**EFFECT OF NON-PERFORMING LOANS ON PERFORMANCE OF COMMERCIAL BANKS IN KENYA: A COMPARATIVE STUDY BETWEEN NATIONAL BANK KENYA LIMITED AND EQUITY BANK KENYA LIMITED**

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# EFFECT OF NON-PERFORMING LOANS ON PERFORMANCE OF COMMERCIAL BANKS IN KENYA: A COMPARATIVE STUDY BETWEEN NATIONAL BANK KENYA LIMITED AND EQUITY BANK KENYA LIMITED

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## ABSTRACT

*Banks are essential in circulating currency and wealth of the society and they optimize their liquidity risk by assuming externalities posed by their choices. Kenya's banking sector has experienced liquidity challenges ranging from funding to market risks. This research focused on the effects of non-performing loans on performance of commercial banks in Kenya. Correlational research design with a comparative analysis approach was adopted. The target population was two commercial banks and document analysis guide was used to gather quantitative data from the banks financial statements through 2007 to 2016 and interview schedule was used to gather primary data from Operations Directors, Chief Finance Officers, Credit Directors and Treasury Directors of the banks. Descriptive statistics showed the trend of the bank's performance and exposure to Non-performing loans. Pearson correlation was used to show the strength and association among the study variables. Non-performing Loans had (r= -0.194) and a significant negative regression coefficient of -0.473 for Equity bank while for National Bank of Kenya had r= -0.338 and a significant relationship with performance as shown by the regression coefficient of -0.031. The study concluded that Non-performing Loans affect bank performance. Banks should therefore encourage wider information sharing to minimize exposure to credit risk as they improve income generation ability. Further research can be undertaken on the relationship between asset base and bank performance by introducing new variables, longer period and different method of analysis (GEE, GMM, Dynamic panel analysis) among others.*

***Key Words:*** *Non-performing Loans, Performance of Commercial Banks in Kenya*

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## INTRODUCTION

Commercial banks ease transactions carried out by economic agents by financing their activities to promote economic growth and development (Horvath, Seidler, & Weill, 2014) and therefore, effective liquidity risk management helps ensure the ability of a bank to meet its obligations as they fall due and reduce the possibility of an adverse situation developing (Kumar & Yadav,2013). Banks perform valuable activities of enhancing the flow of funds between surplus and deficit economic units and facilitate payments and settlement systems supporting the smooth transfer of goods and services (Diamond & Rajan, 2001). In addition, banks ensure productive investment of capital to stimulate economic growth and development of new industries, thereby increasing employment opportunities and improving standards of living of the population. Thus, banks should hold more liquid assets to help indemnify themselves from potential liquidity problems. (Basel Committee on Banking Supervision, 2013).

Al-Tamimi (2008) study on the Basel II Accord found that banks are aware of the benefits, impact and challenges associated with the implementation of the accord. This accord is associated with adequate application of risk management practices in the banking sector to make them sound in their liquidity to avoid financial distress and financial crisis at large in this sector. Prudent liquidity risk management includes maintaining sufficient cash and marketable securities, and the availability of funding from an adequate amount of committed credit facilities (CBK report, 2016). ). In banking theory and practice, there are no commonly accepted indicators measuring the liquidity of banks (Mehmed, 2014). However, for the purpose of this study, non-performing loans was used as liquidity risk management indicators.

The Kenyan Banking system comprises of a total of 42 commercial banks with two banks; Chase bank and Imperial bank under receivership. These banks make up a portion of the country's financial sector (Cytonn investments report, 2017). The banking sector is expected to mobilize savings to finance the country's investment needs in infrastructure and industry to steer forward the realization of Vision 2030. Despite its expected relevance, the sector faces a myriad of challenges with respect to management of risks it is exposed to such as operating risk, credit risk, interest rate risk and liquidity challenges (CBK report, 2011). National Bank of Kenya experienced the same scenario in the period of 2014 to 2016. (CBK report, 2016), having the highest cost to Income ratio at 64.6% against the industry average of 47.1% and the largest NPLs to loans at 42.1% against the industry average of 10.6%, with one of lowest NPL coverage's at 18.1% against the industry average of 35.4%. (Cytonn Investments report, 2016). The sector's growth declined from 7.8% in 2011 to 6.5% in 2012. Its contribution to GDP decreased from 6.3 per cent to 5.2 per cent over the same period (KNBS, 2013) while its assets, excluding capital markets rose from 85.66% of GDP in December 2013 to 88.41% in 2014 but declined to 83.27% in 2015 (Financial Stability Oversight Annual Report, 2015).

The Central Bank of Kenya as the regulator of commercial banks issues regulations and guidelines that foster transparency between banking institutions, individuals and other organizations with which they do business. The objective of these regulations is to protect depositors, reduce systematic risk, and avoid misuse of banks by protecting banking confidentiality in credit allocation (Central Bank of Kenya, 2016). The CBK also fosters the liquidity, solvency, and proper functioning of a market-based financial system in its supervisory functions as well as licensing all financial institutions and inspecting them to ensure that they comply with regulations and guidelines (Central Bank of Kenya, 2016). CBK was very important in ensuring timely and adequate liquidity distribution among all banks in the first half of 2016 following instability

witnessed in the last quarter of 2015 and first quarter of 2016 (Financial Stability Oversight Annual Report, 2016).

Hou and Dickinson (2007), non-performing loans are those loans that are not earning income and full payment of principal and interest is no longer anticipated, principal or interest remains unpaid for ninety days or more or the maturity date has passed and payment in full has not been made. Non-performing loans are also described as loans in arrears for at least ninety days (Guy, 2011). Therefore in this study, NPLs are loans those whose principal and interest repayment is remains outstanding and unpaid for ninety or more days (Bexley & Nenninger, 2012) and are closely associated with banking crises (Waweru & Kalami, 2009). Moreover, non-performing loans were considered one of the main causes of the 2007-2009 global financial crises which damaged the USA economy and the economies of many countries across the globe (Adebola, Yusoff, & Dahalan, 2011). Therefore, there is need to devise mechanisms to control the non-performing loan levels to avert the possibility of a breakdown in the financial system.

Commercial banks can use customers' deposits to hedge their operations naturally against liquidity risk since they provide the needed liquidity for the bank to fund unexpected cash withdrawals by depositors and lenders (Gatev and Strahan, 2003). According to Kazi (2012), customers are encouraged to save and deposit more with a bank if they are mobilized to do so and the bank uses this money in its intermediation role to lend more loans and generate additional revenue in terms of interest income and dividends to the shareholders. Commercial banks mainly conduct the business of accepting deposits and issuing of loans to deficit economic units. The more they lend to lower risk clients, the more certain is the interest income thus enhancing profitability and shareholder wealth creation. Banks do not have a lot of their own money to give as loans, they depend on customers deposits to generate funds for granting loans to other customers. Commercial banks that have a large asset size are able to expand their operations geographically to regions where competition is not very high or to regions where the market is largely untapped. Such a move would increase the customer base of the bank in a significant manner and this would also lead to increased customer deposits (Goddard, Molyneux & Wilson, 2004).

## Statement of the problem

Banks are exposed to liquidity risk because they transform liquid deposits (liabilities) to illiquid loans (assets).The banking sector plays a critical role in the development process and is expected to drive high levels of savings and financing of Kenya's investment needs. Despite its importance, the sector's growth including other monetary intermediation declined from 10.1 per cent in 2015 to 7.1% in 2016. Moreover, ROE declined to 24.8 percent in December 2016 from 27 percent in September 2016 (KNBS report, 2017). Further, the Kenyan banking sector has experienced a number of challenges including funding and market risks (CBK, 2016). For instance, Imperial Bank Limited and Chase Bank Limited are under receivership while Dubai Bank Kenya Limited was liquidated in 2015 (CBK report, 2016). National Bank is also experiencing liquidity challenges and despite the government ownership of 70.55% (22.5%, Treasury and 48.05%, NSSF), it has the highest cost to Income ratio at 64.6% against the industry average of 47.1% and the largest NPLs to loans at 42.1% against the industry average of 10.6%, with one of lowest NPL coverages at 18.1% against the industry average of 35.4% (Cytonn Investments report, 2016). Despite Equity bank having had an improvement in NIM from 10.6% in 2015 to 11.1% in 2016, ROE however reduced from 25.5% in 2015 to 21.5% in 2016 while ROA declined to 3.7% in 2016 from 4.5% in 2016 (Cytonn Investments report, 2017).These banks are exposed to liquidity related risks and inadequate framework to support the banking business. The review of empirical studies showed mixed results as

to how and to what extent non-performing loans affects performance of commercial banks. Therefore this study sought to close the gaps by providing a deeper understanding of the effect of non-performing loans on the performance of commercial banks in Kenya using a comparative analysis approach.

## Objectives of the study

The study sought to determine the effect of non-performing loans on performance of commercial banks in Kenya.

## Research Hypotheses

$H_0$: There is no significant effect of non-performing loans on performance of commercial banks in Kenya.

## LITERATURE REVIEW

### Theoretical Framework

### Information Asymmetry Theory

The theory was proposed by George Akerlof (1970). It holds that in the event where one party to a potential transaction is more informed than the other party, markets can fall apart completely. It may be difficult to distinguish good from bad borrowers (Auronen, 2003 & Richard, 2011), which may result into adverse selection and moral hazards problems. The party that has more information on a specific item to be transacted is in a position to negotiate optimally for the transaction than the other party, (Auronen, 2003). The less informed party in a transaction may either make a right or wrong decision about the transaction. Increase in NPLs are a result of adverse selection of borrowers and moral hazard on borrowers who fail to discharge their duty regarding a transaction, (Bester, 1994).

This theory was relevant in this study since the consequences of asymmetry and insider lending as well as unsecured loans to the political class has further developed the moral hazards resulting in high level of NPLs and hence credit risk which eventually results to liquidity risk problems of commercial banks. The issue of adverse selection is being handled by Credit reference bureaus that minimize information asymmetry. Thus, commercial banks should possess more information on specific items they transact with borrowers in order to negotiate optimally to avoid non-performing loans.

## Non – Performing Loans

Non-performing loans are those loans that are not earning income and full payment of principal and interest is no longer anticipated, principal or interest is ninety days or more delinquent or the maturity date has passed and payment in full has not been made Hou and Dickinson (2007). Non-performing loans cause insolvency of financial institutions and ultimately hurt the whole economy by causing reluctance by banks to provide credit (Hou, 2007). In a high NPL condition, banks increasingly tend to carry out internal consolidation to improve asset quality which minimizes granting of loans. High level of NPLs require banks to raise provision for NPLs which decreases the banks' revenue and reduces the funds for new lending impairing the corporate sector as they have difficulties in expanding their working capital (Agung et al, 2001). Therefore, many banks focus on the corporate or wholesale lending, which poses a challenge for the management to maintain the required liquidity position (Akhtar, 2007). This lending may starve the bank the available cash since it is majorly in long-term and hence plunge the bank into liquidity problems (Kashyap et al., 2002). The loan retirement process slows down in banks during periods of poor production of resources in the economy giving rise to NPLs. In the event of a rapid increase in NPLs volume, liquidity crisis becomes inevitable; hence banks should minimize the possibility of having NPLs by carrying out adequate analysis of the creditworthiness of a borrower.

## Bank Performance

Financial measures are considered the most used parameter of business performance measurement, especially in the current economic climate. These performance indicators are important to the shareholders and depositors who are major beneficiaries of a bank. Profitability is the most important measure of success of a business and it measures the extent to which a business generates a profit from the factors of production; labor, management and capital. Most growing businesses ultimately target increased profits. Bank profitability is the bank's ability to create revenue in excess of cost, in relation to its capital base. A sound and profitable banking sector contributes significantly to financial system stability as it is better placed to withstand negative economic shocks Brissimis, Athanasoglou, & Delis, (2005). Profitability and liquidity are indicators of corporate health and performance of commercial banks and all profit oriented ventures, (Eljelly, 2004). Profitability analysis focuses on the relationship between revenues and expenses and on the level of profits relative to the size of investment in the business (Mesquita & Lara, (2003). It is measured by ratios; ROA, ROE and NIM that summarize large quantities of financial data to make qualitative judgement on performance (Velnampy and Niresh, 2012).

## Regulatory Framework

### Interest Rates Framework

Interest rate is the amount charged, expressed as a percentage of principal, by a lender to a borrower for the use of assets (Investopedia, 2017). The Banking amendment Act, which came into force on 14 September 2016 puts a ceiling on lending rates by banks and financial institutions at 4 percentage points above the CBR, and floor on term-deposit rates at 70 percent of the CBR. Consequently, following the implementation of the amended Act in mid-September 2016, the Monetary Policy Committee (MPC) suspended the Kenya Bankers Reference Rate (KBRR), previously used as the base rate for pricing of loans by commercial banks (KNBS, 2017). With the CBR currently at 10 percent, this implies a floor of 7 percent on term deposits and a ceiling of 14 percent on loans. Since the signing of the law, stock prices of Kenya's biggest banks have fallen and a number of banks have announced cost-cutting measures, including layoffs, closure of branches, and cancellation of expansion plans (IMF, 2017). The interest rate cap has led to loss of deposits by smaller banks, as they are perceived to being risky to larger banks. Average savings rate by commercial banks grew by 262% in 2016 while lending rate decreased by 23% in the same period. (Deloitte, 2017).

## Central Bank of Kenya

The Central Bank of Kenya as the regulator of commercial banks issues regulations and guidelines that foster transparency between banking institutions, individuals and other organizations with which they do business. The objective of these regulations is to protect depositors, reduce systematic risk, and avoid misuse of banks by protecting banking confidentiality in credit allocation (Central Bank of Kenya, 2016). The CBK also fosters the liquidity, solvency, and proper functioning of a market-based financial system in its supervisory functions as well as licensing all financial institutions and inspecting them to ensure that they comply with regulations and guidelines (Central Bank of Kenya, 2016). CBK was very important in ensuring timely and adequate liquidity distribution among all banks in the first half of 2016 following instability witnessed in the last quarter of 2015 and first quarter of 2016 (Financial Stability Oversight Annual Report, 2016).

## Empirical Literature

### Non-performing loans and performance of banks

NPLs were considered one of the main causes of the global financial crisis (2007-2009) which damaged the USA economy and economies of many countries

(Adebola, Yusoff, & Dahalan, 2011). Guy (2011) agrees that non-performing loans have been widely used as a measure of asset quality among lending institutions and are often associated with failures and financial crises in both the developed and developing world. Reinhart and Rogoff (2010) as cited in Louzis et al (2011) point out that non- performing loans are used to mark the onset of a banking crisis. Despite ongoing efforts to control bank lending activities, non-performing loans are still a major concern for both international and local regulators (Boudriga et al, 2009). Therefore, there is need to devise mechanisms to control the non-performing loan levels to avert the possibility of a breakdown in the financial system.

Sohaimi (2013), examined the relationship between liquidity risk and financial performance measures of commercial banks in Malaysia covering 16 years from 2007 to 2012 using secondary data. The study used deposits, cash, liquidity gap and NPLs as independent variables. Findings of this study showed that liquidity risk affects banks' capital and reserves significantly. NPLs, was the important factor in intensifying the liquidity risk by having a negative relationship with deposits, cash and liquidity gap, hence affecting financial performance negatively and concluded that NPLs should be monitored prudently to safeguard a sound liquidity position for the bank.

Arif & Anees (2012), studied Liquidity risk and performance of banking system in Pakistan focusing on conventional banks. Unstructured interviews were used to gather primary data while secondary data from annual reports was extracted for 22 banks covering a period of 6 years from 2004 to 2009 and used a correlational research design. The study found that NPLs negatively affects bank's profitability since NPLs show the presence of credit risk, which can rapidly turn into a severe liquidity crisis. Banks should therefore monitor their long-term debtors and concluded that liquidity risk may be mitigated by decreasing NPLs.

Ozurumba (2016), examined the Impact of Non-Performing Loans on the Performance of Selected Commercial Banks in Nigeria covering the period 2000 – 2013. The study utilized secondary data obtained from annual report and accounts of the selected banks for the period under study and was analyzed using ordinary least square method and ratio analysis. The results indicated that NPLs have an inverse relationship with bank performance measured by ROE and an increase in NPLs will cause a decrease in ROE. The study concluded that the effects of NPLs on Banks cannot be underestimated as they a fundamental threat to the very existence of the Banks as corporate business entities.

Ebba (2016), examined the relationship between non-performing loans and financial performance of commercial banks in Ethiopia using a descriptive research design methodology. Secondary data for a 5 year period from 2011 to 2015 was used and the study found that NPLs have a significant negative effect on banks performance and concluded that the performance of the banks increased from the year 2011 to 2015 due to a significant decrease in NPLs in the same period and recommended that the management of the commercial banks should assess the creditworthiness of their clients and apply rigorous policies on loan advances so as loans are awarded to those with ability to repay and mitigate moral hazards such as insider lending and information asymmetry to minimize incidences of NPLs since they influence financial performance and position of the banks, by decreasing the level of interest income and consequently financial performance.

Mpuga (2002), studied the role of the new capital requirement during 1998-1999 banking crisis in Uganda and found out that in 1998-1999; four commercial banks, three of them locally owned were closed. The results of the study indicated that it was not clear whether it was the new capital requirement that played part in setting off such closure. However, the results indicated that whereas there was an

improvement in the banking sector as a whole, there were differences in the impact of the new capital requirement on foreign and locally owned commercial banks. The performance of foreign banks remained sound and even improved while domestic commercial banks suffered massive decline in their profitability and accumulated NPLs. These NPLs were the major contributors to the decline in performance of these banks due to the forfeited interest income on these loans and the huge provision for the NPLs which impacted negatively on asset quality and the earning capacity of the banks.

## Conceptual Framework



Independent Variables

Intervening Variable
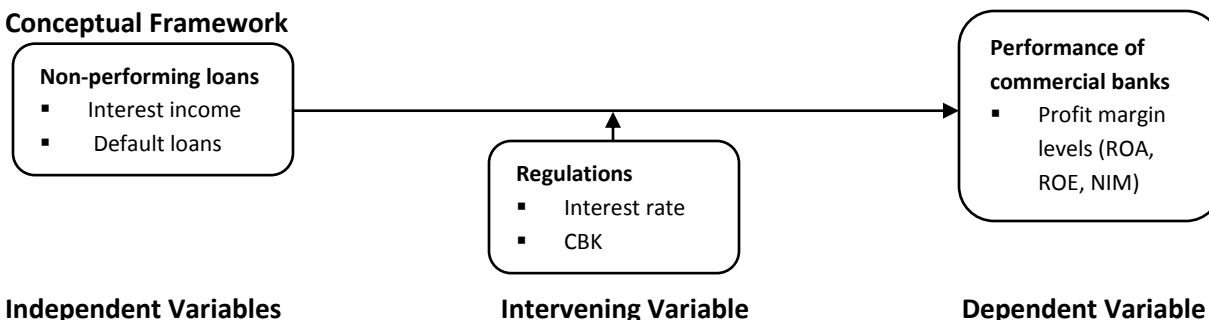
Dependent Variable

**Figure 1: Conceptual framework (Source: Researcher, 2017).**

## METHODOLOGY

This study adopted a correlational research design with a comparative analysis approach which is quantitative in nature and utilized panel data for 10 years from 2007 to 2016. The study was carried out in Kenya as the units of study had their head offices in Kenya with branches across the country. The target population for this study comprised of two commercial banks operating in Kenya. The choice of Equity bank was justified to have a focus on private bank operations while NBK was chosen due to the fact that it is a state owned bank and therefore, its operations were indirectly influenced by the government and therefore the element of private versus a public bank for comparability reasons. The study used secondary data obtained from the bank's annual reports using a document analysis guide and primary data was obtained from the directors of the banks using an interview schedule. Both secondary and primary data were collected. Document analysis guide was used to collect quantitative secondary data. The data analysis for this study was conducted using both descriptive and inferential statistics. SPSS Version 21 software was used to generate descriptive and inferential statistics and STATA Version 11 software was used to test for unit root in the dependent variables.

## RESULTS

### Pperformance of commercial banks

The study sought to establish the performance of commercial banks using three constructs namely ROA, ROE and NIM. The results were presented as in tables 1, table 2 and table 3 below.

**Table 1: ROA (%)**

| Statistics | Equity | NBK |
| --- | --- | --- |
| Mean | 4.828 | 1.619 |
| Median | 4.83 | 1.715 |
| Std. Deviation | 0.64475 | 1.4139 |
| Variance | 0.41571 | 1.9991 |
| Minimum | 3.56 | -0.94 |
| Maximum | 5.64 | 3.37 |

**Source:** Research data (2017)

**Table 2: ROE (%)**

| Statistics | Equity | NBK |
|---|---|---|
| Mean | 25.3 | 10.95 |
| Median | 26.615 | 11.995 |
| Std. Deviation | 6.46 | 10.44 |
| Variance | 41.68 | 109 |
| Minimum | 12.67 | -10.84 |
| Maximum | 33.39 | 22.54 |

**Source:** Research data (2017)

**Table 3: NIM (%)**

| | Statistics | Equity | NBK |
|---|---|---|---|
| | Mean | 11.82 | 8.221 |
| | Median | 11.83 | 8.39 |
| **NIM%** | Std. Deviation | 2.181 | 1.138 |
| | Variance | 4.755 | 1.294 |
| | Minimum | 6.53 | 6.44 |
| | Maximum | 14.87 | 10.63 |

**Source:** Research data (2017)

Equity bank had a positive financial performance through 2007 – 2016. The mean of ROA, ROE and NIM was 4.83%, 25.30% and 11.82 % respectively. Their median was 4.83%, 26.62% and 11.83% respectively with a minimum of 3.56%, 12.67% and 6.53% and a maximum of 5.64%, 33.39% and 14.87% as indicated by tables 1, 2 and table 3. This suggested that the utilization of assets to generate returns for the bank was low compared to the returns generated by shareholders equity and the positive NIM indicated that there was adequate usage of liabilities to generate wealth in the form of interest income to the bank. There was low variation as indicated by standard deviation of 0.64%, 6.46% and 2.18% for ROA, ROE and NIM.

The performance of NBK was negative for one year and then improved thereafter. The mean of ROA, ROE and NIM was 1.62%, 10.95% and 8.22 %. This implied that the ability of NBK to generate wealth in relation to its asset base is low as compared to the returns generated using shareholders' funds. The positive NIM indicated that the bank is generating more interest income hence it is paying less interest

expense to depositors. The median was 1.72%, 11.995% and 8.39% for ROA, ROE and NIM respectively with a minimum of -0.94%, -10.84% and 6.44% while the maximum was 3.37%, 22.54% and 10.63% respectively as indicated by tables 1, 2 and table 3. It was noted that there was low variations in performance indicators as reflected by the standard deviation of 1.41%, 10.44% and 1.14% for ROA, ROE and NIM.

Equity bank reported a positive performance with ROE being higher than NIM which was also higher than ROA throughout the study period. ROE showed an upward trend from 2007 to 2011 but decreased in 2012 and 2013 after which it rose again reaching its maximum in 2014 but started decreasing again afterwards. NIM shows an almost constant trend during the study period. It showed an increasing trend from 2007 to 2010 but decreased in 2011 before increasing again in 2012 after which it started decreasing again. Like NIM, ROA also showed an almost constant trend. It showed an increasing trend from 2007 to 2010 but decreased from 2011 and 2012 before increasing again in 2013 but started

decreasing again in 2014until the end of the study period.

NBK, ROE started at the highest level in 2007 but decreases thereafter up to 2009 and increases again in 2010. It started decreasing again in 2011 to 2012 but increased in 2013 after which it decreased significantly in 2014 reaching its minimum level when it was a negative in 2015 but improved again in 2016. NIM was above ROA throughout the study period. NIM decreased from 8.59% in 2007 to 8.14% in 2009 but increased in 2010 after which it decreased in 2011 to 2015. In 2016, NIM increased to 8.42%. ROA increased from 2.70% in 2007 to 2.91% in 2008 but then decreased slightly to 2.85% in 2009 after which it increased again in 2010 but decreased later in 2011 and 2012. In 2013, ROA increased to 1.18% but decreased again in 2014 and in 2015, it reached its minimum of -0.94% but improved again to 0.13% in 2016.

## Non-Performing Loans and Bank Liquidity

The study sought to establish the descriptive statistics of non- performing loans of the commercial banks in this study. The results of analysis are as in table 4 below.

**Table 4: Non - Performing Loans and Bank Liquidity**

|  | Statistics | Equity | NBK |
|---|---|---|---|
| Non-Performing Loans | Mean | 4.675 | 2.259 |
|  | Median | 3.535 | 1.725 |
|  | Std. Deviation | 3.591 | 1.712 |
|  | Variance | 12.895 | 2.931 |
|  | Minimum | 0.99 | 0.69 |
|  | Maximum | 13.64 | 6.32 |

**Source:** Research data (2017)

The mean of NPLs for Equity was 4.68 billion and the median was 3.54 billion. It was noted that there were more variations in NPLs as reflected by the standard deviation of 3.59 billion translating to 76.71% of the mean of NPLs. For NBK, the mean and median of NPLs was 2.259 billion and 1.725 billion. There is high variation as indicated by standard deviation of 1.712 billion which was 75.79% of the mean of NPLs. Equity Bank had the highest variation in NPLs. High level of NPLs were detrimental to the financial performance of banking institutions as they deprive them the interest income and principal, thus reducing their productive asset base since these NPLs were categorized as non-performing assets since the bank needs to make cash provisions for them thus depriving the bank this cash for productive investments in addition to the foregone principal amount and interest.

## Test of hypothesis

### Non-performing loans and performance of commercial banks (Equity Bank Kenya)

The objective of the study was to determine the effect of non-performing loans on performance of commercial banks in Kenya. The null hypothesis was stated as;

$H_{03}$: There is no significant effect of non-performing loans on performance of commercial banks in Kenya.

Results indicated that the regression weight for NPLs was negative and significant (β= -0.473, t= -2.133< critical value 2.262, p < .05). Therefore, the null hypothesis was rejected in favor of the alternate hypothesis at p 0.002 < 0.05 level of significance implying that NPLs have a statistically significant relationship with performance of Equity bank in Kenya (alternate hypothesis was accepted). The regression estimate for NPLs was -0.473, this

indicates that a unit increase in NPLs would result in 47.3% decrease in performance of Equity bank Kenya. This is because as NPLs increase, they hinder the bank's lending capacity by denying the bank both interest and the principal loan amount. NPLs requires banks to raise provision for loan loss that decreases the banks' revenue and reduces the funds for new lending causing insolvency of financial institutions and ultimately hurting the whole economy by causing reluctance by banks to provide credit.

These findings do concurred with Sohaimi (2013) in the case of commercial banks in Malaysia who found that NPLs was the important factor in intensifying the liquidity risk by having a negative relationship with deposits, cash and liquidity gap, hence affecting financial performance negatively. The finding by Arif & Anees (2012) for banks in Pakistan also agreed with the findings of this study that NPLs negatively affects bank's profitability since NPLs show the presence of credit risk, which can rapidly turn into a severe liquidity crisis.

The study findings by Ozurumba (2016) in Nigeria also concur with the findings of this study that NPLs have an inverse relationship with bank performance and an increase in NPLs will cause a decrease in profitability of a bank and therefore the effects of NPLs on banks cannot be underestimated as they are a fundamental threat to the very existence of the banks as corporate business entities. The findings by Ebba (2016), Mpuga (2002), Maaka (2013), Chege & Bichanga (2017), also concur with this study's finding that NPLs have a significant negative effect on banks performance by decreasing the level of interest income and consequently financial performance and also due to the forfeited interest income on these loans and the huge provision for the NPLs which impact negatively on asset quality and the earning capacity of the banks and recommended that management of commercial banks should strive to minimize as much as possible the Non-performing loans.

This finding however differs with the finding by Kithinji (2010), who found that profits are not dependent on the amount of credit and NPLs and even if no credit is extended, commercial banks will still make some profit revealing that the bulk of the profits of commercial banks are not influenced by the amount of credit and NPLs but other variables other than credit and NPLs impact on profits and recommended that Commercial banks that are keen on making high profits should concentrate on other factors other than focusing more on amount of credit and NPLs.

The study findings contributed to the theory of Information asymmetry because adverse selection of borrowers may lead to accumulation of non-performing loans resulting to liquidity risk problems in commercial banks.

**Non-performing loans and performance of commercial banks (National Bank of Kenya)**
The objective of the study was to determine the effect of non-performing loans on performance of commercial banks in Kenya. The null hypothesis was stated as

$H_{03}$: There is no significant effect of non-performing loans on performance of commercial banks in Kenya. Results indicated that the regression weight for NPLs was negative and significant ($\beta$= -0.031, t= -0.088< critical value 2.262, $p < 0.05$). Therefore, the null hypothesis was rejected in favor of the alternate hypothesis at p 0.002 < 0.05 level of significance implying that NPLs have a statistically significant relationship with performance of NBK (alternate hypothesis was accepted). The regression estimate for NPLs was -0.031, indicating that a unit increase in NPLs would result in 3.1% decrease in performance of NBK.

Like for customer deposits, the regression coefficients are negative for both banks with equity bank ($\beta$= -0.473) and NBK ($\beta$= -0.031). This indicates that the reduction on performance as NPLs increase is higher

for Equity bank than for NBK. For both banks, the regression coefficients were significant thus rejecting the null hypothesis. Increase in NPLs affects financial position and performance of the banks, by decreasing the level of interest income and consequently financial performance. The results concur with the finding of Ozurumba (2016) that NPLs have an inverse relationship with bank performance and an increase in NPLs will cause a decrease in bank performance.

**Thematic Analysis**
**Equity Bank Kenya Limited.**

**Effect of non-performing loans on performance of Commercial Banks in Kenya**

For this objective, the Credit Director intimated that NPLs have had a generally increasing trend over the last 10 years due to households and businesses struggling to meet their repayment schedules due to high interest rates before the capping, *"delayed payment and collapse of small and medium enterprises who form the bulk of the bank's customers also drove up the non-performing loans".*

The presence of non – performing loans has worsened the management of liquidity risk and financial performance as it denies banks the needed liquidity to run daily operations and invest in income generating ventures as the respondent felt that *"non-performing loans deprives the bank both the principal loan amount, interest income in addition to the amount set aside as provision for these loans. This negatively affects the performance of the bank in addition, lending is now skewed toward less riskier sectors like the government and this has limited interest income as the government normally borrows on long term".* Controlling non – performing loans is essential for both the performance of the bank and the economy's financial environment.

As a suggestion on to reduce non-performing loans to improve performance, the interviewee said that *"an improvement of efficiency through cost reduction,*

*pursuing a lending strategy backed by appropriate credit risk evaluation including a detailed information sharing among lenders including financial inclusion of all financial intermediaries and expansion of financial services to increase fee income".* The respondent further suggested the use of past history as an appraisal factor other than the security alone and assessment of the eventual viability of the security to materialize in the event of non-repayment.

These findings are in agreement with the findings by Ozurumba (2016), Sohaimi (2013), Ebba (2016), Mpuga (2002), Maaka (2013) and Chege & Bichanga (2017). These findings however differ with the findings of Kithinji (2010), who found that profits are not dependent on the amount of credit and NPLs and even if no credit is extended, commercial banks will still make some profit revealing that the bulk of the profits of commercial banks are not influenced by the amount of credit and NPLs but other variables other than credit and NPLs impact on profits.

This thematic analysis agrees with the quantitative results that non-performing loans negatively affects bank performance.

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The credit director felt that non – performing loans were the most challenging and risky in bank operations and said that, "*these non – performing loans could cause a banking crisis if they are not checked since they reduce asset quality which impairs lending capacity of the banks*". The non-performing loans for the bank had an increasing trend for the past 10 years generally as per the respondent despite the fact that at certain years they were decreasing but marginally.

With regard to their effect on liquidity risk management, the credit director indicated that the increase in non – performing loans leads to credit risk

and eventually liquidity risk and therefore their presence enhances liquidity risk and "*performance is reduced as the non-performing loans are expensive to deal with since in addition to the loss of the money and its expected interest income, when a bank tries to recover its money, it suffers other costs like auctioneer fees, management time and administration costs which suppress profits further*".

As a suggestion on how to reduce non-performing loans for better bank performance, the respondent had this to say *"banks should be more cautious in lending, apply rigorous policies on loan advances so that loans are awarded to those with ability to repay and mitigate moral hazards such as insider lending and information asymmetry. The banks should also enhance regular credit risk monitoring of their loan portfolios to reduce the instance of default, avoid unsecured loans to politicians and attach more weight to the viability of the project than the collateral and intensify loan recovery efforts".* He further suggested the abolition of interest rate capping and instead adopt the policy of better pricing of loan products to lower risk clients and interest free loans to risk free clients as a motivation to commit others to avoid defaulting.

This thematic analysis is also in agreement with the quantitative analysis that non – performing loans negatively affects bank performance. It also agrees with the results from Equity Bank on thematic analysis.

### SUMMARY

Pearson correlation matrix was obtained to determine the association between NPLs and financial performance indicators; ROA, ROE and NIM. For Equity bank, NPLs had a negative and insignificant correlation with ROA ($r = -0.194$) this is a weak correlation coefficient. .Equally, NPLs had a weak but positive correlation with NIM at $r = 0.158$ while the coefficient with ROE was fairly strong but not significant ($r = 0.535$). For NBK, The coefficient for NPLs and ROA is negative at $r = -0.679$ ($p<0.05$). This is a fairly strong, negative and significant coefficient. For ROE, NBK has a negative, fairly strong but not significant coefficient ($r = -0.598$) and for NIM, NPLs had a coefficient of -0.338 which is a moderate, negative and insignificant coefficient. For both NBK and Equity Bank, the null hypothesis was rejected.

### CONCLUSION

The finding on the hypothesis revealed that Non-performing Loans have a statistically significant negative relationship with performance of commercial banks in Kenya and concluded that increase in NPLs reduces bank performance since the bank forfeits the principal loan amount and the accompanied interest thereon and thus needs to increase provision for NPLs which also minimizes banks assets and therefore limiting its investment and hence income generating potential.

### RECOMMENDATION

Non–performing loans had a significant negative effect on bank performance according to the findings of this study. This is because banks have to forfeit the principal amount and interest income thereon and declare lower earnings because of having to increase provisions for non–performing loans. Commercial banks should therefore engage credit bureaus for assistance in credit assessment and provision of information about susceptible defaulters to minimize exposure to credit risk that eventually starves the bank of the available cash, hence resulting to liquidity constraints.

More robust approaches of reducing credit default that result in accumulation of non – performing loans and high net charge- offs should be adopted by the commercial banks to keep provision for non-performing loans at low levels. The study recommends that:

- The Credit Directors and Credit Managers should put in place and operate under a sound credit

granting process with well-defined credit granting criteria and ensure a detailed understanding of the borrower, the purpose of the loan, its source of repayment as well as the viability of the security as well as the stability in pricing in the event of liquidating the security. Overall credit limits should be adhered to for the borrowers and new credit approvals, amendment, renewal and re-financing of existing credit facilities should be based the laid down credit procedures.

- In addition to reliance on information from CRBs, credit personnel should develop a robust credit management systems and wide information sharing with other banks. Banks should also be innovative and embrace technology to be able to facilitate data mining and management information system to facilitate access to customer information regarding past history to inform the decision on the risk of the customer and thus the loan to be granted.

- Banks should be allowed to give and price loans based on the projected risk of the client. Higher pricing for higher risk customers and lower interest rate for lower risk clients as well as better pricing for clients who pay their loans in time to encourage borrowers to adhere to their credit terms.

- The central bank should increase financial inclusion and develop mechanisms of regulation for chamas, shylocks, so as to minimize credit risk exposure and be able to keep off defaulters from unregulated lending segments migrating to banks.

**Suggestions for further research**

Future studies should focus on a longer time span of about 20 to 30 years as this would clarify whether the observed relationship changes over the years. Such a study would call for advanced econometric and statistical analysis such as time series and panel data analysis. Further, other studies can include more liquidity risk management variables and other bank performance measures. Future studies could also include comparisons with foreign owned commercial banks so that to examine the similarity and differences in the study results. Future studies can also include other measures of performance such as return on deposits in addition to the ones used. Further research can be undertaken on the relationship between asset base and bank performance by introducing new variables, longer period and different method of analysis (GEE, GMM, Dynamic panel analysis among others). The study variables could also be studied individually in the case of future studies to gain an in-depth effect of each on bank performance.

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