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Effect of Capital Adequacy on The Financial Performance of Savings and Credit Societies in Kenya

[1]Jane J. Barus, [2]Willy Muturi,PhD, [3]Patrick Kibati,PhD

ABSTRACT

The purpose of this study to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya. The study employed an explanatory research design. The target population was 83 registered deposit taking SACCO's in Kenya that have been in operation for the last five years. The sample size for the study was all 83 SACCOs that have remained in existence since 2011-2015. Census methodology was used in the study. Both primary and secondary sources of data were employed. Multiple linear regression models were used to analyze the data using statistical package for the social sciences (SPSS) and STATA. A pilot study was conducted to measure the research instruments reliability and validity. Descriptive and inferential analysis was conducted to analyze the data. The data was presented using tables and graphs. Based on the findings the study concluded that capital adequacy influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which capital adequacy influenced the financial performance of savings and credit societies. Based on the findings the study recommended for improvement of the capital requirement regulations by SASRA. The study also recommended that SACCO should improve their liquidity, profitability, operating efficiency and total assets turnover if they must remain in business and meet the capitalization threshold SASRA. Further, the study recommended that SACCO's should shift their concentration from increasing capital levels to credit risk management. Credit risk management would result to improvement in the financial performance of SACCO's.

Keywords: capital adequacy, financial performance, savings and credit societies

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1.0 INTRODUCTION

Background of the Study

The SACCO industry in Kenya plays a very important role as the financial intermediary between savers and investors. The first ever SACCO was established in 1844 by Robert Owen (John, 2002). SACCO's belong to a group of cooperatives that are commonly called Raiffeisen cooperatives due to the German originator of this movement in the 1800s (Tache, 2006). SACCO's are guided by seven principles as stipulated by the International Cooperative Alliance (ICA); Open and voluntary membership, member economic participation, independence and autonomy, democratic member control, education, training and information, Concern for Community and Cooperation among Cooperatives. SACCO's are expected to give better and cheaper services to its members as compared to the main stream banks because SACCO's understands the needs of the members given that they are the owners (Wanyama, Develtere & Pollet, 2008). Services offered by SACCO's include normal loans, emergency loans, school fees loans and front office services for example; payment of salaries, salary advances, bank cheques, safe keeping of documents, and ATMs (Ngaira, 2011).

According to (ICA, 2009) Rochdale Pioneers was the founder of the contemporary Co-operative Movement in Lancashire, England, to deliver cheap alternative to poor-quality and adulterated food and provisions food, by the use of surplus so as to benefit the community. Subsequently, the co-operative movement has succeeded spreading throughout the world and incorporating all parts of the economy. The principles that supported cooperatives ways of doing trade is still recognized today as the basis upon which all co-operatives operate. However, the principles has been looked over and updated.

Globally, the sector has 1 billion memberships. It is estimated that co-operatives have employed 250 million people all over the world, co-operatives has an estimated global turnover of 2.2 trillion US Dollars, Co-operative generate 2.2 trillion US$ in turnover while providing infrastructure and services that the society needs to flourish. Global statistical report for 2014, recorded a total of 57,000 Credit Unions (SACCO's), spread across 105 countries and 6 continents. The world Credit Union system has a combined savings of 1.5 trillion US$, and an asset base of 1.8 trillion US$ out of which 1.2 trillion US$ constitutes the loan portfolio. The average worldwide penetration rate of the Credit Union system stood at 8.2 percent World Co-operative Monitor (2014).

Globally, efficiency of community banks was analyzed in the United States (US) using data from year-end 2006-2008. Multivariate discriminant model was used based on the CAMEL(S) model, to differentiate between low efficiency and high efficiency community banks by using the efficiency ratio as the independent variable. The results on the significance of the individual CAMEL components provide mixed results for different periods apart from the sensitivity to market risk, which is found to be statistically insignificant (Hays, Stephen& Arthur, 2009).

In India, the soundness of Indian Banking through its effect on the asset value was analyzed. The study recognized the key players such as the risk management, Non Performing Assets (NPA) levels, effective cost management and financial inclusion. Moreover, In India performance of different Indian private and public sectors banks over the period 2000-2011 were analyzed using the CAMEL approach and established out that the private sector banks were at the top, with their performance being the best in terms of soundness (Chaudhry &Singh, 2012).

In Africa growth of SACCO's has been experienced to the extent that in 1965, Africa Federation of Cooperative Societies Savings and Credit Association (ACCOSSCA) was formed with the principle objective of offering SACCO insurance, education to members and promoting SACCO principles(Ng'ombe & Mikwamba, 2004). There are 28 countries in the continent of Africa with established SACCO's (saving plus, 2010). Africa has membership of 16 million which is 8 percent of the whole world membership, with savings of 62% and loans of 65% being 3rdafter Asia and North America which has 36 million and 102 million respectively. Africa mobilize 0.4 percent of the worldwide savings of US$ 1.1 trillion and 0.4 percent of international loans given to members standing at US$ 912 billion (WOCCU, 2009).In Africa, performance of the South African Banking Sector was analyzed from 1994 and found out that all bank-specific variables were statistically significant at conventional level for both Return on Assets (ROA) and Return on Equity (ROE) equations. The study had shown that Asset Quality (measured by assets to capital employed ratio), Management Efficiency (measured by operating profits per employee ratio), and Liquidity Management (measured by quick ratio) has positive relationship with both measures of bank performance, which is consistent with a priori theoretical expectations. However, the Leverage Ratio, which is a measure of Capital Adequacy, shows a surprising significant negative relationship with ROA, whereas its relationship with ROE is significant and positive as expected, (Ifeacho & Ngalawa, 2014).In Ghana CAMEL Rating System was used to assess the Performance of Local and Foreign Banks results from the study indicated that not all the CAMEL variables affect Banks performance in Ghana in terms of ROA and ROE (Ansah, 2015).

In East Africa the East African Legislative Assembly (EALA) passed the East African Community (EAC) Cooperative Societies Bill, 2014. The Bill is currently awaiting assent by the East African Community Heads of States in line with Article 63 of the EAC Treaty. The objective of the EAC Cooperative Societies Bill, 2014 is to provide a legal framework for the operations of Co-operative Societies within the Community, which is in line with Article 128 of the EAC Treaty on the strengthening of the role of private sector as an effective force for developing economies, by virtue of EAC Treaty and Article 2(6) of Kenyan Constitution 2010 which recognizes that treaties ratified by Kenya are part of the laws of Kenya, the Kenyan National Legislations on Co-operatives will be required to be aligned to EAC Cooperative Societies Bill, 2014 once it becomes law. The Bill is based on the understanding that each Partner State shall undertake to encourage the efficient use of resources and to promote the development of private sector organizations which are engaged in all types of economic activities, such as the chambers of commerce and industry, confederations and associations of industry, agriculture among others. It also recognized the responsibility of state parties to enact national legislations to govern the operations of co-operative societies within the party states. In Ethiopia Zerfeshewa, 2010 investigated the determinants of SACCO performance; the study established that the educational level of members and officials as well as the regulations posed the greatest impediment to the performance of SACCO's.

Problem Statement

The SACCO's subsector remains a significant player in the provision of financial services to the Kenya household and small business segment. Its membership as per 2013 increased to 3.3million from 2.97 million in 2012. SACCO's plays a vital role of pooling resources for investment and wealth creation (Kinyua, 2013). They spur economic growth through the mobilization of domestic savings. According to SASRA report (2010), SACCO activities contribute 43% of the gross domestic product (GDP).

The significance of SACCO's to the Kenyan economy is further evidenced by inclusion in the Vision 2030 economic blue print (Kioko, 2014). Given their significance in the financial sector and poverty alleviation, it is important to investigate the moderating effect of sensitivity to market risk on determinants of performance in order to provide accurate and consistent assessment of savings and credit financial conditions and operations in the area of performance. Zerfeshewa (2010) investigated the determinants of SACCO performance in Ethiopia; Sonja (2010) analyzed SACCO's in Uganda to determine effect of automation on the growth of SACCO's.

Based on these studies and the varying gaps in literature, there is need to conduct similar studies in Africa and more so in Kenya. Therefore, the research attempted to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya.

Research Objective

To establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya

2.0 LITERATURE REVIEW

Theoretical Framework

Market Power Theory

Modigliani and Miller (1950) approach to capital theory advocates capital structure irrelevancy theory, he further states that the market value of a firm is affected by its future growth prospect apart from the risk involved in the investment. Its prepositions were: financial leverage is in direct proportion to the cost of equity and no taxes based on the following assumptions: there is no taxes, transaction cost for buying and selling securities as well as bankruptcy cost is nil, There is symmetry of information, the cost of borrowing is the same for investors as well as companies and debt financing does not affect companies EBIT. The market power theory postulates that the existence of entry barriers is the major determinant of firm profits. According to the theory, high costs of entry makes it easier for existing firms to maintain monopoly profits. Entry barriers can be in the form of strict regulations. In the SACCO industry in Kenya, this is portrayed by capital adequacy requirements that prevent easy entry into the industry. New entrants will diminish the level of those profits. Capital requirements often lock out new entrants resulting in monopoly tendencies. The rate of entry is relatively low in the SACCO industry in Kenya. However, this is not to say that capital requirements are main barriers of entry to the SACCO industry. Entry barriers can also be designed to increase efficiency.

Such barriers are referred to as structural barriers (OECD, 2007). They reflect the basic industry conditions. With regard to capital adequacy requirement, SASRA seeks to protect investors and member's interests. The market power theory is relevant to this study since the SACCO with a strong position in the market (market share) are likely to achieve higher performance or efficiency.

Expense-Preference Behavior theory

Expense-Preference behavior theory is one of the most employed in the research. This theory was developed by Williamson (1963) and later refined by (Rees, 1974), this theory posits individual preferences of managers of a firm as utility maximizing, as opposed to profit maximizing. It predicts that under certain conducive circumstances such as the separation of ownership and control, costly monitoring of managerial behavior, a lack of effective competition in input and output markets, or effective regulation in those same markets, managers spend more on other prerequisites than is consistent with profit maximization behavior, Gropper & Oswald (1996). The first empirical work for the Expense Preference Theoretical Framework on financial institutions was carried out by Edwards (1977). Using aggregated bank data for 44 banks in 1962, 1964, 1986 and total wages and salaries; total employees as the dependent variables, he finds the coefficient on the three bank concentration ratios to be positive and significantly correlated with both the bank's total labor force and the bank's total wage bill Thus, he concludes that expense preference behavior is a significant force that detracts from profit maximization in many banks. Other works consistent with this view include the empirical works of (Hannan, 1979 and Arnould, 1985) who found evidence of the expense preference theory in the banking firms. The theory is relevant to this study as it guides on how the profitability of the bank is taken in measuring performance though there are other alternative theories, in which factors other than profitability are taken as a measure of performance.

Empirical Review

Naceur &Kandil (2006) examined the impact of capital requirement on the profitability of commercial banks in Egypt. The study focused on capital requirement regulations set by the Central Bank of Egypt and the Basle committee. The study found that high capital requirement increased the cost of intermediation. On the other hand, the capital requirements increased the banks' size leading to increased bank activity and therefore improved performance. The study concluded that capital requirement regulation improved performance.

Saona (2010) investigated the relationship between the capital structure of commercial banks in the United States and performance. The study revealed that a negative relationship existed between the capital ratio and the profitability for the banking industry. Another study by Berger and Bowman (2012) indicated that capital helps small banks to increase their probability of survival and market share at all times (during banking crises, market crises, and normal times). They study further argued that capital enhances the performance of medium and large banks primarily during banking crises

Odunga *et al.*(2013) studied the effect of credit risk and capital adequacy on the performance of commercial banks in Kenya. The study was guided by the operational efficiency theory. They found that credit risk ratios had a significant impact on operating efficiency of the banks. In an interesting twist, the study found that capital adequacy had no significant impact on bank performance. The study recommended that banks shift their concentration from increasing capital levels to credit risk management.

Kivuvo & Olweny, (2014) examined the performance of SACCO's in Kenya using the Altiman Z Score Model of Corporate Bankruptcy. The study focused on predictor variables of bankruptcy and the financial stability of SACCO's. The study found that liquidity and leverage had significant impact of SACCO performance. According to the study, financial stability enhances economic performance. The study concluded that SASRA was right in advocating for additional capital base for SACCO's. They recommended that SACCO's improve their liquidity, profitability, operating efficiency and total assets turnover if they must remain in business and meet the capitalization threshold SASRA.

Conceptual Framework

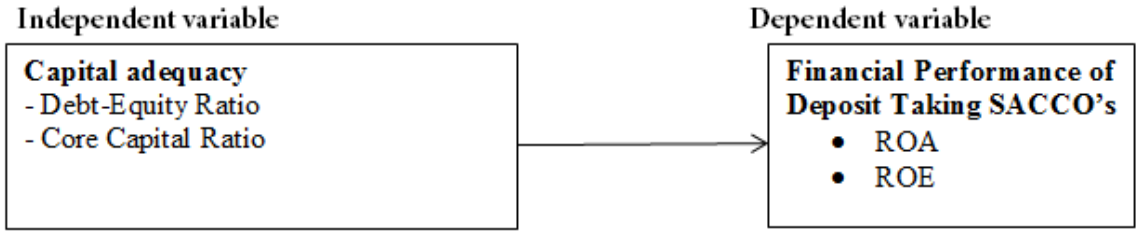

Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

The study employed an explanatory research design. The target population was all the 83 registered deposits taking SACCO's licensed by SASRA as at 31st December 2011 to 2015 and has been in operation for the last five years. Therefore, the study used the inclusion criteria to select a total of 83 SACCO's registered by SASRA as at 31st December 2011. The sampling frame for the study consisted of all licensed deposit taking SACCO's in operation in Kenya as at 31stDecember, 2011and still in operation as at 31st December 2015 as they appear in the SASRA database. Census methodology was used in the study in order to enable researcher gather sufficient information. The study also used purposive sampling procedure to identify the sample units. The sample size for the study was all 83 SACCO's that have remained in existence since 2011-2015. The questionnaire in this study was divided into three parts. The data collected was keyed into Statistical Package for Social Sciences (SPSS) computer software for analysis. SPSS and STATA software was used to produce frequencies, descriptive and inferential statistics which was used to derive a conclusions and generalizations regarding the population.

4.0 RESULTS AND DISCUSSIONS

Response Rate

The number of questionnaires that were administered was 83. A total of 71 questionnaires were properly filled and returned. This represented an overall successful response rate of 86% as shown on Table 1. This agrees with Babbie (2004) who asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Based on this assertion 86% response rate is adequate for the study.

Table 1: Response Rate

Response	Frequency	Percent
Returned	71	86
Unreturned	12	14
Total	**83**	**100**

Demographic Characteristics

This section analyzes the demographic characteristics of the respondents. This section presents the descriptions of the respondents in terms of type of shareholders and period of existence.

Type of Shareholder

The respondents were asked to indicate their shareholders. Results in table 2 reveal that 47% of the respondents indicated business men and women, 42% of the respondents indicated the general public while 11% of the respondents indicated government employees. This implies that majority of the SACCOs members and customers are business people and the general public. This implies that most business people rely on SACCOs for finances. This is likely to have a positive influence on Sacco's financial performance.

Table 2: Type of Shareholder

Response	Frequency	Percent
Government employees	8	11.3
General public	30	42.3
Business Men and Women	33	46.5
Total	**71**	**100**

The respondents were asked to indicate the number of years their organizations have been in existence. Results in table 3 reveal that majority (68%) of the respondents indicated more than 20 years, 16% indicated 5-10 years, 10% indicated 16-20 years while 7% of the respondents indicated 11-15 years. This implies that majority of the SACCOs have been in the market long enough to gain the prerequisite experience and relevance. This implies that the SACCO's have the potential to be competitive and thus performance well.

Table 3: Period of Existence

Response	Frequency	Percent
5-10 years	11	15.5
11-15 years	5	7
16-20 years	7	9.9
More than 20 years	48	67.6
Total	**71**	**100**

Descriptive Statistics

The objective of the study was to establish the influence of capital adequacy on the financial performance of savings and credit societies in Kenya. The respondents were asked to respond to statements on capital adequacy. The responses were rated on a five likert scale as presented in Table 4. Majority of 97% (73.2%+23.9%) of the respondents agreed with the statement that observing the core capital to total asset requirement has improved the financial performance of the Sacco, 98% agreed with the statement that observing the institutional capital to total asset requirement has improved the financial performance of the Sacco, 93% of the respondents agreed that observing the minimum core capital requirement of Kshs. 10 million has improved the financial performance of the Sacco while 91% of the respondents agreed that observing the core capital to total deposits requirement has improved the financial performance of the Sacco.

On a five point scale, the average mean of the responses was 4.13 which means that majority of the respondents were agreeing with most of the statements; however the answers were varied as shown by a standard deviation of 0.57.

The findings agree with that of Naceur and Kandil (2006) who examined the impact of capital requirement on the profitability of commercial banks in Egypt. The study found that high capital requirement increased the cost of intermediation. On the other hand, the capital requirements increased the banks' size leading to increased bank activity and therefore improved performance.

Table 4: Capital Adequacy

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Dev
Observing the core capital to total asset requirement has improved the financial performance of the Sacco	0.00%	2.80%	0.00%	73.20%	23.90%	4.18	0.57
Observing the institutional capital to total asset requirement has improved the financial performance of the Sacco	0.00%	2.80%	0.00%	84.50%	12.70%	4.07	0.49
Observing the minimum core capital requirement of Kshs. 10 million has improved the financial performance of the Sacco	0.00%	2.80%	4.20%	80.30%	12.70%	4.03	0.53
Observing the core capital to total deposits requirement has improved the financial performance of the Sacco	0.00%	2.80%	5.60%	56.30%	35.20%	4.24	0.69
Average						**4.13**	**0.57**

Inferential Statistics

The results presented in table 5 present the regression model used in explaining the study phenomena. Capital adequacy explained 86% of the financial performance of SACCOs in Kenya. This is supported by coefficient of determination also known as the R square of 86%. This means that capital adequacy explain 86% of the financial performance SACCOs in Kenya. Further, results indicate that the overall model was statistically significant as supported by a p value of 0.000. This implies that capital adequacy is a good predictor of financial performance. This was supported by an F statistic of 565.18 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

These findings agree with those of Berger and Bowman (2012) who indicated that capital helps small banks to increase their probability of survival and market share at all times. The study further argued that capital enhances the performance of medium and large banks primarily during banking crises.

Table 5: Regression model

ROA	Coef.	Std.Err	z	P>|z|	[95%	Conf.Interval
Capital Adequacy Ratio	0.54032	0.02273	23.77	0.000	0.49577	0.58486
cons	-0.0121	0.10918	-0.1109	0.912	-0.2261	0.20191
R^2	0.8551					
F-statistics	565.18					
P value	0.000					

The specific model was;

Firm Financial Performance = -0.0121+0.5403 Capital Adequacy

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

Discussion

The objective of the study was to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya. The univariate regression results showed that there is a positive and significant relationship between capital adequacy and financial performance of savings and credit societies as supported by a p value of 0.000 and a beta coefficient of 0.540. This implies that improvement in capital adequacy would increase the financial performance of savings and credit societies by 0.540units.

Conclusions

Based on the findings the study concluded that capital adequacy influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which capital adequacy influenced the financial performance of savings and credit societies. The univariate regression results showed that capital adequacy influenced the financial performance of savings and credit societies by 0.540 units. Further, the overall regression results revealed that capital adequacy influenced the financial performance of savings and credit societies by 0.423units.

Recommendations

The study recommended for improvement of the capital requirement regulations by SASRA. The study also recommended that SACCO should improve their liquidity, profitability, operating efficiency and total assets turnover if they must remain in business and meet the capitalization threshold SASRA. Further, the study recommended that SACCO's should shift their concentration from increasing capital levels to credit risk management. Credit risk management would result to improvement in the financial performance of SACCO's.

Areas for Further Studies

The study recommends that a similar study should be conducted in other financial sectors such as banking sector for comparison purposes. The study also recommends that a study seeking to examine the effects of other financial determinants on financial performance of savings and credit cooperatives should be conducted. This would help to give insight to the SACCO's and other organizations on what other financial factors to consider in order to enhance their performance.

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Effect of Asset Quality on the Financial Performance of Savings and Credit Societies in Kenya

[1]Jane J. Barus, [2]Willy Muturi,PhD, [3]Patrick Kibati,PhD

ABSTRACT

The purpose of this study was to establish the effect of asset quality on the financial performance of savings and credit societies in Kenya. The study employed an explanatory research design. The target population was 83 registered deposit taking SACCO's in Kenya that have been in operation for the last five years. The sample size for the study was all 83 SACCOs that have remained in existence since 2011-2015. Census methodology was used in the study. Both primary and secondary sources of data were employed. Multiple linear regression models were used to analyze the data using statistical package for the social sciences (SPSS) and STATA. A pilot study was conducted to measure the research instruments reliability and validity. Descriptive and inferential analysis was conducted to analyze the data. The data was presented using tables and graphs. Based on the findings the study concluded that asset quality influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which asset quality influenced the financial performance of savings and credit societies. The univariate regression results showed that asset quality influenced the financial performance of savings and credit societies by 5.827units. The study recommended that management need to be cautious in setting up a credit policy that will not negatively affects profitability and also they need to know how credit policy affects the operation of their banks to ensure judicious utilization of deposits and maximization of profit. The study also recommended for credit information sharing between SACCO's. This will play a significant role in determining performance of deposit taking SACCO's. Further, the study recommended that SACCO's opt for equity financing instead of debt financing to improve on its leverage. SACCO's should also avoid excessive lending, maintain high credit standards and limit lending to un-hedged borrowers.

Keywords: asset quality, financial performance, savings and credit societies

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1.0 INTRODUCTION

Background of the Study

The SACCO industry in Kenya plays a very important role as the financial intermediary between savers and investors. The first ever SACCO was established in 1844 by Robert Owen (John, 2002). SACCO's belong to a group of cooperatives that are commonly called Raiffeisen cooperatives due to the German originator of this movement in the 1800s (Tache, 2006). SACCO's are guided by seven principles as stipulated by the International Cooperative Alliance (ICA); Open and voluntary membership, member economic participation, independence and autonomy, democratic member control, education, training and information, Concern for Community and Cooperation among Cooperatives. SACCO's are expected to give better and cheaper services to its members as compared to the main stream banks because SACCO's understands the needs of the members given that they are the owners (Wanyama, Develtere & Pollet, 2008). Services offered by SACCO's include normal loans, emergency loans, school fees loans and front office services for example; payment of salaries, salary advances, bank cheques, safe keeping of documents, and ATMs (Ngaira, 2011).

According to (ICA, 2009) Rochdale Pioneers was the founder of the contemporary Co-operative Movement in Lancashire, England, to deliver cheap alternative to poor-quality and adulterated food and provisions food, by the use of surplus so as to benefit the community. Subsequently, the co-operative movement has succeeded spreading throughout the world and incorporating all parts of the economy. The principles that supported cooperatives ways of doing trade is still recognized today as the basis upon which all co-operatives operate. However, the principles has been looked over and updated.

Globally, the sector has 1 billion memberships. It is estimated that co-operatives have employed 250 million people all over the world, co-operatives has an estimated global turnover of 2.2 trillion US Dollars, Co-operative generate 2.2 trillion US$ in turnover while providing infrastructure and services that the society needs to flourish. Global statistical report for 2014, recorded a total of 57,000 Credit Unions (SACCO's), spread across 105 countries and 6 continents. The world Credit Union system has a combined savings of 1.5 trillion US$, and an asset base of 1.8 trillion US$ out of which 1.2 trillion US$ constitutes the loan portfolio. The average worldwide penetration rate of the Credit Union system stood at 8.2 percent World Co-operative Monitor (2014).

Globally, efficiency of community banks was analyzed in the United States (US) using data from year-end 2006-2008. Multivariate discriminant model was used based on the CAMEL(S) model, to differentiate between low efficiency and high efficiency community banks by using the efficiency ratio as the independent variable. The results on the significance of the individual CAMEL components provide mixed results for different periods apart from the sensitivity to market risk, which is found to be statistically insignificant (Hays, Stephen& Arthur, 2009).

In India, the soundness of Indian Banking through its effect on the asset value was analyzed. The study recognized the key players such as the risk management, Non Performing Assets (NPA) levels, effective cost management and financial inclusion. Moreover, In India performance of different Indian private and public sectors banks over the period 2000-2011 were analyzed using the CAMEL approach and established out that the private sector banks were at the top, with their performance being the best in terms of soundness (Chaudhry &Singh, 2012).

In Africa growth of SACCO's has been experienced to the extent that in 1965, Africa Federation of Cooperative Societies Savings and Credit Association (ACCOSSCA) was formed with the principle objective of offering SACCO insurance, education to members and promoting SACCO principles(Ng'ombe & Mikwamba, 2004). There are 28 countries in the continent of Africa with established SACCO's (saving plus, 2010). Africa has membership of 16 million which is 8 percent of the whole world membership, with savings of 62% and loans of 65% being 3rdafter Asia and North America which has 36 million and 102 million respectively. Africa mobilize 0.4 percent of the worldwide savings of US$ 1.1 trillion and 0.4 percent of international loans given to members standing at US$ 912 billion (WOCCU, 2009).In Africa, performance of the South African Banking Sector was analyzed from 1994 and found out that all bank-specific variables were statistically significant at conventional level for both Return on Assets (ROA) and Return on Equity (ROE) equations. The study had shown that Asset Quality (measured by assets to capital employed ratio), Management Efficiency (measured by operating profits per employee ratio), and Liquidity Management (measured by quick ratio) has positive relationship with both measures of bank performance, which is consistent with a priori theoretical expectations. However, the Leverage Ratio, which is a measure of Capital Adequacy, shows a surprising significant negative relationship with ROA, whereas its relationship with ROE is significant and positive as expected, (Ifeacho & Ngalawa, 2014).In Ghana CAMEL Rating System was used to assess the Performance of Local and Foreign Banks results from the study indicated that not all the CAMEL variables affect Banks performance in Ghana in terms of ROA and ROE (Ansah, 2015).

In East Africa the East African Legislative Assembly (EALA) passed the East African Community (EAC) Cooperative Societies Bill, 2014. The Bill is currently awaiting assent by the East African Community Heads of States in line with Article 63 of the EAC Treaty. The objective of the EAC Cooperative Societies Bill, 2014 is to provide a legal framework for the operations of Co-operative Societies within the Community, which is in line with Article 128 of the EAC Treaty on the strengthening of the role of private sector as an effective force for developing economies, by virtue of EAC Treaty and Article 2(6) of Kenyan Constitution 2010 which recognizes that treaties ratified by Kenya are part of the laws of Kenya, the Kenyan National Legislations on Co-operatives will be required to be aligned to EAC Cooperative Societies Bill, 2014 once it becomes law. The Bill is based on the understanding that each Partner State shall undertake to encourage the efficient use of resources and to promote the development of private sector organizations which are engaged in all types of economic activities, such as the chambers of commerce and industry, confederations and associations of industry, agriculture among others. It also recognized the responsibility of state parties to enact national legislations to govern the operations of co-operative societies within the party states. In Ethiopia Zerfeshewa, 2010 investigated the determinants of SACCO performance; the study established that the educational level of members and officials as well as the regulations posed the greatest impediment to the performance of SACCO's.

Problem Statement

The SACCO's subsector remains a significant player in the provision of financial services to the Kenya household and small business segment. Its membership as per 2013 increased to 3.3million from 2.97 million in 2012. SACCO's plays a vital role of pooling resources for investment and wealth creation (Kinyua, 2013). They spur economic growth through the mobilization of domestic savings. According to SASRA report (2010), SACCO activities contribute 43% of the gross domestic product (GDP).

The significance of SACCO's to the Kenyan economy is further evidenced by inclusion in the Vision 2030 economic blue print (Kioko, 2014). Given their significance in the financial sector and poverty alleviation, it is important to investigate the moderating effect of sensitivity to market risk on determinants of performance in order to provide accurate and consistent assessment of savings and credit financial conditions and operations in the area of performance. Zerfeshewa (2010) investigated the determinants of SACCO performance in Ethiopia; Sonja (2010) analyzed SACCO's in Uganda to determine effect of automation on the growth of SACCO's.

Based on these studies and the varying gaps in literature, there is need to conduct similar studies in Africa and more so in Kenya. Therefore, the research attempted to establish the effect of asset quality on the financial performance of savings and credit societies in Kenya.

Research Objective

To establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya

2.0 LITERATURE REVIEW

Theoretical Framework

Monetarist Theory

Milton Friedman was the Founding Father of Monetarism theory. Monetarism is a theoretical challenge to Keynesian economics that increased in importance and popularity in the late 1960s and 1970s Monetarists argue that since money is a direct substitute for all other assets, an increase in the supply of money, given a fairly stable velocity of circulation, there will be direct effect on the demand for other assets since there will be more money to spend on those assets. If the total output of the economy is fixed, then an increase in the money supply will lead directly to high prices (Friedman, 1987). All increases in the money supply will be reflected in higher prices unless there is a long-term growth in the economy. Monetarist school of economic thought contended that money supply is a key determinant of the level of production the short run and the rate of inflation in the long run. In order to minimize uncertainty monetarist advocated for the maintenance of a constant rate of growth of money supply (Friedman, 1987). The monetarist school holds to three major propositions: the growth of the money supply is the major systematic determinant of nominal GDP growth; prices and wages are relatively flexible; and the private economy is stable, these propositions suggest that macroeconomic fluctuations arise primarily from erratic money-supply growth. The monetarist theory is relevant to this study as it guides the SACCO, given the uncertainty of the future. Additionally, inflationary expectation is affected by previous period thus affecting economic growth. Since SACCO contributes to the economy of the country then this theory will guide SACCO's.

Expense-Preference Behavior theory

Expense-Preference behavior theory is one of the most employed in the research. This theory was developed by Williamson (1963) and later refined by (Rees, 1974), this theory posits individual preferences of managers of a firm as utility maximizing, as opposed to profit maximizing. It predicts that under certain conducive circumstances such as the separation of ownership and control, costly monitoring of managerial behavior, a lack of effective competition in input and output markets, or effective regulation in those same markets, managers spend more on other prerequisites than is consistent with profit maximization behavior, Gropper & Oswald (1996). The first empirical work for the Expense Preference Theoretical Framework on financial institutions was carried out by Edwards (1977). Using aggregated bank data for 44 banks in 1962, 1964, 1986 and total wages and salaries; total employees as the dependent variables, he finds the coefficient on the three bank concentration ratios to be positive and significantly correlated with both the bank's total labor force and the bank's total wage bill Thus, he concludes that expense preference behavior is a significant force that detracts from profit maximization in many banks. Other works consistent with this view include the empirical works of (Hannan, 1979 and Arnould, 1985) who found evidence of the expense preference theory in the banking firms. The theory is relevant to this study as it guides on how the profitability of the bank is taken in measuring performance though there are other alternative theories, in which factors other than profitability are taken as a measure of performance.

Economic Efficiency Theory

Economic efficiency theory states that companies should achieve their output at the lowest possible cost per unit produced. According to this theory, economies of scale should be exploited to achieve optimal production. The theory focuses on two kinds of efficiency; allocative and productive efficiency. Allocative efficiency is achieved by ensuring that all firms in the industry charge optimal prices. In the banking sector, this will result in a reduction of lending rates.

The economic efficiency theory is relevant to this study as it guides in savings mobilization, which will enable SACCO's to create credit out of excess deposits (credit creation) hence SACCO will earn interest. Allocative efficiency in the determination of lending rates among SACCO's will ensure unhealthy competition does not ensue between them. High competition in banking is associated with instability (De Nicoló, Jalal & Boyd, 2006). Productive efficiency is achieved when banks employ all their resources efficiently, producing the most output from the least input (Said, 2011). Productive efficiency guides both the lending and investment decisions of financial institutions. It would involve investing in low risk assets such as government bonds.

Empirical Review

Luqman, (2014) undertook a study on the effect of credit risk on performance of banks in Nigeria. The study found that there is a significant relationship between bank performance (in terms of profitability) and credit risk management (in terms of loan performance). The study mentioned that Loans and advances and non-performing loans are major variables in determining asset quality of a bank. Findings indicated that improper credit risk management reduces bank profitability, affects the quality of its assets and increases loan losses and non-performing loan which may eventually lead to financial distress. The study recommended that management need to be cautious in setting up a credit policy that will not negatively affects profitability and also they need to know how credit policy affects the operation of their banks to ensure judicious utilization of deposits and maximization of profit.

Kinyua, (2013) investigated the relationship between the SACCO size and financial performance in Kenya. The study used total assets deposits and turnover as proxies for SACCO size. The study found that SACCO size significantly influence performance. Kioko (2014) investigated the influence of credit information sharing on SACCO performance. The study established that credit information sharing plays a significant role in determining performance of deposit taking SACCO's.

Manyuanda, (2013) examined the effect of nonperforming loans on the performance of SACCO's in Nairobi, Kenya. The study concluded that a significant negative relationship existed between non-performing loans and performance of SACCO's. The study recommended that SACCO's opt for equity financing instead of debt financing to improve on its leverage. SACCO's should also avoid excessive lending, maintain high credit standards and limit lending to un-hedged borrowers.

Gitonga, (2014) studied the effect of loan provision on the profitability of SACCO's in Nairobi County. The study gathered information on loan provision from the year 2010 to 2013. The study revealed that a negative relationship existed between loan loss provision and profitability of deposit taking SACCO's. A positive relationship was also found between the size of the SACCO and performance. The study also mentioned that management quality positively impacted on performance. They study also looked at the role of loan intensity in SACCO performance. Findings indicated that a unit increase in loan intensity led to a unit increase in profit of deposit taking SACCO's.

Conceptual Framework

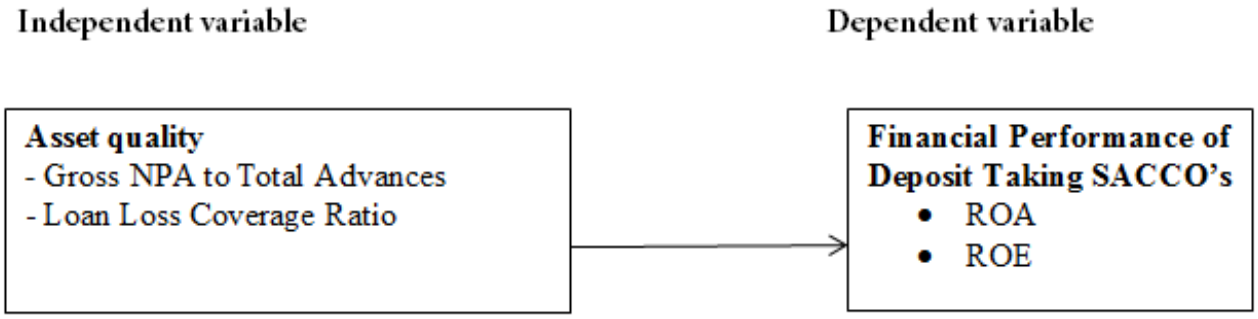

Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

The study employed an explanatory research design. The target population was all the 83 registered deposits taking SACCO's licensed by SASRA as at 31st December 2011 to 2015 and has been in operation for the last five years. Therefore, the study used the inclusion criteria to select a total of 83 SACCO's registered by SASRA as at 31st December 2011. The sampling frame for the study consisted of all licensed deposit taking SACCO's in operation in Kenya as at 31stDecember, 2011and still in operation as at 31st December 2015 as they appear in the SASRA database. Census methodology was used in the study in order to enable researcher gather sufficient information. The study also used purposive sampling procedure to identify the sample units. The sample size for the study was all 83 SACCO's that have remained in existence since 2011-2015. The questionnaire in this study was divided into three parts. The data collected was keyed into Statistical Package for Social Sciences (SPSS) computer software for analysis. SPSS and STATA software was used to produce frequencies, descriptive and inferential statistics which was used to derive a conclusions and generalizations regarding the population.

4.0 RESULTS AND DISCUSSIONS

Response Rate

The number of questionnaires that were administered was 83. A total of 71 questionnaires were properly filled and returned. This represented an overall successful response rate of 86% as shown on Table 1. This agrees with Babbie (2004) who asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Based on this assertion 86% response rate is adequate for the study.

1: Response Rate

Response	Frequency	Percent
Returned	71	86
Unreturned	12	14
Total	**83**	**100**

Demographic Characteristics

This section analyzes the demographic characteristics of the respondents. This section presents the descriptions of the respondents in terms of type of shareholders and period of existence.

Type of Shareholder

The respondents were asked to indicate their shareholders. Results in table 2 reveal that 47% of the respondents indicated business men and women, 42% of the respondents indicated the general public while 11% of the respondents indicated government employees.

This implies that majority of the SACCOs members and customers are business people and the general public. This implies that most business people rely on SACCOs for finances. This is likely to have a positive influence on Sacco's financial performance.

Table 2: Type of Shareholder

Response	Frequency	Percent
Government employees	8	11.3
General public	30	42.3
Business Men and Women	33	46.5
Total	**71**	**100**

The respondents were asked to indicate the number of years their organizations have been in existence. Results in table 3 reveal that majority (68%) of the respondents indicated more than 20 years, 16% indicated 5-10 years, 10% indicated 16-20 years while 7% of the respondents indicated 11-15 years. This implies that majority of the SACCOs have been in the market long enough to gain the prerequisite experience and relevance. This implies that the SACCO's have the potential to be competitive and thus performance well.

Table 3: Period of Existence

Response	Frequency	Percent
5-10 years	11	15.5
11-15 years	5	7
16-20 years	7	9.9
More than 20 years	48	67.6
Total	**71**	**100**

4.3 Descriptive Statistics

The objective of the study was to determine the influence of asset quality on the financial performance of savings and credit societies in Kenya. The respondents were asked to respond to statements on asset quality. The responses were rated on a five likert scale as presented in Table 4. Majority of 96% (69.0%+26.8%) of the respondents agreed with the statement that our Sacco has a credit policy in place, 81% agreed with the statement that our Sacco observes the general state of the economy before establishing a loan portfolio policy, 79% of the respondents agreed that our Sacco observes the trend of creditors before establishing a loan portfolio policy while 85% of the respondents agreed that our Sacco observes the overhead cost before establishing a loan portfolio policy.

On a five point scale, the average mean of the responses was 3.97 which means that majority of the respondents were agreeing with most of the statements; however the answers were varied as shown by a standard deviation of 0.62.

These findings agree with those of Luqman, (2014) who undertook a study on the effect of credit risk on performance of banks in Nigeria. The study found that there is a significant relationship between bank performance (in terms of profitability) and credit risk management (in terms of loan performance). The study mentioned that Loans and advances and non-performing loans are major variables in determining asset quality of a bank. Findings indicated that improper credit risk management reduces bank profitability, affects the quality of its assets and increases loan losses and non-performing loan which may eventually lead to financial distress

Table 4: Asset Quality

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Dev
Our Sacco has a credit policy in place	0.00%	2.80%	1.40%	69.00%	26.80%	4.20	0.60
Our Sacco observes the general state of the economy before establishing a loan portfolio policy	0.00%	2.80%	15.50%	71.80%	9.90%	3.89	0.60
Our Sacco observes the trend of creditors before establishing a loan portfolio policy	0.00%	5.60%	15.50%	64.80%	14.10%	3.87	0.72
Our Sacco observes the overhead cost before establishing a loan portfolio policy	0.00%	2.80%	12.70%	76.10%	8.50%	3.90	0.57
Average						**3.97**	**0.62**

Inferential Statistics

The results presented in table 5 present the regression model used in explaining the study phenomena. Asset quality explained 50% of the financial performance of SACCOs in Kenya. This is supported by coefficient of determination also known as the R square of 50%. This means that asset quality explain 50% of the financial performance SACCO's in Kenya. Further, results indicate that the overall model was statistically significant as supported by a p value of 0.000. This implies that asset quality is a good predictor of financial performance. This was supported by an F statistic of 180.74 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

These findings agree with those of Manyuanda, (2013) who examined the effect of nonperforming loans on the performance of SACCO's in Nairobi, Kenya. The study concluded that a significant negative relationship existed between non-performing loans and performance of SACCO's. The study recommended that SACCO's opt for equity financing instead of debt financing to improve on its leverage. SACCO's should also avoid excessive lending, maintain high credit standards and limit lending to un-hedged borrowers.

Table 5: Regression model

ROA	Coef.	Std.Err	z	P>|z|	[95%	Conf.Interval
Asset Quality Ratio	5.8269	0.43337	13.44	0.000	4.9769	6.6757
cons	-1.0608	0.23176	-4.58	0.000	-1.5150	-0.6066
R^2	0.4986					
F-statistics	180.74					
P value	0.000					

The specific model was;

Firm Financial Performance = -1.0608+5.8269Asset quality

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

Discussion

The objective of the study was to determine the effect of asset quality on the financial performance of savings and credit societies in Kenya. The univariate regression results showed that there is a positive and significant relationship between asset quality and financial performance of savings and credit societies as supported by a p value of 0.000 and a beta coefficient of 5.827. This implies that improvement in asset quality would increase the financial performance of savings and credit societies by 5.827units.

Conclusions

Based on the findings the study concluded that asset quality influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which asset quality influenced the financial performance of savings and credit societies. The univariate regression results showed that asset quality influenced the financial performance of savings and credit societies by 5.827units.

Recommendations

The study recommended that management need to be cautious in setting up a credit policy that will not negatively affects profitability and also they need to know how credit policy affects the operation of their banks to ensure judicious utilization of deposits and maximization of profit. The study also recommended for credit information sharing between SACCO's. This will play a significant role in determining performance of deposit taking SACCO's. Further, the study recommended that SACCO's opt for equity financing instead of debt financing to improve on its leverage. SACCO's should also avoid excessive lending, maintain high credit standards and limit lending to un-hedged borrowers.

Areas for Further Studies

The study recommends that a similar study should be conducted in other financial sectors such as banking sector for comparison purposes. The study also recommends that a study seeking to examine the effects of other financial determinants on financial performance of savings and credit cooperatives should be conducted. This would help to give insight to the SACCO's and other organizations on what other financial factors to consider in order toenhance their performance.

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Challenges Facing Commercial Banks In The Implementation Of Capital Adequacy Requirement In Basel Iii Framework

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ABSTRACT

The purpose of the study was to identify challenges facing commercial banks in the implementation of capital adequacy requirement in Basel III framework. A descriptive survey design was applied to a population of 43 commercial banks operating in Kenya. The target population composed of the 159 management staff currently employed at the head offices of the various commercial banks in Kenya. The population was composed of Senior, Middle and Junior or Entry level Management staff. A sample of 30% was selected from within each group. Primary data was gathered using questionnaires which were dropped off at the bank's head offices and picked up later when the respondents had filled the questionnaires. Descriptive analysis was used to analyze quantitative data while content analysis was used to analyze qualitative data. The study concludes that the implementation of Basel III requirement has been faced by various challenges like growth barrier, regulatory constraints, risk and finance management culture and additional capital challenges. In addition, the study concluded that commercial banks face challenges in deciding how best to implement a solution that will allow them to comply with Basel III, how to operate the systems and processes for improved operational effectiveness, and how to understand and ultimately reduce their capital requirements. The study recommends that Banks should manage their risks more closely and avoid a build-up of unintended risk, reducing the opportunities for regulatory capital arbitrage. This would go a long way in eliminating growth barriers, regulatory constraints, capital adequacy requirement, risk and finance management culture and additional capital challenges.

Keywords: challenges, commercial bank, capital adequacy requirement, Basel III framework.

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1.0 INTRODUCTION

Background of the Study

The global financial crisis of 2009-2010 spurred the need to review the regulatory framework of banks across the globe. As a result, reforms were necessary to rectify flaws in the regulatory framework. The Basel Committee on Banking Supervision (BCBS) is leading efforts to reform the global banking regulatory framework (BCBS, 2010a). In December 2010, BCBS announced Basel III proposals which national regulators and regional supervisory organisations are reviewing to evaluate its suitability to conditions in their own financial systems. According to Bean (2009), the banks were undercapitalised which is one of the reasons behind the 2007-2010 financial crises. The financial crisis 2007-2009 still has effects on international financial markets and the real economy.

Key lessons from the global financial crisis revolve around leverage, capital and liquidity. According to BCBS (2010b) the existence of the credit bubble, alongside with the constant innovation in financial products and techniques and fair value accounting have to be cited in this context as additional causes of the crisis. In addition, inadequate bank regulation is viewed as one of the main causes of the financial crisis (BCBS, 2010a; Calice, 2010).

According to Financial Stability Board (2011) global crises had a huge impact on banks across the world. The crisis resulted from too much leverage, little capital and inadequate liquidity by many banks. They were thus unable to absorb their large trading and credit losses that had occurred since 2007 and many banks failed (International Monetary Fund, 2010). The weaknesses in the banking sector were rapidly transmitted to the rest of the financial system and the economy resulting in a massive contraction of liquidity and credit availability (Moreno, 2011).

Basel III is the third instalment of the Basel accords and is a global regulatory standard set by the BCBS on capital adequacy (including a new leverage ratio and capital buffers), market liquidity risk (with new short-term and long-term liquidity ratios) and stress testing focusing on stability. The Basel III reforms to global regulatory standards were agreed by the G-20 in November 2010 and were then issued by the Basel Committee on Banking Supervision in December 2010 (BCBS, 2010a). The key aim of these reforms is to strengthen the capital adequacy requirements with regard to quality and quantity of capital which banks must hold in order to absorb losses.

The Basel III framework, whose main thrust has been enhancing the banking sector's safety and stability, emphasises the need to improve the quality and quantity of capital components, leverage ratio, liquidity standards, and enhanced disclosures. Basel III is therefore an effort to control the causes of the most recent crisis. Regulation of this sort has been effective in the past (BCBS, 2010b).

Basel III introduces new and enhanced rules, these includes the introduction of a new and stricter definition of capital – designed to increase consistency, transparency and quality of the capital base – and the introduction of a global liquidity standard (BCBS, 2010a,b). The two new liquidity ratios – the longer-term Net Stable Funding Ratio (NSFR) and the short-term Liquidity Coverage Ratio (LCR)–call on banks to raise high-quality liquid assets and acquire more stable sources of funding, ensuring that they are in agreement with the principles of liquidity risk management. In addition, Basel III introduces a new leverage ratio, a substitute to the risk-based Basel II framework. By setting 3 percent as the ratio of Tier 1 Capital to total exposure, the new leverage ratio may limit banks' scope of action (BCBS, 2010c).

Moreover, Basel III increases capital requirements for securities financing activities, repurchase agreements and counterparty credit risk arising from derivatives. Additionally, the new framework has formulated ways of reducing systemic risk and the cyclical effects of Basel II. For instance, it introduces a countercyclical capital buffer and capital conservation, and discusses "through the- cycle" provisioning. The bursting of the credit bubble led to a rapid decline in asset prices, combined with a reduction in what Wilmot, Sweeney, Klein & Lantz (2009) dubbed, the stock of shadow money, liquid assets which take up the role of money to finance the expansion during an economic boom.

Basel III is poised to have a significant impact on the world's financial systems and economies. The implications for the banking industry from Basel III could be profound. According to BCBS (2010b) new minimum capital standards changes combined with the higher capital charges for trading books make some business models less profitable or even unprofitable going forward and banks will need to rethink their strategy and business portfolio in the light of the changes.

As the ailing global economy blew cavernous holes in national budgets, mounting censure was directed to financial regulators in OECD nations. Their counterparts in emerging economies have not escaped fierce condemnation for blatantly (Ashcraft and Schuermann, 2008). While credit rating firms failed to properly measure the inherent dual risks arising from sub-prime loans and the new financial architecture, policymakers resorted to easy money and low interest rates to further boost house purchases and consumption (Mishkin, 2008). All the more, the openness of international financial markets tempted western governments to expand their expenditure by taking up huge foreign debt at cheap interest rates especially since they were weary of rebounding into a post-2001 recession.

The issuance of government bonds tamed emerging economies' hunger for holding solid sovereign securities (Balin, 2010). Consequently, western fiscal agents accumulated national debt that approached the perilous threshold of 90 percent debt-to-GDP ratio boding an economic predicament (Reinhart and Rogoff, 2010).Despite the fact that Macroprudential regulation is necessary for Africa, the proposals in Basel III are still inadequate in reducing systemic risks on the continent. This is because they do not deal with systemic threats resulting from cross border capital flows arbitrated through the banking system.

Lukonga and Kay (2010) argue that the regulatory shortcomings facing Africa need a larger collection of instruments than those offered in Basel III. These instruments can include limitation to foreign exchange exposure and regulations to limit amassing of large loan. This calls for a more aggressive regulatory regime to warrant a more healthy and flexible financial system in Africa. Most African countries inflict restrictions on business activities, banks' large loan concentrations and foreign exchange exposures which are not within the traditional commercial banking.

Lukonga and Kay (2010) further argued that African bank regulation are more forceful compared to the advanced economies which basically rely on just one regulatory instrument, the capital adequacy requirement, which exposed the advanced economies to "gaming" by banks to reduce the amount of capital they had to hold. The potential impact of Basel III on the banking system is significant. Banks will experience increased pressure on their Return on Equity (RoE) due to increased liquidity and capital costs. In particular, Basel III creates incentives for banks to improve their operating processes – not only to meet requirements but also to increase efficiency and lower costs (BCBS, 2010a).

Kenyan banks are forced to improve their capital buffers through increased capital adequacy requirements, as well as the introduction of liquidity requirements and countercyclical macro prudential measures (BCBS, 2010).The banks are also required to maintain a total capital to risk-weighted assets ratio- a gauge of a bank's financial strength based on total capital including items such as goodwill and revaluation of 14.50 per cent, up from the current 12 per cent (CBK, 2013). Banks are building their buffer capital in line with the CBK's prudential requirements and CBK is undertaking stress-testing to ensure that this progresses well within the 18-month build up window.

Currently, the minimum capital requirements for Kenyan banks are already above the proposed minimums as the tier 1 capital to Total Risk Weighted Assets stands at 8 per cent and total capital to total risk weighted assets at 12 per cent. An analysis of the two ratios for banks shows that the top six and other tier two banks such as Diamond Trust and NIC Bank are already in compliance with the new requirements. Equity, Barclays and Co-operative Banks adjusted their ratios in advance, their adoption of new accounting methods resulting in a drop in both ratios as at June 2013 when compared with December 2012 (CBK, 2013).

Further, the progressive increase of the minimum core capital of banks and mortgage finance companies to Ksh1 billion ($12.5 million) by 2012 will position the Kenyan banks to exploit new market niches and absorb any emerging shocks. As at December 2013, the Kenyan Banking system comprised of 43 commercial banks, 2 NBFIs, 4 building societies and 48 foreign exchange bureaus Central Bank of Kenya, (2013). This study aimed at carrying out a study on the effects of Basel III framework on capital adequacy of commercial banks in Kenya.

Problem Statement

The aggregate effects of the requirements vary from one bank to another. Among large banks almost all of them have had to deal with its far reaching implications. Several studies have been carried out with regard to such bank regulations across the globe. In Egypt for the period 1989-2004, using a bank scope data base for 28 banks Naceur and Kandil, (2009) analysed the effects of capital regulations on the stability and performance of banks.

The study analysed two measures of performance: cost of intermediation and banks' profitability- measured by return on assets. Result revealed that banks raise the cost of intermediation as the capital adequacy ratio internalizes the risk for shareholders. This results to higher return on assets and equity revealing the need for capital regulation to the performance of banks and financial stability in Egypt. Their study suggested that the use of structural reforms aiming at establishing more competition in the banking industry can help ensure that performance indicators are corresponding with the best practices of the intermediation function that assures financial stability over time.

According to the quantitative impact study conducted by the Basel Committee (2010c), on average the newly defined capital ratio (Common Equity Tier I ratio) of large banks decreases from 11.1 percent to 5.7 percent, due to the change of definition of capital and the changes in risk-weighted assets. Furthermore, Basel III increased the required minimum capital level percent to more than 7 percent. Kamau et.al (2004) used the simultaneous equations approach to model the regulatory effect of minimum capital requirements on bank risk behaviour and capital levels in Kenya for the period 2000-2002. This study established that the Kenya's banking sector has an oligopolistic market structure.

To the best of the researcher's knowledge, no study had ever concentrated on assessing the effects of Basel III framework on capital adequacy of commercial banking industry in Kenya hence the research gap that the current study sought to fill. This study was built on the premise that the passage of time and the very numerous and significant changes in the commercial banks operating environment have led to totally different operating environment after the Basel III framework requirements.

Research Objectives

To identify challenges facing commercial banks in the implementation of capital adequacy requirement in Basel III framework.

2.0 LITERATURE REVIEW

Empirical Review

Recent economic crises have revealed the importance of bank regulations to reduce the high risk attributed to imbalances in banks' balance sheets. The key regulatory role of banking regulation is regulation on capital. Nonetheless, excessive regulations may have adverse effects. Safety of depositors' fund remains the major concern of bank regulators. It is in this respect the capital adequacy becomes relevant and important. Sentero (2013) sought to find out the effect of capital adequacy requirements on the efficiency of commercial banks in Kenya. This study used a descriptive research design. The population of interest in the study consisted of all 43 commercial banks operating in Kenya and had been in existence in the last five years, licensed and registered under the Banking Act Cap.488. To measure economic efficiency the study adopted the Data Envelopment Analysis (DEA) techniques. The value of the F statistic indicated that the overall regression model was significant implying that there is a significant relationship between the predictor variables of capital adequacy ratio and the efficiency of commercial banks in Kenya.

The study recommends that central bank should be keen on commercial banks capital adequacy ratio by laying down financial regulations on liquidity since the goal of financial regulation is to enable banks to improve liquidity and solvency. Stricter regulation may be good for bank stability, but not for bank efficiency, restricting banks may not only lower bank efficiency but also increase the probability of a banking crisis.

Gudmundsson, Ngoka-Kisinguh and Odongo (2013) sought to find out the role of capital requirements on bank competition and stability in Kenya for the period 2000-2011. The study adopted the Lerner index and the Panzar and Rosse H-statistic to measure competition in Kenya's banking industry. Approximations of both the Lerner index and the H statistic showed that competition in the Kenyan banking sector had reduced over the study period. The study approximated the fixed effects of capital requirements on bank competition and stability for the 36 commercial banks using a panel regression model. The panel estimates indicated that there was a significant non-linear effect of core capital on competition. The log of core capital was positive and significant while squared log of core capital was negative and significant which is an implication that an increase in core capital reduces competition up to a point and then increases competition. Therefore, the advantages of raising capital requirements on competitiveness are achieved after consolidation in the banking sector.

Return on equity was used to capture bank performance and stability which showed a positive relationship in support of the evidence that capital regulation improves the performance of banks and financial stability.

Cheserek (2010) examined the determinants of bank failure in Kenya over a period of five years between 2004 and 2009 using capital adequacy. Asset quality and earnings after tax were cited as major predictors of bank failure. The study addressed the determinants of commercial bank failures in the banking industry. Data from 21 commercial banks was obtained and analyzed using SPSS package. Results revealed that Kenya's banking industry looked shaky but are stabilizing. Key ratios like capital adequacy, asset quality and return on assets didn't have a consistent trend and this was worrying. Results also revealed that banks' management did not have clear policies on how to maintain and grow these key ratios. Further, results revealed that bank failure had no significant relationship with earnings after tax, total loans, total equity and return on assets. However, bank failure had a significant relationship with capital adequacy, asset quality and total assets. This explained the reason as to why over the last decade, national and international regulatory bodies, in an attempt to reduce the chance of a bank failure have imposed stricter requirements on capital adequacy and asset quality.

Odinga (2010) carried out a study seeking to find out the relationship between capital adequacy and stability of Commercial Banks of Kenya. All Commercial Banks in Kenya were analysed. Secondary data was used and this was collected from the financial statements for the year ended 31 December 2009. On the face value Kenyan banks are on average well capitalized implying that they have met all the requirements (statutory) as set by the Central Bank of Kenya. However, on closer inspection, tier I commercial banks have a much stronger capital position than tier II and III commercial banks. Not all commercial banks had achieved the minimum core capital of Kshs. 1 billion. With respect to supplementary capital, majority of Banks were found to have supplementary capital reserves. However, very few were found to have no supplementary capital.

Waithaka (2013) sought to investigate the effect of Basel II requirement on Kenyan commercial banks' lending. A descriptive research design was adopted for this study. The populations for this research are the 43 listed Commercial Banks in Kenya analyzed for a period from 2009-2012. The study findings revealed that commercial banks risk weighted asset had increased by 79% over the years indicating a similar growth in bank's assets. To meet the asset growth, core capital had also increased by 88% with bank's undertaking rights issue between 2011 and 2012 in order to meet the new capital requirements with Basel II. Total loans and advances with a risk weight of 100% also increased by 77% from the year 2009 to 2012. The CAMEL rating also showed continuous growth in all the main ratios over the years under review. The study concluded that Basel II requirement has an impact on banks' capital requirement and asset growth with growth in core capital and risk weighted assets clearly seen over the years. The study also concluded that Basel II requirement has an impact on banks' lending. None of the commercial banks so far was in breach of the minimum capital requirements of 8% as additional capital has being raised through rights issues.

Wachiuri (2012) sought to establish the effect of capital adequacy requirements on credit creation by commercial banks in Kenya. Data for a period of 11 years from 2001 to 2011 was studied where an econometric model was used. For this purpose, data from 43 commercial banks in Kenya was extracted from CBK annual bank supervision reports. The study revealed that capital adequacy requirements introduced by Basel 1 had a negative impact on credit creation by banks in Kenya. This was evident especially in 2000 when the requirements were introduced in Kenya and in 2009 when further development of minimum statutory capital requirements from Kshs. 250 million to 350 million (all the way to 1 billion by December 2012) was introduced. The trend in credit created had been changing direction every four years a fact that can be accredited to shocks originating from the continuous development of capital adequacy requirements by the Central Bank of Kenya. Results showed that the volume of existing bank capital may act as binding constraint on liquidity and credit creation. However, there could have been other factors accounting for variations in credit created trends other than the capital adequacy requirements as experienced in 2005, a fact that could be accredited to other factors such as high interest rate and reduced demand for credit. The study recommended that policy makers should certain that commercial banks have adequate capital to strengthen confidence of depositors, but capital adequacy requirements should not be very retaliatory as to restrain bank activities and the performance of the overall economy.

Bett (2012) examined the extent to which current developments in accounting regulations have been embraced by non-listed firms in the Kenya financial sector and their impacts in finding solutions to major problems of corporate financing among small and medium enterprises. The study used a descriptive research which involved acquisition of information about the level of compliance with mandatory and voluntary aspects of accounting regulations from a sample of 93 non-listed firms in different subsectors; Banking, Insurances, SACCOs and Stock brokerage firms among others. Majority of the firms were more compliant with mandatory aspects of accounting regulations like accounting disclosure requirements of the respective Government Regulatory Agencies, Companies Act and IAS1. However, the level of compliance with voluntary accounting regulations tested like IAS 39 on valuation and disclosures of financial assets and liabilities and IFRS 7 on disclosures requirements for firms' exposure to risk was generally very low. This can be explained by the fact that firms not listed in NSE are generally not motivated to achieve high levels of compliance with accounting pronouncements of IFRSs and IASs mainly because they see these regulations as a requirement for the big public firms.

The study recommended that ICPAK should take the challenge of acquainting Small and Medium sized Entities with information on the strategic benefits on achieving high levels of compliances to entire accounting regulatory framework irrespective of the firm size. This would help mitigate on the risk suffered from the perceptions of information asymmetry and other unfavourable consequences associated with low quality accounting information such as limited access to external finance.

Kinuthia (2013) conducted a study seeking to establish the relationship between financial risk management systems and financial performance of micro finance institutions in Kenya. The research adopted a survey research method as well as causal research design to show the relationship between financial performance and financial risk management systems. The study targeted 47 registered MFIs. Both primary and secondary data sources were used in this study. A likert scale questionnaire was used to collect primary data. Statistical Package for Social Sciences (SPSS version 17.0) was used to aid in the entry, coding and analysis of the data obtained through the questionnaires. A regression analysis was used to determine the relationship between dependent and independent variables. From the findings of the study Mil's-should institutionalize a risk management process. Management of micro finance institutions has in many instances treated internal control and internal audits as marginal to operations, prioritizing only on their ability to uncover past mistakes and wrongdoing. The risk management approach thus suggests a more integrated approach to internal control, placing a greater emphasis on its ability to proactively prevent loss and encourage efficiency. For assured efficiency, MFIs must incorporate the concepts of risk management into their organizational culture and environment. In addition, the board and management should play an active role in a bid to rise above negative perceptions of internal control and internal audit. This can be done by putting emphasis to the employees about the positive results that can be achieved from their effective application. Similarly, the management can create a positive control environment in which all employees have a role in improving the internal control system.

Kasiva (2012) conducted a study seeking to establish the impact of risk-based audit on financial performance in commercial banks in Kenya. This study adopted Correlation research design since it describes the specific phenomenon in its current trends, current events and linkages between different factors at the current time. The target population for the study comprised of 44 respondents who were finance officers, internal auditors, the credit officers, relationship officers/managers and accountants at commercial banks in Kenya. Primary data collected using questionnaires was used in this study. Data analysis was done using descriptive statistics such as mean, standard deviation and frequency distribution. Data presentation was done by the use of pie charts and tables for ease of understanding and interpretation. From the findings, the study concluded that risk based auditing through risk assessment, risk management, annual risk based planning, internal auditing standards and internal auditing staffing should be improved. This would make it easy for the firm to detect risks on time and focusing on high risk areas leading to increased transparency and accountability. Proper planning enhances accuracy, timeliness, efficiency, completeness, convenience and clarity. Credible audit reports, auditor independence to identify and rectify audit errors, effective implementation of audit recommendations, financial management and compliance with accepted audit standards, effective internal audit staff and independent audit committee influence financial performance in commercial banks. From the findings, the study recommended that management in commercial banks in Kenya should adopt effective risk based audit practices such as risk assessment, risk management, annual risk based planning, internal auditing standards and internal auditing staffing to enhance effective and efficient financial performance

Muriithi (2013) carried out a study to determine the causes of Non-Performing loans in Commercial Banks, in Kenya. The study adopted the descriptive design and applied both multiple regression models on secondary data to determine the relationship between causes of Non-Performing Loans in Commercial Banks in Kenya. The study used secondary data for the period 2008-2012. Inflation, interest rates and growth in loans were used as independent variables while non-performing loan was used as the dependent variable. The population of this study comprised of 43 commercial banks in Kenya and data was analysed using SPSS. Findings revealed that inflation rate, real interest rate and growth rate in loans were the causes of non-performing loans in Kenya.

The study recommends that in order for the profitability of commercial banks in Kenya to improve, the Government should adopt measures that will control the real interest rate in Kenya. Lower interest rates would be more appropriate in order to reduce the level of non-performing loans in Kenya since they are negatively correlated with ratio of non-performing loans. The study also recommends that there is also need for the Government to control the inflation rate in Kenya as there is some evidence to suggest that low inflation rate will lead to better performance of loans in Kenya. The study further recommends that there is need for the commercial banks to adopt policies that will control the amount of loans they have.

Wanjiku (2010) sought to find out how Suntra Investment Bank (SIB) had managed growth. SIB endured a very tumultuous time in the capital markets during which several stock brokerage firms collapsed, were put under receivership or were acquired by other companies. The study sought to address two main objectives which were to determine the approaches adopted by SIB to manage growth and to determine how SIB has managed the organisation culture through its growth. Both primary data and secondary data were used in this study. Primary data was collected through personal interviews while secondary data was collected from journals, websites and in-house publications. A content analysis was then done on the data obtained and the findings were presented as brief discussions on the growth of the company, the approaches adopted to manage both growth and the organisation culture and on what informed those approaches.

Results revealed that SIB had gone through a full organization life cycle marked by a period of slow growth which lasted about 12 years between 1990 and 2002, rapid growth was experienced between 2003 and 2006 when the company reached maturity and there was a decline in growth in period between 2007 and 2008. Results also revealed that growth for the company was highly dependent on the performance of the economy and the change in government at the end of 2002 was of great benefit to the company due to increased investor confidence which saw to an increase in investors in the capital market and there by positive returns in the company too. Further, results revealed that SIB had adopted various approaches to manage growth more so during the rapid growth phase and the decline stage. These approaches were applied to different extents with the key ones being strategic planning, financial control, and human resource management, enhancements of the management information systems and management of the organisation culture. On the other hand, standardization marketing and lobbying the government were used to a lower extent. The study also established that SIB had experienced a big challenge in overcoming the organizational culture barrier. The company overcame this challenge by having culture change as an objective in the strategic plan and other strategies such as succession planning and induction of all new employees on the mission vision and core values of the company. Finally, the study concluded that it is very important that companies adopt various approaches to manage growth and to keep evaluating the approaches in light of the changes in the business environment.

3.0 RESEARCH METHODOLOGY

This study used a descriptive research design. The population of this study comprised of the commercial banks operating in Kenya. The target respondents included the 159 departmental heads, assistant departmental heads and lower cadre staffs like the supervisors, accounts and finance officers from the selected commercial banks' offices in Nairobi. The study used stratified sampling. Sample of responding staff was drawn from 159 top and middle level managers from the staff working in the banks' head offices in Nairobi. The study used stratified random sampling. The study used a sample of 30% of the entire population which was selected from within each group in proportions that each group contributes to the study population. This study used primary data collected using questionnaires. Data was analysed using SPSS and Microsoft excel. SPSS was used to produce descriptive statistics such as means, standard deviation, percentages and frequencies. Results were presented inform of tables, pie charts and graphs. The qualitative data was analyzed using content analysis and presented in prose form. Both quantitative and qualitative data was compiled to generate the final project report.

4.0 RESULTS AND DISCUSSIONS

General Information

Response Rate

Response rate involves the computation of the response rate from the questionnaire returned from the respondents. The study sampled 48 respondents from the target population to collect data with regard to the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya. Out of 48 questionnaires distributed 37 respondents completely filled in and returned the questionnaires which accounted for 77.1% response rate. The good response rate was reached due to the adoption of the data collection method of constant follow up with the respondents by the researcher. The response rate demonstrates a willingness of the respondents to participate in the study on the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Distribution of the Respondents by Gender

Table 1: Gender of the Respondents

Gender	Frequency	Percent
Male	23	62
Female	14	38
Total	**37**	**100**

The respondents sampled comprised male and female staff of the commercial banks in Kenya. They were to indicate their gender by ticking on the spaces provided in the questionnaire. Table 1 shows the distribution of the respondents by gender.

Accordingly, 62% of the respondents were males while 38% of them were females. The findings show that the institution studied has both male and female members; however the majority of them are males. The findings imply that the views expressed in this findings are gender sensitive and can be taken as representative of the opinions of both genders as regards to the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Response Rate Based on the Respondents' Departments

Table 2: Respondents' Departments

Department	Frequency	Percentage
Human resource	7	19.0
Finance	16	42.9
Procurement	7	19.0
Operations	5	14.3
Marketing	2	4.8
Total	**37**	**100.0**

Capital requirements and implementation of Basel III decisions affect the various aspects of performance of the organizations across various departments. It was therefore important to ensure that questionnaires were distributed and returned from various departments within the selected commercial banks. This was to ensure that the all areas influenced by Basel III are captured in the study. The results are as depicted in Table 2.

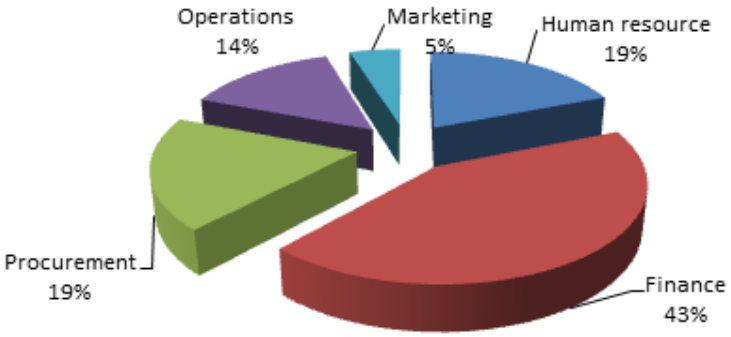

Figure 1: Respondents' Departments

From the results shown in table 2 and figure 1, 42.9% of the respondents were working in the finance departments, 19.0% of them were working in the human resource departments, 19.0% worked in procurement department, and 14.3% worked in the operations department, while 4.8% worked in marketing departments. This implies that all departments that were targeted by the study were involved and that the findings are not biased hence representative of the various departments' views on effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya

Respondents Managerial Positions

Table 3: Respondents Designations

Designations	Frequency	Percentage
Heads of department	4	10.3
Assistant heads of department	13	34.5
Supervisors	13	34.5
General staffs	8	20.7
Total	**37**	**100.0**

The study targeted to collect data from the management staffs. As such the respondents were likely to include managers, assistant managers, supervisors and general staffs. This was relevant to assess the distribution of the respondents across the management levels since they are part and parcel in the process of determining the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

The study findings in table 3 show that all the respondents occupy positions concerned with implementation of decisions like Basel III therefore they are aware of the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya. As such, 34.5% of the respondents indicated that they were assistant heads of department (assistant managers), another 34.5% of them were supervisors, 20.7% of them indicated that they were general staffs, while 10.3% of the respondents comprised of heads of departments (managers). These findings show that the respondents that participated in the study were mainly those involved in the implementation of Basel III requirements that affect the capital adequacy requirement in commercial banks in Kenya.

Distribution of Respondents by Working Experience in the Banking Industry

Table 4: Respondents' Duration of Work in the Commercial Banks in Kenya

Duration	Frequency	Percentage
0-5 yrs	7	19.0
5-10 yrs	11	31.0
10-15	19	50.0
Over 15 yrs	0	0.0
Total	**37**	**100.0**

The respondents were required to indicate the length of time they had worked in commercial banks in Kenya. The length of service/working in an organization determines the extent to which one is aware of the issues sought by the study. The results are as depicted in Table 4.

From the respondents' duration of work in the commercial banks demonstrated in Table 4, 50.0% of them indicated that they had worked in the commercial banks for 10 to 15 years, 31.0% of them had been working in the commercial banks for 5 to 10 years, while 19.0% had worked in the commercial banks for 0 to 5 years. For that reason, majority of the respondents had enough experience on the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya

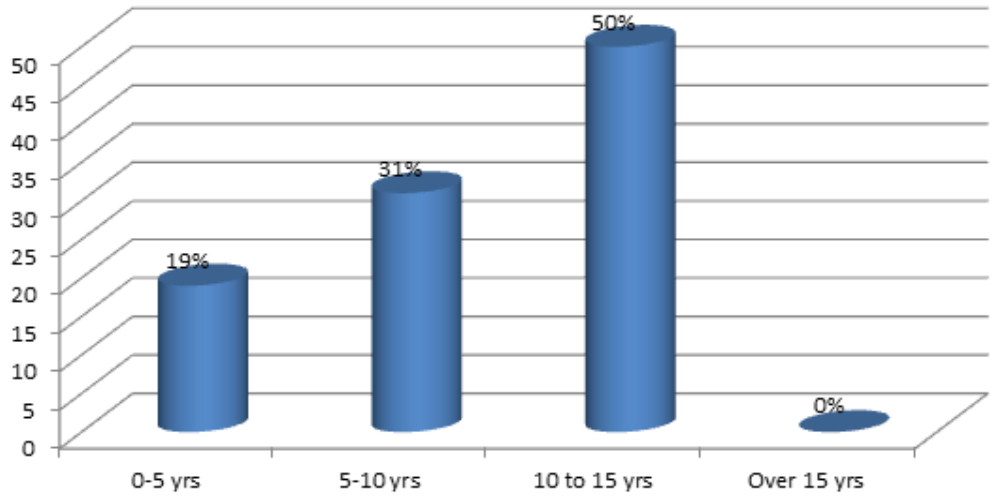

Figure 2: Working Experience in the Banking Industry

Highest Formal Qualification

Table 5: Level of Education

Level of Education	Frequency	Percent
Undergraduate	15	40.5
Post graduate level	19	50.0
Certificate/Diploma	4	9.5
Total	**37**	**100.0**

The respondents were asked to indicate their level of education. The target population comprised of people in different responsibilities and qualification requirements hence different academic qualifications. This difference might contribute to differences in the responses given by the respondents. The study therefore sought to investigate the education level achieved by the respondents.

The outcome depicted in table 5 show that majority of the respondents had at least an undergraduate degree and hence understood the information sought by this study, that is, 40.5% of the respondents had acquired a undergraduate degrees level of education, 50.0% of the respondents indicated that they had acquired a post graduate level of education, while 9.5% of the respondents indicated that they had acquired other levels of education such as ICPAK and Higher Diplomas. These outcomes mean that majority of the respondents had at least an undergraduate degree and hence understood the information sought by this study.

Descriptive Statistics

The objective of the study was to seek to investigate the challenges commercial banks are facing in the implementation of capital adequacy requirement. Accordingly, the respondents were required to indicate the extent their banks experience various challenges in the implementation of capital adequacy requirement.

Table 6: Challenges Faced in the Implementation of Capital Adequacy Requirement

Challenges	No extent	Little extent	Moderate extent	Large extent	Very large extent	Mean	Stddev
Regulatory constraints	29.2	43.8	8.3	8.3	10.4	3.5428	1.5152
Additional capital	18.8	10.4	35.4	35.4	33.3	3.2972	1.6102
Risk and finance management culture	0	12.5	14.6	25	29.2	3.3322	1.4923
Growth barrier	0	4.2	45.8	37.5	12.5	3.5845	0.77251

Results in table 6 reveal that majority of the respondents reiterated that their banks experienced growth barrier and regulatory constraints to great extents as shown by mean scores of 3.5845 and 3.5428 respectively, while they indicated that, in the implementation of capital adequacy requirement, commercial banks experience risk and finance management culture and additional capital challenges to moderate extents as shown by mean scores of 3.3322 and 3.2972respectively.

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

Discussion

The study found out that commercial banks experienced growth barrier and regulatory constraints to great extents, while in the implementation of capital adequacy requirement, commercial banks experiencerisk and finance management culture and additional capital challenges to moderate extents. Further, the respondents said that other challenges for commercial banks and financial institutions is deciding how best to implement a solution that will allow them to comply with Basel III include; how to operate the systems and processes for improved operational effectiveness, and how to understand and ultimately reduce their capital requirements. The weaknesses in applying consistent, robust risk asset definitions globally have led to distortions of true capital adequacy positions.

These findings agree with those of (Agoraki et al, 2011) who argued that commercial banks are faced by several challenges in the implementation of capital adequacy requirement. The key challenge for Kenyan banks and financial institutions are regulatory constraints and limitations as CBK does not have enough staff and systems to adequately supervise the implementation of the new regulations.

Conclusions

The study concludes that the implementation of Basel III requirement has been faced by various challenges like growth barrier, regulatory constraints, risk and finance management culture and additional capital challenges. In addition, the study concluded that commercial banks face challenges in deciding how best to implement a solution that will allow them to comply with Basel III, how to operate the systems and processes for improved operational effectiveness, and how to understand and ultimately reduce their capital requirements.

Recommendations

The implementation of Basel II has been a key driver for the refinement and maturation of risk management frameworks in financial institutions worldwide. However, the arrival of Basel III signals an unprecedented rising of the bar for risk management practices to support the comprehensive nature of the new requirements. The critical risk management challenges posed by the need to implement Basel III require the support and engagement of multiple competencies across the organization to address impacts on people, process and technology. The study therefore recommends that Banks should manage their risks more closely and avoid a build-up of unintended risk, reducing the opportunities for regulatory capital arbitrage. This would go a long way in eliminating growth barriers, regulatory constraints, capital adequacy requirement, risk and finance management culture and additional capital challenges.

Suggestion for Further Research

Basel III framework is founded on strengthening the banking industry through the three key principles of capital adequacy, leverage ratio and liquidity requirements. This study has only analyzed the impact of capital adequacy. Therefore, further research could be done on the Impact of leverage ratios in the commercial banking industry in Kenya as Basel III requires banks to maintain a leverage ratio in excess of 3%.

Further research can also be done on the impact of liquidity requirements on the performance of commercial banks in Kenya since Basel III also introduced two essential liquidity ratios. The liquidity Coverage Ratio is guarantee that a bank holds sufficient high-quality liquid assets to cover up for total net cash outflows for over 30 days. Similarly, the Net Stable Funding Ratio necessitate that the available amount of stable funding should be more than the requisite amount of stable funding for more than one-year of pro-longed stress.

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Importance of Capital Adequacy Requirements in Basel III Framework for Commercial Banks in Kenya

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ABSTRACT

The purpose of the study was to examine the importance of capital adequacy requirements in Basel III framework for commercial banks in Kenya. A descriptive survey design was applied to a population of 43 commercial banks operating in Kenya. The target population composed of the 159 management staff currently employed at the head offices of the various commercial banks in Kenya. The population was composed of Senior, Middle and Junior or Entry level Management staff. A sample of 30% was selected from within each group. Primary data was gathered using questionnaires which were dropped off at the bank's head offices and picked up later when the respondents had filled the questionnaires.Descriptive analysis was used to analyze quantitative data while content analysis was used to analyse qualitative data. The study concludes that capital adequacy requirement is perceived to be important in commercial banks. The study thus deduces that financial stability, credit risk management, reduced vulnerability to liquidity shocks balance sheet structure and deposit insurance affect the capital requirement of the commercial banks in Kenya. In addition, the study concluded that Basel III increases capital requirements for counterparty credit risk arising from derivatives, repurchase agreements and securities financing activities. The study recommends that banks should ensure a flexible Basel III management expertise that delivers speed, accuracy, and performance to deliver competitive advantage.

Keywords: Basel III framework, capital adequacy requirement, commercial banks

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1.0 INTRODUCTION

Background of the Study

The global financial crisis of 2009-2010 spurred the need to review the regulatory framework of banks across the globe. As a result, reforms were necessary to rectify flaws in the regulatory framework. The Basel Committee on Banking Supervision (BCBS) is leading efforts to reform the global banking regulatory framework (BCBS, 2010a). In December 2010, BCBS announced Basel III proposals which national regulators and regional supervisory organisations are reviewing to evaluate its suitability to conditions in their own financial systems. According to Bean (2009), the banks were undercapitalised which is one of the reasons behind the 2007-2010 financial crises. The financial crisis 2007-2009 still has effects on international financial markets and the real economy.

Key lessons from the global financial crisis revolve around leverage, capital and liquidity. According to BCBS (2010b) the existence of the credit bubble, alongside with the constant innovation in financial products and techniques and fair value accounting have to be cited in this context as additional causes of the crisis. In addition, inadequate bank regulation is viewed as one of the main causes of the financial crisis (BCBS, 2010a; Calice, 2010).

According to Financial Stability Board (2011) global crises had a huge impact on banks across the world. The crisis resulted from too much leverage, little capital and inadequate liquidity by many banks. They were thus unable to absorb their large trading and credit losses that had occurred since 2007 and many banks failed (International Monetary Fund, 2010). The weaknesses in the banking sector were rapidly transmitted to the rest of the financial system and the economy resulting in a massive contraction of liquidity and credit availability (Moreno, 2011).

Basel III is the third instalment of the Basel accords and is a global regulatory standard set by the BCBS on capital adequacy (including a new leverage ratio and capital buffers), market liquidity risk (with new short-term and long-term liquidity ratios) and stress testing focusing on stability. The Basel III reforms to global regulatory standards were agreed by the G-20 in November 2010 and were then issued by the Basel Committee on Banking Supervision in December 2010 (BCBS, 2010a). The key aim of these reforms is to strengthen the capital adequacy requirements with regard to quality and quantity of capital which banks must hold in order to absorb losses.

The Basel III framework, whose main thrust has been enhancing the banking sector's safety and stability, emphasises the need to improve the quality and quantity of capital components, leverage ratio, liquidity standards, and enhanced disclosures. Basel III is therefore an effort to control the causes of the most recent crisis. Regulation of this sort has been effective in the past (BCBS, 2010b).

Basel III introduces new and enhanced rules, these includes the introduction of a new and stricter definition of capital – designed to increase consistency, transparency and quality of the capital base – and the introduction of a global liquidity standard (BCBS, 2010a,b). The two new liquidity ratios – the longer-term Net Stable Funding Ratio (NSFR) and the short-term Liquidity Coverage Ratio (LCR)–call on banks to raise high-quality liquid assets and acquire more stable sources of funding, ensuring that they are in agreement with the principles of liquidity risk management. In addition, Basel III introduces a new leverage ratio, a substitute to the risk-based Basel II framework. By setting 3 percent as the ratio of Tier 1 Capital to total exposure, the new leverage ratio may limit banks' scope of action (BCBS, 2010c).

Moreover, Basel III increases capital requirements for securities financing activities, repurchase agreements and counterparty credit risk arising from derivatives. Additionally, the new framework has formulated ways of reducing systemic risk and the cyclical effects of Basel II. For instance, it introduces a countercyclical capital buffer and capital conservation, and discusses "through the- cycle" provisioning. The bursting of the credit bubble led to a rapid decline in asset prices, combined with a reduction in what Wilmot, Sweeney, Klein & Lantz (2009) dubbed, the stock of shadow money, liquid assets which take up the role of money to finance the expansion during an economic boom.

Basel III is poised to have a significant impact on the world's financial systems and economies. The implications for the banking industry from Basel III could be profound. According to BCBS (2010b) new minimum capital standards changes combined with the higher capital charges for trading books make some business models less profitable or even unprofitable going forward and banks will need to rethink their strategy and business portfolio in the light of the changes.

As the ailing global economy blew cavernous holes in national budgets, mounting censure was directed to financial regulators in OECD nations. Their counterparts in emerging economies have not escaped fierce condemnation for blatantly (Ashcraft and Schuermann, 2008). While credit rating firms failed to properly measure the inherent dual risks arising from sub-prime loans and the new financial architecture, policymakers resorted to easy money and low interest rates to further boost house purchases and consumption (Mishkin, 2008). All the more, the openness of international financial markets tempted western governments to expand their expenditure by taking up huge foreign debt at cheap interest rates especially since they were weary of rebounding into a post-2001 recession.

The issuance of government bonds tamed emerging economies' hunger for holding solid sovereign securities (Balin, 2010). Consequently, western fiscal agents accumulated national debt that approached the perilous threshold of 90 percent debt-to-GDP ratio boding an economic predicament (Reinhart and Rogoff, 2010).Despite the fact that Macroprudential regulation is necessary for Africa, the proposals in Basel III are still inadequate in reducing systemic risks on the continent. This is because they do not deal with systemic threats resulting from cross border capital flows arbitrated through the banking system.

Lukonga and Kay (2010) argue that the regulatory shortcomings facing Africa need a larger collection of instruments than those offered in Basel III. These instruments can include limitation to foreign exchange exposure and regulations to limit amassing of large loan. This calls for a more aggressive regulatory regime to warrant a more healthy and flexible financial system in Africa. Most African countries inflict restrictions on business activities, banks' large loan concentrations and foreign exchange exposures which are not within the traditional commercial banking.

Lukonga and Kay (2010) further argued that African bank regulation are more forceful compared to the advanced economies which basically rely on just one regulatory instrument, the capital adequacy requirement, which exposed the advanced economies to "gaming" by banks to reduce the amount of capital they had to hold. The potential impact of Basel III on the banking system is significant. Banks will experience increased pressure on their Return on Equity (RoE) due to increased liquidity and capital costs. In particular, Basel III creates incentives for banks to improve their operating processes – not only to meet requirements but also to increase efficiency and lower costs (BCBS, 2010a).

Kenyan banks are forced to improve their capital buffers through increased capital adequacy requirements, as well as the introduction of liquidity requirements and countercyclical macro prudential measures (BCBS, 2010).The banks are also required to maintain a total capital to risk-weighted assets ratio- a gauge of a bank's financial strength based on total capital including items such as goodwill and revaluation of 14.50 per cent, up from the current 12 per cent (CBK, 2013). Banks are building their buffer capital in line with the CBK's prudential requirements and CBK is undertaking stress-testing to ensure that this progresses well within the 18-month build up window.

Currently, the minimum capital requirements for Kenyan banks are already above the proposed minimums as the tier 1 capital to Total Risk Weighted Assets stands at 8 per cent and total capital to total risk weighted assets at 12 per cent. An analysis of the two ratios for banks shows that the top six and other tier two banks such as Diamond Trust and NIC Bank are already in compliance with the new requirements. Equity, Barclays and Co-operative Banks adjusted their ratios in advance, their adoption of new accounting methods resulting in a drop in both ratios as at June 2013 when compared with December 2012 (CBK, 2013).

Further, the progressive increase of the minimum core capital of banks and mortgage finance companies to Ksh1 billion ($12.5 million) by 2012 will position the Kenyan banks to exploit new market niches and absorb any emerging shocks. As at December 2013, the Kenyan Banking system comprised of 43 commercial banks, 2 NBFIs, 4 building societies and 48 foreign exchange bureaus Central Bank of Kenya, (2013). This study aimed at carrying out a study on the effects of Basel III framework on capital adequacy of commercial banks in Kenya.

Problem Statement

The aggregate effects of the requirements vary from one bank to another. Among large banks almost all of them have had to deal with its far reaching implications. Several studies have been carried out with regard to such bank regulations across the globe. In Egypt for the period 1989-2004, using a bank scope data base for 28 banks Naceur and Kandil, (2009) analysed the effects of capital regulations on the stability and performance of banks. The study analysed two measures of performance: cost of intermediation and banks' profitability- measured by return on assets. Result revealed that banks raise the cost of intermediation as the capital adequacy ratio internalizes the risk for shareholders.

This results to higher return on assets and equity revealing the need for capital regulation to the performance of banks and financial stability in Egypt. Their study suggested that the use of structural reforms aiming at establishing more competition in the banking industry can help ensure that performance indicators are corresponding with the best practices of the intermediation function that assures financial stability over time.

According to the quantitative impact study conducted by the Basel Committee (2010c), on average the newly defined capital ratio (Common Equity Tier I ratio) of large banks decreases from 11.1 percent to 5.7 percent, due to the change of definition of capital and the changes in risk-weighted assets. Furthermore, Basel III increased the required minimum capital level percent to more than 7 percent. Kamau et.al (2004) used the simultaneous equations approach to model the regulatory effect of minimum capital requirements on bank risk behaviour and capital levels in Kenya for the period 2000-2002. This study established that the Kenya's banking sector has an oligopolistic market structure.

To the best of the researcher's knowledge, no study had ever concentrated on assessing the effects of Basel III framework on capital adequacy of commercial banking industry in Kenya hence the research gap that the current study sought to fill. This study was built on the premise that the passage of time and the very numerous and significant changes in the commercial banks operating environment have led to totally different operating environment after the Basel III framework requirements.

Research Objectives

The purpose of this study was to assess the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

2.0 LITERATURE REVIEW

Empirical Review

Mutesi (2011) sought to investigate the relationship between risk management, information and financial performance of commercial banks. The research objectives that guided the study were, to examine the relationship between information sharing and risk management, to examine the relationship between information sharing and financial performance, to investigate the relationship between information sharing, risk management and financial performance. A sample of 104 commercial banks branches were selected from a total of all the branches of commercial banks in Kampala. The respondents were purposively selected from each branch. Across-sectional research design was used in this study. Questionnaires were used collect primary data. SPSS package was used to analyze data. Descriptive regression and correlation analysis were carried out.

The findings revealed that there was a significant positive relationship between all the study variables information sharing, risk management, and financial performance. The study recommended that banks should put up strong information sharing premises like credit bureaus, enrich their risk management committee, credit committee and audit function so as to minimize risks. The study also recommended that banks should recruit qualified staff and embrace training as a common practice in the banking industry in order to improve risk management policies and hence improved financial performance.

Abiola and Olaisi (2014) sought to investigate the impact of credit risk management on the performance of commercial banks in Nigeria. Secondary data was obtained from financial reports of seven commercial banking firms. The study used a time series methodology whereby data was obtained for seven years (2005–2011). The panel regression model was employed for the estimation of the model. In the model, Return on Equity (ROE) and Return on Asset (ROA) were used as the performance indicators while Non-Performing Loans (NPL) and Capital Adequacy Ratio (CAR) as credit risk management indicators. The findings revealed that credit risk management has a significant impact on the profitability of commercial banks in Nigeria.

Hosna, Manzura and Juanjuan (2009) sought to find out how credit risk management affects the profitability of banks in Sweden. The study used the quantitative approach and concentrated on the description of the outputs from SPSS. Regression model was used to do the empirical analysis. In the model ROE was defined as profitability indicator while NPLR and CAR as credit risk management indicators. The data was collected from the sample banks annual reports (2000-2008) and capital adequacy and risk management reports (2007-2008). The findings and analysis showed that credit risk management has effect on profitability in all 4 banks. Among the two credit risk management indicators, NPLR had a more significant effect on profitability (ROE) than CAR.

Mwangi (2012) examined the effect of credit risk management on the financial performance of commercial banks. The study used a descriptive research design. The study used secondary data which was obtained from the commercial banks' annual reports (2007-2011). Of the 43 commercial banks in Kenya, complete data was obtained from only 26 banks and thus the study concentrated on the 26 banks. The data obtained from the annual reports of the banks was analyzed using multiple regression analysis. Statistical Package for Social Sciences (SPSS version 18) was used to obtain the regression output. In the model return on equity (ROE) was used as the profitability indicator while non-performing loans ratio (NPLR) and capital adequacy ratio (CAR) as credit risk management indicators. Results revealed that there is a significant relationship between financial performance (in terms of profitability) and credit risk management (in terms of loan performance and capital adequacy). The results of the analysis revealed that both non-performing loans ratio (NPLR) and capital adequacy ratio (CAR) have negative and relatively significant effect on return on equity (ROE), with NPLR having higher significant effect on ROE in comparison to CAR. The study recommended that all banks should take on a credit risk grading system. The system should define the risk profile of borrower's to ensure that account management, structure and pricing are proportionate with the risk involved. Risk grading is a key measurement of a Bank's asset quality, and as such, it is essential that grading is a robust process. All facilities should be assigned a risk grade. Where deterioration in risk is noted, the risk grade assigned to a borrower and its facilities should be immediately changed. Borrower Risk Grades should be clearly stated on Credit Applications.

A bank's balance sheet structure is the only true measure of analysing a bank's financial performance and wellbeing as capital requirements do not take into account either the competence, depth and integrity of management (Commission of the European Communities, 2004). Capital requirements have become the only true internationally accepted standards of bank soundness (Mishkin, 2008). Due to the scrutiny of the banks' balance sheet structure from regulators and other stakeholders capital adequacy has emerged as major strategic theme for bank managers, one to which they devote an increasing amount of time and effort: capital provides a fund against which to charge unexpected or temporary losses, thus acting as a safety cushion for equity holders and debt holders, capital is considered by competitors, customers and rating agencies as a proxy for soundness (BCBS, 2010b; Taylor, 2011).

Kapan and Minoiu (2013) examined the role of bank balance sheet strength in the transmission of financial sector shocks to the real economy. The study used data from the syndicated loan market, they took advantage of variation in banks' dependency on wholesale funding and their structural liquidity positions, in 2007 quarter two, to approximate the effect of exposure to market freezes during 2007–08 on the supply of bank credit. Results revealed that banks with strong balance sheets were better in maintaining lending during the crisis. Particularly, banks that were ex-ante more dependent on market funding and had lower structural liquidity reduced the supply of credit more than other banks. However, higher and better-quality capital minimized this effect. Hence, it can be concluded that strong bank balance sheets are key for the recovery of credit following crises, and provide support for regulatory proposals under the Basel III framework.

Some proof points to the pro-cyclicality of leverage among financial institutions leading to aggregate volatility. This pro-cyclicality arises when financial institutions finance their assets with non-equity funding (i.e., debt financed asset expansions). Wholesale funding is a key source of market-based funding that enables institutions to adjust their leverage quickly. As such, financial institutions that are dependent on wholesale funding are likely to have higher degrees of leverage pro-cyclicality. Using high frequency balance sheet data for the world of banks, Damar, Meh andTerajima (2010) sought to identify whether there exists a positive relationship between the assets and leverage in Canada, the role played by wholesale funding for this relationship and market and macroeconomic factors associated with this relationship. The findings of the empirical analysis revealed that a strong positive relationship exists between asset growth and leverage growth, and the use to wholesale funding is a key determinant of this relationship. Furthermore, liquidity of several short-term funding markets matters for pro-cyclicality of leverage.

Using the non-parametric Malmquist methodology Casu and Girardone (2010) analyzed the importance of the inclusion of off-balance sheet (OBS) business in the definition of banks output when estimating total factor productivity change indexes. The analysis encompassed the total factor productivity change into technical efficiency and technological change. The results were in line with the common view in the recent literature, indicating that the exclusion of non-traditional activities leads to a misspecification of banks output.

In particular, the inclusion of OBS items raised the estimated productivity levels for all countries under study. However, the impact was bigger on technological change rather than efficiency change. Overall, results suggest that despite the uneven distribution of OBS between countries and among different institutions in the same country, these non-traditional activities are very important and failure to account for them would lead to biased conclusions.

The Deposit Protection Fund Board (DPFB) Kenya was established in 1985, under Section 36 of the Banking Act. This followed a number of bank failures in Kenya. Its mission is to build confidence in the banking sector through the provision of an effective deposit insurance scheme. Currently DPFB operates administratively as a department of Central Bank of Kenya. A new Kenya Deposit Insurance Act has established Kenya Deposit Insurance Corporation which will be independent and autonomous (Kimani, 2013).

Minh (2014) sought to study Deposit Insurance of Vietnam (DIV). The first objective of the study was to determine the benefits of DIV to the national banking system, and to the bank depositors. The second objective of the study was to analyse the knowledge of DIV among the bank employees of the Asian Commercial Bank (ACB), Vietnam. The study used a qualitative research method as a single case study for the case bank ACB in Vietnam. The study used primary data which was collected through interviews with the manager, and three employees of the case bank. Results revealed that the basic information of DIV is well-perceived by three of the four bank employees interviewed. Depending upon the duties of bank employees interviewed in the case bank, their knowledge of DIV's key elements, benefits, and limitations can be improved. The study recommended that banks should increase employees' knowledge of DIV for both the bank and insurer organisation. In terms of the case bank, it is recommended that some training methods should be implemented, for example professional training and consulting in forms of lectures, workshops, and seminars. With regard to the insurer organisation, it is recommended that different communication tools should be used to publicize DIV effectively.

Hamada (2011) investigated market discipline by depositors in the Indonesian banking sector. The study sought to give answers to the following questions; Does depositor discipline fulfill its role in Indonesia? Does deposit insurance affect depositor behavior thereby imposing discipline on banks? These questions are empirically examined using panel data on Indonesian commercial banks from 1998 to 2009. In Indonesia deposit insurance was introduced in 2005. Depositor discipline was examined by two measures: change in the interest rate and amount of deposits. Results revealed that depositors are keen to bank soundness and riskiness and select banks based on the bank's condition paying attention to equity ratio. It is found that depositors impose discipline on banks, but it varies according to regulatory and economic circumstances.

Financial stability is one of the most widely discussed issues in today's economic literature. The relevance of analyses on financial stability was first recognised during the international financial crises at the end of the 1990s, also strengthened by the financial and economic crisis emerging in 2007. These developments prompted the need for continuously providing the professional public opinion with an up-to-date and reliable picture of the condition of a given country's financial sector. Owing to the mutual relations of dependence – affording interpretation on both a vertical and horizontal level – the analyses need to cover the whole financial intermediary system (Reinhart and Rogoff, 2010).

Budding confirm that regulatory policy that restrict entry and banks' activities are negatively linked with bank industry stability. Banking systems having more limitations on banks' activities and hindrances to bank entry face systemic banking distress. On the other hand, capital regulations has no influence on banks financial stability (Barth, Caprio and Levine 2004; Beck et al. 2006).Nevertheless, in highly concentrated markets, financial institutions may judge that they are "too-big-to-fail" resulting to even riskier investments (Berger et al., 2008).

Results of a study conducted by Boyd et al. (2006) and De Nicolo and Loukoianova (2006) revealed that there exists an inverse relationship between higher market concentration and financial stability which is an implication that the risk of failures of a bank is higher in more concentrated markets. When analysing the stability of an institutional system, one examines the degree in which the whole of the system is capable of resisting external and internal shocks. Shocks do not always result in crises, but an unstable financial environment can in itself impede the healthy development of the economy. In global bank regulatory standards Basel III was the first framework to launch a specific macro-prudential measure seeking to deal with challenges to systemic stability; the countercyclical capital shield for the first time. The main aim of this was to control the levels of the credit cycle and chiefly to shun sharp declines of credit during cyclical recession which can have adverse effects on the real economy.

Vodová (2013) sought to find out determinants which affect liquid asset ratio of Czech and Slovak commercial banks. The data covers the period from 2001 to 2010. The study examined four bank specific factors and nine macroeconomic factors. Results of panel data regression analysis showed that although Czech Republic and Slovak Republic have a lot in common, different factors determined banks' liquid assets in individual countries. The liquid asset ratio of Czech banks increased with increase in capital adequacy, with depreciation of Czech koruna and with worsening quality of credit portfolio. Liquidity of Slovak banks decreased with size of the bank, with higher capital adequacy, higher bank liquidity and during periods of financial crisis. Liquidity of Slovak banks was also positively related to economic cycle.

Raddatz (2010) provided a systematic evidence of the role of banks' reliance on wholesale funding in the international transmission of the ongoing financial crisis. The researcher carried out an event study to estimate the impact of the liquidity crunch of September 15, 2008, on the stock price returns of 662 individual banks across 44 countries, and tested whether differences in the abnormal returns observed around those events related to these banks' ex-ante dependence on wholesale funding. Globally and within countries, banks that were highly dependent on non-deposit sources of funds had a larger decline in stock returns even after controlling for other mechanisms implying that liquidity played an important role in the transmission of the crisis.

Botoe (2012) analysed the impact of liquid asset holdings on Commercial Banks in Liberia profitability. The study used regression analysis to analyze the profitability of commercial banks using balanced data over the period of 2006-2011. The study used the liquidity asset to estimate the relationship between liquid asset and profitability. Results revealed that the business cycle of a commercial bank, deposit ratio and asset ratio influenced banks profitability.

3.0 RESEARCH METHODOLOGY

This study used a descriptive research design. The population of this study comprised of the commercial banks operating in Kenya. The target respondents included the 159 departmental heads, assistant departmental heads and lower cadre staffs like the supervisors, accounts and finance officers from the selected commercial banks' offices in Nairobi. The study used stratified sampling. Sample of responding staff was drawn from 159 top and middle level managers from the staff working in the banks' head offices in Nairobi. The study used stratified random sampling. The study used a sample of 30% of the entire population which was selected from within each group in proportions that each group contributes to the study population. This study used primary data collected using questionnaires. Data was analysed using SPSS and Microsoft excel. SPSS was used to produce descriptive statistics such as means, standard deviation, percentages and frequencies. Results were presented inform of tables, pie charts and graphs. The qualitative data was analyzed using content analysis and presented in prose form. Both quantitative and qualitative data was compiled to generate the final project report.

4.0 RESULTS AND DISCUSSIONS

General Information

Response Rate

Response rate involves the computation of the response rate from the questionnaire returned from the respondents. The study sampled 48 respondents from the target population to collect data with regard to the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya. Out of 48 questionnaires distributed 37 respondents completely filled in and returned the questionnaires which accounted for 77.1% response rate. The good response rate was reached due to the adoption of the data collection method of constant follow up with the respondents by the researcher. The response rate demonstrates a willingness of the respondents to participate in the study on the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Distribution of the Respondents by Gender

Table 1: Gender of the Respondents

Gender	Frequency	Percent
Male	23	62
Female	14	38
Total	**37**	**100**

The respondents sampled comprised male and female staff of the commercial banks in Kenya. They were to indicate their gender by ticking on the spaces provided in the questionnaire. Table 1 shows the distribution of the respondents by gender.

Accordingly, 62% of the respondents were males while 38% of them were females. The findings show that the institution studied has both male and female members; however the majority of them are males. The findings imply that the views expressed in this findings are gender sensitive and can be taken as representative of the opinions of both genders as regards to the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Response Rate Based on the Respondents' Departments

Table 2: Respondents' Departments

Department	Frequency	Percentage
Human resource	7	19.0
Finance	16	42.9
Procurement	7	19.0
Operations	5	14.3
Marketing	2	4.8
Total	**37**	**100.0**

Capital requirements and implementation of Basel III decisions affect the various aspects of performance of the organizations across various departments. It was therefore important to ensure that questionnaires were distributed and returned from various departments within the selected commercial banks. This was to ensure that the all areas influenced by Basel III are captured in the study. The results are as depicted in Table 2.

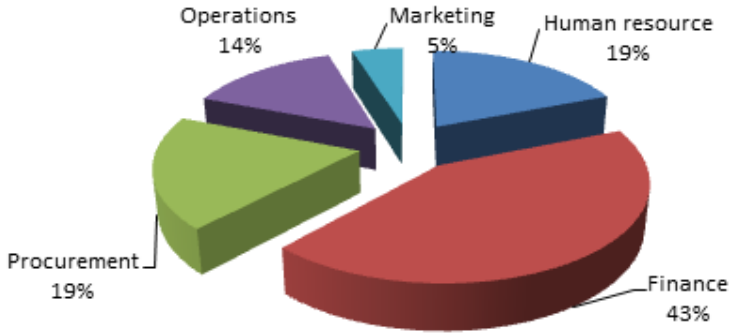

Figure 1: Respondents' Departments

From the results shown in table 2 and figure 1, 42.9% of the respondents were working in the finance departments, 19.0% of them were working in the human resource departments, 19.0% worked in procurement department, and 14.3% worked in the operations department, while 4.8% worked in marketing departments. This implies that all departments that were targeted by the study were involved and that the findings are not biased hence representative of the various departments' views on effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Respondents Managerial Positions

Table 3: Respondents Designations

Designations	Frequency	Percentage
Heads of department	4	10.3
Assistant heads of department	13	34.5
Supervisors	13	34.5
General staffs	8	20.7
Total	**37**	**100.0**

The study targeted to collect data from the management staffs. As such the respondents were likely to include managers, assistant managers, supervisors and general staffs. This was relevant to assess the distribution of the respondents across the management levels since they are part and parcel in the process of determining the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

The study findings in table 3 show that all the respondents occupy positions concerned with implementation of decisions like Basel III therefore they are aware of the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya. As such, 34.5% of the respondents indicated that they were assistant heads of department (assistant managers), another 34.5% of them were supervisors, 20.7% of them indicated that they were general staffs, while 10.3% of the respondents comprised of heads of departments (managers). These findings show that the respondents that participated in the study were mainly those involved in the implementation of Basel III requirements that affect the capital adequacy requirement in commercial banks in Kenya.

Distribution of Respondents by Working Experience in the Banking Industry

Table 4: Respondents' Duration of Work in the Commercial Banks in Kenya

Duration	Frequency	Percentage
0-5 yrs	7	19.0
5-10 yrs	11	31.0
10-15	19	50.0
Over 15 yrs	0	0.0
Total	**37**	**100.0**

The respondents were required to indicate the length of time they had worked in commercial banks in Kenya. The length of service/working in an organization determines the extent to which one is aware of the issues sought by the study. The results are as depicted in Table 4.

From the respondents' duration of work in the commercial banks demonstrated in Table 4, 50.0% of them indicated that they had worked in the commercial banks for 10 to 15 years, 31.0% of them had been working in the commercial banks for 5 to 10 years, while 19.0% had worked in the commercial banks for 0 to 5 years. For that reason, majority of the respondents had enough experience on the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

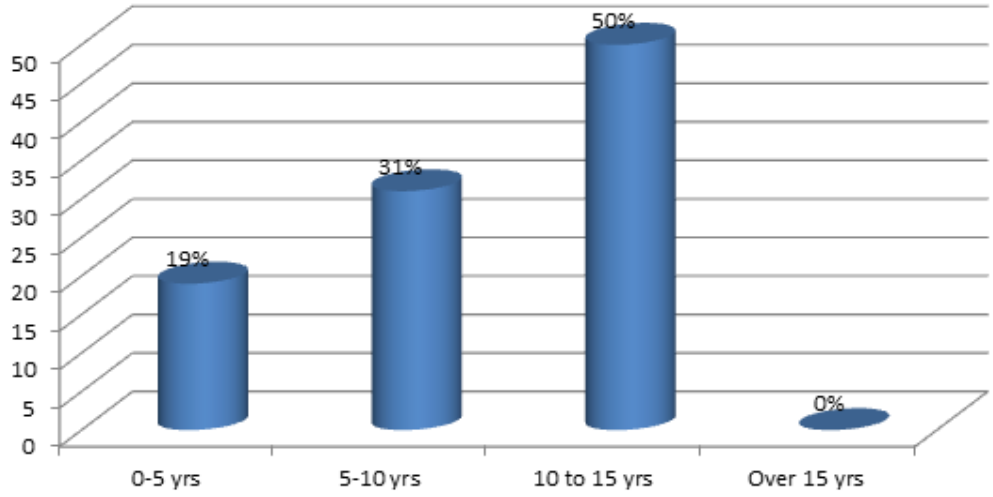

Figure 2: Working Experience in the Banking Industry

Highest Formal Qualification

Table 5: Level of Education

Level of Education	Frequency	Percent
Undergraduate	15	40.5
Post graduate level	19	50.0
Certificate/Diploma	4	9.5
Total	**37**	**100.0**

The respondents were asked to indicate their level of education. The target population comprised of people in different responsibilities and qualification requirements hence different academic qualifications. This difference might contribute to differences in the responses given by the respondents. The study therefore sought to investigate the education level achieved by the respondents.

The outcome depicted in table 5 show that majority of the respondents had at least an undergraduate degree and hence understood the information sought by this study, that is, 40.5% of the respondents had acquired a undergraduate degrees level of education, 50.0% of the respondents indicated that they had acquired a post graduate level of education, while 9.5% of the respondents indicated that they had acquired other levels of education such as ICPAK and Higher Diplomas. These outcomes mean that majority of the respondents had at least an undergraduate degree and hence understood the information sought by this study.

Descriptive Statistics

The objective of the study was to establish the importance of capital adequacy requirement. In this regard the respondents were required to indicate the extent to which capital adequacy requirement is perceived to be important in commercial banks in Kenya.

From table 6, 53.2% of the respondents indicated that capital adequacy requirement is perceived to be important in commercial banks to a great extent, 30.1% of them indicated that capital adequacy requirement is perceived to be important in commercial banks to a very great extent, 13.0% of the respondents indicated to a moderate extent, while 3.7% of the respondents indicated that capital adequacy requirement is perceived to be important in commercial banks to a little extent.

Table 6: Extent to which Capital Adequacy Requirement is Important to Banks

Extent	Frequency	Percent
To a very great extent	11	30.1
To a great extent	20	53.2
To a moderate extent	5	13
To a little extent	1	3.7
Total	**37**	**100**

In addition the respondents were required to indicate the extent to which various aspects of Basel III regulations affect the capital requirement of the commercial banks in Kenya.The results are as depicted in Table 7.

Table 7: Extent to which Basel III Regulations affect Banks' Capital Requirement

Aspects of Basel III regulations	No extent	Little extent	Moderate Extent	Great extent	Very great extent	Mean	Std. Dev.
Credit Risk Management	2.1	16.7	10.4	60.4	8.3	3.6250	1.0022
Balance Sheet Structure	4.1	26.3	18.1	19.2	32.3	3.4612	1.2633
Deposit Insurance	27.1	37.5	6.3	14.6	14.6	3.2083	1.1842
Financial Stability	2.1	27.1	16.7	10.4	43.8	3.6667	1.3421
Reduced Vulnerability to Liquidity Shocks	29.2	43.8	8.3	8.3	10.4	3.5428	1.5152

From the study majority of the respondents indicated that financial stabilityaffects the capital requirement of the commercial banks in Kenya to a great extent as shown by a mean score of 3.6667, credit risk managementaffects the capital requirement of the commercial banks in Kenya to a great extent as shown by a mean score of 3.6250 and reduced vulnerability to liquidity shocksaffects the capital requirement of the commercial banks in Kenya to a great extent as shown by a mean score of 3.5428 while balance sheet structure and deposit insurance affect the capital requirement of the commercial banks in Kenya to moderate extents as shown by mean scores of 3.4612 and 3.2083 respectively.

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

Discussion

The objective of the study was to assess the importance of capital adequacy regulations in commercial banks in Kenya. Capital is often considered as a cushion that helps banks absorb their losses and thus avoid failure in the long run. The study found that capital adequacy requirement is perceived to be important in commercial banks to a great extent, where financial stability, credit risk management and reduced vulnerability to liquidity shocks were found to affect the capital requirement of the commercial banks in Kenya to great extents while balance sheet structure and deposit insurance affect the capital requirement of the commercial banks in Kenya to moderate extents. Additionally, the respondents added that Basel III increases capital requirements for counterparty credit risk arising from derivatives, repurchase agreements and securities financing activities. As such, the capital conversion buffer ensures that banks absorb losses without breaching the minimum capital requirement, and are able to carry on business even in a downturn without deleveraging.

Conclusions

The study concludes that capital adequacy requirement is perceived to be important in commercial banks. In this regard, capital adequacy requirement is perceived to be important in commercial banks. The study thus deduces that financial stability, credit risk management, reduced vulnerability to liquidity shocks balance sheet structure and deposit insurance affect the capital requirement of the commercial banks in Kenya. In addition, the study concluded that Basel III increases capital requirements for counterparty credit risk arising from derivatives, repurchase agreements and securities financing activities. As such, the capital conversion buffer ensures that banks absorb losses without breaching the minimum capital requirement, and are able to carry on business even in a downturn without deleveraging.

Recommendations

Among the benefits of Basel II implementation, the allocation of bank capital is better matched to specific bank risks, resulting in more efficient pricing and allocation of funds. The goals of Basel III are strengthening capital regulations with the goal of promoting a more resilient banking sector; and improving the banking sector's ability to take up shocks resulting from financial and economic stress. Accordingly, the study recommends that banks should ensure a flexible Basel III management expertise that delivers speed, accuracy, and performance to deliver competitive advantage. And those banks that implement the optimal solution will not only have an ideal platform for delivering Basel III, they will also have a solid platform for their future commercial development. A key success factor in implementing Basel II and furthering risk management was gaining buy-in and support at the highest levels of banking organizations, including not only various levels of management, but the board as well. Such an integrated program will coordinate all Basel III initiatives enterprise-wide in the banks and help ensure that major work streams in risk management solution sets and projects fully address Basel III implementation requirements.

Areas for Further Research

Basel III framework is founded on strengthening the banking industry through the three key principles of capital adequacy, leverage ratio and liquidity requirements. This study has only analyzed the impact of capital adequacy. Therefore, further research could be done on the Impact of leverage ratios in the commercial banking industry in Kenya as Basel III requires banks to maintain a leverage ratio in excess of 3%.

Further research can also be done on the impact of liquidity requirements on the performance of commercial banks in Kenya since Basel III also introduced two essential liquidity ratios. The liquidity Coverage Ratio is guarantee that a bank holds sufficient high-quality liquid assets to cover up for total net cash outflows for over 30 days. Similarly, the Net Stable Funding Ratio necessitate that the available amount of stable funding should be more than the requisite amount of stable funding for more than one-year of pro-longed stress.

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Measures Commercial Banks have Taken to Ensure Compliance with the Capital Adequacy Requirement in Basel III Framework

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ABSTRACT

The purpose of the study was to establish measures commercial banks have taken to ensure compliance with the capital adequacy requirement in Basel III framework. A descriptive survey design was applied to a population of 43 commercial banks operating in Kenya. The target population composed of the 159 management staff currently employed at the head offices of the various commercial banks in Kenya. The population was composed of Senior, Middle and Junior or Entry level Management staff. A sample of 30% was selected from within each group. Primary data was gathered using questionnaires which were dropped off at the bank's head offices and picked up later when the respondents had filled the questionnaires. Descriptive analysis was used to analyze quantitative data while content analysis was used to analyze qualitative data. Based on the findings the study concluded that the commercial banks in Kenya have taken various measures to ensure compliance with capital adequacy requirement such as cutting back on lending, market rights issue/bonds, increasing revenue growth/cutting costs and withholding dividend payment. In addition, the study concluded that commercial banks, in a bid to reduce the challenges experienced in the implementation of capital adequacy requirement, they opt to purchase high quality liquid assets, increasing their maturity profile and increasing retail deposits. The study recommends that it is vital to understand the forces behind the increasing sophistication and efficiency of risk management systems, before adopting them more widely for regulatory purposes.

Keywords: measures, commercial bank, capital adequacy requirement, Basel III framework.

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1.0 INTRODUCTION

Background of the Study

The global financial crisis of 2009-2010 spurred the need to review the regulatory framework of banks across the globe. As a result, reforms were necessary to rectify flaws in the regulatory framework. The Basel Committee on Banking Supervision (BCBS) is leading efforts to reform the global banking regulatory framework (BCBS, 2010a). In December 2010, BCBS announced Basel III proposals which national regulators and regional supervisory organisations are reviewing to evaluate its suitability to conditions in their own financial systems. According to Bean (2009), the banks were undercapitalised which is one of the reasons behind the 2007-2010 financial crises. The financial crisis 2007-2009 still has effects on international financial markets and the real economy.

Key lessons from the global financial crisis revolve around leverage, capital and liquidity. According to BCBS (2010b) the existence of the credit bubble, alongside with the constant innovation in financial products and techniques and fair value accounting have to be cited in this context as additional causes of the crisis. In addition, inadequate bank regulation is viewed as one of the main causes of the financial crisis (BCBS, 2010a; Calice, 2010).

According to Financial Stability Board (2011) global crises had a huge impact on banks across the world. The crisis resulted from too much leverage, little capital and inadequate liquidity by many banks. They were thus unable to absorb their large trading and credit losses that had occurred since 2007 and many banks failed (International Monetary Fund, 2010). The weaknesses in the banking sector were rapidly transmitted to the rest of the financial system and the economy resulting in a massive contraction of liquidity and credit availability (Moreno, 2011).

Basel III is the third instalment of the Basel accords and is a global regulatory standard set by the BCBS on capital adequacy (including a new leverage ratio and capital buffers), market liquidity risk (with new short-term and long-term liquidity ratios) and stress testing focusing on stability. The Basel III reforms to global regulatory standards were agreed by the G-20 in November 2010 and were then issued by the Basel Committee on Banking Supervision in December 2010 (BCBS, 2010a). The key aim of these reforms is to strengthen the capital adequacy requirements with regard to quality and quantity of capital which banks must hold in order to absorb losses.

The Basel III framework, whose main thrust has been enhancing the banking sector's safety and stability, emphasises the need to improve the quality and quantity of capital components, leverage ratio, liquidity standards, and enhanced disclosures. Basel III is therefore an effort to control the causes of the most recent crisis. Regulation of this sort has been effective in the past (BCBS, 2010b).

Basel III introduces new and enhanced rules, these includes the introduction of a new and stricter definition of capital – designed to increase consistency, transparency and quality of the capital base – and the introduction of a global liquidity standard (BCBS, 2010a,b). The two new liquidity ratios – the longer-term Net Stable Funding Ratio (NSFR) and the short-term Liquidity Coverage Ratio (LCR)–call on banks to raise high-quality liquid assets and acquire more stable sources of funding, ensuring that they are in agreement with the principles of liquidity risk management. In addition, Basel III introduces a new leverage ratio, a substitute to the risk-based Basel II framework. By setting 3 percent as the ratio of Tier 1 Capital to total exposure, the new leverage ratio may limit banks' scope of action (BCBS, 2010c).

Moreover, Basel III increases capital requirements for securities financing activities, repurchase agreements and counterparty credit risk arising from derivatives. Additionally, the new framework has formulated ways of reducing systemic risk and the cyclical effects of Basel II. For instance, it introduces a countercyclical capital buffer and capital conservation, and discusses "through the- cycle" provisioning. The bursting of the credit bubble led to a rapid decline in asset prices, combined with a reduction in what Wilmot, Sweeney, Klein & Lantz (2009) dubbed, the stock of shadow money, liquid assets which take up the role of money to finance the expansion during an economic boom. Basel III is poised to have a significant impact on the world's financial systems and economies. The implications for the banking industry from Basel III could be profound. According to BCBS (2010b) new minimum capital standards changes combined with the higher capital charges for trading books make some business models less profitable or even unprofitable going forward and banks will need to rethink their strategy and business portfolio in the light of the changes.

As the ailing global economy blew cavernous holes in national budgets, mounting censure was directed to financial regulators in OECD nations. Their counterparts in emerging economies have not escaped fierce condemnation for blatantly (Ashcraft and Schuermann, 2008). While credit rating firms failed to properly measure the inherent dual risks arising from sub-prime loans and the new financial architecture, policymakers resorted to easy money and low interest rates to further boost house purchases and consumption (Mishkin, 2008). All the more, the openness of international financial markets tempted western governments to expand their expenditure by taking up huge foreign debt at cheap interest rates especially since they were weary of rebounding into a post-2001 recession.

The issuance of government bonds tamed emerging economies' hunger for holding solid sovereign securities (Balin, 2010). Consequently, western fiscal agents accumulated national debt that approached the perilous threshold of 90 percent debt-to-GDP ratio boding an economic predicament (Reinhart and Rogoff, 2010).Despite the fact that Macroprudential regulation is necessary for Africa, the proposals in Basel III are still inadequate in reducing systemic risks on the continent. This is because they do not deal with systemic threats resulting from cross border capital flows arbitrated through the banking system.

Lukonga and Kay (2010) argue that the regulatory shortcomings facing Africa need a larger collection of instruments than those offered in Basel III. These instruments can include limitation to foreign exchange exposure and regulations to limit amassing of large loan. This calls for a more aggressive regulatory regime to warrant a more healthy and flexible financial system in Africa. Most African countries inflict restrictions on business activities, banks' large loan concentrations and foreign exchange exposures which are not within the traditional commercial banking.

Lukonga and Kay (2010) further argued that African bank regulation are more forceful compared to the advanced economies which basically rely on just one regulatory instrument, the capital adequacy requirement, which exposed the advanced economies to "gaming" by banks to reduce the amount of capital they had to hold. The potential impact of Basel III on the banking system is significant. Banks will experience increased pressure on their Return on Equity (RoE) due to increased liquidity and capital costs. In particular, Basel III creates incentives for banks to improve their operating processes – not only to meet requirements but also to increase efficiency and lower costs (BCBS, 2010a).

Kenyan banks are forced to improve their capital buffers through increased capital adequacy requirements, as well as the introduction of liquidity requirements and countercyclical macro prudential measures (BCBS, 2010).The banks are also required to maintain a total capital to risk-weighted assets ratio- a gauge of a bank's financial strength based on total capital including items such as goodwill and revaluation of 14.50 per cent, up from the current 12 per cent (CBK, 2013). Banks are building their buffer capital in line with the CBK's prudential requirements and CBK is undertaking stress-testing to ensure that this progresses well within the 18-month build up window.

Currently, the minimum capital requirements for Kenyan banks are already above the proposed minimums as the tier 1 capital to Total Risk Weighted Assets stands at 8 per cent and total capital to total risk weighted assets at 12 per cent. An analysis of the two ratios for banks shows that the top six and other tier two banks such as Diamond Trust and NIC Bank are already in compliance with the new requirements. Equity, Barclays and Co-operative Banks adjusted their ratios in advance, their adoption of new accounting methods resulting in a drop in both ratios as at June 2013 when compared with December 2012 (CBK, 2013).

Further, the progressive increase of the minimum core capital of banks and mortgage finance companies to Ksh1 billion ($12.5 million) by 2012 will position the Kenyan banks to exploit new market niches and absorb any emerging shocks. As at December 2013, the Kenyan Banking system comprised of 43 commercial banks, 2 NBFIs, 4 building societies and 48 foreign exchange bureaus Central Bank of Kenya, (2013). This study aimed at carrying out a study on the effects of Basel III framework on capital adequacy of commercial banks in Kenya.

Problem Statement

The aggregate effects of the requirements vary from one bank to another. Among large banks almost all of them have had to deal with its far reaching implications. Several studies have been carried out with regard to such bank regulations across the globe. In Egypt for the period 1989-2004, using a bank scope data base for 28 banks Naceur and Kandil, (2009) analysed the effects of capital regulations on the stability and performance of banks.

The study analysed two measures of performance: cost of intermediation and banks' profitability- measured by return on assets. Result revealed that banks raise the cost of intermediation as the capital adequacy ratio internalizes the risk for shareholders. This results to higher return on assets and equity revealing the need for capital regulation to the performance of banks and financial stability in Egypt. Their study suggested that the use of structural reforms aiming at establishing more competition in the banking industry can help ensure that performance indicators are corresponding with the best practices of the intermediation function that assures financial stability over time.

According to the quantitative impact study conducted by the Basel Committee (2010c), on average the newly defined capital ratio (Common Equity Tier I ratio) of large banks decreases from 11.1 percent to 5.7 percent, due to the change of definition of capital and the changes in risk-weighted assets. Furthermore, Basel III increased the required minimum capital level percent to more than 7 percent. Kamau et.al (2004) used the simultaneous equations approach to model the regulatory effect of minimum capital requirements on bank risk behaviour and capital levels in Kenya for the period 2000-2002. This study established that the Kenya's banking sector has an oligopolistic market structure.

To the best of the researcher's knowledge, no study had ever concentrated on assessing the effects of Basel III framework on capital adequacy of commercial banking industry in Kenya hence the research gap that the current study sought to fill. This study was built on the premise that the passage of time and the very numerous and significant changes in the commercial banks operating environment have led to totally different operating environment after the Basel III framework requirements.

Research Objectives

To establish measures commercial banks have taken to ensure compliance with the capital adequacy requirement in Basel III framework.

2.0 LITERATURE REVIEW

Empirical Review

Owino (2013) investigated lending policies and their impact on the levels of non-performing loans among commercial banks in Kenya. A descriptive survey was employed in this study with the population of interest of being the forty three (43) commercial banks in Kenya. The study used primary data which was collected using questionnaires. Self-administration of the questionnaires was done through drop-and-pick later method. Descriptive statistics was used to summarize the data and findings presented using tables and other graphical presentations as appropriate for ease of understanding and analysis. The study found that there is a relationship between lending policies and non-performing loans, leading the banks to lend prudently. This lowers the risk level to the banks.

Lang'at (2013) sought to find out the determinants of lending to farmers by commercial banks in Kenya. The study was conducted through a survey research design. Self-administered structured questionnaires were used to collect primary data. The respondents were gave an assessment of their lending policy to farmers vis-a-vis their policies on Credit Standards with Regard to Farmers; their Assessment of Return on Credit to Farmers; and their assessment of Risk on Credit to Farmers. Results indicated that banks give out loans to finance farming activities and that farmers have reliable sources of income that enable them to pay back their loans in time. Results also revealed that credit standards credit standards regard to farmers return on credit to farmers, risk on credit to farmers negatively affected lending to farmers. This is an implication that credit Standards with regard to Farmers; Return on Credit to Farmers; and Risk on Credit to Farmers reduces the amounts provided to the farmers in Kenya. The study recommended that policies should be scripted to ensure that the income from farmers in Kenya is stabilized to mitigate risk and improve their creditworthiness, to ensure that farmers have skills to manage their finances properly to maintain excellent financial records with banks and to help banks unwind their credit qualification for farmers so as to stimulate the demand and supply of credit.

Mwirotsi (2012) sought to investigate the effects of the lending rate policy on the loan portfolio of commercial banks in Kenya. The lending rate policy was measured by the average annual lending rate of the selected commercial banks. Loan portfolio comprised of the annual average of total loans and advances, loan accounts and nonperforming loans. The study employed a quantitative survey design. Secondary data was collected from the audited financial reports of sampled commercial banks for the period between 2002 and 2011. SPSS was used to analyse the data. The findings were presented in bar charts and tables.

Descriptive statistics, correlation analysis, regression analysis and test of auto correlation were the techniques used to analyze the data. Results revealed that the lending rates had a positive correlation with total loans and advances, total loan accounts and total nonperforming loans. However, only the nonperforming loans had a significant relationship with the lending rates. The study concluded that the high nonperforming loans portfolio in the Kenyan commercial banks has been as a result of high lending rates caused by the increases in the CBR and the high exchange rates. The study recommended that commercial banks should adopt policies and models that would enable them to reflect the changes in CBR, foreign exchange rates and any other inherent risks in the lending business. Therefore commercial banks will resort to cutting back on lending in order to shore up then capital adequacy ratios.

According to Financial Stability Board (2011), lack of regulation makes transactional and compliance costs very low. However, the volume that is available domestically is limited so long as it is possible to access cheaper funding from outside and then convert it into local currency. Fixed interest end investors (and their advisers) are blocked by the fear of inflation, the lack of liquidity and an inflexible system of equity-biased taxation. The cash for bond investment is increasing the amount of funds available. However, it needs to be in the best interests of the members for the funds to switch from equities to bonds. A liquid domestic bond market would benefit the financial system but to bring it about it will need a more radical stimulus than the requirements of Basel III.

Koka (2012) explored the relationship between issuance of Treasury/ Government bonds and economic growth in Kenya. A case survey research design was used in this study. The study used secondary data that span from the year 2003 to the year 2011. The time series data was on gross domestic product, market capitalization of bonds, value of bonds traded and total new issues of bonds. Regression analysis was used to analyse the data used in this study. The results revealed that the issuance of Government bonds has a positive effect on the level of economic growth in Kenya. This implied that Kenya could enhance its economic growth by effectively and strategically strengthening the Bonds market and the uptake of Government Bonds. The study concluded that the supply-leading hypothesis of economic growth prevailed in Kenya during the period under study from 2003 to 2011. This was an implication that economic growth was finance-led through funds mobilization. The study recommended that the regulatory authority should adopt policies that would support more companies to access the market and also be more proactive in their inspection role in order to check sharp practices which hinder market integrity and wear away investors' confidence.

The banks are also planning to raise capital in a timely manner and at a proper price. Unfavourable markets may mean issuing shares at a higher discount to market price and issuing more equity shares, thereby causing dilution of shareholding and reducing earnings per share (Moreno, 2011). Banks may be impacted by higher costs of capital and lower returns making it difficult to attract and retain investors. Again, as the cost of capital becomes higher, banks may be unable to provide lending to SME clients/unrated clients. If banks are not able to turn over their assets due to capital constraints, it will impact the GDP and economic growth as well.

In a bid to increase revenue, banks have adopted strategic responses which are dynamic mechanisms to balance sheet management, including rationalisation of branch structures, product rationalisation or implementation of a shared services model, undertaking strategic cost reductions. Banks will have to look at the kind of equity they can raise, the contingent capital and the amount of earnings they have to retain to reduce the need for raising further capital (Caggiano and Calice. 2011). At the same time this will affect the investor community because the investors look at dividends and expect some returns from the banks every year. So it's like a trade-off between retaining capital, retaining earnings and distributing dividends. Banks also have to look at their lines of businesses and make some hard decisions on exiting risky businesses, and businesses that are more capital demanding and also outsourcing or off-shoring non-core functions.

Kimani (2013) considered revenue, cost and profit effectiveness for Kenyan banks between 1998 and 2006. Besides, the study sought to find out the relationship between changes in cost and profit efficiency to stock returns using classical regression models. The study used a DEA methodology. Results revealed that banks had declining cost efficiency over the sample period while the revenue efficiency was linearly increasing. Malmquist total factor productivity index measures revealed that technical efficiency and technological efficiency were the main drivers of profit efficiency in the banking industry.

Results also revealed that there exists a significant relationship between stock returns and changes in both cost and profit efficiency for the listed commercial banks. Cost efficiency influenced stock returns of banks as poor cost management lowers banks' profits. Poor profits led to low future dividends to investors. Subsequently, the share price was bid down at the stock market. Hence, a bank which is capable of mobilizing its deposits, other funds and staff earns high profits, resulting to high dividends to investors and the share will be highly priced which implies high stock returns.

Mwange (2013) conducted a study seeking to establish the impact of mobile banking on the Financial Performance of Commercial Banks in Kenya during a period of five years. A causal research design was used in this study. The study used secondary data obtained from the Central Bank of Kenya reports and published financial reports of the 43 Commercial Banks in Kenya for a period of five years between 2008 through 2012. Results revealed that Mobile Banking has a restrained influence on profitability of commercial banks in Kenya. Thus, there exists positive relationship between mobile banking and bank performance. The study concluded that mobile banking enables banks to increase revenues in various ways such as increasing the return on asset (ROA). The study recommended that commercial banks should adopt new technologies which will improve their profit margins. Government policy makers should also revise policies related to promotion of innovation and transfer of technology that will improve profitability of organizations as it will translate to better tax revenues for the government.

The goal of corporate entities is to maximize the value of shareholders' investment in the firm. Managers pursue this goal through their investment and financing decisions. Investment decisions involve the selection of positive net present value projects while financing decisions involve selection of a capital structure that would minimize the cost of capital of firm. Apart from the investment and financing decisions, managers need to decide on regular basis whether to payout the earning to shareholders, reducing the agency problem. As Richard and Stewart (2003) posit the objective of the corporation is to maximize the total discounted dividends paid out to shareholders and companies that pay dividends are historically stable.

Ada (2013) carried out a study seeking to establish the relationship between corporate governance practices on the dividend payout of commercial banks in Kenya. The study used a functional form relationship between corporate governance practices and dividend payout using a regression model that showed the relationship between board size, insider holding, board composition, CEO duality, leverage as well as ownership and control to dividend payout. A total of 17 commercial banks in Kenya that paid dividends in the year 2008 - 2012 were used to determine the relationship. Results revealed that 72.7% of dividend payout in Kenyan commercial banks could be explained by corporate governance practices. The study recommended that the government should ensure that the corporate governance practices as outlined by the CMA are followed by companies which in turn will certify that the dividend payout to investors is most favourable.

Kimathi (2010) sought to establish the forms of dividend payout of firms listed at the Nairobi Stock Exchange by industry and to find out their influence of industry on dividend pay-out policies of firms. This study was a relational survey. The population of interest in this study consisted of all the firms quoted at the Nairobi Stock Exchange. Lack of readily available data from private companies limited this study to listed companies. Results showed that cash was the only form of dividend which was paid out by these firms. Hence, in terms of industry, it is not possible to conclude that a particular form of dividend payout is preferred over the other since all the firms paid their dividends in the form of cash. Results also revealed that industry factors had a strong positive effect on dividend payout ratios in three industries namely agriculture, finance and investment, and industrial and allied. In addition, industry factors had a weak positive influence on dividend payout ratios in the commercial and services industry. The study recommended that the management of various companies listed on the NSE should take into account the findings of this study in a bid to understand how industry factors influence the dividend payout ratios of their firms.

The second objective of the study was to seek to investigate the challenges commercial banks are facing in the implementation of capital adequacy requirement. Accordingly, the respondents were required to indicate the extent their banks experience various challenges in the implementation of capital adequacy requirement.

3.0 RESEARCH METHODOLOGY

This study used a descriptive research design. The population of this study comprised of the commercial banks operating in Kenya. The target respondents included the 159 departmental heads, assistant departmental heads and lower cadre staffs like the supervisors, accounts and finance officers from the selected commercial banks' offices in Nairobi. The study used stratified sampling. Sample of responding staff was drawn from 159 top and middle level managers from the staff working in the banks' head offices in Nairobi. The study used stratified random sampling. The study used a sample of 30% of the entire population which was selected from within each group in proportions that each group contributes to the study population. This study used primary data collected using questionnaires. Data was analysed using SPSS and Microsoft excel. SPSS was used to produce descriptive statistics such as means, standard deviation, percentages and frequencies. Results were presented inform of tables, pie charts and graphs. The qualitative data was analyzed using content analysis and presented in prose form. Both quantitative and qualitative data was compiled to generate the final project report.

4.0 RESULTS AND DISCUSSIONS

General Information

Response Rate

Response rate involves the computation of the response rate from the questionnaire returned from the respondents. The study sampled 48 respondents from the target population to collect data with regard to the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya. Out of 48 questionnaires distributed 37 respondents completely filled in and returned the questionnaires which accounted for 77.1% response rate. The good response rate was reached due to the adoption of the data collection method of constant follow up with the respondents by the researcher. The response rate demonstrates a willingness of the respondents to participate in the study on the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Distribution of the Respondents by Gender

Table 1: Gender of the Respondents

Gender	Frequency	Percent
Male	23	62
Female	14	38
Total	**37**	**100**

The respondents sampled comprised male and female staff of the commercial banks in Kenya. They were to indicate their gender by ticking on the spaces provided in the questionnaire. Table 1 shows the distribution of the respondents by gender.

Accordingly, 62% of the respondents were males while 38% of them were females. The findings show that the institution studied has both male and female members; however the majority of them are males. The findings imply that the views expressed in this findings are gender sensitive and can be taken as representative of the opinions of both genders as regards to the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Response Rate Based on the Respondents' Departments

Table 2: Respondents' Departments

Department	Frequency	Percentage
Human resource	7	19.0
Finance	16	42.9
Procurement	7	19.0
Operations	5	14.3
Marketing	2	4.8
Total	**37**	**100.0**

Capital requirements and implementation of Basel III decisions affect the various aspects of performance of the organizations across various departments. It was therefore important to ensure that questionnaires were distributed and returned from various departments within the selected commercial banks. This was to ensure that the all areas influenced by Basel III are captured in the study. The results are as depicted in Table 2.

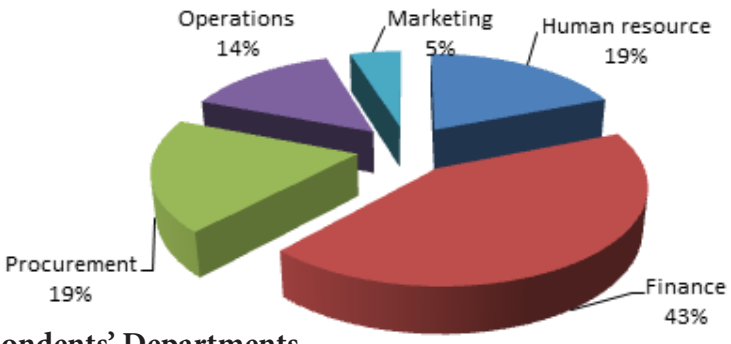

Figure 1: Respondents' Departments

From the results shown in table 2 and figure 1, 42.9% of the respondents were working in the finance departments, 19.0% of them were working in the human resource departments, 19.0% worked in procurement department, and 14.3% worked in the operations department, while 4.8% worked in marketing departments. This implies that all departments that were targeted by the study were involved and that the findings are not biased hence representative of the various departments' views on effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

Respondents Managerial Positions

Table 3: Respondents Designations

Designations	Frequency	Percentage
Heads of department	4	10.3
Assistant heads of department	13	34.5
Supervisors	13	34.5
General staffs	8	20.7
Total	**37**	**100.0**

The study targeted to collect data from the management staffs. As such the respondents were likely to include managers, assistant managers, supervisors and general staffs. This was relevant to assess the distribution of the respondents across the management levels since they are part and parcel in the process of determining the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

The study findings in table 3 show that all the respondents occupy positions concerned with implementation of decisions like Basel III therefore they are aware of the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya. As such, 34.5% of the respondents indicated that they were assistant heads of department (assistant managers), another 34.5% of them were supervisors, 20.7% of them indicated that they were general staffs, while 10.3% of the respondents comprised of heads of departments (managers). These findings show that the respondents that participated in the study were mainly those involved in the implementation of Basel III requirements that affect the capital adequacy requirement in commercial banks in Kenya.

Distribution of Respondents by Working Experience in the Banking Industry

Table 4: Respondents' Duration of Work in the Commercial Banks in Kenya

Duration	Frequency	Percentage
0-5 yrs	7	19.0
5-10 yrs	11	31.0
10-15	19	50.0
Over 15 yrs	0	0.0
Total	**37**	**100.0**

The respondents were required to indicate the length of time they had worked in commercial banks in Kenya. The length of service/working in an organization determines the extent to which one is aware of the issues sought by the study. The results are as depicted in Table 4.

From the respondents' duration of work in the commercial banks demonstrated in Table 4, 50.0% of them indicated that they had worked in the commercial banks for 10 to 15 years, 31.0% of them had been working in the commercial banks for 5 to 10 years, while 19.0% had worked in the commercial banks for 0 to 5 years. For that reason, majority of the respondents had enough experience on the effects of Basel III framework on capital adequacy requirement in commercial banks in Kenya.

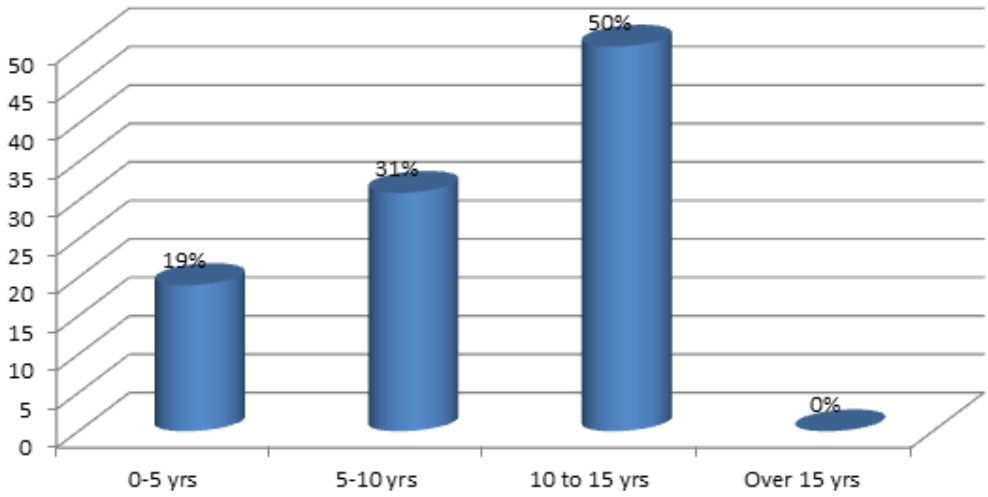

Figure 2: Working Experience in the Banking Industry

Highest Formal Qualification

Table 5: Level of Education

Level of Education	Frequency	Percent
Undergraduate	15	40.5
Post graduate level	19	50.0
Certificate/Diploma	4	9.5
Total	**37**	**100.0**

The respondents were asked to indicate their level of education. The target population comprised of people in different responsibilities and qualification requirements hence different academic qualifications. This difference might contribute to differences in the responses given by the respondents. The study therefore sought to investigate the education level achieved by the respondents.

The outcome depicted in table 5 show that majority of the respondents had at least an undergraduate degree and hence understood the information sought by this study, that is, 40.5% of the respondents had acquired a undergraduate degrees level of education, 50.0% of the respondents indicated that they had acquired a post graduate level of education, while 9.5% of the respondents indicated that they had acquired other levels of education such as ICPAK and Higher Diplomas. These outcomes mean that majority of the respondents had at least an undergraduate degree and hence understood the information sought by this study.

Descriptive Statistics

The objective of the study was to establish the measures that commercial banks have taken to ensure compliance with the capital adequacy requirement. As such the study sought to ascertain the extent to which commercial banks have taken some measures to ensure compliance with the capital adequacy requirement.

Table 6: Measures taken for Compliance with Capital Requirement

Extent	Frequency	Percentage
Very great extent	12	33
Great extent	14	39
Moderate extent	9	23
Little extent	2	5
Total	**37**	**100.0**

Results in Table 6 reveal that a majority (39%) of the respondents stated that commercial banks have taken measures to ensure compliance with the capital adequacy requirement to a great extent and 33% to a very great extent while 23% said commercial banks have taken some measures to ensure compliance with the capital adequacy requirement to a moderate extent. According to 4.5% of the respondents, commercial banks have taken some measures to ensure compliance with the capital adequacy requirement to a little extent. These results indicate that commercial banks have taken some measures to ensure compliance with the capital adequacy requirement to a great extent as shown by majority of the respondents, 72%.

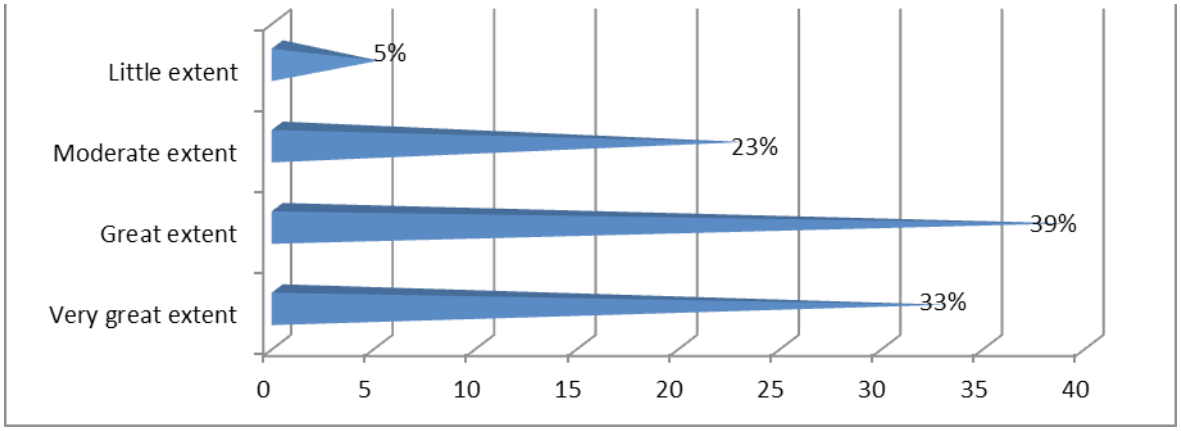

Figure 3: Measures are taken for Compliance with Capital Requirement

The study further required the respondents to rate the extent to which the banks have taken various measures to ensure compliance with the capital adequacy requirement. A scale of 1 to 5 where 1= no extent, 2= little extent, 3= moderate extent, 4= large extent and 5 is to a very large extent was provided.

Table 7: Measures to Ensure Compliance with the Capital Adequacy Requirement

Measures to ensure compliance	No Extent	Little Extent	Moderate Extent	Great Extent	Very Great Extent	Mean	Std. Dev
Cutting back on lending	2.1	27.1	16.7	10.4	43.8	3.6667	1.342
Market rights issue/bonds	11.9	7.4	22.6	21.2	24.3	3.0071	1.695
Increasing revenue growth/ cutting costs	16.2	7.1	21.7	21.2	26.0	3.1000	1.634
Withholding dividend payment	0	27	7	41	23	3.5528	1.1843

Majority of the respondents recapped that their banks have practiced cutting back on lending and withholding dividend payment to great extents as shown by mean scores of3.6667 and 3.5528to ensure compliance with the capital adequacy requirement while their banks have been increasing revenue growth/cutting costs as well as market rights issue/ bonds to a moderate extents shown by mean scores of 3.1000 and 3.0071 respectively.

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

Discussion

The study found out that the banks have adopted various measures in a bid to comply with capital adequacy requirement. This include; cutting back on lending and withholding dividend payment to great extents, increasing revenue growth/cutting costs as well as market rights issue/bonds to a moderate extents. Additionally, the commercial banks can minimize the capital adequacy gap with a steadfast secured liquidity facility after reducing its liquid asset requirement by other means, market rights issue for banks listed at the NSE, bonds issues for listed and non-listed firms, advertising, reducing interest rates on loans and mortgages, increasing interest rates on fixed deposits and introducing new products into the market, cutting costs through staff retirement packages, reduction of travelling costs and in-house training and development for staff.

These findings agree with those of BCBS (2010) a group that argued that banks may be impacted by higher costs of capital and lower returns making it difficult to attract and retain investors. As such, increasing efficiency, strategic cost reduction, and reassessing risky processes so that operating costs will be reduced and productivity will simultaneously increase. They also added that banks may consider changing group structure by buying minority and banks can mitigate the impact through cost-reduction programmes, changing internal change, adopting capital efficiency measures, de-risking and price adjustments. As a result of the foregoing measures, the average there has been a strong financial status of overall industry performance.

Conclusions

The study thus concluded that the commercial banks in Kenya have taken various measures to ensure compliance with capital adequacy requirement such as cutting back on lending, market rights issue/ bonds, increasing revenue growth/cutting costs and withholding dividend payment. In addition, the study also concluded that commercial banks, in a bid to reduce the challenges experienced in the implementation of capital adequacy requirement, they opt to purchase high quality liquid assets, increasing their maturity profile and increasing retail deposits.

Recommendations

The study further recommends that it is vital to understand the forces behind the increasing sophistication and efficiency of risk management systems, before adopting them more widely for regulatory purposes. Accordingly, ensuring that the Basel III regulations function effectively will require substantial investment in the human capital of supervisors in the Country as well as in other developing countries. Further the commercial banks should ensure that they are well versed with the measures that include risk-management incentives, including incentives to move over-the-counter derivative contracts to central counterparties, to reduce systemic risk across the financial system from counterparty exposures. This would ensure that the commercial banks take the appropriate measures for ensuring compliance with the capital adequacy regulations through cutting back on lending, market rights issue/bonds, increasing revenue growth/cutting costs and withholding dividend payment.

Suggestion for Further Research

Basel III framework is founded on strengthening the banking industry through the three key principles of capital adequacy, leverage ratio and liquidity requirements. This study has only analyzed the impact of capital adequacy. Therefore, further research could be done on the Impact of leverage ratios in the commercial banking industry in Kenya as Basel III requires banks to maintain a leverage ratio in excess of 3%.

Further research can also be done on the impact of liquidity requirements on the performance of commercial banks in Kenya since Basel III also introduced two essential liquidity ratios. The liquidity Coverage Ratio is guarantee that a bank holds sufficient high-quality liquid assets to cover up for total net cash outflows for over 30 days. Similarly, the Net Stable Funding Ratio necessitate that the available amount of stable funding should be more than the requisite amount of stable funding for more than one-year of pro-longed stress.

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