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Panoramas and experiments in Financial Performance of Commercial Banks in Rwanda: lesson from non-performing loan management

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Abstract
The main objective of this study was to analyze the impact of non-performing loans management on the financial performance of commercial Banks in Rwanda. The problem of this study was to investigate on what extent does non-performing loans management affects the performance of commercial banks in Rwanda? Methodology used qualitative and quantitative data where the population of study was 295 employees of ECOBANK Rwanda while, sample size was 170 respondents. The findings on relationship between nonperforming loans management and financial performance were confirmed by correlation coefficient of 74.1%. As conclusion, according to the findings, the problem of this research was solved, research objectives were achieved, research questions were answered, and research hypotheses were verified where null hypothesis was rejected and alternative hypothesis was retained by saying that there is greater contribution of NPLs management on the financial performance of commercial banks especially ECOBANK Rwanda. ECOBANK Rwanda should continue to do an improvement because the findings show that NPLs management contributes 74.1% on financial performance, they should use all strategies to achieve on 100.0% of performance.

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I. INTRODUCTION

Commercial banks are the most relevant financial institution in many countries in worldwide which encourage and mobilize savings and also channel such as savings into productive investment. They serve as intermediaries between borrower and savers. In the process of lending, new money is created by banks through the deposit lending multiplier effect, and many commercial banks exposed to credit risk (Adhikari, 2007). Credit risk is as the possibility of losing the outstanding loan partially or totally, due to credit events (default risk) and this is an internal determinant of bank performance, and the higher the exposure of a bank to credit risk, the higher the tendency of the bank to experience financial crisis and vice-versa sector (Obuobi,& Polio, 2010).

Non-performing loans in developed countries like Spanish, Italian and Greek banks are found to be a big problem where increase when the unemployment rate and the real interest rate rise and decrease when the GDP growth rate and profitability of bank's assets fall. Hence, some of the loans given out by the lending institutions unfortunately become non-performing and eventually result in bad debts with adverse consequences for the overall financial performance of the institutions (Messai&Jouini, 2013). The issue of loan default (NPLs) is becoming an increasing problem that threatens the sustainability of commercial banks, and they are always a source of misery for lenders because if commercial bank has too much of it on its balance sheet, it can adversely affect its operations in terms of liquidity, profitability, debt-servicing capacity, lending capacity and ability to raise additional capital (Messai&Jouini, 2013).

USA is experiencing a banking crisis for example Citibank group alone has written of more than 39 billion dollars in losses. NPLs are a multi-class concept since they can be categorized into different categories based on the duration NPL has been overdue. NPLs results from the weaknesses in the administration and supervision of the financial system of which commercial banks (Choudhuryet al.,2002). Most banks from Thailand, Indonesia, Malaysia, Japan and Mexico experienced also high Non-Performing Loans (NPLs) and significant increase in credit risk during financial and banking crises which resulted in the closing down of several banks in Indonesia and Thailand. The negative effect of credit risk and non-performing loans on banks performance and the economy in general has made the issue of NPLs a global one and of great importance in the last decades (Ahmad &Ariff, 2013). In the contemporary banking business, increasing of Non-performing loans (NPLs) is a very critical but frequent issue in bank fund management (Adhikary, 2006). The situation of NPLs is not only a challenge worldwide but also in developing countries where the incidence of non-performing loans in the Ghanaian banking and non-banking industries including commercial bank has been on the rise in recent years as their loan portfolio increases despite efforts by these financial institutions to deal with it (Barth et al., 2004). The total NPLs in Ghana's Commercial bank stood at 6% in 2004 and by 2006, it has shot up to 9%. With loans and advances making over 50% of the total operating assets of Commercial bank, if the trend of the incidence of NPLs continues, it will have a huge negative impact on the operations of the Commercial bank in Ghana (Ghamfin, 2008). In Kenya, the situation of rising NPLs damaged the confidence of investors and act as a contagious for financial malaise as it may drive away deserving loan borrowers out of the financial system. The problem of rising Non-performing loans in Kenya are attributed to inadequate or weak monitoring and controls and supervision on the part of banks, weaknesses of legal infrastructure, lack of effective lenders' recourse and poor debt recovery strategies (Adhikary, 2006). In Rwanda, the immediate consequences of non-performing loans for commercial banks are the reduction in their profitability through disposal costs like provisions for credit losses and direct write-offs for bad debts and shrinking of loanable funds. Large amounts of non-performing loans in the banking and non-banking financial system have at many times threatened the failure and actually collapsed some banks and microfinance institutions in Rwanda. Banks and microfinance institutions in Rwanda are not insulated from the problem of delinquent loans (Non-performing loans) because they are not a particular issue happened to Rwanda but also in worldwide.

II. PROBLEM STATEMENT

A loan is nonperforming when payments of interest and/or principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons such as a debtor filing for bankruptcy to doubt that payments are made in full. Non-performing loans seriously affect profitability of the Bank (Barth et al., 2004). Some borrowers do not follow discipline of payment of their loans due to the numerous reasons beyond their control. It was found that the competent manager is in his lending practices, bad debt will arise or the repayment of a loan and advance became doubtful from time to time will eventually affect profitability (Littlefield & Rosenberg, 2004).

Vogiazas&Nikolaidou (2011) indicated that construction and investment expenditure, unemployment and inflation rate and the external debt to GDP and to narrow money and intermediate money) influence the credit risk of the country's banking system are the determinants of non- performing loans. Hamisu, (2011) revealed that credit risk management has a significant impact on the profitability of banks and that management of banks needs to be cautious in setting up a credit policy that might not negatively affects profitability of banks. Hou& Dickinson (2007) argued that many researches on the causes of bank failures found that asset quality is a statistically significant predictor of insolvency, and that failing bank institutions always have high level of Non-performing loans prior to failure. Therefore, in managing the lending portfolio to attain the desired results, the bank should give adequate attention the loans delivered to borrowers.

ECOBANK generated reported diluted earnings per share (EPS) of 0.28 U.S. Dollar cents, a fall of 83% compared with the 1.69 U.S. Dollar cents reported in 2014. Return on total shareholders' equity (ROE) was 4.2% in 2015 versus 16.5% in the prior year. Profit attributable to shareholders of ETI amounted to $66 million, compared to $338 million in 2014. The major reason behind these less than satisfactory results was the high level of impairments on loans and financial assets made in 2015, totaling $532 million, almost double 2014's level. For instance,the reported revenues decreased by 8% in 2015, underlying revenues would have increased by 9%, assuming constant exchange rates. The cost base remained fairly stable, with a cost-to income ratio (CIR) of 64.9%. The balance sheet is healthy, with a Tier 1 ratio of 20.5% and a total capital adequacy ratio (CAR) of 23.9%. The revenue for the year ended 31 December 2015 was $2.1 billion while that of the parent company was $174 million. Profit before tax for the Group was $205 million and $61 million for the parent company. The profit after tax stood at $107 million. The detailed results for 2015 are set out in the consolidated financial statements. The Board of Directors approved the financial statements of the parent company and the Group for the year ended 31 December 2015 at its meeting held on 1 April 2016 (ECOBANK, 2017).

Net interest income increased by 45% yearonyear to $85 million due to efficient balance sheet management, together with the optimization of liquidity management synergies with our country subsidiaries. The Group provides loans to its customers, ranging from multinational and regional corporates to individuals, households and small businesses. Total gross loans decreased by $839 million, or 7%, to $11.9 billion in 2015, compared with 2014. In constant dollars, total loan growth was flat, as a result of a cautious lending strategy reflective of the heightened risk environment. Domestic Bank's total loans decreased by $2.1 billion, or 36%, to $3.6 billion, largely due to the migration of High Value Local Corporates (HVLC) businesses to Corporate Bank in 2015, whilst Corporate Bank's total loans increased by $1.2 billion, or 17%, to $8.2 billion, benefiting from selective lending. The allowance account for loan losses increased by $272 million, or 71%, to $657 million, as both Corporate and Domestic Bank built their reserves to reflect an increase in non-performing loans. Consequently, the Group-wide ratio of non-performing loans as a percentage of total loans increased from 4.4% in 2014 to 8.2% in 2015. Similarly, the non-performing loans ratios for Corporate Bank and Domestic Bank increased to 6.2% and 12.5% in 2015, versus 1.7% and 7.7%, respectively in 2014. The non-performing loans coverage ratio was 67.9% in 2015, compared with 68.7% in 2014 (ECOBANK, 2017).
Therefore, according to the above background, the following questions are answered during the study: what are the factors of nonperforming loans management to commercial banks in Rwanda like ECOBANK? To what extent does non-performing loans management affect the performance of commercial banks in Rwanda

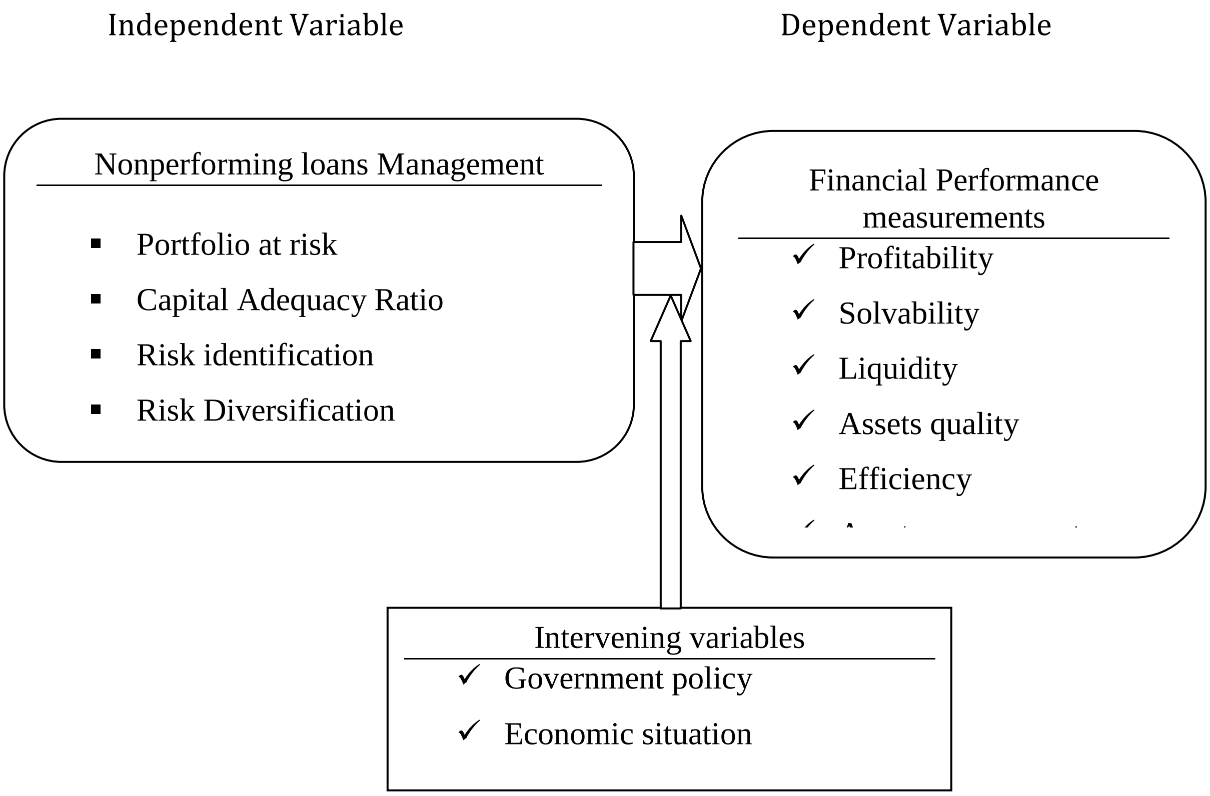
III. OBJECTIVES OF THE STUDY

i. To evaluate the determinants of non-performing loans management in ECOBANK Rwanda
ii. To assess the indicators of financial performance of ECOBANK Rwanda.
iii. To establish the relationship between non-performing loans management and financial performance indicators of ECOBANK Rwanda

IV. Concepts Framework

The conceptual framework is a systematic structure which reflects the relationship between the independent variable and the dependent variables through their sub-variables in order to explain the rational connection between those variables (Kothari, 1990).

Figure IV.1: Conceptual Framework



Source: *Researcher conceptualization, 2017*

V. REVIEW OF RELATED LITTERATURE

Lydnon, M., et al., (2015) investigated the relationship between non-performing loans and bank performance in Nigeria for the period 1994-2014. The study employed ADF Unit Root test, descriptive statistics, and multiple regression techniques to analyze data collected for the study from the CBN, NDIC and annual reports of listed banks. The results of the study show that BAL and DOL had statistically negative significant influence on ROCE, while SUL had statistically negative insignificant impact on ROCE. These results show that high level of non-performing loans would reduce the performance of banks in the long run in Nigeria. The study therefore recommended that credit reporting agencies and supervising authorities should be strengthen in order to reduce the high level of non-performing loans in the banking sector of Nigeria.

Credit risk is a serious threat to the performance of banks; therefore, various researchers have examined the impact of credit risk on banks in varying dimensions. Credit risk management greatly influences or prevents the failure of a bank. This is because the failure of a bank is influenced to a large extent by the quality of credit decisions and thus the quality of the risk assets. Credit risk management provides a leading indicator of the quality of banks credit portfolio (McNaugton 1994). Felix and Claudine (2008) investigated the relationship between bank performance and credit risk management. It could be inferred from their findings that return on equity (ROE) and return on assets (ROA) both measuring profitability were inversely related to the ratio of nonperforming loan to total loan of financial institutions thereby leading to a decline in profitability. Kithinji (2010) assessed the effect of credit risk management on the profitability of Deposit Money Banks in Kenya. Data on the amount of credit, level of non-performing loans and profits were collected for the period 2004 to 2008. The findings revealed that the bulk of the profits of Deposit Money Banks are not influenced by the amount of credit and non-performing loans, therefore suggesting that other variables other than credit and non-performing loans impact on profits.

Kargi (2011) evaluated the impact of credit risk on the profitability of Nigerian banks. Financial ratios as measures of bank performance and credit risk were collected from the annual reports and accounts of sampled banks from 2004-2008 and analyzed using descriptive, correlation and regression techniques. The findings revealed that credit risk management has a significant impact on the profitability of Nigerian banks. It concluded that banks' profitability is inversely influenced by the levels of loans and advances, non - performing loans and deposits thereby exposing them to great risk of illiquidity and distress. Epure and Lafuente (2012) examined bank performance in the presence of risk for Costa-Rican banking industry during 1998-2007. The results showed that performance improvements follow regulatory changes and that risk explains differences in banks and non-performing loans negatively affect efficiency and return on assets while the capital adequacy ratio has a positive impact on the net interest margin. Ahmad and Ariff (2013) examined the key determinants of credit risk of Deposit Money Banks on emerging economy banking systems compared with the developed economies. The study found that regulation is important for banking systems that offer multi-products and services; management quality is critical in the cases of loan-dominant banks in emerging economies. An increase in loan loss provision is also considered to be a significant determinant of potential credit risk. The study further highlighted that credit risk in emerging economy banks is higher than that in developed economies. Ahmed, Takeda and Shawn (2013) in their study found that loan loss provision has a significant positive influence on non-performing loans. Therefore, an increase in loan loss provision indicates an increase in credit risk and deterioration in the quality of loans consequently affecting bank performance adversely. The risks in lending stem from the various factors that can lead to non-payment of the loan obligation when it falls due. Losses sometimes result from "acts of god" such as storm, drought, fires, earthquakes and floods.

VI. RESEARCH METHODOLOGY

This study adopted descriptive cross sectional survey design. The target population in this study was the employees of ECOBANK Rwanda, with 295 employees targeted from head quarter. The stratified random sampling technique was used to select 170 of respondents. The information used in this research was originated from primary and secondary source while data collection techniques were questionnaire and documentary techniques. Data was analyzed using both quantitative and qualitative technique and the results were presented by using the descriptive methods of data analysis.

VI. STUDY FINDINGS

VI.1 Perceptions on the Non-Performing Loans Management in ECOBANK Rwanda

According to Fofack (2005), Nonperforming loans are as loans which for a relatively long period of time do not generate income that is both the principal and interest on these loans remain unpaid for at least 90 days. There are different causes and factors of NPLs in banking institutions. But when bank follows laws and regulation, this default or close to being in default is not happen. The study at ECOBANK shows the information related to NPLs management where, the findings indicate that non-performing loans are caused by poor management. After the administration of the questionnaires, the responses given by the respondents are discussed. Many reasons were assigned to the causes of non-performing loans in the commercial bank like ECOBANK. According to the findings from 100.0% respondents, the major factors identified by the respondents were business failure, poor credit appraisal techniques, inadequate monitoring, diversion of funds, poor weather conditions, inadequate marketing avenues, wrong timing of credit delivery, high interest rate, willful default among others as the table VI.1 presented as follows:

Table VI.1: The factors account for the incidence of non-performing loans in ECOBANK

Factors account for the incidence of NPLs	Frequency	Percent
Poor weather	10	5.9
Business Failure	36	21.2
Poor credit appraisal	18	10.6
Inadequate monitoring	18	10.6
High interest rate	24	14.1
Inadequate marketing avenues	31	18.2
Diversion of funds	14	8.2
Wrong timing of credit delivery	11	6.5
All of the above	8	4.7
Total	170	100.0

Source: Primary Data, (2017)

According to Berger, and De Young, (1997) most banks with the problem of nonperforming loans do not practice adequate loan underwriting, monitoring and control. Credit culture is another factor which has been identified by some research findings as a cause of NPLs. Sometimes borrowers decide to apply for loan without thinking enough about the future and what else they need to buy with their income. When this occurs, a credit culture can develop where borrowers take out large loans not because it is financially wise to do so but because they see others do it, and this can result in defaulted loans. During this study at ECOBANK Rwanda, there was various factors account for the incidence of non-performing loans in ECOBANK astable 4.6 illustrated based to the perceptions of respondents in relation with the factors account for the incidence of non-performing loans in ECOBANK. Out of 100.0% respondents, Poor weather was occupied the rate of 5.9% among other factors account for the incidence of non-performing loans in ECOBANK.Business Failure was on high level because occupied 21.2%. Poor credit appraisal and inadequate monitoring was on rate of 10.6%.High interest rate was on 14.1%. Inadequate marketing avenues has rate of 18.2%. Diversion of funds occupied the rate of 8.2%. Wrong timing of credit delivery was on rate of 6.5%. All of the above was occupied by 4.7%. Business failure was the main factor account for the incidence of non-performing loans in ECOBANK which occupied the rate of 21.2%.

Generally, ineffective monitoring, inadequate marketing avenues, business failure, poor credit appraisal techniques, diversion of funds, wrong timing of credit delivery, poor weather conditions, high interest rate, willful default and others are confirmed to be the factors account for the incidence of non-performing loans in ECOBANK Rwanda.

Table VI.2: Perceptions on the types of security/collateral is often offered by borrowers to secure loans or overdraft

Types of Security/Collateral asked by ECOBANK	Frequency	Percent
Landed property	19	11.2
Cash (Fixed Deposit)	72	42.4
Guarantee	64	37.6
Others	15	8.8
Total	170	100.0

Source: Primary Data, (2017)

According to Dichter, (2007) major factors considered by the lending institutions before granting loans are the ability and the willingness of the borrower to repay the loan on the due date. When the probability of collecting, a loan becomes very low, the normal practice is to charge the loan off by deducting its value from the loan portfolio balance by reducing loan loss reserve or, if there is no reserve, by charging an equivalent expense to the income statement. Thus, as results of uncertainties in future cash flows and willful defaulting and to be able to minimize the risk of default, banking institutions normally require security in the form of guarantee and/or deposit, (usually up to 25% of the loan amount). However, the borrowers who miss payments are pressured at the due date and if the arrears continue, legal action is initiated against the borrower and guarantor(s) to recover any amounts owed, but usually after the designated collateral has been seized and liquidated to reduce the borrowing (outstanding loan balance). Provisioning for delinquent microfinance and small business loans is made on a "basket" basis, rather than on an individual loan basis. Basket-based provisioning involves making a blanket provision for the aggregate outstanding balances of loans grouped in each age basket, without regard to any security available for individual loans (Vijay, K., 2007). During this study at ECOBANK Rwanda, it was found that this Bank used different types of security/collateral to borrowers to secure loans or overdraft as presented on the table 4.7. Out of 100.0% respondents, 11.2% confirmed that landed property is type of security/collateral which is often offered by borrowers to secure loans or overdraft from ECOBANK Rwanda. The 42.4% said that they used Cash (Fixed Deposit) as security/collateral is often offered by borrowers to secure loans or overdraft. 37.6% said that Guarantee is type of security/collateral is often offered by borrowers to secure loans or overdraft. Only 8.8% respondents confirmed that there are others types of security/collateral are often offered by borrowers to secure loans or overdraft like houses, vehicle, house equipment and etc. Generally, to reduce NPLs in ECOBANK required asking the security/collateral that is often offered by borrowers to secure loans.

Table VI.3: Perceptions on the techniques used to monitor the health of loan portfolio

Techniques used by ECOBANK	Frequency	Percent
Ageing Analysis	25	14.7
Portfolio at Risk (PAR)	95	55.9
Capital adequate	50	29.4
Total	170	100.0

Source: Primary Data, (2017)

According to Abdelkareem & Salah, (2007) Interest income generated from loans contributes significantly to the profitability performance of the financial institutions. However, when loans become delinquent, it has a serious negative effect on the health and operations of the financial institution. One of the reasons is that, in line with the Bank of Rwanda regulations, the lending institution has to make provision and charges for credit losses (bad debt/impairment) which ultimately reduce the profit level. The table VI.3 illustrates the perceptions on the techniques used to monitor the health of loan portfolio. Ageing Analysis was confirmed on rate of 14.7% to be one among the techniques used by ECOBANK Rwanda to monitor the health of loan portfolio. Portfolio at Risk (PAR) was confirmed by 55.9%. Capital adequate was confirmed on rate of 29.4% as being the technique used in ECOBANK Rwanda to monitor the health of loan portfolio.

Table VI.4: Perceptions on the kinds of Portfolio at Risk (PAR) in the transactions

The Kinds of Portfolio at Risk (PAR)	Frequency	Percent
Transfer Risk	28	16.5
Operational Risk	33	19.4
Liquidity risk	34	20.0
Foreign exchange risk	29	17.1
Market risk	27	15.9
Interest rates risks	19	11.2
Total	170	100.0

Source: Primary Data, (2017)

According to Kay Associate Ltd, (2005) there is an element of risk in any loan granted because the expected repayment may not occur. Lending involves a lender providing a loan in return for a promise of interest and principal repayment in future. Because of this risk of default in loan repayment, lenders needs to project into the future and make sound judgment that will ensure that repayment is effected at the agreed date. Available literature places so much importance on the lender's role in ensuring good decisions relating to the granting of loans in order to minimize Portfolio at Risk (PAR). During this study at ECOBANK Rwanda, the participant respondents confirmed various risks faced by ECOBANK Rwanda such as Transfer Risk which confirmed on rate of 16.5%; Operational Risk on rate of 19.4%; Liquidity risk on 20.0%; Foreign exchange risk on rate of 17.1%; Market risk on rate of 15.9% and Interest rates risks was on rate of 11.2% as indicated by confirmation from respondents in ECOBANK Rwanda.

Table VI.5: Perceptions of respondents on dealing with problem of loans

Dealing with problem of loans	Frequency	Percent
Legal Action	64	37.6
Outsourcing (External solicitor/ Debt collectors)	54	31.8
Write off	52	30.6
Total	170	100.0

Source: Primary Data, (2017)

According to Klingebiel (1990) cited in Fofack (2005), the incidence of NPLs can be reduced considerably while ensuring the utilization of the loan for the intended purpose; identifying early warning signals of any problem relating to the operations of the business that are likely to affect the performance of the loan; ensuring compliance with the covenants of the loan facility, and affording the lender the opportunity to discuss the problems and prospects of the borrower's business. ECOBANK Rwanda used various measures to reduce the problem of loans as confirmed by 37.6% respondents who said that ECOBANK Rwanda takes Legal Action to reduce problem of loans. 31.8% confirmed that ECOBANK Rwanda used Outsourcing (External solicitor/ Debt collectors). The 30.6% confirmed that they used to write off the loans.

Table VI.6: Perceptions on the factors considered before granting loans to reduce NPLs

Factors that considered before Granting Loans	Frequency	Percent
Look the character of the prospective borrower	30	17.6
Check the amount requested by the customer	38	22.4
Margin (Interest margin, commissions and relevant fees.)	26	15.3
Verify the purpose of the loan	15	8.8
Ability of the borrower to manage business successfully	25	14.7
Repayment (source of repayment must be credible)	17	10.0
Insurance (security provided by the customer)	9	5.3
Technical and financial viability of the business	10	5.9
Total	170	100.0

Source: Primary Data, (2017)

Chandra, S., Shadel, (2007) available literature places so much importance on the lender's role in ensuring good decisions relating to the granting of loans in order to minimize credit risk. The lender must always aim at assessing the extent of the risk associated with the lending and try to reduce factors that can undermine repayment. The lender should therefore assemble all the relevant information that assists him/her in arriving at a sound credit decision. In view of the possibility of non-payment which leads to NPLs, Banks have adopted a standard loan request procedures and requirements usually contained in credit policy manual to guide loan officers and customers. During the study at ECOBANK Rwanda, to verify the character of the prospective borrower was confirmed on rate of 17.6% as factor considered before granting loans to reduce NPLs at ECOBANK Rwanda. Check the amount being requested by the customer was also confirmed on rate of 22.4%. Margin (Interest margin, commissions and relevant fees) was on rate of 15.3%. ECOBANK Rwanda looks the purpose of the loan as confirmed by 8.8%. Ability of the borrower to manage business successfully was confirmed by 14.7% respondents. To verify the repayment (source of repayment must be credible) was on rate of 10.0%. To have an insurance (security provided by the customer) was occupied 5.3% while, technical and financial viability of the business was on rate of 5.9%. Generally, ECOBANK Rwanda also uses and considers different factors before granting loans to reduce NPLs.

Table VI.7: Perceptions of Respondents on monitoring the incidence of NPLs at ECOBANK Rwanda

Monitoring the incidence of NPLs at ECOBANK Rwanda	Frequency	Percent
Ensuring the utilization of the loan	40	23.5
Identifying early warning signals of any problem relating to the operations of the business	53	31.2
Ensuring compliance with the covenants of the loan facility	51	30.0
Affording the lender the opportunity to discuss the problems and prospects of the borrower's business	26	15.3
Total	170	100.0

Source: Primary Data, (2017)

According to Rouse (1989) identified internal records, visits and interviews, audited and management accounts as some of the things that help in the monitoring and control process, where monitoring can help minimize the incidence of NPLs.
The table VI.7 presents the perceptions of Respondents on monitoring the incidence of NPLs at ECOBANK Rwanda; where out of 100.0% respondents, 23.5% confirmed that ECOBANK Rwanda was ensuring the utilization of the loan for the intended purpose. 31.2% confirmed that ECOBANK was identifying early warning signals of any problem relating to the operations of the business that are likely to affect the performance of the loan. 30.0% said that ECOBANK was ensuring compliance with the covenants of the loan facility. ECOBANK Rwanda was affording the lender the opportunity to discuss the problems and prospects of the borrower's business as confirmed by 15.3%.

Table VI.8: Factors of nonperforming loan management in ECOBANK Rwanda

Factors of nonperforming loan management	Frequency	Percent
Portfolio at risk	28	16.5
Capital Adequacy Ratio	33	19.4
Risk identification	53	31.2
Risk Diversification	29	17.1
Planning of budget	27	15.9
Total	170	100.0

Source: Primary Data, (2017)

According to Aggarwal, & Jacques, (2001) Non-performing Loan Management is looked as to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Bank need to manage the credit risk inherent in the entire Risk as well as the risk in individual credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organizations. During this study confirmed that Portfolio at risk; Capital Adequacy Ratio; Risk diversification; Risk

Diversification; and Planning of budget were found to be used and checked in Nonperforming loans management as detailed in the table 4.13. This table illustrates the data about factors of nonperforming loan management at ECOBANK Rwanda where Portfolio at risk was occupied rate of 16.5%. Capital Adequacy Ratio was on 19.4%. Risk identification was on 31.2%. Risk Diversification was on 17.1%. While planning of budget was on rate of 15.9%.

VI.2 Perceptions on the Financial Performance of ECOBANK Rwanda

According to Sheffrin, (2003) financial performance was measured by obtaining the magnitude of a quantity, such as length or mass, relative to a unit of measurement, such as a meter or a kilogram. Performance improvement at the operational or individual employee level usually involves processes such as statistical quality control. Profitability ratios offer several different measures of the success of the firm at generating profits. The gross profit margin is a measure of the gross profit earned on sales. The gross profit margin considers the firm's cost of goods sold, but does not include other costs. The perceptions of respondents on financial performance measurement were presented on the table 4.14 as follows.

Table VI.9: Perceptions of respondents on financial performance measurement

Financial performance measurement	Frequency	Percent
Profitability	24	14.1
Solvability	36	21.2
Liquidity	26	15.3
Assets quality	18	10.6
Efficiency	24	14.1
Asset management	42	24.7
Total	170	100.0

Source: Primary data, 2017

Table VI.9 illustrates the perceptions of respondents on financial performance measurement. Out of 100.0% respondents, 14.1% confirmed profitability as financial performance measurement used by ECOBANK Rwanda. Solvability was occupied the rate of 21.2%. Liquidity was on rate of 15.3%. Assets quality was on rate of 10.6%. Efficiency is financial performance measurement as confirmed by 14.1%. The asset management was on rate of 24.7% from other factors of financial performance measurement in ECOBANK Rwanda.

Table VI.10: Appreciation of respondents on financial performance of ECOBANK

financial performance of ECOBANK	Frequency	Percent
Revenue of ECOBANK was increased from 2012 up to 2015	16	9.4
ECOBANK has greatly diversified its products	19	11.2
ECOBANK has improved its market share during the period 2012 to 2015	20	11.8
ECOBANK has consistently increased its assets	13	7.6
ECOBANK increases its braches during the period of years	17	10.0
Increase in customers	16	9.4
Presenting profitability evolution	23	13.5
Reducing non-performing loans	32	18.8
Increasing number of loans delivered	14	8.2
Total	170	100.0

Source: primary data, 2017

According to Ronald, (1999) financial Performance involves on the improvement of the concept of organizational change in which the manager sand governing body of an organization put into place and manage a program which measures the current level of performance of the organization like inventory management and then generates ideas for modifying organizational behavior and infrastructure which are put into place to achieve higher output.

Table 4.15 presents the perceptions of Respondents on the indicators of financial performance of ECOBANK Rwanda. Out of 100.0% respondents, 9.4% confirmed that Revenue of ECOBANK was increased from 2012 up to 2016. The 11.2% respondents confirmed that during the period 2012 to 2016, ECOBANK has greatly diversified its products. 11.8% respondents confirmed that ECOBANK has improved its market share during the period 2012 to 2017. The 7.6% confirmed that ECOBANK has consistently increased its assets. 10.0% respondents confirmed that ECOBANK increases its braches during the period of years.9.4% confirmed that ECOBANK Rwanda presents an increase in customers. The 13.5% confirmed that ECOBANK Rwanda presenting profitability evolution. 18.8% said that ECOBANK was reducing non-performing loans as factor of financial performance. 8.2% confirmed that ECOBANK Rwanda was Increasing number of loans delivered to borrowers.

VI.3 Profit Evolution of ECOBANK Rwanda

There is different measurement used to analyze the of profit evolution of company such as gross profit margin (GPM), return on assets (ROA), return on equity (ROE). According to the financial statement analysis from ECOBANK Rwanda, the following information shows the profit of this banking institution in 2012-2017

Table VI.11: Net profit ratios of ECOBANK Rwanda

	2012 "Rwf '000"	2013 "Rwf '000"	2014 "Rwf '000"	2015 "Rwf '000"	2016 "Rwf '000	2017 "Rwf '000
Net profit	1,673,937	136,507	274,484	(563,055)	(3,192,592)	(2,188,260)
Net operations	6,264,341	8,233,800	11,324,759	11,470,293	14,650,016	11,196,987
NP% NP/NO*100	0.267	0.016	0.024	(0.049)	(0.21)	(1.65)

Source: Ecobank Rwanda, *annually financial reports (2017)*

It was found that in ECOBANK Rwanda presented NP% of 0.267 in the year 2012. It shows also NP% of 0.016 in 2013. While, the year of 2014, the NP% was 0.024; and NP% were also (0.049) in 2015. It was found that ECOBANK Rwanda, from 2012-2013 presented the decrease in NP%, while, the year from 2013-2014 it had an increase and even in 2014 to 2015. From 2015 to 2016, Ecobank presents loss of (0.21) and the year 2016 up to 2017, NP was (1.65) due to various factors included by inflation.

Table VI.12: The Return on Assets of ECOBANK Rwanda

	2012 "Rwf '000"	2013 "Rwf '000"	2014 "Rwf '000"	2015 "Rwf '000"	2016 "Rwf '000"	2017 "Rwf '000"
Net income	1,673,937	136,507	274,484	(563,055)	(3,192,592)	(2,188,260)
Assets	61,964,879	88,798,248	120,649,897	112,985,420	158,651,288	133,943,037
ROA% = NI/A*100	0.027	0.0015	0.0022	(0.0049)	(0.02)	(1,63)

Source: Ecobank Rwanda, *Ecobank annually reports (2017)*

The table VI.12 presents return on Asset which was in 2012 was 0.027; in 2013; return on asset was 0.0015; in 2014, ROA was 0.0022; while the year of 2015, ROA was - 0.0049. Based on the results from the above table provided by the Ecobank reports of : 2012 to 2015, the profitability index through the ROA (Return On Assets), it shows that the contribution of assets becomes positive when EcoBank Rwanda Ltd recognizes a Profit and it becomes negative when Ecobank recognized a loss. This shows that the contribution of Ecoank Rwanda's assets has been positive in the years of 2012, 2013 and 2014 at the average of 0.027; 0.0015; and 0.0022 and 0.02 respectively and the negative contribution in 2015 with the average of (0.0049) while in 2016, ROA was (0.02). In 2017, Return on Assets of ECOBANK Rwanda was (1,63).

Table VI.13: Return on Equity of ECOBANK Rwanda

	2012 "Rwf '000"	2013 "Rwf '000"	2014 "Rwf '000"	2015 "Rwf '000"	2016 "Rwf '000"	2017 "Rwf '000"
Net income	1,673,937	136,507	274,484	(563,055)	(3,192,592)	(2,188,260)
Shareholder's Investment	9,280,708	9,417,215	13,297,853	12,734,814	14,621,352	19,074,866
ROE = (NI/SI)	0.180	0.014	0.020	(0.044)	(0,21)	(11,47)

Source: Ecobank Rwanda, *ECOBANK annually reports (2017)*

According to the results from the above table provided by the EcoBank reports from 2012 to 2017, the profitability index through the ROE (Return On Equity), it shows that the contribution of Ecobank capital becomes positive when EcoBank Rwanda Ltd recognizes a Profit and it becomes negative when EcoBank recognized a loss. This shows that the contribution of Ecobank Rwanda's capital has been positive in the years of 2012, 2013 and 2014 at the average of 0.180, 0.014, and 0.020 respectively the negative contribution in 2015 with the average of (0.044) while in the year 2016, it was (0,21). In 2017, Return on Equity of ECOBANK Rwanda was (11,47).

Table VI.14: Current Ratio of ECOBANK Rwanda

	2012 "Rwf '000"	2013 "Rwf '000"	2014 "Rwf '000"	2015 "Rwf '000"	2016 "Rwf '000"	2017 "Rwf '000"
Current assets	61,964,879	88,798,248	120,649,897	112,985,420	2,028,460	1,360,939
Current liabilities	52,684,171	79,381,033	107,352,044	100,250,606	2,676,289	3,044,745
CR = (CA/CL)	1.17	1.11	1.12	1.12	0,75	0,44

Source: Ecobank Rwanda, *ECOBANK annually reports (2017)*

The table VI.14 presents the current ratio of ECOBANK Rwanda where, Current Ratio was 1.17 in 2012; CR was 1.11in 2013; and in 2014, CR was 1.12, and in 2015, CR was 1.12, and in 2016, it was 0,75. In the year 2017, Current Ratio of ECOBANK Rwanda was 0.44. Generally, the data presented on table 4.19 shows that ECOBANK Rwanda is able to cover the liabilities because its Current assets are more than Current liabilities.

VI.4 Relationship between nonperforming Loans Management and financial performance of ECOBANK Rwanda

This section presents agreements or disagreements from respondents at ECOBANK Rwanda about what nonperforming loans management contribute to the financial performance of banking institution. The table VI.15 shows the ideas from respondents about NPLs management on financial performance achievement of ECOBANK Rwanda.

Table VI.15: NPLs management contributed to the financial performance achievement in ECOBANK

NPLs management contributed to the financial performance	Frequency	Percent
Strongly Agree	58	34.1
Agree	69	40.6
Disagree	21	12.4
Strongly Disagree	22	12.9
Total	170	100.0

Source: Primary Data, (2017)

Table VI.15 illustrates the perceptions from respondents on if NPLs management contributes to the financial performance achievement in ECOBANK. Out of 100.0% respondents, 34.1% and 40.6% respondents were strongly agreed and agreed that NPLs contributed to the financial performance achievement in ECOBANK during the period from 2013 to 2016. The 12.4% and 12.9% respondents were disagreed and strongly disagreed that NPLs management contributed to the financial performance achievement in ECOBANK. Majority of 74.7% respondents confirmed that NPLs management contributed to the financial performance achievement in ECOBANK Rwanda.

Table VI.16: There is a significant relationship between NPLs management and performance of ECOBANK Rwanda

significant relationship	Frequency	Percent
Strongly Agree	44	25.9
Agree	79	46.5
Disagree	34	20.0
Strongly Disagree	13	7.6
Total	170	100.0

Source: Primary Data, (2017)

Table VI.16 presents perceptions from respondents on if there is a significant relationship between NPLs management and performance of ECOBANK Rwanda. Out of 100.0% respondents, 25.9% and 46.5% respondents were strongly agreed and agreed that there is a significant relationship between NPLs and performance of ECOBANK Rwanda during the period from 2013 to 2015. The 20.0% and 7.6% respondents were disagreed and strongly disagreed that there is a significant relationship between NPLs management and performance of ECOBANK Rwanda. Majority of 72.4% respondents confirmed that there is a significant relationship between NPLs management and performance of ECOBANK Rwanda during the period from 2013 to 2016.These are supported by correlation coefficient between NPLs management and financial performance of ECOBANK

VI.5 Correlation Coefficient Test

All responses related to the questions on NPLs management were summarized to present independent variable while all responses related to the financial performance of ECOBANK Rwanda from 2012 up to 2017 were totaled to give the dependent variable. In correlating using spearman analysis the research got table 4.22 as follows:

Table VI.17: Correlation Coefficient

			NPLs Management	Financial Performance
Spearman's rho	NPLs Management	Correlation Coefficient	1.000	.741**
		Sig. (2-tailed)	.	.000
		N	170	170
	Financial Performance	Correlation Coefficient	.741**	1.000
		Sig. (2-tailed)	.000	.
		N	170	170

**. Correlation is significant at the 0.05 level (2-tailed).

Legend:

[-1.00 - 0.00[: Negative correlation;
[0.00 - 0.25 [: Positive and very low correlation;
[0.25 - 0.50 [: Positive and low correlation;
[0.50 - 0.75 [: Positive and high correlation and
[0.75 - 1.00] : Positive and very high correlation.

The variation of Spearman Coefficient correlation is between -1 and 1. Spearman Coefficient correlation has significance when it is equal or greater than 0.05. According to the research done, the correlation between NPLs management and financial performance provides the 0.741 (74.1%) which is located in the interval of [0.50-0.75[categorized as positive and high correlation. As the significant level is at 0.05 (5%), the p-value of 0.000 (i.e. 0.0%) is less than 5%. This leads to confirm that there is significant relationship between NPLs management and financial performance of ECOBANK Rwanda. Thus, null hypothesis was rejected and retaining alternative Hypothesis.

VII. SUMMARY OF MAJOR FINDINGS

The main objective of this study was to analyze the effect of non-performing loans management on the financial performance of commercial Banks in Rwanda. The problem of this study was to investigate on what are the factors of nonperforming loans management to commercial banks in Rwanda like ECOBANK? To what extent does non-performing loans management affect the performance of commercial banks in Rwanda? The specific objectives of this study were to evaluate the determinants of non-performing loans management in ECOBANK Rwanda; to assess the indicators of financial performance of ECOBANK Rwanda; and to establish the relationship between nonperforming loans management and financial performance indicators of ECOBANK RwandaMethodology used qualitative and quantitative data where the population of this study was 295 of employees of ECOBANK Rwanda while, sample size was 170 of respondents selected from employees. The findings were summarized below in accordance of research objectives. The findings indicated that the participation rate was 100.0% of answering the questionnaires. This helps the research to continue with editing, coding, recording, classifying and tabulating the data in order to make statistical tables using SPSS version 16.0. Among of 170 customers who participated during this study, majority were male. This is justified by the rate of 56.5% respondents who were male. The 43.5% respondents were females. ECOBANK employs both sexes.

VII.1 First objective was to evaluate the determinants of non-performing loans management in ECOBANK Rwanda

The results were shown from table VI.1 to table VI.8 which confirmed that the factors account for the incidence of non-performing loans in ECOBANK were poor weather which was occupied the rate of 5.9% among other factors account for the incidence of non-performing loans in ECOBANK. Business failure was on high level where it occupied the 21.2%. Poor credit appraisal and inadequate monitoring was on the rate of 10.6%. High interest rate was on 14.1%. Inadequate marketing avenues have the rate of 18.2%. Diversion of funds occupied the 8.2%. Wrong timing of credit delivery was on rate of 6.5%. All of the above was occupied by 4.7%. Business failure was the main factor account for the incidence of non-performing loans in ECOBANK which occupied the rate of 21.2%.

Bank used different types of security/collateral to borrowers to secure loans or overdraft as presented on the table VI.2 as confirmed by 11.2% respondents who said that landed property is type of security/collateral that often offered by borrowers to secure loans or overdraft from ECOBANK Rwanda. The 42.4% said that they used Cash (Fixed Deposit) as security/collateral is often offered by borrowers to secure loans or overdraft. 37.6% said that Guarantee is type of security/collateral is often offered by borrowers to secure loans or overdraft. But 8.8% confirmed that there are Others types of security/collateral is often offered by borrowers to secure loans or overdraft like houses, vehicle, house equipment and etc. for reducing NPLs in ECOBANK required asking the security/collateral that is often offered by borrowers to secure loans or overdraft. The table VI.8 shows the techniques used to monitor the health of loan portfolio where Ageing Analysis was confirmed by 14.7% to be one among the techniques used by ECOBANK Rwanda to monitor the health of loan portfolio. Portfolio at Risk (PAR) was confirmed by 55.9%. Capital adequate was confirmed by 29.4% as being the technique used in ECOBANK Rwanda to monitor the health of loan portfolio. The various risks faced by ECOBANK Rwanda are the transfer risk which confirmed on rate of 16.5%; Operational Risk on rate of 19.4%; Liquidity risk on 20.0%; Foreign exchange risk on rate of 17.1%; Market risk on rate of 15.9% and Interest rates risks was on rate of 11.2% as indicated by confirmation from respondents in ECOBANK Rwanda. ECOBANK Rwanda used various measures to reduce problem of loans as confirmed by 37.6% respondents who said that ECOBANK Rwanda takes legal action to reduce problem of loans. The 31.8% confirmed that ECOBANK Rwanda used Outsourcing (External solicitor/ Debt collectors), and the 30.6% confirmed that they used to write off the loans.

ECOBANK Rwanda verified the character of the prospective borrower was confirmed on rate of 17.6% as factor considered before granting loans to reduce NPLs at ECOBANK Rwanda. Check the amount being requested by the customer was also confirmed on rate of 22.4%. Margin (Interest margin, commissions and relevant fees) was on rate of 15.3%. ECOBANK Rwanda looks the purpose of the loan as confirmed by 8.8%. Ability of the borrower to manage business successfully was confirmed by 14.7% respondents. To verify the repayment (source of repayment must be credible) was on rate of 10.0%. To have an insurance (security provided by the customer) was occupied 5.3% while, technical and financial viability of the business was on rate of 5.9%. For monitoring the incidence of NPLs at ECOBANK Rwanda was confirmed by 23.5% who ensuring the utilization of the loan for the intended purpose. The 31.2% confirmed that ECOBANK was identifying early warning signals of any problem relating to the operations of the business that are likely to affect the performance of the loan. 30.0% said that ECOBANK was ensuring compliance with the covenants of the loan facility. ECOBANK Rwanda was affording the lender the opportunity to discuss the problems and prospects of the borrower's business as confirmed by 15.3%. The factors of nonperforming loan management at ECOBANK Rwanda were confirmed by Portfolio at risk which was occupied rate of 16.5%. Capital Adequacy Ratio was on rate of 19.4%. Risk identification was 31.2%. Risk Diversification was on 17.1%. While, planning of budget was on rate of 15.9%.

VII.2 The second objective was to assess the indicators of financial performance of ECOBANK Rwanda.

The findings were presented to table VI.9 up to table 4.10 which illustrated the perceptions of respondents about the financial performance. Therefore, out of 100.0% respondents, 14.1% confirmed profitability as financial performance measurement used by ECOBANK Rwanda. Solvability was occupied the rate of 21.2%. Liquidity was on rate of 15.3%. Assets quality was on rate of 10.6%. Efficiency is financial performance measurement as confirmed by 14.1%. Asset management was on rate of 24.7% from other factors of financial performance measurement in ECOBANK Rwanda. The table 4.15 shows the indicators of financial performance of ECOBANK Rwanda as confirmed by 9.4% who said that Revenue of ECOBANK was increased from 2012 up to 2016. The 11.2% respondents confirmed that during the period 2012 to 2016, ECOBANK has greatly diversified its products. The 11.8% respondents confirmed that ECOBANK has improved its market share during the period 2012 to 2016. The 7.6% confirmed that ECOBANK has consistently increased its assets. The 10.0% respondents confirmed that ECOBANK increases its braches during the period of years. 9.4% confirmed that ECOBANK Rwanda presents an increase in customers. 13.5% confirmed that ECOBANK Rwanda presenting profitability evolution. 18.8% said that ECOBANK was reducing non-performing loans as factor of financial performance. 8.2% confirmed that ECOBANK Rwanda was Increasing number of loans delivered to borrowers. The profit ratios performance of ECOBANK Rwanda from 2012 to 2017 indicated that ECOBANK Rwanda presented NP% of 0.267 in the year 2012. It shows also NP% of 0.016 in 2013. While, the year of 2014, the NP% was 0.024; and NP% were also 0.049 in 2015. It was found that ECOBANK Rwanda, from 2012-2013 presented the decrease in NP%, while, the year from 2013-2014 it had an increase and even in 2014 to 2015. An increase was happened because the various factors such as market interest rate, and other related factors internally and externally of bank.

The table VI.17 presents return on Asset which was in 2012 was 0.027; in 2013; return on asset was 0.0015; in 2014, ROA was 0.0022; while the year of 2015, ROA was - 0.0049. Based on the results from the above table provided by the Ecobank reports from 2012 to 2015, the profitability index through the ROA (Return On Assets), it shows that the contribution of assets becomes positive when EcoBank Rwanda Ltd recognizes a Profit and it becomes negative when Ecobank recognized a loss. This shows that the contribution of Ecoank Rwanda's assets has been positive in the years of 2012, 2013 and 2014 at the average of 0.027; 0.0015; and 0.0022, and 0.02 respectively and the negative contribution in 2015 with the average of - 0.0049. According to EcoBank reports from 2012 to 2017, the profitability index through the ROE (Return On Equity), it shows that the contribution of Ecobank capital becomes positive when EcoBank Rwanda Ltd recognizes a Profit and it becomes negative when EcoBank recognized a loss. This shows that the contribution of Ecobank Rwanda's capital has been positive in the years of 2012, 2013 and 2014 at the average of 0.180, 0.014, and 0.020 respectively the negative contribution in 2015 with the average of - 0.044. The table 4.19 presents the current ratio of ECOBANK Rwanda where, Current Ratio was 1.17 in 2012; CR was 1.11in 2013; and in 2014, CR was 1.12, and in 2015, CR was 1.12. Generally, the data presented on table 4.19 shows that ECOBANK Rwanda is able to cover the liabilities because its Current assets are more than Current liabilities.

VII.3 The third objective was to establish the relationship between nonperforming loans management and financial performance indicators of ECOBANK Rwanda

The findings are shown on able VI.20 which illustrate the perceptions from respondents on if NPLs management contributes to the financial performance achievement in ECOBANK. Out of 100.0% respondents, majority of 74.7% respondents confirmed that NPLs management contributed to the financial performance achievement in ECOBANK Rwanda during the period from 2012 to 2017. Table VI.21 presents perceptions from respondents on if there is a significant relationship between NPLs management and performance of ECOBANK Rwanda. Out of 100.0% respondents, majority of 72.4% respondents confirmed that there is a significant relationship between NPLs management and performance of ECOBANK Rwanda during the period from 2012 to 2016. These are supported by correlation coefficient between NPLs management and financial performance of ECOBANK Rwanda which was 0.741 (74.1%)

VIII. CONCLUSIONS

As conclusion, according to the findings indicated in the above, the problem of this research was solved, research objectives were achieved, research questions were answered, and research hypotheses were verified by retaining alternative hypothesis which confirmed that there is greater contribution of NPLs management on the financial performance of commercial banks especially ECOBANK Rwanda.

IX. SUGGESTIONS FOR THE FURTHER RESEARCHES

This research was very important because it helps the researcher to put theoretical knowledge applied in classroom into practical. It is in that case I open the door to other future researchers on related topic to take it as reference book by considering other elements to show also the result of financial performance by accomplishing what the researcher did not reach. This means the study was limited on ECOBANK; other researchers should address their studies to other commercial Banks like BK, KCB, GT Bank, A&M Bank and etc. by carrying out the given topic: effect of Credit risk management on profit evolution of commercial banks in Rwanda

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