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INFLUENCE OF LIQUIDITY DISTRESS FACTOR ON PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

The Central Bank of Kenya advised commercial banks to take precautions for the growth of banking industry. In Kenya Imperial Bank and Chase Bank were placed under liquidation due to liquidity problems. CBK established performance of Banks whereby 8 Banks obtained a negative ROA as a result of poor investments. The main objective of this research was to establish the influence of liquidity on performance of Kenyan Commercial Banks. This study was guided by Liquidity Preference theory. The study used a cross sectional but descriptive survey design on 39 commercial banks incorporated under census survey. Secondary data results were retrieved from annual financial statement reports of Kenyan Commercial Banks. This study would help both managers Commercial Banks and the government of Kenya as it seeks to develop the banking sector and enhance financial growth. Panel data was used and hypothesis test at a significance level of 0.05. Descriptive analysis included; skweness, kurtosis and jarque bera while inferential analysis involved correlation analysis. The study ensured that the assumptions of linear regression based on normality test and linearity were tested. The data was presented in form of tables and models. The results were that liquidity distress factor significantly influenced performance of commercial banks. Panel data Pearson correlation results show a moderate significant negative association between liquidity and financial performance of Commercial Banks since p = 0.0000 (p<0.05). Fixed effect simple regression analysis indicated that Liquid assets to total assets p = 0.000 (p<0.05) had a significant and positive influence on financial performance as liquid assets to total deposit p = 0.010 (p<0.05). It was recommended that stakeholders should source for enough asset bases both liquid and total assets to increase their liquidity position. Commercial Banks should also encourage their customers to maintain deposits for a better liquidity position.

Key words; *Commercial banks, Liquidity Distress Factor, Performance*

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INTRODUCTION

There exists bank factors that if not controlled leads to bankruptcy of financing banking institutions. According to Otingo and Wesa (2018), a bank that is facing financial distress sums up those liquidated in current financial year and governmental authorities have raised concerns about their future. Financial distress in a bank leads to worsening of financial performance of a bank thereby reducing return on asset value for respective banks (Muigai, 2016). This situation if not addressed could negatively affect all the stakeholders the government being inclusive (Altman & Hotchkiss, 2010). Financial distress computed using Altman Z Score model.

According to European Central Bank (Merler, 2017) two Banks had non-performance and questionable going concern signals. The European Central Bank noted that undercapitalization/capital adequacy and liquidity were major factors that failed the two banks. According to Central Bank of Nigeria (2021), 14 banks were placed under liquidation. The collapse of this Banks was associated to liquidity, profitability and asset quality. However, as collapse of Europe Banks is based on liquidity and asset quality, the case on Nigerian Banks incorporates the element of non-profitability.

According to Central Bank of Uganda (2020), Crane Bank Ltd was placed under liquidation and ordered the winding up of its affairs, earlier on Crane Bank was placed under receivership since 2016 after it failed to comply with a capital call on 1st July and some of its assets were sold to DFCU bank. Capital adequacy was the basis of the bank's collapse. The fall of Crane Bank Ltd is associated to high-rise in the levels of non-performing loans. Previously, Bank of Uganda (2014) revoked the banking license of Global Trust Bank Limited and immediately placed it under statutory liquidation. Liquidity challenges led to the placement of Dubai, Imperial, Charterhouse Bank Ltd and chase bank under liquidation, though imperial and chase banks were first placed under receivership on non-adherence to asset quality, capital adequacy and liquidity challenges on basis on non-performing loans and gross loan, total capital to TRWA asset computation (CBK, 2015).

In Kenya the minimum statutory liquidity ratio is placed at 20 percent of which two banks Chase Bank and Chatterhouse Bank failed to comply (CBK, 2020). It is therefore evident that inadequate liquidity leads to financial distress of a firm (Chepkemoi, Ndung,u & Kahuthia, 2019). However, increased liquidity to a certain level is disadvantageous as banks get limited to access of external financing. This study will compute liquid assets to total deposits or total assets ratios. A bank will be declared not to be using its liquid assets to total assets or total deposits well if a ratio is too high (Osoro, Nyang'au & Ngacho, 2018). According to Mwangi (2019) when liquid assets of an entity are more than the total assets, then the entity works at a risk since their assets become impaired.

Financial distress factors for this case comprise of liquidity distress factor and it affects financial performance of Banks (Thorley, Perry, & Andes, 2012). There are various factors that leads to financial distress. Financial distress factors vary basing on the age of the an organization, to some level in old organizations differ from young entities. This study bases on liquidity financial distress factors. Companies under financial distress perform poorly compared to those with low distress level (Kariuki, 2017).

Statement of the Problem

The Central Bank of Kenya advised commercial banks to take precautions for the growth of banking industry. According to CBK (2021) Imperial Bank and Chase Bank were placed under liquidation due to liquidity problems. Central Bank report (2016) indicates that Dubai Bank, Prudential Bank, Trust Bank, Euro Bank and Chartterhouse Bank collapsed due to liquidity and low capital base. According to CBK report (2019) Spire Bank Limited were unable to meet the minimum Ksh.1 billion in 2019 financial year failing the capital adequacy requirement, for 2020 financial year National Bank of Kenya failed to maintain the minimum core capital indicating a decline in capital adequacy (CBK, 2020). Thirteen listed firms at NSE have totally faced financial

distress forcing some to be suspended from NSE (NSE, 2020). Contradicting findings on financial distress factors and financial performance of Banks were reported. Studies have indicated that liquidity of assets had a positively significant influence on financial performance of Banks (Sporta, 2019) whereas (Njue, 2020) noted that it had a significantly negative influence on performance while Irungu (2019) noted it had no influence. Osoro, Nyang'au and Ngacho (2018) carried out a study on effects of financial distress on performance of manufacturing firms at NSE for 2011 to 2015 financial periods recommending further study using liquidity as a variable. The current study covered a longer period of 7 years (2014-2020) and involved all commercial Banks unlike former study that based on manufacturing firms.

Objectives of the Study

The objective of the study was to establish the influence of liquidity on performance of Commercial Banks in Kenya. The study was guided by the following research hypothesis;

- ***H_{01}:*** Liquidity has no significant influence on performance of Commercial Banks in Kenya.

LITERATURE REVIEW

Theoretical Literature Review

Liquidity Preference Theory was opined Keynes (1936). It refers to the sum of money that one is willing to hold at a specified interest from lending institutions. According Ongore and Kusa, (2018) there are a number liquidity theories that help in building up the theory. This study capitalizes on liquid assets to total deposits and total assets. Deposits are made through a good pool of customers as assets exists on different accumulations, a liquid asset is one that can easily be converted to cash. This ratios are applicable in computing the liquidity position of Banks. Basically when interest rates are very high banks give out more loans to customers so as to generate more liquidity though customers may fear taking loans due to high interests. However banks take it as opportunity to hold less cash and generate revenue through interests charged. The interest factor will help in moderating the liquidity position of the firm on the other hand for Banks to increase lending adequate capital must be in place for efficient lending.

The Bank first assesses the core capital, total capital and total deposit to gauge the ability to lend more which will easily ascertain capital adequate ability. When capital is adequate as well as interest rate is considerate effective loaning will take place after which performance of this loans must be ascertained. Central Bank of Kenya (2020) maintains a minimum regulatory capital adequacy ratios as 10.5 percent and 14.5 percent for Core Capital and Total Capital to Total Risk Weighted Assets respectively. Once Banks lend money the non performing loans will be sought out from the gross loans which eventually has an impact on quality of assets. Therefore liquidity theory asserts that once loans are given in considerate to interest rate then the process of ascertaining loan performance crops linking it to asset quality (Karagu & Okibo, 2018). Furthermore when Banks are large in size liquidity position tends to be sound due to more deposits, increased number of customer which forms the asset base of Banks. Bank size being computed by natural logarithm of assets confirms that it has applicability on liquidity theory.

Liquidity theory articulates three pillars thus the speculative pillar, precautions pillar and transaction pillar. Liquidity imbalances are dangerous to commercial banks (Suka & Ng'ang'a, 2019). This theory vividly outlines its relation to liquidity on basis of interest rate as provided under this study. Liquidity theory can be criticized based on various aspects. Though it talks about interest rate which helps in determining liquidity position of Banks its criticized on basis of its biased emphasis on only monetary aspects (Janglani & Sandhar, 2018). Conclusively when Banks are large in size liquidity position tends to be sound due to more deposits therefore liquidity theory has applicability on Bank size.

Conceptual Review

Liquidity distress factor

Financial performance of a bank is articulated through liquidity whereby liquidity simply narrates how well liquid assets can be assembled in relation to total assets or total deposits. Liquidity will be measured using liquid assets to total deposits, similarly liquid assets to total assets. A bank will be declared not to be using its liquid assets to total assets or total deposits well if a ratio is too high (Osoro, Nyang'au & Ngacho, 2018).

Performance of Commercial Banks

This study incorporated Return on asset for efficiency of the firm on the management point of view (Mwaura, 2015). Return on Asset is a ratio attained through assessment of net income to total assets for banks. It is evident that a higher Return on asset signalls good financial performance (Olweny & Themba (2011).

Empirical Review

Liquidity articulates three pillars thus the speculative pillar, precautions pillar and transaction pillar. Liquidity imbalances are dangerous to commercial banks (Suka & Ng'ang'a, 2019). It simply the ability that commercial Banks have to fulfill the shortterm obligations when it falls due. According to Muthoga and Njoka (2019) liquidity is the consensus to handle long term as well as short term demands. There is need to control liquidity since too much or too little liquidity exposes a firm to a higher risk of financial distress challenges (Cheluiget, 2014). According to Altman, (1968) companies with narrow liquidity are affected by financial distress. A narrow liquidity ratio shows that a bank has limited liquid assets to manage day to day operations whereas a higher ratio indicates sufficient liquid funds to cover for day to day obligations.

Korir (2019) conducted an empirical study liquidity and its role on Kenyan Banks financial performance. In his study he used only secondary data. This study used a census approach on all the fourty four Kenyan commercial banks that were in existence as at that date. Descriptive research design and Ordinary least squares regression method will be applied for a period of 6 years. Regression and correlation approaches examined liquidity influence on performance based on financial approach. Findings showed a positive but strong association between liquidity and financial performance. In his conclusion liquidity positively affected financial performance.

Olongo (2017) conducted a study on factors affecting Kenyan Banks financial performance. The study used panel data on fourty three commercial Banks that were in existence as at that time, used primary data between 2011-2016 financial years. The findings were that ROA was fairly off in relation to liquidity ratios. This study covered a five year period hence a limited time hence the current study covered a seven year period 2014-2021. Furthermore factors discussed lacked asset quality and capital adequacy variables as well as firm size moderation. The current study called for an examination of un discussed financial distressed factors.

An empirical study by Gweyi, Oloko and Olweny (2018) examined the effect of Liquidity on performance of Kenyan deposit taking SACCOs. The findings were that though liquidity risk had a positive effect on performance of deposit taking SACCOs the influence was negative. The recommendations on this findings were that bank leaders can s olve liquidity risks by availing enough cash reserves. This study focused on deposit taking Savings and Credit Cooperatives Societies in Kenya and failed to monitor commercial banks in Kenya. The current study used secondary data through published bank reports and not primary data as used in above study.

An empirical study by Irungu (2019) examined the influence of liquidity on financial performance of listed companies at Nairobi Securities Exchange and realized that liquity factor had a positive influence financial performance of non-financial firms quoted at Nairobi Securities Exchange. The study recommended for liquid assets to be on table to

enable smooth liquidity state. This study looked at firms listed at NSE and failed to categorize those firm unlike the current study that specified on commercial baks in Kenya without sampling the listed. The current study used secondary data through published bank reports and not primary data as used in above study.

Wesa and Otinga (2018) carried out a panel data study on antecedents of financial distress with specific regards to all quoted companies at Nairobi Securities exchange. A survey of sixty five firms was analyzed with specificity on liquidity risk, financial leverage and capital structure which significantly emerged as financial distress antecedents. This study cut across all firms listed an not on banks. The distress dynamics among sectors differ in most cases. The current study used secondary data through published bank reports and not primary data as used in above study.

Munguti and Tirimba (2019) carried out a study on factors leading to financial distress among banks specifically tier two banks. The study evaluated the effect of leverage and liquidity, firm size on medium size banks. In their study a number of theories were involved thus Wrecker theory, liquidity and trade off theories .The study was done on a time series of ten years thus 2009 and 2018 on elevn banks under medium size category. Secondary data obtained was run under SPSS and tests done were; normality, hausman and multicolinearity. It came to realization that liquidity affected financial performance of tier two banks. The current study is not biased based on tier two banks but all banks and clearly articulates data based on STATA sofwhere provision.

Sporta, Ngugi, Ngumi, Simiyu (2019) carried out panel data study on on the influence of Financial distress components on financial performance of firms and specifically Kenyan commercial Banks. The study variables had a basis on efficiency operations, liquidity risk, capital structure, quality of assets and how adequate capital imparted on financial performance of Kenyan commercial firms. This study was on a 10 year period between 2009-2019 on fourty three firms that existed at that time. Secondary data from published CBK reports was assembled and interpreted with help of STATA soft ware and found that efficiency operations, liquidity risk, imparted positively on financial performance of Kenyan commercial firms. The dynamics of time for past study and current study gives reason for further research. The current study measured variables using two ratios per variable unlike the above study.

Cheluget, Gekara, Orwa, and Keraro (2018) examined influence of liquidity on financial distress components of Kenyan insurance companies. A descriptive but cross sectional research design was employed and analyzed catered across through both inferential and descriptive modes where applicable. The study established that liquidity practices positively influenced performance of commercial banks if in required applicability. The current study recommends longer period study and use of other variables of which this study involved asset quality and capital adequacy and a moderator firm size. The current study covered a longer period of 7years and focused on commercial banks in Kenya and not manufacturing firms moreso specificity of those listed yet current study bases on all banks not focusing on banks listed.

An empirical study by Nyamboga, Omwario, Ongesa, Muriuki Nyamweya, and Murimi (2014) ascertained the antecedents of company financial distress of companies and specifically non financial companies meaning banks were excluded in Nairobi security exchange. This study focused on capital structure component as a point of view. The study population was thirty eight firms and it emerged that capital structure had no significance impact on financial performance of firms. The current study focused on financial firms and specifically commercial banks across the globe not the listed ones in Kenya. This study addressed leverage as a variable but the current study cuts across a series of perceived issues under CAMEL approach thus liquidity to spur further findings.

Omesa (2015) carried out a study on entire financial institution quoted NSE whereby 19 firms were used successfully using a census survey. Secondary data was obtained from published income statements, statements of financial position for a 5 year period of 2010-2014 on 19 listed firms. Therefore with adjusted R2 of 55.17% liquidity was weak and negatively impacted on performance. The current study went further by addressing liquidity as realized in above study. The current study addressed all commercial banks in Kenya being 39 in number compared to only 19 firms that executed financial services at NSE.

METHODOLOGY

This study adopted a descriptive correlation survey research design to collect and analyze data it helps to test hypothesis. Correlation research was carried out to measure two variables and its mathematical in nature. Correlation, regression and multiple regression analysis were obtained. Secondary data from CBK reports was used to compute financial performance and liquidity ratio for a 7 year period (2014-2020). This data was obtained from CBK bank supervisory reports. This study used secondary data. The data was drawn from published CBK banks annual supervisory reports, this based on 2014 to 2020 financial periods. Liquid asset to total deposits ratio, Liquid assets to total assets ratio and Return on Assets ratios were generated for all the years 2014 to 2020. The regression models used for both standard multiple and hierarchical multiple was as follows:

Without moderating variable;

$$ROA_{it} = \alpha + \beta_1 LQ_{it} + \varepsilon_{it}$$

Where:

ROA_{it} = Return on assets for 2014 - 2020

α = Determines the level of fitted lines

$\beta_{1,}$ = Regression coefficient

LQ_{it} = Measures of liquidity for 2014 - 2020

ε_{it} = Error term

RESULTS AND DISCUSSION

Descriptive Statistics and Normality

This was ascertained through skweness, kurtosis and Jacque bera

Table 1: Descriptive Statistics Results

Variable	Skewness	Kurtosis	Jarque Bera adj chi2(2)	Prob>chi2
LN:LA_ TA	-0.8963	5.5712	111.8	-0.250
LN:LA_ TD	-0.1886	7.4575	227.6	-0.500
LN:ROA	-0.8089	8.5188	74.69	-0.170

Source: Field data (2022)

LN is Natural Log, TD-Total Deposit, LA-Liquid Assets, TA-Total Assets, ROA-Return on Assets

A dataset is symmetric if it looks the same to the left and right of a center point measured while Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution. A distribution is considered normal if the values of Skewness and Kurtosis are equal to zero. LA_ TA, LN:LA_ TD, LA_ TD and LN_ROA are skewed negatively. According to Monte-carlo rule a figure less than 2 for skewness and less than 6 for kurtosis termed normal. Similarly figures between 2.0 and 3.0 for Skewness and between 6.0 and 21.0 for kurtosis are termed non-normal. According to Tabor, (2011) there are some cases where there exists an extremely non normal scenario when figures are more than 3 for Skewness and more than 21 for kurtosis. With above skewness of between -1.3668 to 0.3708 they are very normal. The implication of negative skewness of natural log of return on asset is that commercial banks reported a reduction in performance during 2014-2020 period.

Kurtosis recorded 3.2255-11.5496 where most of measures were normal with exception of LA_ TD and ROA. For Jarque-Bera test the values for

probability were less than 0.05 hence rejecting normality was rejected with an exception of NPL_OI that had a value of 0.7478. According to Oztuna, Elhan & Tuccar, (2006) generally a normality of 30 to 40 should not raise eyebrows for a statistical data of which the above findings didn't surpass.

Correlation Matrix

Table 2: Correlation Matrix

VARIABLES	LN:LA_TA	LN:LA_TD
LN:LA_ TA	1.0000	
LN:LA_ TD	0.2016	1.0000
	0.0008	
LN:ROA	0.1256	0.0075
	0.0382	0.0500

Source: Field data (2022)

The results in Table 3 revealed that there was no high correlation on liquidity. Therefore this showed that there didn't exist multi-collinearity as correlation coefficients were less than 0.9. The relationship between liquidity and return on asset 0.1256 for LA-TA was positive and weak as 0.0075 for LA-TD was positive and weak. The results indicated that there is a significant positive relationship between return on asset and liquidity distress (LA-TA) shown by P=0.0382 (P less than 0.05). Furthermore results indicated that there is a positive significant relationship between return on asset and liquidity distress (LA-TD) shown by P=0.500 (P=0.05).

Panel Unit Root Tests

To ascertain that panel data used was stationery unit root tests were conducted to help solve the possibility of having a regression that could be spurious. A number of unit root tests comprising of Levin Lin and Chu, Augmented DickieFuller, Phillips-Perron and Im Pesaran shin were employed as shown below.

Table 3: Panel Unit Root Tests

Variable	Levin, Lin & Chu Stat	Augmented DickieFuller	Im Pesaran	Phillips Perron
LN:LA_ TA	-17.5650**	369.4048**	-3.4672**	369.4048**
	(0.0000)	(0.0000)	(0.0002)	(0.0000)
LN:LA_ TD	-16.3933**	100.4589**	-1.7041**	100.4589**
	(0.0000)	(0.0444)	(0.0210)	(0.0444)
LN:ROA	-12.4782**	157.6094**	-1.8818**	157.6094**
	(0.0000)	(0.0000)	(0.0089)	(0.0000)

Source: Field data (2022)

Based on non balanced panel data it was important to conduct a number of unit root tests. The study had to find out if variation and autocorrelation dint vary as time passed. The p-value in parentheses, ** and * denote rejection of null hypothesis at 1% and 5 % significance respectively. All the P values were less than 0.05 showing there was no unit root across all the unit root tests conducted. Therefore differencing was not applicable for this data.

Hausman Test

A Hausman test was carried out to determine whether to use the fixed effect or random effect model to address objectives of this study. The appropriate approach of choosing between fixed and random effect model is running a Hausman test

(Borenstein, Hedges, Higgins, & Rothstein, 2010). The null hypothesis states that there is no significant correlation between the individual effects and liquidity. The random effect is for null hypothesis while alternative hypothesis or rejection of null hypothesis favours the fixed effect model.

Table 4: Hausman Test

	ROA
Chi-sq statistic	25.37
Prob	0.0003

Source: Field data (2022)

Results in the table 5 indicated a prob>chi2 value of 0.0003 which was less than critical P value at 0.05 level of significance which implies that alternative hypothesis that a fixed effect model is the best was adopted. The study hence used a fixed effect regression model.

Regression Fixed Effects of ROA on Liquidity

Table 5: Regression Fixed Effects of ROA on Liquidity

Fixed-effects (within) regression **No of observations = 273**

Group variable: BANKID		No of groups	= 39
R-square:		Observation per group:	
within = 0.1209		minimum	= 7
between = 0.0265		average	= 7.0
overall = 0.0165		maximum	= 7
		F(2,232)	= 15.96
corr(u_i, Xb) = -0.2842		Prob > chi2	= 0.0000

LROA	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
L. Assets to T. Assets	.5086595	.0909663	5.59	0.000	.3294339	.6878851
L. Assets to T. Deposits	-.3267335	.1260233	-2.59	0.010	-.5750298	-.0784371
_cons	.3069968	.3921856	0.78	0.435	-.4657037	1.079697
sigma_u	.79007913					
sigma_e	.80285876					
rho	.49197784	(variance due to u_i)				
F test that all u_i=0: F(38, 232) = 6.23				Prob > F = 0.0000		

Source: Field data (2022)

The result obtained from fixed effect model indicated that liquidity accounted for 12.09% (Overall R square=0.1209) of the variation in performance of Commercial Banks. The corresponding p-value is=0.0000 which was less than 0.05. The value for liquidity was 0.5086595 (LA-TA) and -0.3267335(LA-TD) respectively shows that an increase in one percent in liquidity makes ROA to increase by 0.5086595 and decrease by -0.3267335 per cent respectively. This relationship was further found to be statistically significant since the p-value for Liquidity was 0.000 (LA-TA) and 0.010 (LA-TD) which was lower than the adopted significance level of 0.05.The regression model is as shown below

ROA=0.5086595+ 0.3069968LATAR

ROA=-0.3267335+ 0.3069968LATDR

The study therefore rejected the null hypothesis that liquidity has no significant influence on financial performance of Commercial Banks and concluded that the influence of liquidity on financial performance was statistically significant. This implies that increase in liquidity would results to increase in performance of Commercial Banks. The results are in agreement with Sporta, Ngugu and Simuyu (2019) who examined the influence of financial distress factor on financial performance of Commercial Banks. The study found there is significant relationship between liquidity and financial performance of Commercial Banks in Kenya. Furthermore based on liquid asset to total asset results it agrees with Musundi (2018) who found that liquidity was positive and significant in ascertaining the relationship between liquidity and profitability of Commercial Banks in Kenya 2008-2017. However, the findings contradicts results from Muriithi, Kariuki and Njeru (2020) who found that liquidity had a negative and insignificant effect on financial performance of commercial banks.

CONCLUSION AND RECOMMENDATIONS

Based on the empirical evidence a logical conclusion was based on the establish influence of liquidity on performance of Commercial Banks. The study concluded that liquidity has significant positive effect on performance of Commercial Banks in Kenya. An increase in liquidity result to an increase in performance of Kenyan Commercial Banks. Therefore, liquidity has got significant influence on performance of Kenya Commercial Banks.

The study recommends that Commercial Banks should source for enough asset base both liquid and total assets to increase their liquidity position. Commercial Banks should also encourage their customers to maintain deposits for a better liquidity position. The study recommends that Commercial Banks should monitor loans granted to reduce cases of loan non-performance. Commercial Banks should also check on operating income to ensure it is within the standard guidelines of loans awarded.

Suggestions for Further Research

This study used a pool of all 39 Kenyan Commercial Banks. A study on liquidity distress factors, and financial performance should be done in other industries such as Agricultural and manufacturing firms. In the banking sector, a similar study can be done on microfinance institutions and SACCOs and for a longer period of at least 10 years. Choice of a moderator and other variables was recommended for other studies.

REFERENCES

Adeyemi, B. (2012). Bank Failure in Nigeria: A Consequence of Capital Inadequacy, Lack of Transparency and Non-Performing Loans. *Banks and Bank System*, 6(1),99–109.

Adeolu, M. (2014). Asset Quality and Bank Performance : *A Study of Commercial Banks in Nigeria. Research Journal of Finance and Accounting*, 5(18), 39– 44.

Adedji, S, H. (2018). Relationship between financial leverage and financial performance: Evidence from fuel & energy sector of Pakistan. *European Journal of Business and Management*, 4(11), 7-17.

Altman, E. I., & Hotchkiss, E. (2010). Corporate financial distress and bankruptcy: *Predict and avoid bankruptcy, analyze and invest in distressed debt (Vol. 289). John Wiley & Sons*.

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The journal of Finance*, *23(4), 589-609.Retrieved from*

http://www.jstor.org/stable/2978933

Azizi.M & Sarkani.Y.A (2014) Review financial performance of MELLAT Bank CAMEL Model, *A journal of multidisciplinary research, 3(1),32-42*.

Basel Committee on Banking Supervision, (2013). Basel III: The Liquidity Coverage Ratio and Liquidity risk monitoring tools. *Bank of International Settlements*.

Bender, R. (2013). Corporate financial strategy (4th Edition). UK: Routledge. Borg., G (1989). Population Distribution. *Journal of development, 12-24.*

Bibow, M.C,. 2015. Financial Management: *Theory and Practice*. Eleventh Edition. South Western: Thomson.

Cheluget, J., Gekara, M., Orwa, G., & Keraro, V. (2018). Liquidity as a determinant of financial distress in insurance companies in Kenya. *Prime Journal of Business Administration and Management, 4(1), 1319–1328.*

Central Bank of Kenya (2020) Bank Supervision Annual Report 2019/2020. *https://www.centralbank.go.ke/uploads/cbk_annual_reports/665458124_annual%20report%202917%2018%2 low%20resolution.pdf*

Central Bank of Kenya (2019) Annual Report and Financial Statements 2018/2019. *https://www.centralbank.go.ke/uploads/cbk_annual_reports/665458124_annual%20report%202917%2018%20low%20resolution.pdf*

Central Bank of Kenya (2018) Annual Report and Financial Statements 2017/2018. *https://www.centralbank.go.ke/uploads/cbk_annual_reports/665458124_annual%20report%202917%2018%20low%20resolution.pdf*

Central Bank of Kenya (2017) Central Bank of Kenya Directory of Licensed Commercial Banks, Mortgage Finance Institutions and Authorized Non-Operating Holding Companies. *Retrieved from www.abcthebank.com*

Central Bank of Kenya (2016) Annual Report and Financial Statements 2015/2016.

https://www.centralbank.go.ke/uploads/cbk_annual_reports/665458124_annual%20report%202917%2018%20low%20resolution.pdf

Central Bank of Nigeria (2021) *Annual Report and Financial Statements 2020/2021.*

Central Bank of Tanzania (2018) *Annual Report and Financial Statements 2017/2018*

Central Bank of Uganda (2020) *Annual Report and Financial Statements 2019/2020*

Cheluiget, J.K. (2014), Determinants of Financial Distress in Insurance Companies in Kenya. *Prime Journal of Business Administration and Management* (BAM) 4(1), 1319-1328.

Chepkemoi, Ndung'u & Kahuthia (2019) *Market risk and Financial Performance of Listed Non-Bank Financial Institutions in Kenya.*

Cherutich Kangogo & Irungu (2018) *Effect of Liquidity on Financial Performance of Selected Firms Listed at Nairobi Securities Exchange*.

Cooper, D. R., & Schindler, P.S. (2011). *Business research methods*. New York. McGraw Hill.

Cooper, J. & Schindler, P. (2011). An Attempt to Study Intellectual deterioration by Premorbid and Psychotic testing, *Journal of Consulting Psychology*, 14(95-98)

Cohen, W. M. (2008). Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly, 35(1), 128-152.*

Colvin, C. L., Jong, A & Fliers, P. T. (2014). Predicting the Past: Understanding the Causes of Bank Distress in The Netherlands in the 1920s. *Quech Working Paper Series, Retrieved from http://www.quceh.org.uk/working-papers.html on 16th January 2017.*

Creswell, J. (2003). Research Design: *Qualitative, Quantitative and Mixed Method Analysis. SAGE Publications (4ed).*

Fama, E., & French, K. (2005). The Capital Asset Pricing Model : *Theory and Evidence. Journal of Economic Perspectives, 18(3), 25–46.*

Gweyi, M., O., Olweny, T & Oloko, M. (2018) Effect of Liquidity RiskoonoFinancial Performance of Deposi to Taking Savings and Credit Societies in Kenya; *International Journaloof Economics, Commerce and Management*, 6(1), 259-283.

Gujarati, D., & Porter, D. (2008). Multicollinearity: What happens if the regressor are correlated. *Basic econometrics,* 363.

Jahangir, N.,& Begum, N. (2008). The role of perceived usefulness, perceived ease of use, security and privacy, and customer attitude to engender customer adaptation in the context of electronic banking. *African journal of business management*, *2*(2), 032-040.

Isabwa., K, H & Mabonga., W. M (2020) "Effect of Non Performing Loans on Profitability of the Banking Industry in Kenya", *International Journal of Finance and Banking Research*, 2020 Publication.

Jahur, M.S., & Quadir, S.M. (2012). Financial Distress in Small and Medium Enterprises (SMEs) of Bangladesh: Determinants and Remedial Measures. *Journal of Business Administration*.

Jha.S & Hui.X (2014) A Comparison of Financial Performance of Commercial Banks: A case study of Nepal, *African Journal of Business Management,* 6 (25), 7601-7611.

Kamande, G, E Evusa, Z & Ariemba, J (2016) The Effects of Bank Specific Factors on the Financial Performance of Commercial Banks in Kenya. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*

Kanbur, R (2020). *Sustainable Development Goals and the Study of Economic Inequality.* Springer Science, Business Media, LLC, part of Springer Nature 2020

Kangogo,C,C & Irungu, M, A (2018) Liquidity and Performance of Selected Firms Listed at the Nairobi Securities Exchange, Kenya. *African Journal of Emerging Issues (AJOEI). Online ISSN: 2663-9335*, Vol (2), Issue 14, Pg. 1-16

Kariuki (2019) *Effect of financial distress on Financial Performance of Commercial Banks in Kenya.*

Karugu, Achoki & Kiriri,(2018) *Capital Adequacy Ratios as Predictors of Financial Distress.*

Keynes, J. (1936). The general theory of employment, interest and money. Liquidity theory. United States: publisher not identified.

Khrawish, H. A.(2011). Determinants of commercialobanksoperformance: Evidence from Jordan. *International Research Journal of Finance and Economics*, *81*, 148-159.

Korir, J, C Tanui, K, L & Cheruiyot, P (2019) Applicability of Piotroski F-score Model in Predicting Financial Distress of Listed Companies at the Nairobi Securities Exchange. *International Journal of Business Management and Processes (IJBMP)* Vol 5. Issue No.3. November, 2019. PP 81-109. ISSN 2616-3209.

Kothari, C. R. (2004). Research methodology: *Methods and techniques (2nd Edition)*: New Delhi, India: New Age International (P) Limited.

Maina F. G., & Sakwa M. M. (2019). Understanding financial distress among listed firms in Nairobi stock exchange: *A quantitative approach using the z-score multi-discriminant financial analysis model*. Media, London. 189.

Mamo, A. Q. (2011). *Applicability of Altman (1968) model in predicting financial distress of commercial banks in Kenya*. (Unpublished MBA Project). University of Nairobi.

Mahfuzur, Cheong & Masud (2021) *Predicting Firms' Financial Distress*.

Marshall, A & Rossman, K. (1999). *Principles of Economics*, (8th edn.) (1920). London: Mcmillan.

Maniagi, G. M. (2018). *Influence of Financial Risk on Financial Performance of Commercial Banks in Kenya* (Doctoral dissertation, JKUAT).

Maingi, M.W (2018). *Investigating economic integration, ease of doing business, economic growth and foreign direct investment in East African Community* (Doctoral dissertation, Moi University).

Mauwa,J.(2016). *Determinants of Financial Performance of Firms Listed on the Rwanda Stock Exchange* (Doctoralodissertation, COHRED, JKUAT).

Mboi, S,C Muturi, W & Wanjare, J, M (2018) The moderating Effect of Enterprise Characteristics on the Relationship between Capital Structure and Financial Performance of Medium-Sized and Large Enterprises in Kenya. *Journal of Economics and Sustainable Development* www.iiste.org, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online). Vol.9, No.18, 2018

Meeme, M. (2015). *The Relationship Between Adherence To baseIII Accord and financial Distress on Commercial Bank In Kenya.* University of Nairobi.

Miencha,O, I., Murugesan, S., Vasanth.,V Kasilingam, L, Raja., M (2015) "*Efficiency Measurement of Kenyan Commercial Banks*", Mediterranean Journal of Social Sciences, 2015

Miencha,O, I., Justin, P & Selvam, M (2017). "*Technical Efficiency for Strategic Change and Global Competitiveness*", Strategic Change, 2017

Mubaraq., S, Salami,A,A & Uthman, A, B (2020). "*Determinants of Bank Performance in Nigeria: Do they Behave Differently with Risk-Adjusted Returns?*", Studia Universitatis, Vasile Goldis" Arad –Economics Series, 2020

Muthoga, M, S & Njoka, C., (2016) *Liquidity risks and profitability of commercial banks listed at the Nairobi Securities Exchange, Kenya*.

Munguti, M, H and Tirimba, I (2019) *The Effect of Financial Factors on the Financial Distress of Tier two Commercial Banks in Kenya.* KCA University.

Muiruri, P. (2015). *Effects of Central Bank Regulatory Requirements on Financial Performance of Commercial Banks In Kenya*.

Mugwang'a, F and Ogilo, A (2014) *Determinants of Capital Adequacy of Commercial Banks in Kenya.* University of Nairobi.

Muthoga and Njoka (2019) *Liquidity Risks and Profitability of Commercial Banks Listed at the Nairobi Securities Exchange*, Kenya.

Muriithi, K. Kariuki, R. Njeru, A., (2020) *The Effect of Liquidity Management on the Financial Performance of MFI's in Kenya.*

Mugenda & Mugenda. (2003). *Research methods quantitative and qualitative approaches*. Nairobi, Kenya: African Center for Technology Studies.

Muigai R. G (2016), *Effect of Capital Structure on Financial Distress of Non-financial Companies Listed at Nairobi Securities Exchange*.

Mwangi, Muathe, S., & Kosimbei, G. (2019). Relationship between capital structure and performance of nonfinancial companies listed in the Nairobi Securities Exchange, Kenya. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics*, 1(2), 72-90.

Myers, M. D. (2013). *Qualitative research in business and management*. New Delhi, ND: Sage Publications Ltd.

Myers, S.C. & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221.

Nairobi Stock Exchnage (2020) *Annual Reports and Financial Statements 2020*. Bridiging the gap in the African market.

Nasieku, T. (2018). *Basel Capital Adequacy Framework and Economic Efficiency of Commercial Banks in Kenya.* Jomo Kenyatta University of Agriculture and Technology.

Nazir, S. (2020). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model. *Pakistan Journal of Commerce and Social Sciences*, 4(1), 40–55.

Njeule, M., A. (2013). *The Effects of Central Bank of Kenya Prudential Regulations on the Financial Performance of Commercial banks in Kenya*. Unpublished MBA Thesis. University of Nairobi, Kenya.

Nyabaga. M, R & Wepukhulu, M, J (2020) *The Effect of Firm Characteristics on Financial Performance with a focus on Listed Banks in the Nairobi Securities Exchange, Kenya.*

Nyamboga, T. O., Omwario, B. N., & Muriuki, A. M. (2014). Determinants of Corporate Financial Distress : Case of Non- Financial Firms Listed in the Nairobi Securities Exchange. *Research Journal Of Finance and Acoounting*, 5(12), 193–207.

Noreen, S., Liaqat, A., & Parveen, F. (2018). Interest Rate Changes and its Impact on the Profitability of Pakistani Commercial Banks. *International Journal of Academic Research in Business and Science*, 8(12), 948–954

Kuria, K., Ngumi, P., & Rugami, J. (2013) *Investigated factors affecting rental income tax compliance among landlords in Kilifi Municipality*.

Odhiambo, S and Ochieng, P. (2018) Factors Contributing to Financial Distress in Commercial Banks. *The International Journal of Business Management and Technology*, Volume 2 Issue 5 September-October 2018 ISSN: 2581-3889

Odongo, C, O and Jagongo, A., (2013) *Examination of how Capital Structure Influences Financial performance of NSE listed firms in Kenya.* Kenyatta University.

Ogachi, D & Zoltan, Z. "Corporate Social Responsibility and Firm Value Protection", *International Journal of Financial Studies*, 2020

Odalo, S.K., Achoki, G., & Njuguna, A. (2016). Relating Company Size and Financial Performance in Agricultural Firms Listed in the Nairobi Securities Exchange in Kenya. *International Journal of Economics and Finance, 8(9), 34-40.*

Omesa, J. N. (2015). Effect of liquidity on the financial performance of financial institutions listed in the Nairobi securities exchange. *Unpublished PhD Thesis, Nairobi: University of Nairobi.*

Ong'era, J.B., Muturi, W., Oluoch ,O., & Karanja, J.N. (2017). Liquidity as a Financial Antecedent to Financial Distress in Listed Companies at Nairobi Securities Exchange. *Journal of Emerging Issues in Economics, Finance and Banking. An Online International Research Journal*, 6(1), 306-367.

Ongore, V,. O. (2018). The relationship between ownership structure and firm Performance: An empirical analysis of listed companies in Kenya. *African Journal of Business Management*, 5(6), 2120-2128.

Ongore, V., & Kusa, G. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues, 3(1), 237–252*.

Olongo, O. (2017). The Effects of Financial Fraud and Liquidity management On Financial Performance Of Commercial Banks InKenya. *Unpublished MBA Project, University of Nairobi.*

Olweny, T., & Mamba, T. (2011). Effects of Banking Sectoral Factors on the Profitability of Commercial Banks in Kenya. *Economics and Finance Review, 1(5), 1–30. Retrieved from* http://wwww.businessjournalz.org/efr.

Osoro,K., Nyang'au, C and Ngacho,K., (2018) The Effects of Financial Distress on the Financial Performance of Manufacturing Firms Listed in Nairobi Securities Exchange. *International Journals of Academics & Research ISSN: 2617-4138 IJARKE Business & Management Journal.*

Osoro, P. Nyang,au., M. &Ngacho., J (2018). *The effect of financial restructuring on the financial performance of commercial banks in Kenya* (Doctoral dissertation, University of Nairobi)

Pandey, I. M. (2005). *Essentials of Financial Management* (1st Edition). New Delhi: DN, Vikas Publishing House Ltd.

Judy Ramage, J. L, Surapol, P & Howard, L(2015). "The Use Of Ohlson's OScore For Bankruptcy Prediction In Thailand", *Journal of Applied Business Research* (JABR), 2015

ROK (2015). *Economic survey.* The Central Bank of Kenya Act; Chapter 491.

Sathyamoorthi, C.R, Mogotsinyana, M, Mashoko, D (2020). "Liquidity Management and Financial Performance: Evidence From Commercial Banks in Botswana", *International Journal of Financial Research*, 2020

Sekaran, U. (2010). *Research Methods for Business*: A skill Building Approach (4th Edition), John Wiley & Sons, New York.

Schumacher, S. K. and Boland, M. A (2010). The persistence of profitability in the food and agribusiness sector, *Paper presented at American Agricultural Economics Association Meeting Paper*, Montrealo:Canada, July 27 – 30.

Shahatit, A. (2018). Impact of Financial Distress on Financial Performance of Pakistani Corporate Sector. *International Journal of Current Research*, 7(2), 12991–12996.

Sporta, F, O Ngugi, P, K Ngumi, C Simiyu, P, N (2018) Effect of Financial Distress Factors on Performance of Commercial Banks in Kenya. *Thesis Jomo Kenyatta University of Agriculture and Technology.*

Ska and Ng'ang'a (2019) *The Impact of Capital Adequacy on the Financial Performance of Commercial Banks Quoted at the Nairobi Stock Exchange.*

Wangige, J, M,. Simiyu, E, M, and Atheru, G (2016) *The Effect of Firm Characteristics on Financial Distress of Non-Financial Firms listed at Nairobi Securities Exchange, Kenya*.

Wesa and Otinga (2018) The Determinants of Financial Distress in the Context of Listed Firms. Jomo Kenya University of Agriculture & Technology [JKUAT], Kenya *Vol. 5, Iss. 4, pp 1057 - 1073, October 29, 2018. www.strategicjournals.com, ©Strategic Journal.*

Velnampy, T. & Viresh, J. (2014). Corporate governance and firm performance: a study of Sri Lankan manufacturing companies. *Journal of Economics and Sustainable Development, 4(3), 228-235*.

Yahaya, S. N., Mansor, N., & Okazaki, K. (2016). Financial Performance and Economic Impact on Capital Adequacy Ratio in Japan. *International Journal of Business and Management*, 11(4), 14–21.

Yussuf, Abdirahman A, Achoki, G (2017) *Factors causing corporate financial distress in Commercial Banking Sector in Kenya: a case of Chase Bank*.

Zeytınoglu, E. & Akarim, Y. D. (2013). Financial Failure Prediction Using Financial Ratios :An Empirical Application on Istanbul Stock Exchange. *Journal of Applied Finance & Banking, 3(3), 107–116.*