



**INFLUENCE OF FINANCIAL RISK MANAGEMENT PRACTICES ON FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN KENYA, A CASE OF BANKS IN KAKAMEGA COUNTY**

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Accepted: October 26, 2018

ABSTRACT

This study aimed at assessing risks facing commercial banks in Kenya. The general objective of this study was to determine the influence of financial risk management practice on performance of commercial banks in Kenya. The specific objectives were to establish the influence of credit risk management practice on performance of commercial banks in Kenya, to find out the influence of capital risk management practice on performance of commercial banks in Kenya, to determine the influence of interest rate risk management practice on performance of commercial banks in Kenya and to determine the influence of liquidity risk management practice on performance of commercial banks in Kenya. The study adopted a descriptive research design and a panel data analysis. The target population was all 9 commercial banks that were licensed and allowed to carry out business of banking in Kakamega County. The study was census because the target population was small. This study proposed to use both primary data and secondary data from the financial statements of the banks. Primary data was collected through issuance of questionnaires. Primary data analysis was done using SPSS version 23.0 and the panel data was analysed using STATA version 12.0 Data was presented in tables and charts. The study revealed that credit risk and capital risk management practices had a positive and significant influence on financial performance of commercial banks. On the other hand, liquidity management practice and interest rate risk management had a negative and none significant influence on financial performance of commercial banks in Kakamega. The study recommended that it was important for banks to have a robust framework that effectively management financial risks because they affect financial performance of commercial banks.

Key Words: credit risk, capital risk, interest rate, liquidity risk, financial risk management

INTRODUCTION

Performance of commercial banks is important because of their nature of operations. Banks accept deposits and in turn offer loans in a country hence acting as savings and investments mobilisers in an economy. Therefore, it is vital that banks' management seek strategic ways of enhancing profitability in order to realize sustained growth and stability of the financial institutions. According to Arrafin and Tafri (2014) an effective risk management framework is pertinent in improving the profitability of commercial banks. It is true to suffice that commercial banks operate in a dynamic and volatile environment that is characterized by a number of risks that should be prudently mitigated. Financial institutions cannot thrive well without effective risk management practices that safeguard the entities from collapsing (Malik, Khan & Khan, 2014). This means that without proper risk management framework financial institutions are exposed to negative externalities which may lead to poor performance and collapse of the entities.

According to Arrafin *et al.* (2014) risk affects performance of banks in Malaysia. This was attributed to the observation that banks main income earner project was issuance of loans and thus making credit risk inherent. As a result, credit risk was a risk that faced most banks in the country. In addition, Muhamad *et al.* (2011) indicated that financial risks such as interest risks, exchange risks, liquidity risks, capital management risks and asset quality risk affected performance of Islamic banks in Jordan. In Pakistan, Abbas, Zaidi, Ahmad and Ashraf (2014) noted that risks had a significant effect on the performance of banks. In particular, they revealed that credit risk was the most significant determinant of performance of banks. This was because a higher exposure to credit risks would result into an increase in non-performing loans which negatively impacted on performance of banks. It is important to note that interest on loan is the main income source of most banks.

In Nigeria, Kolapo (2012) was able to reveal that risks had an impact on performance of commercial

banks in the country. In particular, it was noted that liquidity risks, interest risks and credit risks had a negative and significant impact on Return on Investments on commercial banks. According to Boahene, Dasah and Agyei (2018) a high credit risk did not have any effect on performance of banks in Ghana where the banks relied on non-interest sources of income. This indicates that a high credit risk exposure does not necessarily lead to low profitability. However, the study revealed that the inability to pay debts and increase in non-performing rate had a negative and significant impact on profitability of banks in Ghana. As noted by Saira, Khalid and Abdul (2011) risks compromise on the sustainability of performance of all organizations.

Statement of the Problem

Banks operate in an environment that is characterized by a lot of risks and this exposes them to losses in the event that those risks materialize. It is thus of paramount importance that risks are controlled with the intention of ensuring that risks are identified and mitigating measures set up.

In 2017 citing interest rates volatility the Standard Chartered Bank and Family bank issues profit warnings as indication of poor performance (Business Daily, 2017). A year before, the Central Bank of Kenya (CBK, 2015) through its Bank Supervision Report indicated that non-performing loans among commercial banks had increased by 2.4% in year 2016 from a 6.9% that was reported in the year 2015. This indicates that credit risk management was a challenge among commercial banks in Kenya. In a period of three years, three banks namely Chase Bank, Imperial Bank and Dubai were put under receivership indicating the financial sector in Kenya had a much bigger problem than that indicating by shrinking profits. (Mutuku, 2016). According to Saunders and Cornett (2015) banks' main liabilities are in form of deposits made by the customers. This means that banks should offer assurance that they are in a position of paying the

deposits as and when called upon to so. As a result, liquidity of a bank is a vital ingredient towards sustainability of the financial institutions. The CBK (2017) notes that there are various risks that face the financial sector in Kenya and these includes; compliance and legal risks, interest rates risks, forex risks and credit risks.

Arrafin *et al.* (2014) noted that credit risk was the main cause of bank failure in Malaysia. The authors noted that those banks that failed in Malaysia performed poorly in credit risk management. In addition, Kolapo (2012) noted that liquidity was a major hindrance to poor performance among commercial banks in Nigeria. Boahene *et al* (2012) noted that relying on interest income was the main cause of poor profitability by Ghanaian banks. The Kenyan economy has been characterized by rising interest rates to the extent of the Parliament enacting the interest rate capping law. The CBK (2018) noted that this had impacted negatively on the economy and performance of banks that has led to downsizing in form of staff retrenchments. All these points to one direction; that risk management is important for sustained performance in a competitive and highly turbulent environment.

A number of studies had been done in Kenya. Studies done by (Fredick. 2012: Kithinji, 2012) dealt with credit risk management and revealed that credit risk management if done effectively improved performance of banks. On the other hand, Gatsi (2013) studied the impact of market risk on profitability of banks and revealed that market volatility had a negative effect on performance. Said (2014) revealed that liquidity had a positive and significant effect on performance of banks. It is thus evident that most of these studies dealt with a single dimension of risk management.

However risks do not occur in isolation and it is the confluence of all risks and mitigating measures that affects performance of banks. As a result, this study sought to assess the influence of financial risk management practice on performance of banks in Kenya. More so, none of the studies have been undertaken with specific consideration of banks in

Kakamega County. The study evaluated the influence of credit risk management practice, capital risk management practice, interest rate risk management practice and liquidity risk management practice on performance of banks in Kenya.

Research Objectives

The general objective of this study was to determine the influence of financial risk management practices on performance of commercial banks in Kenya. The specific objectives were;

- To establish the influence of credit risk management practices on performance of commercial banks in Kenya.
- To find out the influence of capital risk on performance practices of commercial banks in Kenya.
- To determine the influence of interest rate risk management practices on performance of commercial banks in Kenya.
- To determine the influence of liquidity risk management practices on performance of commercial banks in Kenya.

Research Hypothesis

- **H₀₁:** Credit risk management practices has no significant effect performance of commercial banks in Kenya
- **H₀₂:** There is no significant impact of capital risk management practices on performance of commercial banks in Kenya.
- **H₀₃:** Interest rate risk management practices do not affect the performance of commercial banks in Kenya?
- **H₀₄:** Liquidity risk management practices have no effect on performance of commercial banks in Kenya

LITERATURE REVIEW

Theoretical Review

Financial Distress Theory and Efficient Structure Theory

This study was based on the following theories: financial distress theory and efficient structure theory.

The theory of financial distress was coined by Baldwin and Scott (1983) who aimed at explaining the predictors of financial wellness of firms. The authors noted that in the event that firms could not fulfill their financial obligations, they were said to be in financial distress. The theory notes that financial distress is predicted by some signs such as non-payment of dividends and failure to honor financial obligations as and when they fall due. The theory notes that the firm may be paying the creditors' normally but the crisis results when contractual liabilities of long term nature that falls due are not serviced. In this respect, the theory indicates that not being able to honor debts is a serious indicator of financial distress.

According to Wruck (1990), prior to default in financial obligations, evidence of distress is revealed by low performance and ineffective risk monitoring by the management of firms. This means that default of obligations does not just happen but is preceded by a situations that depict a failing firm in terms of risk management and overall financial performance. For instance, it would be a financial distress indicator if commercial banks do not have funds to honor depositors' withdrawals.

This theory is crucial to this study because it provides information on risk management particularly credit and liquidity risk management. The model indicates that there are predictors of financial distress which faces firms. On citing these predictors, the management of firms should work proactively in order to correct the anomaly before the situation escalates and leads to collapse of firms. Credit risk in banks implies a situation where banks are exposed to the risk of nonperforming loans due to default by borrowers. Liquidity is important because it indicates the position of the banks in terms of its paying ability. Thus this theory is related to credit risk and liquidity risks which are predictors of financial distress among banks in Kenya.

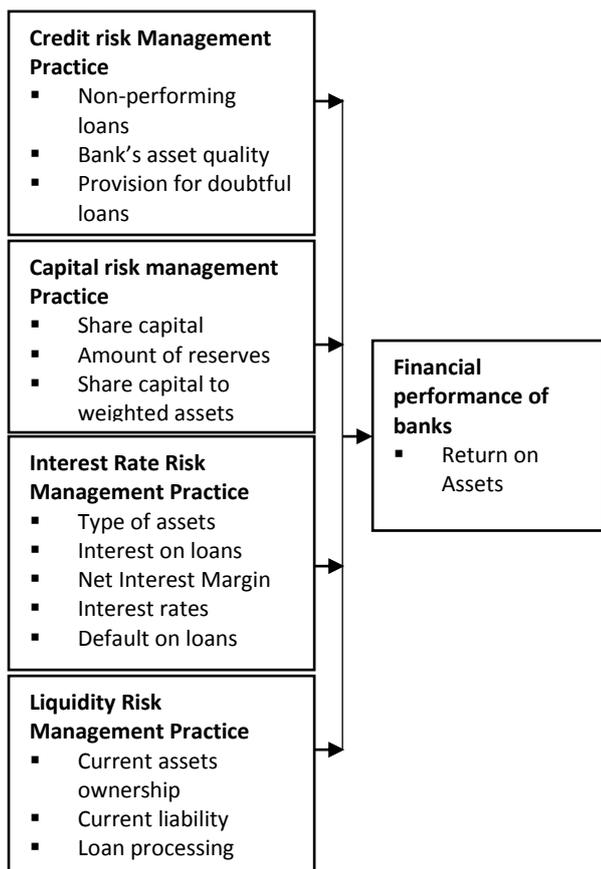
The theory of Efficient Structure was developed by Demsetz (1973) and posits that some firms exhibit better performance due to having more efficient methods than others. In this respect, the theory notes that some firms have internal capabilities that improve their profitability while some are not efficient. The theory notes that those banks that are more efficient tends to save on time for processes which saves costs. The ES theory advocates for firms to improve their levels of efficiencies in order to outdo their competitors. This theory takes two dimensions, that is, X-efficiency and Scale efficiency. According to Athanasoglou *et al.* (2008), X-efficiency notes that some firms are more efficient than others due to cost advantages. For this reason, firms with X efficiency gains a larger market share and this has the tendency of increasing their profitability due to market concentration.

As noted by Athanasoglou *et al.* (2008), the scale efficiency idealizes on improving performance of firms due to having economies of scale as opposed to having managerial efficiencies. Berger (1997) indicates that the costs incurred by banks with efficient management are lower thus improving profitability. However, the scale efficiency indicates that economies of scale play a role on performance of entities. In this respect, firms may reduce their unit costs through mass production which in turn would result into more market concentration. The theory of ES indicates that both internal and external factors affect performance of banks. As noted by Nzongang and Atemnkeng (2006), some banks may use their skilled management to enhance efficiency of processes while others improve profitability by increasing the scale of operations. The theory notes that both costs and scale of operational have the potential of influencing profitability of banks.

This theory is relevant to this study because it provides insights on what causes difference in performance among firms. The theory notes that management quality is an important ingredient of financial performance. This means that the

management would be in a position to make proper accurate decisions with respect to liquidity, credit risk management and investing decisions. The theory has also noted that economies of scale have an effect on performance of firms. Further, the theory of ES has been established to be pertinent to explaining performance of banks (Shepherd, 1986).

Conceptual Framework



Independent Variable Dependent Variable

Figure 1: Conceptual Framework

Source: Author (2018)

Empirical Review

Empirical review is a critical analysis of other studies on the variables that form the basis of a particular study. This review is important because it forms the basis on which a research gap is identified. This section is arranged as per the specific objectives of the study.

Abas, Zaidi, Ahmad and Ashraf (2014) did a study on the effects of credit risk on the performance of

Islamic banks in Pakistan. The study sought to investigate the effects of credit risk, market risks, liquidity risks and interest risk on the financial performance of banks in Pakistan. The study adopted a regression model in data analysis and a sample of data was collected for a period of six years between 2006 and 2011. The study expressed financial performance in terms of Return on Equity and Return on Assets. It was revealed that credit risk weighed by ratio of Non-performing loans together with total loan adversely affected performance of ROA and ROE. This means that failure to manage credit risks leads to poor financial performance among commercial banks. This study was conducted among the Islamic banks in Pakistan which is basically a different economic environment from the Kenyan financial sector. Islamic banks do not charge interest on loans while conventional banks charge interest on loans.

Boahene, Dasah and Agyei (2012) did a study on the impacts of credit risk on the profitability of banks in Ghana. The study was a survey of a sample of commercial banks in Ghana. The study sought to investigate the impacts of credit risks, market risks and size of banks on profitability of the financial institutions. The assessment adopted a panel data analysis on which a sample of six commercial banks was used during the assessment between the periods of 2005-2009. The outcome of the assessment was that credit risk has a statistically significant and positive impact on the profitability of commercial banks in Ghana.

Al-shakrchy (2017) did a research on the effects of credit risk management on the profitability of commercial banks in Sweden. The study had the aim of establishing the effects of bank operations mainly lending activities which has huge effect on banking sector and the financial vulnerability. The assessment adopted multiple regression model; a sample of one bank was used during the assessment. Upon data analysis, the study revealed that credit risk management can probably increase the assessment of bank facilities.

Ariffin, and Tafri (2014) did a study on financial risks on profitability of banks for Islamic religion. The study sought to assess the impacts of financial risk on the profitability of Islamic banks worldwide. The study adopted Generalized Least Square (GLS) panel data analysis. A sample of 65 Islamic commercial banks was selected for data analysis. The result of the study was that the combination of credit risk and interest rate risk has statistically negative significant effect on return of asset which is a major determinant on Islamic commercial banks profitability. This indicates that interest rates volatility affected performance of banks in a negative way.

A study was done by Amin *et al.* (2014) on influence of financial risk on performance of banks in Tanzania. The study adopted a descriptive research design where secondary data was collected from twenty one commercial banks. The study sought to ascertain whether performance of banks was statistically affected by financial risks. Data was collected for a period of ten years from the year 2003 to 2012. The study revealed that there was a negative relationship between financial risk and performance of commercial banks. In particular, the study revealed that capital adequacy had a significant effect on performance of banks.

Another study was done by Al-Tamimi *et al.* (2015) with the aim of determining the impact of financial risks on performance of Islamic Bank in the Gulf region. The study sought to assess the effect of credit risk, liquidity risks, operational risks and capital risks. The study adopted a regression analysis in order to ascertain the relationships between the variables. Data analysis was done in form of descriptive statistics and it was revealed that both capital risk and operational had a negative relationship which was statistically significant. Further, the study concluded that capital risk led to poor banks performance in the Gulf region. It is important to note that capital risk is the exposure of assets.

Aruwa and Musa (2014) did a study on evaluation of risks and performance of banks in Nigeria. The

study sought to assess the effect of interest risks, operational risks, credit risks and capital risks and capital adequacy. The study had a target population of all banks in Nigeria where data was collected for the time period between 1997 and 2011. The study revealed that a large extent of variations in performance of deposit taking banks in Nigeria was influenced by financial risks. In particular, the study revealed that capital risk had a positive effect on performance of banks in Nigeria. On the contrary, it was established that both operational risks and interest rates had a negative impact on financial performance of deposit taking banks in Nigeria.

In Ethiopia, Lake (2013) did a study on the effect of financial risks and profitability. The study sought to assess the effect of credit risk, liquidity risks and capital adequacy risks among the banks in Addis Ababa. The study collected secondary from the bank annual financial statements for a period of twelve years. The study adopted a quantitative research design where data was analyzed into descriptive statistics. The study revealed that both credit risk and liquidity risks negatively impacted on profitability of banks. On the other hand, interest rates risks, capital risk and foreign exchange risks negatively impacted on profitability of commercial banks in Ethiopia.

Fauziah, Hamid and Omar (2009) did a study on the effects of risks among the commercial banks in Malaysia. The study sought to assess the effect of interest rates fluctuation, liquidity management and credit risks on financial performance of the banks. The study adopted a panel data analysis where data was collected from a sample of banks for the period of 1995 to 2005. The study expressed financial performance in terms of Return on Equity and Return on Assets. It was established that credit risk had a positive and significant impact on the ROE and ROA of banks in the country. In addition, the study revealed that credit risk management had an effect on reduction of non-performing loans for the banks and this resulted to a positive impact of credit risk management to return on assets. Equally,

the study noted that liquidity had a positive but not statistically significant impact on ROA and ROE.

Khan (2014) did a study that sought to assess the effect of interest rates changes on performance of banks in Pakistan. The study adopted a correlation analysis and data was collected for a period of five years between 2008 and 2012. The study used secondary data that was extracted from the financial records and statement of four tier one banks. The study revealed that there was a significant and positive effect of interest rates changes on profitability of commercial of banks. This was attributed to the fact that interest was the income for banks and when they increased, the profitability of banks increased too.

Another study was done by Muhammad and Khan (2014) on effect of interest rates on performance of commercial banks in Malaysia. The study sought to examine whether changes in interest rates affected Return on Assets of banks. The study had a target population of all banks in the country. A sample of ten banks was selected, six from public and four in the private sectors. On data analysis, the study revealed that interest rates, if increased, had a positive effect on profitability of commercial banks in the country. However, it was revealed that banks in the private sector exhibited more profits due to volatility of interest rates when compared to those in the public sector.

Oluwafemi *et al.* (2014) did a study on the effects of capital adequacy ratio, asset quality, management efficiency, liquidity ratio, inflation and economic growth on profitability of commercial banks in Nigeria. The study adopted a panel data analysis and data was collected for a period of nine years. The study revealed that liquidity had a positive effect on performance of commercial banks. This was because the coefficient of determination of the variables in the function was positive. However, the relationship between liquidity management and performance was not statistically significant.

Ouma (2015) on the effects of liquidity on financial performance of commercial banks in Kenya. The study used secondary data that was mined from the financial statement of banks and from the Central Bank of Kenya records. The study adopted a descriptive research design. The study revealed that performance of commercial was influenced by liquidity ratio. In particular, the study found out that the relationship between liquidity and financial performance of commercial banks was statistically significant.

METHODOLOGY

This study adopted a descriptive research design. A descriptive research design aimed at establishing the extent of relationship between variables. As noted by Creswell (2014) a descriptive research design is defined as a systematic empirical approach where the researcher has no control of the independent variables of the study. This study had a target population of all the commercial banks in Kakamega County.

The target population of this study was all the 9 commercial banks in Kakamega County, a census was done. Data was collected from the financial statements of the banks for the period of 2011 to 2016. This period is preferred because the published financial statements were available. This study used both primary data and secondary data from the specific banks financial statements in order to analyze data with the objective of achieving the objectives. The data was collected with respect to the specific objectives of the study. The study used a questionnaire in collecting primary data from the respondents. The primary data was collected using self-administered questionnaires which were written in English. The study adopted regression analysis where secondary data was analyzed. The model was expressed as follows;

$$ROA_t = \beta_0 + \beta_1 CRM_t + \beta_2 KRM_t + \beta_3 IRM_t + \beta_4 LM_t + \epsilon_t$$

Where:

ROA_t = Performance of commercial banks year t

β_0 = is the constant to be estimated by the model

$\beta_1, \beta_2, \beta_3$ and β_4 = Coefficients that shows nature of impact of the predictors

CRM_t = Credit ratio for commercial banks in year t

KRM_t = Capital risk management commercial banks in year t

IRM_t = Net Interest Margin for commercial banks in year t

LM_t = Current ratio for commercial banks in year t

ϵ_t = error term in the model

RESULTS

Credit Risk Management Practices

The study had the objective of assessing the effect of credit risk management practices on financial performance of banks. These finding were presented on Table 1.

Table 1: Descriptive Statistics for Credit Risk Management Practices

| | N | Mean | Std. Deviation |
|--|----|------|----------------|
| The bank has a rigorous process of borrowers' assessment which ensures that loan defaults are minimized. | 43 | 4.44 | .765 |
| The bank has a strict credit limit policy which ensures that borrowers repay their loans thus not hampering banks profitability. | 43 | 4.49 | .506 |
| The banks asks for guarantors and this safeguards it from loss of income due to loan defaults | 43 | 4.56 | .502 |
| The cost and time spent on credit risk management is adequate and this there is no chance of making mistakes | 43 | 4.77 | .427 |
| The bank has adopted a strict loan approval policy and this ensures that all loans are correctly approved. | 43 | 4.53 | .505 |
| Filtering loanees reduces non-performing loans and thus enhancing performance of loans which increases profitability | 43 | 4.67 | .474 |

A mean of 4.44 with a standard deviation of 0.765 was found on if the bank had a rigorous process of borrowers' assessment which ensures that loan defaults are minimized. This means that the respondents agreed that borrowers' evaluation was effective in reducing loan defaults. On whether the banks had a strict credit limit policy which ensured that borrowers repay their loans thus not hampering banks profitability, a mean of 4.49 with a standard deviation of 0.506 was found. This means that respondents agreed that a credit limit policy was important in fostering loan repayments. A mean of 4.56 with a standard deviation of 0.502 was found on if the banks ask for guarantors and this safeguards it from loss of income due to loan defaults. This reveals that the respondents indicated that guarantors requirement in loan application was a good mitigation against loan defaults.

On whether the cost and time spent on credit risk management was adequate and this there was no

chance of making mistakes, a mean of 4.77 with a standard deviation of 0.427 was established. This was an indication that respondents agreed that time allocated to credit risk management was adequate for the course. On if the bank had adopted a strict loan approval policy and this ensures that all loans are correctly approved; a mean of 4.53 with a standard deviation of 0.505 was established indicating that the respondents agreed with statement. A mean of 4.67 with a standard deviation 0.474 was established on whether filtering loanees reduces non-performing loans and thus enhancing performance of loans which increases profitability. In this respect, the respondents agreed that credit risk management practice was important in reduction of NPLs.

Liquidity Risk Management Practices

The study sought to assess the effect of capital risk management practices on financial performance of banks. The findings were presented on table 2.

Table 2: Descriptive Statistics for Liquidity Risk Management Practices

| | N | Mean | Std. Deviation |
|---|----|------|----------------|
| Liquidity ensures that the bank can service financial obligations as and when they fall due thus not hampering operations of the bank | 43 | 4.26 | .441 |
| Liquidity ensures that there are available cash flows for immediate and future use which is affects investing | 43 | 4.37 | .489 |
| A liquid bank attracts stakeholders confidence resulting to more business | 43 | 4.26 | .539 |
| Liquidity ensures that loans are processed on a timely fashion thus attracting more customers which improves performance of the bank | 43 | 4.21 | .559 |
| The asset portfolio guideline adopted by the company improves profits of the bank. | 43 | 4.30 | .465 |
| The bank has a board committee that looks at investments with the aim of ensuring favourable liquidity | 43 | 4.33 | .778 |

A mean of 4.26 with a standard deviation of 0.441 was established for if liquidity ensures that the bank can service financial obligations as and when they fall due thus not hampering operations of the bank. This means that liquidity was crucial in that it ensured that liabilities were paid without defaults. On whether Liquidity ensured that there were available cash flows for immediate and future use which affects investing, a mean of 4.37 with a standard deviation of 0.489 was found. This indicated that the respondents agreed that liquidity risk management was important in that it checked the cash flows of the banks.

A mean of 4.26 with a standard deviation of 0.539 was established on if a liquid bank attracts stakeholders' confidence resulting to more business denoting that liquidity was important in stakeholders trust in the banks. The respondents agreed that Liquidity ensures that loans are processed on a timely fashion thus attracting more

customers which improves performance of the bank. This was as indicated by the mean of 4.21 with a standard deviation of 0.559.

Equally, most of the respondents agreed that the asset portfolio guideline adopted by the company improves profits of the bank. As indicated by the mean of 4.30 with a standard deviation of 0.465. Lastly, a mean of 4.33 was established on if the bank had a board committee that looks at investments with the aim of ensuring favorable liquidity. In this respect, liquidity was found to be of beneficial contribution to financial performance of banks.

Capital Risk Management Practices

The study sought to determine the influence of Capital management practices on financial performance of banks. The findings were indicated on Table 3.

Table3: Descriptive Statistics for Capital Risk Management Practices

| Capital Risk Management Practices | N | Mean | Std. Deviation |
|--|----|------|----------------|
| A large capital base ensures that the bank has financial stability which improves performance of banks | 43 | 4.40 | .623 |
| A higher equity in the debt and equity structure improves the performance of the bank. | 43 | 4.27 | .253 |
| The bank has a contingency plan for capital funding that improves performance of banks | 43 | 4.47 | .505 |
| The bank does relies on internal funding and this positively | 43 | 4.30 | .165 |

| | | | |
|--|----|------|------|
| impacts on performance | | | |
| The bank has enough capital reserves which ensures it is institutionally solvent | 43 | 4.53 | .525 |
| High amount of capital positively impacts on the risks of bankruptcy for the bank. | 43 | 4.81 | .394 |
| A highly capitalized bank does not have to borrow externally hence saving on interest on borrowings. | 43 | 4.77 | .427 |

A mean of 4.40 with a standard deviation of 0.623 was found on if a large capital base ensures that the bank has financial stability which improves performance of banks. This means that most of the respondents agreed that capital adequacy was important in fostering performance of banks. A mean of 4.27 with a standard deviation of 0.253 was found on if a higher equity in the debt and equity structure improves the performance of the bank which reveals that the respondents agreed with the statement.

A mean of 4.47 with a standard deviation of 0.505 was established on if the banks had a contingency plan for capital funding that improved performance of banks. It meant that banks had mitigation measures of increasing capital as and when it was necessary. Equally, most of the respondents agreed that the banks rely on internal funding and this positively impacts on performance. This was as indicated by the mean of 4.30 with a standard deviation of 0.165.

A mean of 4.53 with a standard deviation of 0.525 was established on whether the bank had enough capital reserves which ensures it is institutionally solvent. This meant that solvency was improved by the possession of high capital reserves. Also, the respondents agreed that High amount of capital positively impacts on the risks of bankruptcy for the bank as shown by the mean of 4.81 with a standard deviation of 0.394. A mean of 4.77 with standard deviation of 0.427 was found on whether a highly capitalized bank does not have to borrow externally hence saving on interest on borrowings. These findings showed that capital risk management practices were of great value to the commercial banks as indicated by the high means of more than 4.00

Interest Risk Management Practices

The fourth objective of the study sought to find out the influence of interest risk management practices on financial performance of Commercial banks. The findings were presented on Table 4.

Table 4: Descriptive Statistics for Interest Risk Management Practices

| Interest Risk Management Practices | N | Mean | Std. Deviation |
|--|----|------|----------------|
| The volatility of interest rates affects the income for the bank thus influencing performance | 43 | 4.81 | .394 |
| Highly escalating interest rates makes the banks loans unattractive thus hampering profitability in the long run | 43 | 4.53 | .505 |
| Short run increases in interest rates increases loans interest for the banks | 43 | 4.74 | .441 |
| Sudden increases in interest rates make it hard for loanees to repay the credit | 43 | 4.58 | .499 |
| Due to increase in interest rates, the bank has recorded a high rate of non-performance | 43 | 4.56 | .502 |

As indicated on Table 4, a mean of 4.81 with a standard deviation of 0.394 was established on if the volatility of interest rates affects the income for the bank thus influencing performance. This means that volatility of interest rates affected interest

income for the banks which at the overall had an effect on financial performance of banks. A mean of 4.53 with a standard deviation of 0.505 was found on if highly escalating interest rates makes the banks loans unattractive thus hampering

profitability in the long run. This means that high interest rates did not increase the number of borrowers which had in turn lowered performance of banks.

A mean of 4.74 with a standard deviation of established on if short run increases in interest rates increases loans interest for the banks. This means that in the short run increase in interest rates improved performance of banks but the finding was on the contrary on long term effects of escalating interest rates. This is because loans were not affordable at very high interest rates. The respondents agreed that a sudden increase in interest rates make it hard for loanees to repay the credit as evidenced by the high mean of 4.58 with a standard deviation of 0.499. It was important to note that increase in interest rates may increase the income for banks if borrowers would be able to afford the loans otherwise it has a negative effect.

A mean of 4.56 with a standard deviation of 0.502 was established on if due to increase in interest rates, the banks have recorded a high rate of non-performance. This means that the respondents agreed. Perhaps, this is because, where loans become unaffordable due to high interest rates, the

existing borrowers also may find it hard to keep up with the periodic loan repayments. Thus, interest rates increases have a negative influence on financial performance of commercial banks in Kenya.

Financial Risk Management Practices

The respondents were asked to rate the extent the various financial risk management practices affects financial performance of banks. The study revealed that credit risk management practices had the greatest influence as indicated by the mean of 4.65 with a standard deviation of 0.482, followed by capital risk management practices as evidenced by the mean of 4.26 with a standard deviation of 0.759. At third position was interest rate risk management practice as evidenced by the mean of 4.09 with a standard deviation of 0.648. The least influencing was liquidity risk management practices as evidenced by the neutral mean of 3.47 with a standard deviation of 1.777. These findings reveals that financial risk management practices affects financial performance of commercial banks in Kenya.

Table 5: Overall Influence of Financial Risk Management Practices

| Financial Risk Management Practices | N | Mean | Std. Deviation |
|---|----|------|----------------|
| To what extent credit risk affect performance of the bank? | 43 | 4.65 | .482 |
| To what extent liquidity risk affect performance of the bank? | 43 | 3.47 | 1.777 |
| To what extent capital risk affect performance of the bank? | 43 | 4.26 | .759 |
| To what extent interest rate risk affect performance of the bank? | 43 | 4.09 | .648 |

Descriptive Data Analysis

It was important to compute the descriptive statistics which included the mean, standard deviation, minimum and the maximum. The study found out mean ROA was 2.58% with a standard deviation of 2.2%. The minimum ROA was 1.0 % while the maximum ROA was 9.7%. These findings indicate that performance of banks was not high which implies that it was indeed necessarily to

study what contributed to the low financial performance.

It was important to note that ROA is a financial performance measure that indicates how well assets are used in generation of returns for the shareholders. It was established that credit risk management had a mean of 15.75 % with a standard deviation of 7.08 %. The minimum credit risk ratio was 6.00% while the maximum was 32.0%.

Capital risk had a mean of 11.77 % with a standard deviation of 8.84%. The minimum capital risk ratio was 1.00% while the maximum was 35 %. Liquidity risk had a mean of 38.5 % with a standard deviation of 10.71 %. The minimum liquidity risk ratio was 17.0% while the maximum was 76.00%.

Lastly, the study found out that interest risk had a mean of 17.20 % with a standard deviation of 7.53%, a minimum interest risk ratio of 9.0% and the maximum ratio was found to be 43.00 %. The statistics indicates that the variables were different for all the banks.

Table 6: Descriptive Statistics

| Variable | N | Mean | Std. Dev. | Min | Max |
|----------------|----|------|-----------|-----|-----|
| ROA | 54 | .259 | .225 | .01 | .97 |
| Credit Risk | 54 | .158 | .071 | .06 | .32 |
| Capital Risk | 54 | .118 | .088 | .01 | .35 |
| Liquidity Risk | 54 | .385 | .107 | .17 | .76 |
| Interest Risk | 54 | .172 | .075 | .09 | .43 |

Table 7: Prais Winsten Regression

| Prais-Winsten regression, heteroskedastic panels corrected standard errors | | | | | | |
|--|--------------|------------------|----------------|----------------|-------------|--------|
| Mean dependent var | 0.259 | SD dependent var | | | | 0.225 |
| R-squared | 0.729 | Number of obs | | | | 54.000 |
| Chi-square | 37.930 | Prob > chi2 | | | | 0.000 |
| ROA | Coef. | St.Err | t-value | p-value | Sig. | |
| Credit Risk | 1.895 | 0.572 | 3.31 | 0.001 | *** | |
| Capital Risk | 1.233 | 0.307 | 4.02 | 0.000 | *** | |
| Liquidity Risk | -0.227 | 0.259 | -0.88 | 0.381 | | |
| Interest Risk | -0.180 | 0.462 | -0.39 | 0.696 | | |
| _cons | -0.017 | 0.118 | -0.15 | 0.883 | | |

*** p<0.01, ** p<0.05, * p<0.1

According to Table 7, chi square test statistic of 0.0000 which indicated that overall model was statistically significant in explaining the financial performance of commercial banks in Kakamega. The study found an R² of 72.94 % indicating that the variable accounts for 72.94% of variations in Return on Assets of the commercial banks. The other 27.06 % is accounted for by other factors that were not assessed. This means that financial risk management greatly affects financial performance of commercial banks in Kenya.

The study had developed the following regression model

$$ROA_t = \beta_0 + \beta_1 CRM_t + \beta_2 KRM_t + \beta_3 IRM_t + \beta_4 LM_t + \beta_5 + \epsilon_t$$

On fixing the coefficients

$$ROA = -0.173 + 1.895CRM + 1.233KRM - 0.180IRM - 0.227LM$$

Where:

-0.173 is the Return on Assets in absence of the study variables

1.895 is the increase in ROA following an increase in 1 unit of credit risk management

1.233 is the increase in ROA following an increase in 1 unit of capital risk management

-0.180 is the decrease in ROA following an increase in 1 unit of interest risk management

-0.227 is the decrease in ROA following an increase in 1 unit of liquidity management

The findings indicates that credit risk management practice and capital risk management practice have positive influence on financial performance of commercial banks while interest risk management practice and liquidity management practice have a negative relationship with financial performance of commercial banks in Kakamega.

Further, looking at the P-Value, it showed that both credit risk management practice and capital risk management practices had statistically significant influence on financial performance of commercial banks in Kakamega. This was because, the P-Value are less than 0.05 at 0.001 and 0.000 for credit risk and capital risk management practices respectively meaning that we reject the null hypothesis. Thus both **H₀₁**: Credit risk management practice has no significant influence on performance of commercial banks in Kenya and **H₀₂**: There is no significant influence of capital risk management practices on performance of commercial banks in Kenya is rejected.

This finding agreed with those of Boahene, Dasah and Agyei (2012) who did a study on the impacts of credit risk on the profitability of banks in Ghana and revealed that credit risk has a statistically significant and positive impact on the profitability of commercial banks in Ghana. On the contrary the findings are against those of Abas, Zaidi, Ahmad and Ashraf (2014) who did a study on the effects of credit risk on the performance of Islamic banks in Pakistan who revealed that credit risk weighed by ratio of Non-performing loans together with total loan adversely affected performance of ROA and ROE.

In addition the findings of this study agrees with those of Aruwa and Musa (2014) who did a study on evaluation of risks and performance of banks in Nigeria and revealed that capital risk had a positive effect on performance of banks in Nigeria. However, In Ethiopia, Lake (2013) did a study on the effect of financial risks and profitability and found out that capital risk management and foreign exchange risks negatively impacted on profitability of commercial banks in Ethiopia.

On the other hand the P-Value for liquidity risk management and interest risk management are 0.381 and 0.696 which are more than 0.05 indicating that both do not exhibit a statistically significant relationship with financial performance of commercial banks. In this respect, the third and the fourth hypothesis, **H₀₃**: Interest rate risk

management does not affect the performance of commercial banks in Kenya and **H₀₄**: Liquidity risk management practices have no effect on performance of commercial banks in Kenya are accepted.

The findings contradicted the conclusion of Oluwafemi *et al.* (2014) who did a study on the effects of capital adequacy ratio, asset quality, management efficiency, liquidity ratio, inflation and economic growth on profitability of commercial banks in Nigeria and revealed that liquidity had a positive effect on performance of commercial banks. Also, Ouma (2015) undertook a study on the effects of liquidity on financial performance of commercial banks in Kenya and found out that the relationship between liquidity and financial performance of commercial banks was statistically significant which contradicts the findings of this study.

However, the findings disagreed with those of Khan (2014) who did a study that sought to assess the effect of interest rates changes on performance of banks in Pakistan and revealed that there was a significant and positive effect of interest rates changes on profitability of commercial of banks. His finding was attributed to the fact that interest was the income for banks and when they increased, the profitability of banks increased too. Also, Muhammad and Khan (2014) undertook a study on effect of interest rates on performance of commercial banks in Malaysia and revealed that interest rates, if increased, had a positive effect on profitability of commercial banks in the country.

CONCLUSIONS

The secondary data indicated that credit risk management had a positive effect on financial performance of banks in Kenya. This is because; credit risk management aims at keeping loan defaults at the minimum. Credit risk management seeks to establish effect credit policies whose objective is to reduce the nonperforming loans. Loans are the major income earning assets for commercial banks. Having noted this, a reduction in

NPL implies increased income for the commercial banks.

The study concluded that capital risk management affects financial performance of commercial banks in Kenya. The relationship between financial performance of banks and capital risk management was found to be statistically significant. Therefore, the study concludes that capital risk management significantly affects performance of banks. This is because capital adequacy ensures that the bank is cushioned against negative externalities that may occur in the industry. Further, sufficient capital reserves ensure that banks have enough capital that can be reinvested to generate more income.

The study concluded that liquidity risk management affects financial performance of banks in a negative way. Also, the study concludes that the relationship between liquidity risk management and financial performance was not statistically significant. Liquidity is the ability of an entity to pay liabilities as and when they fall due. This means that for this to happen, a certain amount of assets must be kept in liquid form. However, liquid assets earn little returns if any.

The study concludes that interest risk management affects financial performance of banks in a negative way. In addition, the study concludes that the relationship between interest risk management and financial performance of commercial banks was not statistically significant. It is important to note that when interest rates are volatile, they may negatively affect the performance of banks particularly if they are on a declining trend.

RECOMMENDATIONS

Based on the findings, the following recommendations are made: the study recommends that it is important for banks to improve their credit risk management and capital risk management as it was found to have a positive effect on financial performance. An effective credit risk management framework reduces the NPL which improve financial performance of the financial institutions. A high capital reserve provides a

cushion in case of negative externalities and also provides funds for more investments.

It was also recommended that banks ought to keep few liquid assets as liquidity risk management which was measured by the quick ratio was found to have a negative impact on financial performance of commercial banks. Liquidity lowers the income that would have been earned if the assets were invested for long term basis.

The study also recommended banks to have a robust mechanism for dealing with interest rates risk as it was found to affect performance negatively. In General, the study recommends that a robust framework of financial risk management should be established since financial risk management affects financial performance of banks. To this end, an effective risk and compliance department that ensures that financial risks are identified and mitigated should be established.

Areas for Further Studies

This study assessed the influence of financial risk management practice on performance of commercial banks in Kenya with consideration of banks in Kakamega. The study found out that financial risk management significantly affected financial performance of banks. Specifically, credit risk management and capital risk management practice had positive and significant influence on financial performance of banks while both liquidity and interest rate risk management practice had negative and non-significant relationship with financial performance of banks.

The study suggested that another study a census of all commercial banks can be done in order to compare the findings with those of this study. Further, another study can be done using other measures of financial performance such as Return on Equity in order to provide a holistic conclusion of influence of financial risk management on banks' performance. Still, another study can be done with the target population being the Microfinance Banks in Kenya.

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