ATLANTIS PRESS

Advances in Economics, Business and Management Research, volume 65

1st International Conference on Economics, Business, Entrepreneurship, and Finance (ICEBEF 2018)

Impaired Loan in Commercial Banks, a Benediction or Atrocity? An Empirical Investigation on Selected Sub-Saharan African Countries

Odunayo Magret Olarewaju
Department of Management and Accounting, Faculty of Accounting and Informatics
Durban University of Technology
Durban, South Africa
odunayoo@dut.ac.za

***Abstract*—This study investigates the effect of diversifying impaired and unimpaired loans on the financial performance of selected banks in SSA within the period from 2007 to 2016. Descriptive, correlation and panel regression techniques were adopted on 250 sampled banks form 30 countries. The results revealed that impaired loan ratio (ILR) has a direct and significant relationship with Return on Asset (ROA), while unimpaired loan ratio (LCR) has an inverse relationship with ROA, even though this relationship is insignificant. In addition, a restricted F-test was conducted and revealed that loan diversification has a cross-sectional uniqueness or heterogeneity effect on bank performance, while the Hausman test carried out showed that the fixed-effect model was the most efficient and consistent parameter estimate Thus, commercial banks need to revisit their loan structures both in terms and repayment modes to ensure that all loans they disburse are impaired, as this is positively and significantly related to the enhancement of their performance level. Also, banks should carry out their loan diversification practices in line with the adequate considerations of human capital training, development, and deployment, so as to ensure the attainment of the benefits of diversification on their performance.**

Keywords—banks performance; impaired loan; unimpaired loan; panel regression technique

I. INTRODUCTION

One of the traditional functions of a bank is to disperse funds from the surplus units as loans to the deficit unit to ensure a balance that can enhance economic sustainability. Loans form a major proportion of banks' assets and can be used to engender or proffer solutions to the problem of disparities between the surplus and deficit units which to a great extent affect a nation's economy. They serve as agents that bridge the gap between the lender and the borrower, because it is much easier for them to gather information on borrowers' credit-worthiness. Also, banks are able to minimize credit risk by diversifying loan portfolios to avoid the default ratio which can adversely affect their financial performance. In Maubi and Jagongo, the importance of loan diversification in the banking sector as a means of minimizing loan portfolio risks that can have a negative effect on financial performance was emphasized [1]. Bank loans can be impaired or unimpaired. Impaired loans can be sub-standard, doubtful, and lost. Thus, for a loan to achieve its desired purpose, the bank must decide whether it is impaired or not from the onset, so as to ensure that adequate provision is made to cushion the negative impact of a default by the beneficiary (debtors). However, in SSA banks, loan activities have failed to increase overall financial performance due to incompetence, poor lending, and huge losses as a result of credit-testing, which is one of the rating factors of the banking sector. It was revealed that one of the greatest challenges of the SSA region is an unavoidable increase in bad debt. Dividing the region into various blocs such as CEMAC, EAC, ECOWAS, SADC and WAEMU showed that the average non-performing loans expressed in percentage are 9.7-20, 4.8-22, 5.2-40, 2.0-9.3 and 14.4-17.6 respectively with very minute performance levels. Thus, the SSA banking sector remains shallow and underdeveloped because banking loans and advances, which constitute a major bank asset, are categorized as non-performing because of its huge default rate. Despite this persistent increase in the loan menace, research on the banking sector the world over has neglected the impact of loan and its diversification on bank performance. All the attention on diversification within the banking context has been directed at income, which is just one of the four dimensions of operational diversification in the banking sector [2]. The reasons for loan spread, as well as the forms of loans which will be most beneficial to banks, must be clearly identified. The pertinent question which needs to be answered is, should loans be fully impaired with adequate provisions for possible defaults, or should they be unprovided for at the stage of disbursement, relying on hopes of recouping all? It is the absence of a clear answer to this cogent question in the existing literature that motivated this study using a new dataset from selected SSA commercial banks.

The rest of the paper is arranged as follows: Section two presents a review of relevant literature, Section three is devoted to the research method, Section four presents the analysis and discussion of results, while Section five concludes the paper.

II. Empirical Evidence on Loan Diversification

Sibel and Ihsan examined the effect of sectoral and geographical diversification on the performance of Turkish banks [3]. They investigated the relationship between the credit diversification and performance of 40 Turkish banks between the time period of 2007 and 2011. Data were sourced from the banking regulation and supervision agency, the Banks Association of Turkey, and the Istanbul Stock Exchange. The analysis was done using correlation and regression methods. Return on assets and return on equity were used to measure performance, and the Herfindahl index was used to measure the diversification of banks. The number and amount of credits that banks lend to borrowers were employed as control variables. The results of the analysis revealed that the diversification variables under consideration were statistically significant in determining the performance of the banks studied. In a similar manner, Goetz studied how a bank's diversification affects its own risk-taking behaviour and the risk-taking behaviours of competing, non-diversified banks [4]. The descriptive analysis done indicated that a bank's level of diversification affected the risk-taking behaviour of its competitors, even when the activities of the competing banks were not diversified. Fang, Hasan, and Marton investigated the relationship between asset diversification, loan diversification, and bank performance [5]. The data gathered were analysed using correlation analysis and it was discovered that asset diversification was positively related to bank performance, while loan diversification was negatively related to bank performance. Cotugno and Stefanelli examined the relationship between diversification and bank performance and applied correlation to the data collected for the study [6]. Their study established a positive relationship between product diversification and bank performance. The same result was also obtained with respect to geographical diversification and bank performance. Similarly, Tabak, Fazio, and Cajuerio assessed whether banks operating within the Brazilian banking system concentrate or diversify their credit portfolios, and how this choice impacts their performance and risk [7]. The study found out that Brazilian banks' loan portfolios are more concentrated than those of developed countries like Germany, Italy and the U.S. Bebczuk and Galindo evaluated the sectoral diversification of Argentine banks [8]. The study revealed that larger banks benefit more from diversification than smaller ones. It was further revealed that the benefits of diversification are greater during the downside of the business cycle. Berry-Stölzle, Liebenberg, Ruhland and Sommer analyzed variations in line-of-business diversification status and their extent among property-liability insurers [9]. The study was done using descriptive analysis, and the results showed that the extent of diversification is not driven by risk pooling considerations. It was also revealed that insurers operating in more volatile business lines do not get involved in stringent diversification. Lee, Hsieh and Yang examined the impact of diversification on the performance of banks in Asia-Pacific countries [10]. A sample of 29 banks selected for the study were modelled using regression. The results revealed that diversification had a positive effect on bank performance. Arnety, Gregory and Maurice examined the effect of portfolio diversification on commercial banks' financial performance [11]. A mixed method research design was used and data was collected using questionnaires and interview schedules. The target population was 43 licensed commercial banks in Kenya, from which 133 managers were randomly sampled. Data were analyzed using descriptive statistics, correlation, and regression analysis. The result showed that a positive and statistically significant relationship exists between portfolio diversification and financial performance. Thus, most banks diversify their investments to enable them to increase profits and performance. The study established that financial institutions should invest in a combination of assets which are negatively correlated because this maximizes revenue (returns) and minimizes losses (risks). Otieno and Moronge investigated the influence of product diversification on the financial performance of selected commercial banks in Kenya [12]. The product diversification avenues considered include new markets, technology, information flow, and innovation. These avenues have seen an unprecedented development and growth during the last few years, and are becoming a major catalyst for economic and social development in many countries. The study adopted a descriptive research design where stratification and simple random sampling were used as the technique for selecting the banks and the respondents. The data gathered were analyzed using narratives, tables, graphs, descriptive and multiple regression. The results revealed that technology, information flow, new markets, and innovation all had an effect on financial performance. Innovation was found to be the factor with the highest influence compared to other variables or factors under consideration in the study. They, therefore, concluded that all banks should employ high-quality and up-to-date technology in rendering financial services, and that some technologies which make clients susceptible to fraud, identity theft, and so on should be taking care of by ensuring that the public is well-informed about them and their associated fraud possibilities.

Conclusively, all the available research on credit or loan diversification has not emanated from the SSA region, and none of these previous studies has been able to examine impaired and unimpaired loans to determine which has a more significant impact on bank performance. In a recent study from the SSA region, Simpasa and Pla examined the loan structure in Zambia (2005-2014) using regression analysis. The result revealed that the concentration of lending to a few sectors reduces monitoring cost and risk, boosting the bank's financial performance. This study did not examine impaired and unimpaired loans to propose a solution to the recurring non-performing loan problem of banks. Thus, to bridge this identified gap in the existing literature, this study investigates the effect of impaired and unimpaired loan diversification on the financial performance of SSA banks [13].

III. Research Method

An explanatory research design was employed in this study, focusing on the effect of loan diversification on the financial performance of banks in SSA. The study was carried out on 250 purposively selected commercial banks in SSA from 30 countries for the period from 2007 to 2016. These banks were selected using convenience sampling method based on the availability of complete and required information on the variables under consideration. The countries examined share

the same economic and banking features - most importantly, they are all faced with the challenge of huge non-performing loans in their banking sectors. Thus, the secondary data were collected using the extraction method from the BankScope database, which has been described as the most comprehensive database with banking profile data all over the world.

A. Model Specification

This work adopted the model of Ismail, Hanif, Choudhary, and Ahmad which empirically explored the relationship between income diversification and banking performance [14]. This was stated in functional form as:

$$\mathrm{ROA}_{it} = f(\mathrm{DIVI}_{it}, \mathrm{GR}_{it}, \mathrm{EQTA}_{it}, \mathrm{LNTA}_{it})$$

In an explicit form, equation (1) was transformed and written as:

$$ROA_{it} = \alpha_0 + \alpha_1 \mathrm{DIVI}_{it} + \alpha_2 \mathrm{GR}_{it} + \alpha_3 \mathrm{EQTA}_{it} + \alpha_3 \mathrm{LNTA}_{it} + \mathrm{e}_{it}$$

Where: ROA is return on asset i.e. performance measure, DIVI is the diversification measure, GR indicates the growth rate of total assets, EQTA is the ratio of equity to total asset, LNTA is the proxy of loan ratio, LTA is the ratio of total loan to total asset representing financial leverage of banks, *e* is error term of the model, *i* is the sample of cross-sectional variables, *t* is the time dimension of the variables and α_i is the parameter to be estimated.

However, the model presented in equations (1) and (2) was modified using a performance model generated from the Structure Conduct and Performance (SCP) paradigm. That is,

$$P = f(S, C);$$

where P represents performance, S structure, and C conduct.

Using ROA as a measure of banks' performance, loan diversification approaches such as impaired and unimpaired loans, as well as the control variables, are captured by ILR, LCR, SIZ, LOD, LLR, and CIR respectively, and μ_i is the stochastic error term. Thus, the modified model for this study is stated in functional form in equations (3) and (4) as follows:

$$\mathrm{ROA}_{it} = f(\mathrm{ILR}_{it}, \mathrm{LCR}_{it}, \mathrm{SIZ}_{it}, \mathrm{LOD}_{it}, \mathrm{LLR}_{it}, \mathrm{CIR}_{it})$$

In econometric form, the equation (3) was transformed and stated in equation (4) as:

$$ROA_{it} = \alpha_0 + \alpha_1 \mathrm{ILR}_{it} + \alpha_2 \mathrm{LCR}_{it} + \alpha_3 \mathrm{SIZ}_{it} + \alpha_3 \mathrm{LOD}_{it} + \alpha_3 \mathrm{LLR}_{it} + \alpha_3 \mathrm{CIR}_{it} + \mathrm{U}_{it}$$

ROA is measured as the ratio of profit after tax to total asset, ILR is measured as the ratio of impaired loans to total loans to capture the impaired loan ratio, LCR is the ratio of customer loans to total loans to capture the unimpaired loan ratio, SIZ is the natural logarithm of total asset, LOD is the loan to deposit ratio which is used to capture banks liquidity ratio, LLR is the ratio of loan loss provision to total loan to capture the loan default ratio of banks, and CIR is the ratio of operating cost to operating income, used to capture the cost efficiency ratio. All these variables are used based on the structure conduct and performance paradigm (SCP) that posits diversification as one of the structural components of the paradigm.

B. Estimation and Diagnostic Techniques

The estimation techniques adopted for this study include descriptive analysis, and correlation, panel data regression which consists of pooled effect panel, fixed effect panel, and random effect panel. The diagnostic tests carried out are: test for coefficient of determination, test for the significance of the estimated parameters using standard error, T-test, probability value test, test for the significance of the fitted models using F-test, and Hausman test.

C. Pooled Effect Model

A general linear model for panel data permits the intercept and slope coefficients to vary over both individual and time, with

$$\mathrm{Y}_{it} = A_{it} + \mathrm{X}'_{it}\alpha_{it} + \mathrm{U}_{it}\ \mathrm{i} = 1, \ldots\ldots, \mathrm{N}, \mathrm{t} = 1, \ldots\ldots, \mathrm{T}$$

Where Y_{it} is a scalar dependent variable, X_{it} is a k x 1 vector of the independent variable, U_{it} is a scalar disturbance term, *i* indexes individuals in the cross sections, and *t* is the time index. Further restriction was placed on the extent to which A_{it} and α_{it} vary with *i* and *t* and on the behaviour of the error term, U_{it}.

D. Fixed Effects Model

The fixed effects model was specified as:

$$\mathrm{Y}_{it} = A_i + \mathrm{X}'_{it}\alpha + \mathrm{U}_{it}\ \mathrm{i} = 1, \ldots\ldots, \mathrm{N}, \mathrm{t} = 1, \ldots\ldots, \mathrm{T}$$

Where the individual specific effects A_1, A_2…… A_N measure unobserved heterogeneity which is possibly correlated with the regressors X_{it}, α is a k x1 vector, and the errors U_{it} are iid 0, σ^2). The major challenge in estimation is the increase in N individual specific effects as N becomes large. For this research, interest will be focused on the slope or estimated parameters α. The N parameters A_1, A_2…… A_N are nuisance parameters or incidental parameters that are not of intrinsic interest.

The fixed effect model used for this analysis is thus expressed as:

$$\mathrm{Y}_{it} = A_i + \alpha' \mathrm{X}_{ijk} + \mathrm{U}_{it}\ \mathrm{i} = 1, \ldots\ldots, \mathrm{N}, \mathrm{j} = 1 \ldots\ldots, \mathrm{M}, \mathrm{t} = 1, \ldots\ldots, \mathrm{T}$$

E. Random Effects Model

The rationale behind the random effects model is that unlike the fixed effects model, the variation across entities is assumed to be random and uncorrelated (independence) with the predictor or independent variables included in the model. The random effects model is given as:

$$\mathrm{Y}_{it} = A + \alpha_i \mathrm{X}_{it} + \mathrm{U}_{it} + \mathrm{E}_{it}$$

Y_{it} = dependent variables

X_{it} = explanatory variables

α_i = coefficient of the explanatory variables

A = the unknown intercept for each *n* specific entity

U_{it} = between-entity error

E_{it} = within-entity error

The model also allows us to generalize the inferences beyond the sample used in the model.

Thus:

X_{ijk} = k x j vector of regressors and α' = (α_1, α_2, α_3 and α_4)

X'_{it} = $(ILR, LCR, SIZ, LOD, LLR, CIR)_{it}$

Y_{it} = ROA_{it}

IV. Analysis and Discussion Results

This section shows the purview of pooled variable observations used in this study for the period under investigation with reference to the mean, standard deviation, skewness, kurtosis, minimum, and maximum statistics. The panel data used to capture these variables are on a yearly frequency and are all expressed as ratios, except for SIZ which is naturally logged.

TABLE I. Descriptive Analysis Result

	ROA	ILR	LCR	SIZ	LOD	LLR	CIR
Mean	1.85987	1204.767	369175.4	13.1914	4.36082	5.17386	65.681
Med	1.85500	0.000242	0.596303	13.1414	0.63635	3.01300	59.212
Max	38.7130	2721164.	8.36E+08	18.3013	3960.36	100.000	850.00
Min	-54.7330	0.000000	4.33E-06	3.77769	0.00000	0.00000	0.0000
Std-de	3.34941	57176.90	17558525	1.56959	96.6695	7.17827	48.334
Skew	-1.60037	47.56034	47.56049	-0.86357	35.4812	6.12532	7.2850
Kurtos	60.8161	2262.991	2263.000	8.99702	1351.40	65.5254	89.914
Prob	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 1 above shows the descriptive analysis results of all the activities regarding the loan diversification and financial performance of commercial banks in SSA for the period 2007 to 2016. ROA measured the performance of the banking industry, while ILR and LCR which represent impaired loan ratio and loan to customer ratio are used to measure the HHI index of loan diversification in SSA banks. The average rate of ROA is 1.8598%, implying that the average performance of the SSA commercial banking industry is not low, but moderate. It is evident from the results that all the series display a high level of consistency, as their mean, median, and standard deviation values consistently fall within the range of minimum and maximum values of the series. Also, the standard deviation values of the loan diversification measure are high, indicating a relatively high level of deviation of the actual data from its mean or expected average value. From the skewness statistics, only ROA and SIZ are negatively skewed because their distributions have a long tail to the left, while other variables in the series are positively skewed because their distributions have a long tail to the right. However, the kurtosis of the financial variables showed that all the variables under consideration are leptokurtic in nature. This is because the kurtosis coefficient indices are all positive. But probability values of 0.000 for all the variables in the series show that the model is of good fit and all the chosen variables in the study are expected to significantly impact the financial performance of the SSA banking industry.

TABLE II. Correlation Analysis

Variable	ROA	ILR	LCR	SIZ	LOD	LLR	CIR
ROA	1						
ILR	0.0000	1					
LCR	-0.0000	0.500	1				
SIZ	0.1245	0.0195	0.0195	1			
LOD	-0.3431	-0.007	-0.0007	0.0444	1		
LLR	-0.1447	-0.0127	-0.0127	-0.0129	0.0953	1	
CIR	-0.4204	-0.0035	-0.0035	-0.2179	0.0092	0.0423	1

Table 2 presents the correlation between pairs of variables used in the study with the aim of showing the nature and strength of the relationships existing between variables employed in the loan diversification model. From the table, there are variations in the degree of relationship among the variables. Only ILR and SIZ have positive relationships with ROA. Other loan diversification variables – LCR and the control variables LOD, LLR, and CIR show negative relationships. LCR and SIZ show a positive relationship with ILR, while all other variables are negatively associated with ILR. It was also discovered that only

SIZ is positively related with LCR, while other variables in the model are negatively associated with it. Also, LLR and CIR are negatively related with SIZ with correlation coefficients of 0.0129 and 0.2179 respectively, while LOD is positively related to SIZ with a degree of relationship of 0.0444. Thus, the correlation matrix reveals that there is no evidence of the possibility of multi-colinearity in the estimations because of the

revealed extent of relationship among the variables. This informs the need for this study to further examine the effect of the loan diversification variables on the sampled banks' performance using panel data regression techniques such as pooled, fixed and random effect frameworks.

TABLE III. POOLED, FEM AND REM ESTIMATION

	POOLED		**FEM**		**REM**	
VARIABLE	***COEFF***	***P>/t/***	***COEFF***	***P>/t/***	***COEFF***	***P>/t/***
C	3.452977	0.000***	-0.951668	0.343	1.519563	0.038**
ILR	0.0007102	0.316	0.0004105	0.022**	0.00496	0.434
LCR	-2.31e-06	0.315	-1.34e-06	0.522	-1.62e-06	0.434
SIZ	0.0413793	0.283	0.3378504	0.000***	0.1644741	0.002***
LOD	-0.011412	0.000***	-0.010830	0.016**	-0.011064	0.000***
LLR	-0.044457	0.000***	-0.024149	0.000***	-0.030417	0.001***
CIR	-0.028322	0.000***	-0.022441	0.000***	-0.024577	0.000***
R-square	0.3015		Within= 0.2731 Between = 0.3122 Overall = 0.2779		Within= 0.2706 Between = 0.3802 Overall = 0.2966	
Adj R-Sq	0.2996					
F-stat	F(6,2258) = 162.40		F(6, 2012) = 125.96			
Chi^2-Stat					Wald $Chi^2(6)$= 882.23	
Prob	Prob>F = 0.0000***		Prob>F = 0.0000***		Prob>Chi^2 = 0.0000***	
Post-Estimation Test						
Restricted F-test			***Hausman Test***			
D.F	***F-stat***	***Prob***	***Test Estimate***		***Chi2 stat***	***Prob***
(246, 2012)	4.57	0.0000***	$chi^2(4)$		37.51	0.0000***

Pooled estimation places restrictions on the heterogeneity or uniqueness of the cross-sectional units by stacking all the observations without taking into account their cross-sectional or time series features, based on the assumption that both the regressors and constant estimates are the same across all banks (cross-sectional subjects) and over time. In other words, the cross-sectional subject and period-related effects in the estimation are negligible. Thus, ILR and SIZ have a direct relationship with ROA, while LCR, LOD, LLR, and CIR have inverse relationships with ROA. The result further revealed that ILR and SIZ contribute 0.0007 and 0.0414 percent respectively to improve banks' ROA. On the other hand, it was discovered that LCR, LOD, LLR, and CIR limit bank performance by 0.000002, 0.0114, 0.0445, and 0.0283 percent respectively. The standard error and probability values of the estimated parameters for LOD, LLR, and CIR established their statistical significance in determining banks' performance in SSA.

Relative to the pooled regression estimator is the fixed-effect estimator which takes cognizance of subject and/or period heterogeneity or uniqueness that may exist in the regression model. Therefore, from the results, ILR and SIZ have direct and significant relationships with ROA at 5 and 1%, while LCR, LOD, LLR, and CIR have an inverse relationship with ROA. The result further revealed that ILR and SIZ contribute 0.0007 and 0.0414 percent respectively to improving the banks' ROA. On the other hand, LCR, LOD, LLR, and CIR limit bank performance by 0.000002, 0.0114, 0.0445, and 0.0283 percent respectively. The standard error and probability values of the estimated parameters for SIZ, LOD, LLR, and CIR established their statistical significance in determining banks' performance. However, due to inherent problems such as the possibility of multicollinearity, loss of degree of freedom, inability to track the effects of the time-invariant variable that was associated with the fixed effect model, a random effect estimation which assumes that the heterogeneity is random rather than fixed was examined. It showed that ILR and SIZ have a direct relationship with ROA, while LCR, LOD, LLR, and CIR have an inverse relationship with ROA. The results further revealed that ILR and SIZ contribute 0.00496 and 0.16447 percent respectively to improving banks' ROA. On the other hand, it was discovered from the result that LCR, LOD, LLR, and CIR limit bank performance by 0.000002, 0.0111, 0.0304, and 0.0246 percent, respectively. The standard error and probability values of the estimated parameters for SIZ, LOD, LLR, and CIR established their statistical significance in examining banks' performance in SSA. The R-Square values of 0.30, 0.28, and 0.30 showed that the 30, 28, and 30 percent variations in bank performance in SSA can be explained by the loan diversification variables as revealed by pooled, fixed and random effect model.

From the post-estimation test, F-statistics values of 4.57 and probability values of 4.57 and 0.0000 (< 0.05) respectively in the restricted heterogeneity test revealed that all differential intercepts corresponding to the cross-sectional specific units are not equal to zero. This implies that there is a cross-sectional uniqueness or heterogeneity effect of loan diversification on the performance of the banks under consideration in SSA. Thus, the pooled regression estimate restriction is not valid, as the cross-sectional heterogeneity effect is too significant to be overlooked. Also, from the Hausman test, a chi-square value of 37.51 and probability value of 37.51 and 0.0000 (< 0.05) showed that the difference in coefficients is unsystematic and highly substantial. This implies that there is a correlation between the random effects incorporated into the composite error term and one or more of the independent variables. Thus, the FEM estimation becomes the best (most efficient and consistent) model and is preferred for this study.

V. Conclusions and Recommendations

A thorough examination of the results of this study reveals a positive and significant effect of ILR on banks' performance. This implies that having an expectation and making preparations at the onset for the likelihood of debtors not repaying the exact amount to be repaid is more helpful and has a huge positive and significant impact on bank performance. This is because necessary adjustments would have been made to cushion the impact of the proportions that are un-recoupable such that their impact on financial performance will be minimal. The positive and significant effect of SIZ implies that larger banks engage in different business activities that aid the flexibility of exploiting economies of scale and scope advantage. This conclusion is in agreement with the study carried out by Lee, Hsieh and Yang which revealed that diversification had a positive effect on bank performance [10]. It also agrees with Arnety, Gregory and Maurice who established a positive and statistically significant relationship between portfolio diversification and financial performance [11]. The negative and significant effect of CIR is a good signal of the banks' efficiency. Thus, the estimate on the loan diversification model of SSA banks is efficient, consistent and reliable.

In conclusion, commercial banks need to revisit their loan structures as regards both terms and repayment plans. It is far better for banks to disburse loans and operate with the expectation that customers may not be able to repay the entire amount as expected than to expect total repayment. The negative effect of issuing loans to customers on bank performance might be due to factors such as unstable interest rates and economic policies made by the monetary authorities in SSA. Other factors include unforeseen circumstances such as death, insurgency, theft, and fire outbreaks which can ruin the business activities of the loan beneficiary. Also, the managerial acumen of a loan beneficiary (business) has a huge impact on its success or failure. These factors require the urgent attention of SSA commercial bank regulators, as this is significantly limiting their financial performance. More so, banks should carry out their loan diversification schemes in line with adequate considerations for human capital training, development, and deployment, so as to enable the attainment of the benefits of diversification on banks' performance.

References

[1] Maubi, A.M., and Jagongo, A. "Corporate loan portfolio diversification and credit risk management among commercial banks in Kenya". International Journal of Current Business and Social Sciences, vol. 1(2), pp. 81-111, 2014.

[2] Mishra, D.S.P., and Sahoo, D. "Operational diversification and stability of financial performance in Indian banking sector: A panel data investigation". Research Journal of Finance and Accounting, vol. 3(3), pp.70-87, 2012.

[3] Sibel, Y.T., and Ihsan, Y. "Diversification in Banking and its effect on banks' performance: Evidence from Turkey". American International Journal of Contemporary Research, vol. 2(12), 2012.

[4] Goetz, M. "Quantitative Analysis Unit. Bank Diversification, Market Structure and Bank Risk Taking: Theory and Evidence from U.S. Commercial Banks". Boston: Working Paper No. QAU 12-2, Federal Reserve Bank of Boston, 2008.

[5] Fang, Y., Hasan, I. and Marton, K. "Institutional development and its impact on the performance effect of bank diversification: Evidence from transition economies". Emerging Markets Finance & Trade, vol. 47(4), pp. 5-22, 2011.

[6] Cotugno, M. and Stefanelli, V. "Geographical and product diversification during instability financial period: Good or bad for banks?" International Research Journal of Finance and Economics, vol. 85, pp. 87-100, 2012.

[7] Tabak, B.M., Fazio, D. M. and Cajuerio, D.O. "The Effects of Loan Portfolio Concentration on Brazilian Banks' Return and Risk". Banco Central Do Brazil, Working Papers No 21, 2010.

[8] Bebczuk, R. and Galindo, A. "Financial crisis and sectoral diversification of Argentine banks, 1999-2004". Applied Financial Economics, 18, 199-211, 2008.

[9] Berry-Stölzle, T.R., Liebenberg, A.P., Ruhland, J.S. and Sommer, D.W. "Determinants of corporate diversification: Evidence from the property-liability insurance industry". The Journal of Risk and Insurance, vol. 79(2), pp. 381-413, 2011.

[10] Lee, C.C., Hsieh, M.-F., and Yang, S.-J. "Revenue diversification and bank performance: Do financial structures and financial reforms matter?" Japan and the World Economy, vol. 29, pp. 18-35, 2014.

[11] Arnety N.M., Gregory S.N. and Maurice S. "Effect of Portfolio Diversification on Commercial Banks Financial Performance in Kenya", International Journal of Business and Management Invention, vol. 5(9), pp. 5-8, 2016.

[12] Otieno, O.A and Moronge, M. "Influence of Product Diversification on the Financial Performance of Selected Commercial Banks in Kenya". European Journal of Business Management, vol. 1 (11), pp. 336-341, 2014.

[13] Simpasa, A., and Pla, L. "Sectoral Credit Concentration and Bank Performance in Zambia (No. 245)". Working Paper Series, 2016.

[14] Ismail A., Hanif R., Choudhary S. and Ahmad N. "Income-diversification in the banking sector of Pakistan: a 'Blessing' or 'Curse'?" The Journal of Commerce, vol. 7(1), pp. 11-22, 2015.