The Influence of CAMEL Ratios on Credit Rating Evaluation in Tanzanian Commercial Banks: An Empirical Analysis

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***Abstract*— the international credit rating evaluation systems are used by global agencies to grade their lenders which can be non-financial or financial institutions. Also, international credit ratings are considerably platforms of evidence of private information possessed by banks. Credit rating evaluation to entities such as commercial banks, it is still under infant stage in Tanzania and other developing countries. This research paper examined the influence of CAMEL ratios on credit rating evaluation of Tanzanian Commercial Banks. The research opted time series research design in capturing the variables, quarterly data from 2009-2019 was estracted from banks' financial reports. In evaluating the commercial banks' credit rating, the study's sample sizes were 40 observations from CRDB and NMB commercial banks. The results indicated that, the influence of CAMEL ratios on credit rating of Tanzania Commercial Banks are likely to undergo significantly from capital adequacy, management quality, earning capability and liquidity. The study additional findings showed that, Tanzanian regulatory system (locally) considerers less indicators in credit rating evaluation with inferior standards as compared to international standards. CRDB and NMB banks combine had satisfactory view rating scores that signified basically accuracy with modest amendable limitation (rating average of '2'), nevertheless NMB appeared to be better in ratings than CRDB in the period of 10-years examined quarterly (insert statistical P-Values). The study suggests that local systems ensure the establishment of credit rating evaluation guidelines to reflect international standards to effect the credit rating evaluation of local firms. In order to meet international rating standards for local commercial banks, the international credit rating standards are crucial to be adopted.**

***Keywords*— Credit Rating, CAMEL Ratios, Commercial Banks, Tanzania**

I. Introduction

Credit rating evaluation have a great utility in the global financial and political systems, as they assist in the door-keeping to the huge amounts of loans to institutional and supreme ratings arrangement competence and willingness of an institution or government to repay its arrears, achieved by the credit rating organization [1, 5, 13]. In guaranteed the borrowes relating to their returns on their savings, credit rating organization give out the purpose in providing the investors with similar and reliable information on credit risks that are based on standard measurable units of scales in governing all type of governments and institutions through serious systematic evaluation [31, 59]. Comparatively the

evaluation give suggestion based to rating framework on the capability and readiness of the debt issuer to meet its agreement [6, 57]. These ratings are genuine based and expressed in well understood-able alphabetic symbols, which help the investors to decide basing on the credit character [22, 33, 58]. In confirmed the creditworthiness of persons, companies and governments it can be done either locally or internationally [8, 16, 32, 39].

The international credit rating evaluation systems are used by international organisation or institutions to grade their lenders which can be financial or non-financial institutions [2, 28, 37]. In addition, international credit ratings are considerably platforms of confirmation of personal information possessed by banks [56, 61, 68]. Moreover, the international credit rating evaluation can be done by agencies such as Moody's, Standard and Poor, Flitch just to mention few [3, 7, 11, 57]. However, the international credit rating agencies consider parameters like strength of member support, capital adequacy, asset quality, sensitivity to market risk, earning capability, liquidity and general business risk evaluation [12, 19, 69]. There are institutions responsible for the credit rating grading and practices that are generally termed as the External Credit Evaluations Institutions (ECAIs) [4, 70]. The standardized approach to credit risk requires banks to use credit evaluation provided by the ECAIs that are generally known by the national supervisors as entitled for regulatory capital purposes in determination of the weight on credit exposures [14, 25, 34, 60].

In developing countries like Kenya, Uganda, Ethiopia, Zambia, Nigeria consider profitability, capital adequacy and asset quality in credit rating evaluation of their commercial banks [22, 69]. Locally the evaluation can be done by the specific country's authority such as central banks or other authorized credit rating agencies within the country [3, 25]. Local credit rating evaluation in Tanzanian commercial banks tends to consider parameters like capital adequacy, asset quality, management competence earning capability and liquidity [10, 35, 59]. Despite the fact that BOT is the major credit rating assessor to the Tanzanian commercial banks in Tanzania, Credit info Tanzania Limited and Dun & Bradstreet Credit Bureau Tanzania Limited, are also accountable in credit rating evaluation to institutions [23, 38].

Capital Adequacy serves the key purpose of firm stability and absorption of losses. However, capital adequacy simply measures the solvency of an institution [6, 69]. In summary of combination from variety of credit rating agencies, it signifies difference in minimum capital requirement; these alterations never exceed 10% of European and Monetary Union (EMU) banks' capital regulatory [5, 38, 67].

Asset Quality, this is the valuation of the potential existing credit risk that is associated with specific asset that requires interest payments [8, 37]. Asset quality is one of the crucial determinants of risks in credit ratings considerations that can be assigned in rating scale of 1-5 numerical values [6, 42]. A rating of 1 in asset quality signifies a very strong asset and strong credit management practices while rating of 4-5 is assigned to institutions with critical deficient asset quality and management practices [29, 61, 66].

Management Quality is concerned with the evaluation in whether the institution can be capable to precisely react on financial stress [2, 7, 36, 40, 62]. According to [11, 24 39], stipulates that, management is a one-sided element in credit rating determinants and most problematic factor to incorporate quantitatively. However, in credit ratings the management factor is incorporated with report based in knowledge, share return and stock price, sales growth, profitability, integrity, strategic planning, cost-efficiency and reputation, effective management results to higher rating [8, 24,47).

Earning Capability, describes whether the bank is profitable and winning in the long run, it simply means the after tax net income of the bank profits [42, 62]. As per the credit ratings is concerned the earnings are scaled from 1 to 5, in '1' it indicates the strong operational earnings and capital unlike when a bank is assigned 4 to 5, it indicates the bank has deficient earnings and the bank can even stop paying dividends [65, 66].

Liquidity is regarded to as the capability of institutions to meet its funds demands [4]. Inadequate liquidity signifies less immune timely delay of refinancing, increase in portfolio risks and delay in growth projections [33]. Every bank needs to facilitate daily fund plan in guidance of the cash inflows with cash outflows on daily basis. In credit rating the liquidity position can be measured by Loan to asset ratio (LAR), indicating the total asset percentage used to provide loan [40]

Based on Tanzania context, credit evaluation to commercial banks is closely undertaken by the BOT in combination of measures in supervision and rating evaluation [9, 69]. Despite the fact that BOT hardly applies CAMEL move toward to asset risk weighting approach, CAMEL rating system is internationally adhered in rating financial institutions. However, BOT incorporates CAMEL analysis to all banks and financial institutions in comprehensive uniform manner and that supervisory regulations attention is appropriately focused in exhibiting financial and operational weakness and trends in consideration of capital adequacy, asset quality and liquidity [10]. In spite of the cruciality of these credit rating evaluations, various institutions across the world have raised concerns on the dissatisfaction and trust in relying on such evaluation in under rating these institutions, that eventually being subjected to discrediting of these evaluations [15]. According to the latest Moody's report of 2020, despite the fact that Tanzanian commercial banks Tanzania (35) are doing better than most of the other commercial banks in countries like Kenya (33), Uganda (31), Ethiopia (30) just to mention a few, still the Tanzanian commercial banks are lowly rated to B2, subjected to high credit risk [10, 49].

In both domestic and international perspectives, the credit ratings are of high significant in assuring the borrowers' on the ability, capability and stability of the issuers (entities that issues securities like bonds or debentures for the aim of raising funds) in their financial strength and welfare through assigning of the rating scales of measurements by the credit rating agencies [23]. According to [11, 45], the credit ratings are majorly into three categories; First being Financial ratios and financial data that are considered by financial organizations, second being corporate governance that considers corporate governance and third being macroeconomic factors that could influence ratings.

Even though the significant perspectives of the credit rating practices to the institutions and to the governments, the rates are said to be biased and may reflect bad implications of the institutions entities and the governments to the investors and the rest of the world. Ever since the first international credit rating evaluations to CRDB and NMB made by Moody's in 2018,the '2' Tanzanian financial institutions and the government, the rating scores have still been low as a result, Moody's downgraded (negative outlook) and classified the major Tanzanian financial institutions of Cooperative Rural Development Bank (CRDB) and National Microfinance Bank (NMB) alongside the government to (B2) negative, despite the fact that Tanzanian scores being higher than most of the African countries like Kenya (33), Uganda(31), Rwanda (33), Ethiopia (30) just to mention a few. CRDB and NMB criticized Moody's decision to assign low credit rating and argued that it hasn't been well consulted and consider unstable economies [12, 28, 41, 63].

In association to BOT as supervisory authority, the study about combination of point from the CAMEL rating approach as it is an international modality system in appropriate and comprehensive evaluation of the commercial banks, despite the fact that Moody's report involves capital adequacy, asset quality and liquidity onlyconsideringthe likelihood of other variables to affect the credit rating evaluation, the study incorporates the general international modality of CAMEL approach.

Most of the African countries have critisezed and tried to encourage the investors not to rely much on the information and report issued by the agencies, also, these complaints of dissatisfaction of credit ratings are from various African countries and in Tanzania in specific [42, 50, 64]. Due to disappointment in low rates to CRDB and NMB researcher intends to examine the influence of CAMEL ratios on credit ratio on Tanzanian commercial banks specifically, focused on comparison in regulatory standards criteria between the international and local credit rating evaluation. Therefore, in understanding the regulatory modality, the Tanzania credit rating evaluation systems could be adjusted and also through influence one can be able to know the major variables that are likely to influence CRDB and NMB banks in credit rating evaluation drawn from the CAMELS international system.

II. LITERATURE REVIEW

Capital Adequacy: According to [49] analyzed a paper on influencing factors behind credit risks in Azerbaijani banks. Comparable study made by According to the findings a decrease in capital adequacy ratio can increase the credit risk and eventually lower the credit ratings. However, the findings suggest that the banks should increase their capital adequacy ratios to minimize the credit risk effect and boost the credit ratings. According to [13, 17, 65], researched on the Ghanaian banks' performance using CAMELS rating method, the results observed that, earnings had no significance association to Ghanaian banks while on the other factors like capital adequacy, asset quality, management efficiency and liquidity were found to be significant to Ghanaian banks performance.

From an empirical study of capital requirements and bank behavior, the study recommends that banks should increase capital requirements in issuing capital in order to strengthen the corporation based in rating framework [41]. Most of the theoretical literatures findings acknowledged that the financial institutions like banks, that have higher capital adequacy are subjected to higher probability of obtaining high ratings [27, 43].

In evaluating the determination of the credit ratings to bank performance prove in explanations that strong or high bank capital adequacy variable lowers the chances of bank fiascos or failures. Furthermore, specifies that, financial institutions (banks) with higher risk were said to have less capital, with greater dependence on short term market funding and hostile credit growth [55, 70]. From the study conducted basing on the bank capitalization and credit rating evaluation, in the purpose of assessing whether the banks keep equity to balance sheet obtain better credit ratings given capital, bank size and default to total exposure as predictors. The conclusion was fundamentally specified that; when banks changes their leverage ratios they can either be downgraded or the cost linked to provision more equity, eventually at the end balance the leverage ratio and retain as much capital as required by the regulation [44, 52].

From an empirical study of capital requirements and bank behavior, the study recommends that banks should increase capital requirements in issuing capital and earnings in order to make strong corporation based in rating framework [47, 67]. Financial institutions like banks that have higher capital adequacy, profitability and liquidity are subjected to higher chances of obtaining high ratings. Not only the mentioned variables, but also higher asset quality measures effect to high ratings and vice versa [5]. A study on the credit rating impact on performance of firms. The findings depicted that, credit ratings are past dependent, present and predicted for the future performance with high capital and leveraged corporations are said to be found among high ratings, however, credit ratings are used to justify their financial conditions [64]. Accessed the credit risk approaches in relationship with competitiveness increase of the banking sector. The results presumed banks need capital savings within the article of standardization for appropriate external ratings and coverage of losses. Consequently, banks need to keep its capital at least equal to regulatory capital requirements [26].

Asset Quality: According to [61], examined whether the assets are crucial parameter to Kenyan banks that may affect the bank's financial performance. The findings from the study revealed that asset quality has a significant relationship and has influence on financial performance of a bank.

Furthermore, the studies specify credit appraisal techniques in improving asset quality, in investigating the various causes of poor credit risk management and implementation of these techniques to banks [60]. The findings were, the banks commonly use asset quality when establishing the credit worthiness.In empirical study concerning credit rating and commercial banks performance. Various literatures findings suggested that strong asset size positively associate to strongly credit ratings [7].

In studies assessed what determines bank credit rating in order to arrive to sustainable performance with better ratings, findings similarly stated banks that receive more favorable credit ratings includes asset quality being one of the significant determinant to credit rating [2, 11, 14, 39, 66].

In the study conducted on the influence of commercial banks' credit rating assessment to Zimbabwean banks in asset quality, through investigating the various causes of poor credit risk and implementation of these techniques to Zimbabwean banks. The results were, all the Zimbabwean banks use asset quality in credit evaluation [44].

From the study about the credit risk and commercial banks performance in Tanzania: a panel data analysis, focused on search of the relationship between bank performance and credit risk measured by return on asset. The findings suggested that the banks that need to increase the capital reserve in order to guard for forthcoming losses and increase bank credit risk management techniques [36, 67].

According to [15, 51], observed the factors affecting the management of asset and liability of the commercial banks in Kenya in relation to financial performance. The study observed that, bank managerial asset decisions can influence the financial performance that would basically affect the bank ratings.

According to [32], in the study about what determines bank credit rating. The study specifies on the feature that the credit rating determinants are poorly understood, the study assessment findings signifies that credit rating are relation in examining the creditworthiness of the financial institutions and however, more leveraged banks that receive more favorable credit ratings includes asset quality being one of the significant determinants to credit rating.

In the study on asset quality ratings being critical tool for managing credit portfolio risk, the result stated that; asset quality ratings are ineffective if their no problem spotted by the banks; nevertheless, asset quality ratings are active as they provide competitive advantage and better use of capital. Eventually management and their lenders need to take responsibility to ensure best use of asset quality ratings [18, 45].

Management Quality: Studies on financial performance credit risk of commercial banks. Literatures recommended that banks need to have effective management in order to enhance the financial performance as the bank managers need to ensure bank practices practical management of risk in protecting the shareholders interest and eventually favor the corporate ratings [20, 48, 62]. More literatures signify that; there is a significant influence of management to stock price of firms that can be justifiable to ratings [16, 43, 54].

According to the study relating to the influence of corporate governance on credit rating, in assessment from stock price [17, 56]. More studies shows that management quality add to sales growth, increase in the firm's share return and increase profitability that eventually reflect the ratings of a firm [28, 47, 58] .

Further studies go beyond and argue that; management quality of financial institution is effectively reflected in generalappraisalfrom capital adequacy, asset quality, profitability, earnings and risk market sensitivity in reflecting performance and credit ratings [14, 31].

Earning Capability: Literatures on changes in credit ratings by the Moody's and S&P impact to companies, the results stipulated that, negative ratings were typically linked with abnormal negative returns, while the positive ratings were subjected to positive abnormal returns [5, 19, 46]. The results depicted that corporation earning capability and cash flows can influence credit ratings, therefore earning capability and cash flow are significantly associated to firm credit ratings, better earning capabilities facilitate credit rating future upgrades.

In order to improve credit ratings, the managers of the corporation need to directly increase their earning capabilities [34]. In support of improving the credit ratings it is further recommended that the earning should beat its benchmarks that will expand the probability and rating upgrade. More studies that balance such observation are according to [21, 30].

In investigation of the rating methodology of the major three credits rating agencies before and after 2008 financial crisis comparison. The results showed that earnings had to be encountered and had effect to upgrade or downgrade of the corporation's trustworthiness [1, 6].

In an assessment on the three major credit rating agencies (S&P, Fitch, Moody's), from the year 1997-2012 in European market, the results showed that the credit rating downgrades finding in negative abnormal returns, upgrades are a result of positive returns and in accumulation small firms and financial corporations have stronger reactions to credit rating downgrade [30, 63, 66].

According to [20, 35], justifies that smoothening of earnings can be used by the corporations to manage the long-term credit rating. Furthermore, the credit rating agencies reflect earnings instability in rating factor, however, crucially considered by S&P and Moody's credit rating agencies. The literature further recommended that managers can assist in smoothening of earnings to reduce the probability of default risk.

Liquidity: From an empirical study that involves the rating methodology in banks, it states that lack of liquidity in a bank can ultimately lead to bank's failure unlike when it has strong liquidity [57]. in addition, more studies made, liquidity is carefully evaluated in requirements in order to have a clear and higher rating [3, 52].

In a study conducted on analysis of the credit ratings and performance indicators regarding the banking sector. Similar empirical findings showed that liquidity variable, has significant relation to the credit ratings that corresponds to upgrading or downgrading provided by the CRAs [1].

From an empirical study that involves the rating methodology in banks, it states that lack of liquidity in a bank can eventually lead to bank's collapse unlike when it has strong liquidity. Furthermore, liquidity is carefully evaluated in requirements in order to have a clear rating [6, 22, 46].

Study conducted to examine the association between credit risk managing and financial performance of Ethiopian commercial banks over a period of years 2010-2014, the results stipulated that management soundness, earnings and liquidity ratio are significant to credit risk whereas capital adequacy and asset quality proved to be insignificant [56].

From a study based on the credit rating sufficiently reflecting liquidity risk that can be connected with difficulties of the firm in refinancing its short-term debts [49]. The findings specify that that, corporations with higher short-term debt are likely to experience downgrades. In general results show that rating organisation tend to undervalue the liquidity risk and give a latent clarification for breakdown of ratings to predict financial complications [8, 19].

According to [21, 48], determined the effects of bank regulations, supervision and market structure on bank ratings, the results observed that the individual banks, banks with higher liquidity and profitability receive higher credit ratings compared to the ones with low liquidity, profitability and performance efficiency.

An Overview of *CAMEL* Ratios: According to [8, 17], the study on the Ghanaian bank performance using the CAMELS rating method. The findings observed that, Earning had no significance to Ghanaian banks while on the other factors like capital adequacy, asset quality, management efficiency and liquidity were found to be significant to Ghanaian banks performance. According to [38, 52, 55], asserted that the changes of banking soundness based on CAMELS rating systems from the Indian banking industry. Through the study conducted in assessing the Indian banking industry performance, in use of the CAMELS rating system, the result shows that, Capital Adequacy, Management and Asset Quality are the most crucial parameters of assessing the soundness of Indian banks [6, 9, 23, 68].

In an empirical review of analyzing of the effects of credit ratings on firm performance and stock returns [5, 27]. The findings depicted that; credit rating is predicted by crucial firm determinants such as capital intensity, firm size, asset returns and growth opportunities. Additional validation stipulates that, corporations with higher credit ratings be liable to have better performance relied on the mentioned determinants evaluation [45]. In the study linking to determination of Credit Default Swaps (CDS) alert on American and European banks, the purpose of the study was to identify the fundamental elements driving banks' credit default swaps. In use of CAMELS variables the findings stipulated that default risk of banks seemed to be connected to the whole of the CAMELS system framework [27, 50].

According to [7, 16, 51], observed on the factors of the ratings in banks for the banking sector and the study concluded that; economic variables such as Gross Domestic Product (GDP), inflations do not seem to contribute in factors of the bank's credit ratings, instead liquidity, capital adequacy, asset quality and profitability performance are the major indicators/attributes in ratings in banks. According to [70], examined the relationship between ratios based on CAMELS and bank deposits based on credit ratings in Turkey. The results from the study are follows; the asset quality, sensitivity to market risk and management quality have effects on credit ratings while, capital adequacy and earnings are not successful in credit ratings. Therefore, the study finalized that Turkish deposit banks should highly focus on fixed assets and interest income to have an improved rating [24, 49, 52].

According to [3, 46], in analyzing whether CAMELS methods is authentic in determining the Ethiopian banks performances, the study found that, the CAMEL method is successful in showing the performance and have relationship with the credit rating evaluation to Ethiopian banks. CAMEL model can be a considerate tool for evaluation of financial institutions based on its parameters. In an empirical study that focused on CAMEL rating system to determine the performance of local and foreign banks [9]. The findings to the study observed that foreign banks perform better on capital adequacy, asset quality and management efficiency while the local banks perform better on earnings and liquidity [3].

According to [42], studied the CAMEL model, earnings being barred from the analysis; the findings predetermined that, all the variables tested from the model have significant effect on ratings based on profitability with capital adequacy, followed by operation efficiency, asset quality and liquidity. The study further justified that CAMEL model is reliable and effective in as a corporate internationally standardized supervisory and a credit rating tool [7].

According to [11, 25], clarifies that, indicators of the bank power and performance are capital adequacy, asset quality, management, earnings and liquidity abbreviated as CAMEL rating system. On the other hand, the study specifies further, the most crucial variables among the five are capital adequacy, asset quality and liquidity. Conclusively the study added that the strength of capital is crucial element in analyzing the emerging market banks.

III. RESEARCH METHODOLOGY

This study adopted time series research design while the study adopted quantitative research approach. Quantitative research approach was adopted, because the study sought to make an explanation of various relationships among micro-economic variables in credit rating evaluation and make a clear distinction on between the local and international standards ratings that were tested by the investigator.

The population of the study involved 10-years quarterly data from 2009-2019 from 2 commercial banks (NMB and CRDB) out of 40 registered Tanzanian commercial banks, data drawn from BOT [10].The sample size of this study is 88 observations, data extracted from 2009-2019 period of 10 years quarterly based from CRDB and NMB banks (44 observations from each bank as a result from 2009-2019 quarterly data) sourced drawn from BOT. The study shall involve secondary data collection technique. The quantitative data, information that were collected through documentary reviews (financial statements) in gathering numerical data and analyzed the multiple linear regression model in use of STATA software's as a tool [10, 26, 69, 70].

Based on the objective of the study, the study included multiple linear regressions in examining the influence of the CAMEL ratios to credit rating evaluation in Tanzania commercial banks. In addition, the standard differentials were classified in apparent association from the policy. The multiple regression equation in this study is expressed as follows;

$$(Y)R = \beta_0 + \beta_1(CAR) + \beta_2(AQ) + \beta_3(MQ) + \beta_4(EC) + \beta_5(LQD) + \varepsilon \ldots.(1)$$

Whereas: *R*= Ratings; β_0= Constant term; *CAR* = Capital Adequacy Ratio; *AQ*= Asset Quality; *MQ*= Management Quality; *EC*= Earning Capability and *LQD*= Liquidity
Whereby;
(Y) R = Dependent Variable; β = coefficient; ε = Error Term

CAMELS Rating Model; In the CAMELS rating model, the all the 6 variables are assessed in the criteria of 1 to 5. Moreover, each variable has a well arranged out scale of rating based on the existing financial and economic circumstances. In this study the researcher used the rating base methodology, according to [9] analyze of ratios based on CAMEL model.

Table 1: Rating Key Signification

Rating Score	Rating Analysis Intervals	Rating Score Analysis Interpretation
Rating 1	1.0 – 1.4	Strong: Sound in every aspect, no managerial responses required
Rating 2	1.6 – 2.4	Satisfactory: Fundamentally sound with humble amendable weakness.
Rating 3	2.6 – 3.4	Fair: (watch category) Combination of weakness if not redressed will become severe. Watch category- requires more than normal supervision
Rating 4	3.6 – 4.4	Marginal: (some risk of failure) Immoderate weakness unless properly addressed could impair future viability of the bank. Needsclose supervision.
Rating 5	4.6 – 5.0	Unsatisfactory: (high degree of failure evident). High risk of failure inthe near term. Under constant supervision/cease and desist order.

Source: Literature Reviewed, 2020

Table 2. CAMELS Rating Base

CAMEL Rating Components	Rating 1 (Strong)	Rating 2 (Satisfactory)	Rating 3 (Fair)	Rating 4 (Marginal)	Rating 5 (Unsatisfactory)
Capital Adequacy	≥15%	12%- 14.99%	8%- 11.99%	7%-7.99%	≤6.99%
Asset Quality Ratio	≤1.25%	≤2.5%- 1.26%	≤3.5%- 2.6%	≤5.5%-3.6%	≥5.6%
Management Competence	≤25%	30%- 26%	38%- 31%	45%- 39%	≥46%
Earnings (ROA)	≥1%	0.9%-0.8%	0.35%- 0.7%	0.25%- 0.34%	≤0.24
Earnings (ROE)	≥22%	17%- 21.99%	10%- 16.99%	7%-9.99%	≤6.99%
Liquidity Ratio L1	≤0.55%	0.62%-0.56%	0.68%- 0.63%	0.80%-0.69%	≥0.81%
Liquidity Ratio L2	≥50%	45%-49.99%	38%- 44.99%	33%-37.99%	≤32%

Source: Literature Reviewed, 2020

IV. RESULTS AND DISCUSSION

Based on the study data analysis and findings the results are elaborated in aspects of standard differentials between the local and international credit ratings assessment, CAMEL ratings of the selected commercial banks and influence of the CAMEL ratios to credit ratings [9, 13, 53, 59].

In CAR, local system had set higher benchmark compared to the international (minimum of 10.5% - international standard and 12% local standards). Also, as much liquidity, the local and international systems both had similar benchmark of ≥60%, however, the international reports regard liquid banking asset to tangible banking asset as their major reflection ofliquidity ratio under the benchmark of above 25% compared to local standard of 20%.In asset quality and earning capability there was unalignement of regulatory standards benchmark between the intenational being 5%, >10% respectively and local standard system subjected to no definable regulatory standards in local perspective to both.
In regard to the comparison in standards from top leading African countries in banking industry such as South Africa, Egypt and morocco, these countries had set higher standards in molding the operations of their commercial banks that reflects higher position of their commercial banks in African credit rating assessment rankings as compared to Tanzanian commercial banks [35, 54, 70].

Never the less, in light of recent COVID-19 pandemic, BOT had taken measures in introducing policies in safeguarding the stability of the financial sector. Lowering of the statutory minimum reserves (SMR) from 7% to 6%, discount rates from 7% to 5% and also treasury bills from 40% to 20% [9, 27]. Moreover, the measure did not cover up long-term period in extending to CAMEL ratios, but only on mentioned specific banking sections. Furthermore, the financial and real economy risk are interrelated in two major ways; an extended Covid-19 crisis could drive up the number of real economy bankruptcies, which makes it even difficult for financial system to manage. Therefore, there is no off-the-shelf cure for liquidity problems of entire real economies; this may also include credit, CAR, foreign exchange and operational risk [2, 4, 9, 28, 54].

Furthermore, based on rating Tanzanian commercial banks, both banks had scored a rating of '1' signifying a strong capital adequacy and liquidity. Furthermore, asset quality, earning capability and management quality had fundamentally sound with modest amendable weakness as they scored '2' in rating scores. Asset quality had a poor rating score to both banks especially to CRDB as it had the rate of '5' reflecting high degree of failure.

Additionally, NMB had better position rates compared to CRDB in terms of asset quality, earning capability and management quality whereas as CRDB had better rate in liquidity. In addition, both banks should improve in capital adequacy ratio, asset quality, earning capability and management quality. On average both banks had a general sartisfactory credit rating score [1, 29, 44, 55 67, 68]. Controlling of CAMEL ratios reflect an important monitoring of credit risk that can affect the credit rating score.

Furthermore, based on the influence of the CAMEL ratios to credit rating, capital adequacy, earning capability, management quality and liquidity were significant to credit rating with p-value greater than 0.05. Capital adequacy had a p-value of 0.0073, earning capability had a p-value of 0.0236, management quality had a p-value of 0.000 and liquidity had a p-value of 0.000. However, asset quality was insignificant to credit ratings therefore; Tanzanian commercial banks are likely to suffer significantly from capital adequacy, earning capability, management quality and liquidity based on the credit rating [6, 17, 33, 56].

V.CONCLUSION

Now days in the world, the credit rating organisation plays a important role in financial development [3, 9, 30]. Credit rating organization is well checked with by numerous financial and non-financial companies to help assistance in determination of their companies' performance, the viewpoint to attract potential investor's amoung countries in the world through issuing of bonds. Therefore, the research suggests Tanzania should start reliable credit rating framework, establishment of regulations and also, policies on credit rating and financial institution's credit rating methodology.

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