EFFECT OF CORPORATE GOVERNANCE ON LIQUIDITY DUE TO NON-PERFORMING ASSET PORTFOLIOS IN THE BANKING SECTOR: A CASE OF COMMERCIAL BANKS IN KENYA

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Abstract

It's argued that corporate governance can be linked to liquidity due to non performing asset portfolios (NPAs) in commercial banks in Kenya but this has not been determined empirically. Information is lacking on effect of corporate governance on liquidity due to NPAs among these banks. The study sought to establish effect of corporate governance on liquidity due to NPAs, among these banks. The study was guided by a Shareholder theory in which the independent variable is corporate governance and dependent variable is liquidity due to NPAs. Panel Least square data analysis was employed in the study. The target population was 43 heads of credit of the banks operating in Kenya from 2005 to 2012. Simple random sampling technique was used to select a sample size of 24 heads of credit. Secondary data was collected through review of records of the banks, reports, journals and books. Primary data was obtained from respondents through a questionnaire and interview schedule. Instrument reliability stood at Cronbach's Alpha of 0.65. The objective was analyzed using regression analysis. Results for the objective showed a_1, a_2 and a_3 as -0.101(p=0.292), 0.363(p=0.000) and -0.055(p=0.121) respectively. This means that a unit change in standard deviation in capital adequacy for example causes 0.363 standard deviations in liquidity significantly. R-Square results was 0.161 for liquidity model. This implies the model is stable and valid for prediction at 16.1%.

1.0 INTRODUCTION

Corporate governance is a set of decisions and actions used to direct and control an organization. It consists of relationships between, and accountability of, the organization's stakeholders, as well as the laws, policies, procedures, practices, standards, and principles which may affect the organization's direction and control (Cadbury, 1992). Spectacular corporate failures, such as Enron, WorldCom, the Bank of Credit and Commerce International (BCCI), Polly Peck International, and

Baring Bank, have made it a central issue, with various governments and regulatory authorities making efforts to install stringent governance regimes to ensure the smooth running of corporate organizations, and prevent such failures (Al-Baidhani, 2014). Understanding the corporate governance of banks is especially important because of the systemic risk that banking activity poses for the economy at large as evidenced by the U.S. savings and loan crisis in the 1980's, the Asian financial crisis in the 1990's and the more recent subprime mortgage crisis (Alexander 2006). Notwithstanding, the economic relevance of banks and of corporate governance within banks, corporate governance issues related to banks have been overlooked by prior research, which tends to focus on firms in the non-financial sector (Handley et al. 2001, Adams et al 2003). Studies, particularly focusing on Kenya, have not covered effect of asset quality, capital adequacy and efficiency on liquidity of commercial banks due to NPAs.

1.1 Problem Statement

In Kenya lack of stringent Corporate Governance mechanisms have led to banks collapsing, merging or going into receivership leading to loss of jobs as a result of low liquidity by banks due to non-performing asset portfolios. Poor lending; mismanagement; customers unwillingness to repay etc. are perceived as the main factors contributing to the non-performing debt problem in Kenya leading to low liquidity by banks and this is the ground for anchoring this study. The Kenyan banking sector was in the 1980's and 1990's saddled with a momentous low liquidity due to non-performing loans portfolio which invariably led to the collapse of some banks. Where there is non-repayment of borrowed funds at widespread levels there will be a devastating effect on the bank and the entire economy as this will lead to erosion of the banks' liquidity. Therefore the purpose of this research was to examine the effect of corporate governance on liquidity due to non-performing asset portfolios in the banking sector: A case of commercial banks in Kenya.

1.2 Objective of the study

Establish effect of corporate governance on liquidity due to non-performing asset portfolios among commercial banks in Kenya.

1.3 Conceptual Framework

The study was guided by Shareholders Value Theory whereby independent variable is corporate governance and dependent variable is liquidity due to non- performing asset portfolio. Intervening variables were internal and external factors. It is expected that corporate governance operationalized through asset quality, capital adequacy and efficiency (Friedman, 1970) have an effect on liquidity of banks due to NPAs. The relationship is not perfect. It is expected that a number of internal and external factors interfere with the relationship as illustrated in figure 1.1.
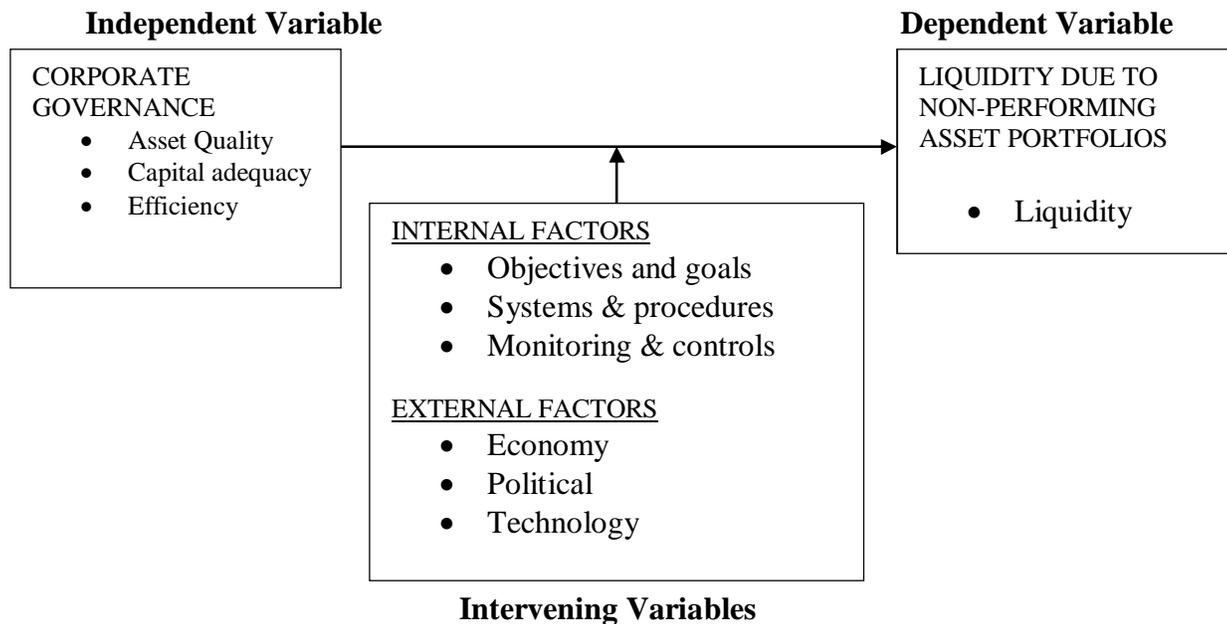
Independent Variable   **Dependent Variable**

Intervening Variables

Figure 1.1: Relationship between corporate governance and Performance of Banks due to Non-performing Asset Portfolios**.**

Source: Adapted from Friedman (1970)

2.0 Literature Review

2.1 Theory of the Study

The shareholder theory (Friedman, 1970), states that the sole responsibility of business is to increase profits. It is based on the premise that management is hired as the agent of the shareholders to run the company for their benefit, and therefore they are legally and morally obligated to serve their interests. The only qualification on the rule to make as much money as possible is "conformity to the basic rules of the society, both those embodied in law and those embodied in ethical custom." For purposes of this study, the theory explains the interaction of stakeholders in governance of the banks resulting in different levels of liquidity due to NPAs subsequently affecting overall bank performance. Consequently, it explains the relationship that would exist between asset quality, capital adequacy and efficiency as elements of corporate governance and liquidity due to NPAs.

2.2 The Concept of Corporate Governance

Corporate governance is defined as "ways of bringing the interests of investors and managers into line and ensuring that firms are run for the benefit of investors (Mayer, 1997). Corporate governance is one of the reasons that is believed to have played a role in the global financial crisis of 2008, where many commercial banks and investment banks worldwide collapsed or were bailed out by governments (Kabigting *et al*., 2011). It has received wide attention in Kenya due to recognition that improved corporate governance will lead to improved productivity, efficiency and effectiveness. Asset quality as a concept of corporate governance is an evaluation of asset to measure the credit risk associated with it. Bank's asset comprises mainly of its loans and advances

to customers and is related to the left-hand side of the bank balance sheet. Bank managers are concerned with the quality of their loans since that provides earnings for the bank. To assess asset quality, a ratio that is used is non performing loans (NPL) provision to operating income. This ratio measures to what extent the operating income is weighted down by the provisions set aside for NPL. A lower ratio is desirable. According to Muhammad *et al.* (2011) capital adequacy refers to bank's capital sufficiency in relation to its liabilities and it is measured using Core Capital to Total Deposits. The rule of the thumb is that bank's should progressively convert some of their earnings into capital to cover any liabilities that may occur in the future. For banks with limited earnings, strategic decisions should be taken to ensure capital adequacy. Efficiency is the ratio of Operating expenses to Total Net Operating Income, also known as Cost Income Ratio. It is a measure of how efficiently the bank is utilizing its resources to generate income. A lower ratio is desirable.

2.3 The Concept of Liquidity

Muhammad *et al* (2011), argues that poor corporate governance of the banks can drive the market to lose confidence in the ability of a bank to properly manage its assets and liabilities, including deposits, which could in turn trigger a liquidity crisis and then it might lead to economic crisis in a country and pose a systemic risk to the society at large. Michael et al (2006) emphasized that NPA in loan portfolio affect operational efficiency which in turn affects profitability, liquidity and solvency position of banks. Batra (2003) noted that in addition to the influence on profitability, liquidity and competitive functioning, NPA also affect the psychology of bankers in respect of their disposition of funds towards credit delivery and credit expansion. The objective of maintaining a certain liquidity ratio is to ensure that depositors are able to get their money as and when they require it. The CBK has a regulatory minimum of 20% on this ratio. A higher ratio implies a high level of liquidity. Every bank seeking to maintain its integrity in the market and continue in business must ensure that it always has enough cash to pay its depositors. To assess liquidity, the following parameter is used: Net Loans to Total Deposits. A lower ratio is safer in this regard. Twenty years after independence in 1983, the stage was set for Kenya's first post-independence banking crisis when several indigenous banks developed acute liquidity problems. In spite of efforts by Treasury and Central Bank to bail out the ailing institutions, one institution was closed in December 1984. This crisis and failure exposed the inadequacy of the safety-net and failure resolution mechanisms existing at the time, which precipitated amendments to the Banking Act in 1985 to expand the safety net and improve the bank failure resolution mechanism. The Deposit Protection Fund Board (DPFB) was established as a deposit insurance scheme to provide cover for depositors and act as liquidator of banks which could not be salvaged. The same amendments gave Central Bank of Kenya the responsibility of risk minimization through enhanced prudential regulation, supervision and surveillance.

2.4 Concept of Non-Performing Asset Portfolio

An asset becomes non-performing when it ceases to generate income for the bank. This occurs when the borrower fails to repay the interest and/or principal on agreed terms (Siraj *et al.*, 2012). Accordingly, a non-performing asset (NPA) shall be a loan or an advance where; Interest and /or installment of principal remain overdue for a period of more than 90 days in respect of a term loan, an Overdraft (OD), or bills purchased and discounted. CBK requires commercial banks to maintain adequate provisions for bad and doubtful debts prior to declaring profits or dividends. Loans and advances are always classified as either, normal, watch, substandard, doubtful or loss based on their

characteristics. All the facilities granted by a bank to a borrower will have to be treated as NPA and not the particular facility or part therefore which has become irregular (Reserve Bank of India master circular, 2001). The extent of non-performing assets of banks has assumed a formidable proportion during the last decade and beyond, eating into hard earned incomes of the banks. This figure averaged 38 percent between the years 1990 to the year 2000 according to the Kenya Institute of Bankers Issue no.2 (2000). Currently the situation is not any better.

3.0 Methodology

3.1 Research Design

This study was guided by quantitative paradigm, since it was based on testing of a theory, was composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory held true (Cresswell, 2003). This study adopted panel least squares data analysis . The design was expected to test the hypothesis and meet the objective of the study. According to MacManus 2011, panel data are a type of longitudinal data , or data collected at different points in time and is most suitable in a research aimed at data on organizations and firms at different time points and determining its extent. The advantage of a panel least square is emphasized in its more accurate inference of model parameters. Least squares approach helped to determine analysis of non stationery time series and provide micro foundations for aggregate data analysis (Heckman, J. J 1981).

3.2 Study Area

The study area is Kenya. The study covers all the banks in Kenya. The banks have their headquarters and branches geographically spread all over Kenya. Kenya, is a country in East Africa lying in the latitudes and longitudes of 4°N and 4°S and 34° E and 42°E respectively.

3.3 Study Population

The target population comprised of heads of credit from 43 commercial banks operating in Kenya between 2005 to 2012.

3.4 Sampling Technique

Simple random sampling was used to select the banks for the study from the total number of banks. Simple random sampling technique was considered as suitable because it gives all the banks a chance to be selected for this study. A sample size of 24 heads of credit, representing 56% of the target population (Table 3.4.1) was used. The study considered senior managers of the selected banks totaling to 24 as the respondents. This sample size was determined using the formula as indicated below:

$$S = n/1 + (n/N)$$

Source: Chava *et al.,* 1996.

Where, N= Target population
        S= Sample Size

$$n = Z * Z(P(1 - P)/(D * D))$$

P= True proportion of factor in the population, or the expected frequency value

D= Maximum difference between the sample mean and the population mean, or expected frequency value minus (-) worst acceptable value

Z= Area under normal curve corresponding to the desired confidence level

Hence; Z= 95%/1.960, N=43, P= 4%, D= 5%

Calculation; n= 1.96 * 1.96(0.04(1-0.04)/(0.05*0.05))= 3.816(15.36) = 58.6

$$S = \frac{58.6}{1 + \left(\frac{58.6}{43}\right)} = \frac{58.6}{2.4} = 24$$

The formula assumes a margin precision of 0.5 and a confidence of 95% (Chava *et al.,* 1996).

Table 3.4.1 Sample Distribution

	Total Population(N)	Sample(S)
Banks/Heads of Credit	43	24
Total	43	24

Source: Adapted from CBK (2014)

3.5 Data Collection

3.5.1 Data Type and Source

The study used both primary and secondary data. Primary data was collected from original sources which in this case were the heads of credit. Secondary data was obtained from text books, journals, periodicals, magazines, libraries, internet services, banks' financial statements.

3.5.2 Data Collection Instrument

The questionnaires are commonly used to obtain important information about the population. Each item in the questionnaire was developed to address specific objective (Mugenda, 1999). Interview method was also used. Personal or face to face and telephone interviews were conducted. An interview schedule of the banking institutions and the bank contact persons were prepared based on the objective of the research and were administered by the interviewer.

3.5.3 Reliability of Data Collection Instrument

Pretesting was conducted for reliability. Reliability refers to the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials. Reliability test was aimed at determining consistency and stability. Since there is little published guidance concerning how large a pilot study should be (Melody Herztog, 2008), pilot test was conducted on 10 heads of credit from the commercial banks. This group was not included in the main study. The responses for the pilot test are presented in table 3.5.3 below:

Table 3.5.3: Pilot test response Received from Target Respondents

Bank	Expected Number	Actual umber	Percentage
Bank 1	1	1	100%
Bank 2	1	1	100%
Bank 3	1	1	100%
Bank 4	1	1	100%
Bank 5	1	1	100%
Bank 6	1	1	100%
Bank 7	1	1	100%
Bank 8	1	1	100%
Bank 9	1	1	100%
Bank 10	1	1	100%
Total	10	10	100%

Source: Pilot Survey Data (2014)

The ideal was to test stability by administering the instrument to the pilot survey respondents twice. However it was difficult to do this when dealing with senior executives like in this study (Sekaran, 2000). Therefore to check the reliability of the instrument in this study, Cronbach's Alpha was used (Cronbach, 1951). According to suggestions by Hair et al (1998), the study found it acceptable a reliability coefficient above 0.6. The instrument was found reliable at Cronbach's alpha of 0.65. Consequently the instrument was accepted as reliable.

3.5.4 Validity of Data Collection Instrument

Data collection instrument was exposed to subject and research experts who included the supervisors, to critique for clarity and ability to collect intended data.

3.6 Data Analysis and Presentation

Measures used were percentages, means and averages. Since the study was focusing on relationship between variables, bivariate analysis was done using Pearson correlation techniques (O'Connor, 2011) and regression analysis. The objective was analyzed using regression analysis. The results are presented in tables.

Least Square Model Specification

$y = f($ Asset Quality, Capital Adequacy, Efficiency, $\varepsilon)$

$$y_{it} = +bx_{it} + \epsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots1$$

$$y_3 = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + \varepsilon_3 \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots1$$

Where;

Asset Quality $= x_1$; Capital Adequacy $= x_2$; Efficiency $= x_3$; Liquidity $= y_3$; $\varepsilon =$ Error margin

Results and Discussions

Effect of Corporate governance on Liquidity due to Non-performing Asset Portfolios in commercial banks in Kenya

4.1 Liquidity analysis:

A bank must be liquid enough to meet its day to day obligations to its customer. The objective of maintaining a certain liquidity ratio is to ensure that depositors are able to get their money as and when they require it. The CBK has a regulatory minimum of 20% on this ratio. A higher ratio implies a high level of liquidity. Every bank seeking to maintain its integrity in the market and continue in business must ensure that it always has enough cash to pay its depositor. To assess liquidity, the following parameter is used: Net Loans to Total Deposits. A lower ratio is safer in this regard.

Table 4.1 below represents net loans to total deposits for the period 2005 to 2012 for 24 out of 43 commercial banks operating in Kenya. In the year 2007, TNBK had the highest liquidity ratio at 99.23% followed by Equity bank at 80.84%. DBK at 12.87% and BBK at 16.5% were the lowest. In 2008, TNBK was highest at 91.64% followed by Citibank at 75.84%. DBK at 18.19% and KCB at 18.55% had the lowest. In the year 2009, NBK had the highest rate at 84.8% followed by TNBK at 73.96%. HFCK and DTB were lowest at 24.03% and 25.26% respectively. In the year 2010, TNBK was the highest at 77.3% followed by DBK at 74.76%, while Middle East at 10.96% and CFC Stanbic at 23.13% were the lowest. In 2011, Middle East at 135.77% and Credit bank at 86.68% were the highest. KCB at 16.88% and CFC Stanbic at 17.69% were the lowest. In 2012, Citibank at 89.22% and Credit bank at 79.82% had the highest liquidity ratio, while BOA at 22.46% and CFC Stanbic at 23.4% had the lowest.

The table also shows that Stanchart remained the most liquid bank in Kenya in 2005 at 82.84% followed by DBK at 78.98% while NBK at 18.34% and Chase bank at 19.88% had the lowest liquidity ratio during the same period. In 2006, BOB had the highest liquidity ratio at 67.66% followed by TNBK at 66.37%, while NBK at 20.56% and I & M at 29.44% had the lowest. Liquidity as a dependent variable entered against all the predictors: efficiency, capital adequacy and asset quality show a significant level of 0.008. The multiple correlation coefficients, R, is the correlation coefficient between the observed values of y and the predicted values of x. ANOVA F statistic of 5.271 is significant with a P-value>0.05. The model establishes a relationship between profitability, efficiency, capital adequacy and asset quality.

Table 4.1: Net Loans to Total Deposits

	2005	2006	2007	2008	2009	2010	2011	2012
KCB	41.10	38.55	28.45	18.55	25.36	38.38	16.88	29.08
Equity	51.76	38.99	80.84	44.30	31.29	25.86	39.90	45.08
Coop	34.05	38.02	31.73	28.02	42.74	40.39	27.42	35.73
BBK	32.71	35.14	16.50	25.32	42.67	55.87	57.76	63.10
Stanchart	82.84	55.58	55.40	56.66	59.94	59.98	29.53	40.70

Citibank	64.52	61.87	68.34	75.84	64.02	67.22	70.58	89.22
CBA	49.23	60.74	48.22	33.50	42.15	37.71	30.53	32.42
DTB	31.53	37.10	28.41	31.09	25.26	34.21	56.65	45.72
NBK	18.34	20.56	27.54	24.69	84.80	51.61	21.67	51.86
NIC	28.09	35.39	28.93	26.87	28.27	26.17	53.97	58.16
CFC Stanbic	37.95	50.47	20.77	37.12	31.98	23.13	17.69	23.40
I & M	31.25	29.44	27.48	22.14	45.74	23.82	45.53	45.63
Imperial	31.41	30.46	22.47	24.53	39.42	49.82	27.65	28.97
Chase	19.88	48.17	20.57	18.65	39.81	44.16	35.97	57.37
BOA	37.04	33.31	26.74	30.95	47.15	47.94	20.87	22.46
HFCK	31.84	25.94	19.70	29.30	24.03	55.35	75.00	69.39
BOB	64.98	67.66	54.50	51.70	63.99	67.38	42.25	49.65
DBK	78.98	51.30	12.87	18.19	73.34	74.76	57.14	53.17
Credit	25.50	48.42	57.39	48.01	29.43	32.96	86.68	79.82
Giro	28.90	38.82	39.50	35.02	51.18	58.21	46.86	44.68
Guardian	22.51	37.92	36.66	30.03	38.45	37.09	31.56	33.27
Middle East	61.69	41.54	27.66	38.68	52.41	10.96	135.77	72.29
Paramount	41.89	64.37	53.92	58.32	62.18	62.15	59.54	66.73
TNBK	58.07	66.37	99.23	91.64	73.96	77.30	35.92	28.21

Source: Banking Survey (East Africa) 2014

Table 4.2 Level Prediction of the model of Liquidity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.401[a]	.161	.138	17.86847

a. Predictors: (Constant), Efficiency(x3): Cost Income Ratio, Capital Adequacy(x2): Core Capital to Total Deposits, Asset Quality(x1): Loan Loss Provision to Operating Income, Year(t), Bank(i)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11363.964	5	2272.793	7.118	.000[b]
	Residual	59386.494	186	319.282		
	Total	70750.458	191			

a. Dependent Variable: Liquidity(y3): Net Loans to Total Deposits

b. Predictors: (Constant), Efficiency(x3): Cost Income Ratio, Capital Adequacy(x2): Core Capital to Total Deposits, Asset Quality(x1): Loan Loss Provision to Operating Income, Year(t), Bank(i)

Table 4.3: Effect of Asset Quality, Capital Adequacy and Efficiency on Liquidity

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2046.706	1202.551		-1.702	.090
	Bank(i)	.349	.219	.126	1.594	.113
	Year(t)	1.039	.598	.124	1.737	.084
	Asset Quality(x1)	-.055	.035	-.112	-1.560	.121
	Capital Adequacy(x2)	.363	.088	.309	4.146	.000
	Efficiency(x3)	-.101	.096	-.075	-1.056	.292
a. Dependent Variable: Liquidity(y3): Net Loans to Total Deposits						

The Coefficients show that the confidence level has been met by asset quality and or efficiency. The relationship between liquidity and asset quality is not linear and the significance level is 0.121 meaning most banks' liquidity are eroded by provisions and interest suspense due to non-performing assets. The relationship between liquidity and capital adequacy is linear and the confidence level is highly significant($P < 0.001$) meaning most banks have the capacity to plough back their earnings to core capital resulting in high liquidity levels. The relationship between liquidity and efficiency is also not linear and the significance level is 0.292 meaning most of the banks have their liquidity affected by poor corporate governance measures. The coefficients show 95% confidence interval for Beta and that:

$$y_{it} = +bx_{it} + \epsilon_{it}$$

$$Liquidity_{it} = (-2046.706) + (-.101) * Efficiency + (.363) * Capital\ Adequacy + (-.055) * Asset\ Quality + \epsilon_{it}$$

This model fits the data well (F=7.118, p<.0000 and R2=.161). We may, however, suspect if there is a fixed group effect producing different intercepts across groups. Each Bank may have a significantly different level of liquidity, its y-intercept, when all regressors are set to zero. This difference is modeled as a fixed group effect.

Results for objective three showed a_1, a_2 and a_3 for Y_3 as -0.101(p=0.292), 0.363(p=0.000) and -0.055(p=0.121). This means that a unit change in standard deviation in capital adequacy causes 0.363 standard deviations in liquidity of the banks due to non performing asset portfolios, significantly. R square result was 0.161 implying that the model is stable and valid for prediction of liquidity of the banks due to non performing asset portfolios at 16.1%. This finding agrees with Murinde et al 2004 that the traditional approaches to bank regulation are not conducive for management of NPAs. These approaches emphasized the view that the existence of capital adequacy regulation plays a crucial role in the long-term financing and solvency position of banks, especially in helping the banks to avoid bankruptcies and their negative externalities on the financial system. In general, capital or net worth serves as a buffer against losses and failure. 100% of the respondents agreed that high incidence of NPAs are a source of low profitability, low income and low liquidity in large commercial banks..

5.1 Summary of Findings

The results show that capital adequacy, efficiency and asset quality contribute to liquidity of these banks due to NPAs. Capital adequacy and efficiency all have   positive effect on liquidity significantly, whereas, Assset quality has negative effect on liquidity significantly. The model for liquidity is stable.

5.2 Conclusions of the study

The results of the study show that corporate governance has effect on liquidity of banks due to NPAs. Specifically, the study concludes that a number of internal factors including poor lending, customers unwillingness to repay and mismanagement contribute to low liquidity due to NPAs among commercial banks in Kenya. Asset quality, Capital Adequacy and Efficiency have joint effect on liquidity.

5.3 Recommendations of the study
Based on the findings and conclusions the study recommends that , the rules and procedures of banks should be enhanced to improve bank performance hence increasing banks' liquidity and eliminating NPAs. This will go along way in addressing mismanagement of the banks. On poor lending, it is also recommended that credit officers, supervisors and management undergo rigorous training on regular basis. Customers should be thoroughly vetted and appraised on the basis of character to address the issue of unwillingness to repay in future. The history of customers should be variously verified. The customers should also be offered advisory services and products' training. Hence these will reduce NPAs and increase banks' liquidity.

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