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The Impact of Delinquent Loans on Financial Performance of Banks in Ghana

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Authors' contributions

This study was carried out in collaboration between both authors. Author BA designed the study and wrote the first draft of the manuscript including the literature searches, data input, analysis and interpretation. Author CP reviewed the first draft. Both authors read and approved the final manuscript.

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ABSTRACT

Loan portfolio is the largest asset and the biggest source of income for banks; consequently, most banks advance huge portions of financial resources as loans to clients. Despite the stringent evaluation and monitoring strategies put in place by banks to ensure repayment of loans by borrowers, a considerable proportion of loans become delinquent. Empirical evidence on the incidence of non-payment of loans on financial performance of Banks in Ghana is very limited. Consequently, this study investigates into the impact of delinquent loans on financial performance (interest income and net profit) of banks in Ghana. Glaring in this study is a statistically significant impact of delinquent loans on interest income and net profit. At $\alpha = 0.05$, delinquent loans significantly affect both interest income [F (1, 48) = 119.28, P < 0.05, partial $\eta^2 = 0.713$] and net profit [F (1, 48) = 54.20, P < 0.05, partial $\eta^2 = 0.530$]. Considering the influence of delinquent loans on individual dependent variables, delinquent loans account for 70.7% of the variation in interest

income (t= -10.921, P < 0.000) and 52.1% variation in net profit (t= -7.362, P < 0.000). As a result, a significant impact of delinquent loans on FP (interest income and net profit) of banks is established in this study. Apparently, it is recommended that banks embark on effective and regular monitoring of the loan from the time of disbursement till the final repayment as a means of reducing delinquent loans and its antecedent impact on interest income and net profit. Periodic relevant training programs could also be organized for loan officers particularly in the area of risk management and management of delinquent loans.

Keywords: Delinquent loans; interest income; net profit; financial performance; banks; Ghana.

ABBREVIATIONS

BiG: Banks in Ghana; FP: Financial Performance; MFIs: Microfinance Institutions; ROI: Return on Investment; SMEs: Small and Medium Enterprises;

1. INTRODUCTION

Loan portfolio is the largest asset and the biggest source of income for banks; therefore, most banks advance huge portions of financial resources as loans to clients [1,2]. Globally, banks grant loans to customers as a way of enhancing financial performance (FP) [3,4]. To this effect, banks in Ghana (BiG) also engage in giving loans to customers [5-8]. Banking institutions give loans to a broad category of customers; a significant portion of the loans go to corporate institutions whiles the remaining part goes to private individuals. Universal Banks (commercial and investment banks) provide loans to an estimated 65% of Ghana's total population in comparison with 15% Microfinance Institutions (MFIs) which is partly due to the provision of microfinance services by universal banks [9]. This presupposes that universal banks advance loans to greater proportion of the Ghanaian banking population than the MFIs and this may be because the universal banks also provide microfinance services such as microcredit to clients. The universal banks are better positioned to participate in, if not dominate, the future of the microfinance market because universal banks are more able to offer a wide range of financial products and services including micro lending at a relatively lower interest rate [8,10]. This gives the indication that universal banks offer microloans to poor clients in addition to clients in the formal banking sector thereby providing loans to greater proportion of the Ghanaian population. BiG, like banks in other countries, have various forms of evaluation method to access the credit worthiness of customers as well as monitoring strategies to check the repayment of loans by customers [11]. The evaluation and monitoring methods used by banks include preliminary

screening, loan proposal assessment by credit committee and monitoring of loan repayment. The evaluation of credit worthiness of customers as well as monitoring of loan repayment is very crucial if universal banks are to recover loans advanced to customers in due time. As a result, many banks have credit department that carry these essential functions.

Despite the stringent evaluation and monitoring strategies put in place by banks to ensure repayment of loans by borrowers, there are quite a large number of customers who are unable to pay the interest that accrues on the loan and sometimes even the principal amount of the loan [1,2,12,13]. Recent studies show that many BiG suffer from non-payment of loans by customers [6-8,14-17]. Loan delinquency among BiG has become so crucial compelling most banks to adopt alternative means of recovering delinquent loans; including personal liability on banking staff for recovery of loans. Having realized the worsening situation of delinquent loans among BiG, the major question is to what extent do delinquent loans affect the financial performance (FP) of banks? Several works have attempted to analyse the impact of delinquent loans on banking institutions in Ghana [6,14,15,17]. However, in assessing the impact of delinquent loans on FP, most studies were void of financial statements and largely concentrated on MFIs. Again, single case studies have been employed. limiting the generalization effect of the findings. Apparently, a recent study that attempted to analyse the impact of delinquent loans on lending ability and FP of BiG focused on Small and Medium Enterprises (SMEs) lending and as such only net profit and lending ability were analysed [8]. The motivation for this study stems from the gap existing in literature on the impact of delinquent loans on FP of BiG. The study

investigates into the impact of delinquent loans on FP of BiG.

This study analyses the financial statements of 10 banks over the period of five years (form 2009 to 2013) to determine the impact of delinquent loans on the operations of the banks. This study analyses the impact of delinquent loans on FP of BiG by assessing the impact of delinquent loans on interest income and net profit.

1.1 Research Objectives

The main objective of this study is to analyse the impact of delinquent loans on the FP of BiG. The following specific objectives would be achieved in order to accomplish the above general objective:

- To assess impact of delinquent loans on interest income in the selected banks from 2009 to 2013.
- To examine the impact of delinquent loans on net profit in the selected banks from 2009 to 2013.

2. LITERATURE REVIEW

2.1 Performing Loans and Delinquent Loans

The World Bank Policy Research paper on loans in Sub-Saharan Africa in 2005 establishes a loan as the lending of sum of money [18]. A loan is an agreement between a creditor and a debtor where the creditor agrees to give a sum of money known as the principal amount to the debtor who promises to pay the principal usually with interest to the creditor either in one lump sum or in installments over a specified period of time [19,20]. Lending entails a lending institution giving a loan for promise of interest and principal to be paid in return in the future [21-23]. All loans given by BiG are in the form of money. Therefore, this study adopts the definition of loan as a sum of money lent to an individual or an organization. It is worth mentioning that loan could also extend to the lending of property. However, for the purpose of this study the definition of loan will be limited to the lending of sum of money since loans given by BiG are usually monetary. Where the borrower meets the set deadline for loan repayment, performing loans are defined [24,25]. Consequently, a loan is said to be performing if the principal and interest are paid at the date agreed by both the creditor and the debtor. Performing loans add up

to the valuable asset portfolio for banks because of the generation of interest income [7].

The term "delinquent loan" is synonymous to "non-performing loan", "impaired loans", "bad loans" and "problem loans" [2,18]. As a result, the terms loan default, delinquent loan, bad loan and non-performing loan are used synonymously in this study. Delinquent loans are loans that are ninety days or more past due [26]. Loan could also be delinquent if the debtor is either unwilling or unable to pay the amount borrowed when it is due [25,27,28]. A loan default also occurs when the debtor does not make required payments or comply with the loan covenant or agreement between the borrower and the lender. Conclusively, delinquent loans are loans for which both principal amount and interest charges are outstanding contrary to the terms and conditions of the loan agreement between the borrower and the lender and mostly are at least 90 days overdue.

2.2 Impact of Delinquent Loans on Banking Institutions

Globally, several studies have acknowledged the impact of delinquent loans on banking institutions [2,4,18,20,26,29]. Many studies have also recognized the impact of delinquent loans on BiG [7,8,30,31]. Mostly, emphasis is exerted on the adverse effect of delinquent loans on the FP and the credit granting potential of banking institutions. Among the studied impacts, one effect is paramount; limitation on FP.

Loan portfolio forms a greater proportion of the assets of banks because it is the principal source of interest income [2,7,15]. The provisions for delinquent loans reduce total loan portfolio of banks and consequently reduce the interest earnings on such assets. Recent studies indicate a correlation between delinquent loans and operating profit of banks [1,2,32,33]. A study conducted in 7 Asian countries (Thailand, Hong Kong, Singapore, Indonesia, South Korea, Malaysia, and Philippines) from 1992 to 1999 using regression analysis, empirically revealed that increased delinquent loans negatively influence earnings on loans [34]. Revenues of banks depend on lending. As a result, FPs and success of banks depend on how effectively lending activities are managed. presupposes that the amount of revenue BiG can generate partially depends on the amount of delinquent loans standing in the books since

revenue (interest income) is usually generated from performing loans.

Delinquent loans adversely affect the ability of banks to cover all expenses including taxation, especially banks which tend to have large loan portfolios [8,35,36]. Provision for doubtful loans reduces the net profit of banks and consequently reduces the amount of dividends paid to shareholders [37-39]. Study of the financial statement of banks indicates that bad loans have a direct effect on the net profit of banks [40]. This is because charge for bad debts is treated as expenses on the statement of comprehensive income and as such impacts negatively on the net profit of banks. In Ghana, Barclays Bank Ghana Limited increased delinguent Loan charge from GH¢5,540,000.00 in 2007 GH¢46,890,000.00 in 2008 and the results was a loss glaring in its 2008 financial statement partially due to the huge charge for bad debts which increased [41,42]. This gives the indication that banks make adequate provisions and charges for bad loan portfolios affecting the return on investment (ROI) of the shareholders, thereby adversely affecting the ability of banks to even pay relatively higher dividends to shareholders (especially banks with greater bad loan portfolios). Banks usually declare dividend only after making the required provision for delinguent loans. Consequently, delinguent loans

could have an adverse effect on shareholders earnings. Provision for delinquent loans reduces the net profit of banks and in turn reduces the dividends paid to shareholders.

Despite the research related evidence given on delinquent loans and subsequent impact on FP of banks, evidence of delinquent loans and its impact on income statement elements such as interest income as well as net profit is still limited, hence the motivation for this research.

2.3 Conceptual Framework

In conceptualizing the impact of delinquent loans on FP of banks, it is considered that, interest income and net profit are significantly influenced by delinquent loans. Fig.1 shows the hypothesized relationships between delinquent loans and interest income as well as net profit.

2.4 Hypotheses

- H_0 : Delinquent loan does not have significant impact on x_i
- H_a : Delinquent loan has a significant impact on X_i
- For i = 1, 2 and X_1 , X_2 represent interest income and net profit respectively.

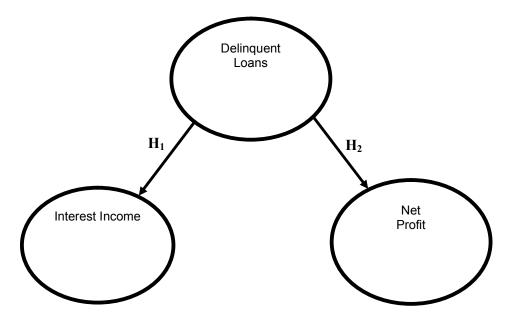


Fig. 1. Conceptual framework for impact of delinquent loans on FP of banks Source: Authors' construct

3. METHODOLOGY

Quantitative research approach was used in this study. The data used in this study are secondary in nature. Secondary data on delinquent loans, interest income and net profit are used in this study. A convenient sampling method was used to select ten universal banks in Ghana for this study. The data were sourced from the published annual reports and financial statements of ten banks, namely; Cal Bank Limited, Barclays Bank Ghana, Ecobank Ghana Limited, Fidelity Bank Ghana Limited, Ghana Commercial bank (GCB), Guaranty Trust Bank (GTB), Societe Generale Ghana Limited (SG Ghana), Zenith Bank Ghana Limited, Home Finance Company (HFC) Bank Ghana Limited and Unique Trust (UT) Bank. Data used cover a period of 5 years; 2009-2013. Consequently, 50 yearly observations of the variables are incorporated in data analysis. Access to the data was not a problem as these were published annually in the print and electronic media for public consumption. This made it easier to collect high quality data which would not have been of the same quality if collected in its primary form. SPSS Statistics version 21 was used to analyze the secondary data. Multiple regression (Multivariate) analysis was performed to determine the impact of delinquent loans on interest income as well as net profit.

4. RESULTS AND DISCUSSION

Table 1 indicates that at α = 0.05, delinquent loans have significant impact on interest income and net profit, Wilk's Λ = 0.175, F (2, 47) = 110.53, P = 0.000, partial η^2 = 0.825. This indicates statistically significant predictor (delinquent loans) for both dependent variables (interest income and net profit). Consequently, there is sufficient evidence against the null

hypothesis (delinquent loans have no significant impact on X_i).

Table 2 shows the results of a separate ANOVA conducted for each dependent variable, with each ANOVA evaluated at α = 0.05, the results confirm that delinquent loans have a statistically significant effect on both interest income [F (1, 48) = 119.28, P < 0.05, partial η^2 = 0.713] and net profit [F (1, 48) = 54.20, P < 0.05, partial η^2 = 0.530]. Considering the influence of delinquent loans on individual dependent variables, delinquent loans account for 70.7% of the variation in interest income and 52.1% variation in net profit. This gives the indication that delinquent loans limit the interest income and net profit earning capacity of banks to a greater extent.

Table 3 shows the coefficients for predicting interest income and net profit from delinquent loans. From the table, delinquent loans significantly predict both interest income and net profit at $\alpha = 0.05$ (P < 0.05). Additionally, a unit change in delinquent loans decreases the conditional proportion of interest income by 8.2%. This indicates that there is an indirect relationship between delinquent loans and interest income. For interest income, $\beta_0 = 47.176$, $\beta_{1} = -8.236$. The relationship between delinquent income and interest income can be expressed as follows:

Interest income = $47.176 - 8.236x_1$

The regression equation signifies that every 1 unit increase in delinquent loans reduce interest income by 8.236. The relationship indicates that delinquent loans have negative effect on the interest earning potential of banks. Delinquent loans therefore limit the financial performance of banks.

Table 1. Multivariate tests^a

Effect		Value	F	Hypothesis df	Error df	Sig
Intercept	Pillai's trace	.198	5.789 ^b	2.000	47.000	.006
·	Wilks' lambda	.802	5.789 ^b	2.000	47.000	.006
	Hotelling's trace	.246	5.789 ^b	2.000	47.000	.006
	Roy's largest root	.246	5.789 ^b	2.000	47.000	.006
Delinquent loan	Pillai's trace	.825	110.532 ^b	2.000	47.000	.000
	Wilks' lambda	.175	110.532 ^b	2.000	47.000	.000
	Hotelling's trace	4.703	110.532 ^b	2.000	47.000	.000
	Roy's largest root	4.703	110.532 ^b	2.000	47.000	.000

Table 2. To	est of between	-subject effects
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Source	Dependent variable	Type III sum of squares	Df	Mean square	F	Sig
Corrected model	Interest income	982746.032 ^a	1	982746.032	119.276	.000
	Net profit	691873.811 ^b	1	691873.811	54.201	.000
Intercept	Interest income	85252.677	1	85252.677	10.347	.002
	Net profit	2030.353	1	2030.353	.159	.692
Delinguent loan	Interest income	982746.032	1	982746.032	119.276	.000
•	Net profit	691873.811	1	691873.811	54.201	.000
Error	Interest income	395485.529	48	8239.282		
	Net profit	612723.551	48	12765.074		
Total	Interest income	2154923.080	50			
	Net profit	1565767.629	50			
Corrected total	Interest income	1378231.561	49			
	Net profit	1304597.362	49			

- a. R squared = .713 (Adjusted R squared = .707)
- b. R squared = .530 (Adjusted R squared = .521)

Table 3. Parameter estimates

Dependent variable	Parameter	В	Std. error	T	Sig
Interest income	Intercept	47.176	14.666	3.217	.002
	Delinquent loan	-8.236	.754	-10.921	.000
Net profit	Intercept	7.280	18.255	.399	.692
·	Delinquent loan	-6.911	.939	-7.362	.000

Again, a unit change in delinquent loans decreases the conditional proportion of net profit by 6.9%. This indicates that delinquent loans adversely affect net profit. For net profit, β_0 = 7.280, β_1 = –6.911. The relationship between the two variables can be expressed as follows:

Net profit =
$$7.280 - 6.911x_2$$

The regression equation denotes that every 1 unit increase in delinquent loans reduce net profit by 6.911. The relationship indicates that delinquent loans when encouraged, deteriorate the net profit of banks.

5. CONCLUSION

Regardless of the stringent evaluation and monitoring strategies put in place by banks to ensure repayment of loans by borrowers, there are quite a large number of customers who are unable to pay the interest that accrues on the loan and sometimes even the principal amount of the loan. Consequently, this study was conducted to analyze the impact of delinquent loans on financial performance of ten banks in Ghana, namely; Cal Bank Limited, Barclays Bank Ghana, Ecobank Ghana Limited, Fidelity Bank Ghana Limited, Ghana Commercial bank (GCB) Guaranty Trust Bank (GTB), Societe Generale

Ghana Limited (SG Ghana), Zenith Bank Ghana Limited, Home Finance Company (HFC) Bank Ghana Limited and Unique Trust (UT) Bank. The findings of this study posit a statistically significant predictor (delinquent loans) for both dependent variables (interest income and net profit). At $\alpha = 0.05$, the results confirm that delinquent loans have a statistically significant effect on both interest income [F (1, 48) = 119.28, P < 0.05, partial $\eta^2 = 0.713$] and net profit [F (1, 48) = 54.20, P < 0.05, partial η^2 = 0.530]. Considering the influence of delinguent loans on individual dependent variables. delinguent loans account for 70.7% of the variation in interest income (t= -10.921, P < 0.000) and 52.1% variation in net profit (t= -7.362, P < 0.000). As a result, a significant impact of delinquent loans on FP (interest income and net profit) of banks is established in this study. The inverse relationship between the independent variable and dependent variables implies that an increase in delinquent loans limits interest income as well as net profit earnings capacity of BiG. Therefore, this recommends that BiG embarks on effective and regular monitoring of the loan from the time of disbursement till the final repayment as a means of reducing delinquent loans and its antecedent negative impact on interest income and net profit. Periodic relevant training programs could also be organized for loan officers particularly in the area of risk management and management of delinquent loans. Future research could be conducted to incorporate dividend payments, asset base and remuneration as dependent variables and the number of participating banks could also be increased from 10 to at least 20 to enhance the accuracy of generalisation of the research findings.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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