

1 The Impact of Credit Risk Management on the Performance of  
2 Commercial Banks in Cameroon. Case Study of BICEC  
3 Cameroon

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7 **Abstract**

8 The study is based on finding out the impact of credit risk management on the performance of  
9 commercial banks with specific objectives of evaluating loan assessment techniques used by  
10 banks and finding out various risk management tools used to manage credit risk. In order to  
11 verify it, secondary data were used to carry out ratio analyses and trend analyses which were  
12 then correlated to the percentages changes in profits. The findings of the study indicated that  
13 the Non- Performing loans (NPL) to total loans ratio which is one of the risk management  
14 indicators is a major predicator and is significantly related to bank financial performance,  
15 followed by the loan to total deposit ratio and loans to total assets ratios that have an inverse  
16 impact on financial performance of banks.

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18 *Index terms—*

19 **1 Introduction a) Background of the study**

20 with the major functions of accepting deposits from customers and granting funds out in the form of loans,  
21 thus performing a middle man role between surplus spending and deficit spending units (known as financial  
22 intermediation), Commercial Banks have expanded significantly over the past decades all over the globe.

23 In the USA for instance, the Federal Reserve released a listing of the US largest banks ranked by consolidated  
24 assets expressed in Million US Dollars (\$), in which the first three are JP Morgan Chase BANK, Bankof America,  
25 and Wells Fargo Bankwith consolidated assets of 1.945.467, 1.433.716 and 1,373,600 respectively as of 31 st  
26 December 2013.

27 In China, the China Banking Regulatory Commission (CBRC)(2012) published a report, in which the  
28 three largest banks in China are, in order of decreasing size, Industrial and Commercial Bank of China (ICBC),  
29 China Construction Bank (CCB),and Bank Of China (BOC) with IPOs in 2006 of respectively US \$22 Billions,  
30 US \$17Billions and US \$13 Billion added to their capital.

31 Furthermore,in Africa, on one hand,the Ghanaian banking system is made up of 26 banks operating in  
32 the country among which the first group of the six largest ones including Ghana Commercial Bank Ltd  
33 (GCB), Standard Chartered Bank Ltd (SCB), Barclays Bank of Ghana Ltd (BBGL), Ecobank Ghana Ltd  
34 (EBG), Agricultural Development Bank (ADB), and Standbic Ghana Bank. Their total operating assets  
35 cumulatedincreased by 95% from GH¢4.3billion (2007) toGH¢8.4billion (2010) according to the Bank of Ghana  
36 statistics.

37 On the other hand, commercial banks have also been active in the Nigerian economy for many centuries now.  
38 According to the IMF Country Report N°13/146 of May 2013, Nigeria has a financial sector made up of thousands  
39 of financial institutions among which there exist 21 commercial banks with a total banking sector assets of N18.21  
40 Trillion as at end December 2011, which represented 53.6% of the country's GDP.

41 The 3 biggest banks in Nigeria include First Bank of Nigeria with total assets worth \$18.6 Billion approximately,  
42 followed by Zenith Bank PLC with \$14.147 Billion and United Bank for Africa that has total assets of \$11.901  
43 Billion.

## 6 E) SIGNIFICANCE OF THE STUDY

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44 In addition, commercial banking is also present and active in the northern part of the continent, namely in  
45 Egypt where Business Directory evaluated and compared the performance of banks nationwide. From a total  
46 of 39 commercial banks, the top 3 are the following: Commercial International Bank(CIB) with total assets of  
47 about \$14.8 Billion and made profits of \$ 319. 4 Million, followed by the National SociétéGénérale Bank (NSGB)  
48 with \$222.8 Million in profits and total assets of \$9.6 Billion, and Credit Agricole Egypt (CAE) came third with  
49 profits of \$68.3 Million with total assets totaling about \$4.1 Billion.

50 More so, banks have also evolved in Cameroon over the years and have played a key role in the financial  
51 system. The Cameroonian banking system is constituted of 13 commercial banks among which the first three  
52 banks are SociétéGénérale de Banques du Cameroun (SGBC), BanqueInternationale du Cameroun pour l'Epargne  
53 et le Crédit (BICEC) and Afriland First Bank with respective capital of 12,5Billion XAF, 12Billion XAF and  
54 15,8Billion XAF. And in terms of total assets, SGBC registered 668.661Billion XAF, followed by BICEC with  
55 658.468Billion XAF and Afriland First Bank with 654.902 Billion XAF.

56 Cameroon experienced a severe economic crisis in the early 1990's which resulted to a drop of 50% in the  
57 value of its currency, the CFA Franc which used to be pegged to the former French Franc. Then, the banking  
58 system watched the failure of two major banks namely with the liquidation of BanqueMeridien BIAO Cameroun  
59 (BMBC) in 1996, and Credit Agricole du Cameroun (CAC) in 1997.

60 Although COBAC put in place better policies and prudential norms to ensure the stability of the system, it  
61 still experienced the failure of Amity Bank PLC in 2008 whose assets were bought over by BanqueAtlantique  
62 in May 2009 and later in 2011, Union Bank of Cameroon PLC was recapitalized by Oceanic Bank Nigeria and  
63 which was bought over just recently by ECOBANK.

64 Also, the Commercial Bank of Cameroon (CBC) which is typically owned totally by Cameroonian faced  
65 financial difficulties for many years and is currently under restructuring.

66 Also, some Microfinance Institutions collapsed recently such as FIFFA, and COFINEST just to mention those  
67 two.

68 These various bank crises may lead to a reflection that the risks involved in the banking activity is one to  
69 take in consideration to the greatest extend, be it the liquidity risk, the credit risk, the foreign exchange risk, the  
70 market risk or the operational risk. Risk management tools should be as efficient and effective as to be able to  
71 mitigate those latter risks inherent to the banking business.

## 72 2 b) Problem Statement

73 Despite all efforts put in place by commercial banks in Cameroon, their credit risk in the form of nonperforming  
74 loans still exists on their bank's loan portfolio. In addition, the credit experts of these banks sometimes have  
75 overlapping functions, which result to them being mixed up with the type of risk to focus on, since other types  
76 of risks such as interest rate risk, market risk, liquidity risk, currency risk and operational risk also exist. Also,  
77 with the information asymmetry that exists between borrowers and lenders, it had led to credit experts to be  
78 more likely to select projects that are dubious than those that will succeed to grant financing. Based on the  
79 above problems, the following questions were asked: ? What are the various risk management tools used by the  
80 bank? ? How efficient are the loan assessment techniques of the institution? ? What sources of information are  
81 available for loan officers for use in loans assessment?

## 82 3 c) Objectives of the study

83 The main objective is to study and examine the impact of credit risk management on the performance of  
84 commercial banks.

## 85 4 The specific objectives include:

86 ? To find out the various risk management tools used by the bank to manage credit risk. ? To evaluate the  
87 efficiency of loan assessment techniques of the institution. ? To investigate the problems associated with credit  
88 risk management at the bank. ? To make necessary recommendations based on findings.

## 89 5 d) Hypotheses of the study

90 To accomplish the aim of this research project, the following hypotheses have been posed:

91 1. H 0 : Credit risk management does not affect profitability 2. H 1 : Credit risk affects profitability.

## 92 6 e) Significance of the study

93 The conclusions and recommendations of the study will be of great importance to BICEC and other banks, to  
94 the Banking Commission of Central Africa (COBAC) or Ministry of Finance, to customers as a whole and to  
95 students.

96 To BICEC and other banks, the findings will assist their loan experts to know more about the impact of credit  
97 risk management and help them to upgrade the effectiveness of their techniques in order to mitigate the number  
98 of non-performing loans that affect their profitability.

99 To COBAC and MINFI, the study will be of great importance in knowing more about impact of effective  
100 credit risk management and help their officials to develop more efficient policies for controlling credit default risk.

101 To customers, this research will help them to be aware of the various tools used by banks to assess their loan  
102 applications and also to be able to meet up with the requirements to obtain credit.

103 To students, it would serve as a guide for doing further research in banking and finance and in other fields of  
104 study.

## 105 **7 f) Delimitation of the study**

106 The main aim of this study is to examine the impact of credit management on the performance of commercial  
107 banks in Cameroon. The case study here is the Bamenda branch of BICEC.

## 108 **8 g) Organization of the study**

109 This write up is organized in five chapters as follows: Chapter one provides the background information, the  
110 problem statement, the study objectives, significance and delimitations. Chapter two gives the literature review.  
111 Then Chapter three describes the methodology of the study and Chapter four gives the analysis and discussions  
112 and finally Chapter five is the conclusion.

## 113 **9 Chapter Two**

114 II.

## 115 **10 Literature Review**

116 The purpose of this chapter is to examine what has been written by other scholars in relation to this research  
117 topic. Therefore, we are going to review various concepts, models, principles and definitions put forward by other  
118 scholars and how they can help to achieving our research objectives.

## 119 **11 a) Conceptual literature**

### 120 **i. Risk**

121 Risk can be defined as the uncertainty of outcome. There exists two types of risks, namely pure risk (risk that  
122 leads only to a loss such as flood, fire or accident) and speculative risk (risk that either a loss or a profit can  
123 occur such as a business venture). Risk contains many possible outcomes and we can determine the probability  
124 that an event will occur. We must note that taking risk is a part of the essence of management but it should not  
125 be taken unnecessarily and foolishly. We must take calculated risk i.e. balancing risk against rewards. There are  
126 a many risks that affect financial institutions; they include interest rate risk, market risk, liquidity risk, currency  
127 risk, operational risk, off-balance sheet risk, legal and compliance risk reputation risk, strategic risk, and capital  
128 risk. These various risks will be briefly discussed further below.

### 129 **ii. Loans**

130 Faure (2013) defines bank loans as advances and credit. This proportion of the bank's balance sheet makes up  
131 the vast majority of their assets. There are two categories of loans: Non-marketable debt (NMD) (made up of  
132 loans to non-banks and interbank loans) and Marketable debt (MD), i.e. investments. The author pursued that  
133 the majority of bank loans are NMD.

134 On the other hand, Peter S. and Sylvia C. (2010), emphasize on the various loan types which include real  
135 estate loans, financial institution loans, agricultural loans, commercial loans, consumer loans, lease financing  
136 receivables and miscellaneous loans.

### 137 **iii. Credit risk**

138 The Global Association of Risk Professionals (GARP) defines credit risk (also referred to as default risk) as the  
139 potential for a loss due to failure of a borrower to meet its obligations to repay a debt in accordance with agreed  
140 terms. A home owner stops making mortgage payments is an example of credit risk. According to the GARP,  
141 for banks, credit risk typically resides in the assets in its banking book (loans, and bonds held to maturity) and  
142 can arise in the banking book as counterparty credit risk.

143 Faure (2013) defined credit risk as the risk that the borrower from a bank will default on the loan and/or the  
144 interest payable, i.e. that it will not perform in the conditions under which the loan was granted. According to  
145 the author, credit risk is damaging to the bank, not only because of the actual loss eventually incurred, but also  
146 in terms of the time that management and bank counsel expend on attempting to recover the loss or a portion  
147 of the loss.

148 In the same line, two other authors, Peter S. Rose and Sylvia C. Hudgins (2010) defined credit risk by the  
149 following illustration. Financial intermediaries make loans and take on securities that are nothing more than  
150 promises to pay. When borrowing customers fail to make some or all of their promised payments, these defaulted  
151 loans and securities result in losses that can eventually erode capital. Donald et al, (1996) defines credit risk

152 simply as the potential that a bank borrower or counterpart will fail to meet its obligations in accordance with  
153 agreed terms.

### 154 15 iv. Credit risk management

155 Gestel and Baesens (2009) defined credit risk management as a process that involves the identification of potential  
156 risks, the appropriate treatment and the actual implementation of risk models.

157 Secondly, according to Basel Committee on Banking Supervision, (2009), credit risk management is a set of  
158 sound practices such as establishing an appropriate credit risk environment, operating under a sound credit-  
159 granting process, maintaining an appropriate credit risk measurement and monitoring process and ensuring  
160 adequate controls over credit risk. Greuning and Iqbal(2007) defined credit risk management as a structured  
161 approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation  
162 of risk using managerial resources. The strategies include transferring to another party, avoiding the risk, reducing  
163 the negative effects of the risk, and accepting some or all of the consequences of a particular risk. The process  
164 of risk management is a two-step process. The first is to identify the source of the risk, which is to identify  
165 the leading variables causing the risk. The second is to devise methods to quantify the risk using mathematical  
166 models, in order to understand the risk profile of the instrument. Once a general framework of risk identification  
167 and management is developed, the techniques can be applied to different situations, products, instruments and  
168 institutions. It is crucial for banks to have comprehensive risk management framework as there is a growing  
169 realization that sustainable growth critically depends on the development of a comprehensive risk management  
170 framework.

### 171 16 v. Commercial Banks

172 These are banks that perform all kinds of banking businesses and generally finance trade and commerce. Since  
173 their deposits are for a short period, these banks normally advance short term loans to businessmen and traders  
174 and avoid medium term and long term lending. However, recently, the commercial banks have also extended  
175 their areas of operation, to medium terms and long term finance. Commercial banks are also called joined stock  
176 banks.

177 According to Peter S. and Sylvia C., a commercial bank is defined as a bank that sells deposits and makes  
178 loans to businesses and individuals. In the same line, Tegwi (2010) defined commercial banks as profit making  
179 institutions that receive deposits from the public, safeguard them, and make them available on demand and  
180 make loans or create credit. He went further by giving their functions among which the main ones are accepting  
181 deposits, lending (by granting loans, overdrafts and by accepting bills) and agents of payment (by cheques, credit  
182 transfer, credit card, standing order). Other functions of commercial banks include providing cash dispensers,  
183 buying and selling of shares and stocks for customers in the stock exchange market, giving investment and  
184 financial advices to customers, providing travelers cheques to facilitate foreign trade, providing bank statements,  
185 acting as executors and trustees, and safekeeping of valuables such as jewelries, documents and certificates.

186 vi. Banks performance and its determinants Illmer (2010) defines performance as one the words which definition  
187 is very flexible as everyone places the concept that suits best and letting the context take care of the definition.  
188 Nevertheless, in general terms, performance can be seen as the results of activities (e.g. of an organization)  
189 over a given period of time. He added that performance measurement is the process of qualifying the efficiency  
190 and effectiveness of past action. More concrete performance measurement is the process of measuring how well  
191 organizations are managed against their targets and the value they generate for their stakeholders.

192 According to Athanasoglou et al ??2005), the role of banks remain central in financing economic activity and  
193 its effectiveness could exert positive impact on overall economy as a sound and profitable banking sector is better  
194 able to withstand negative shocks and contribute to the stability of the financial system.

195 During the last decades, the banking system has experienced worldwide major transformations in its operating  
196 environment. Both external and domestic factors have affected its structure and performance.

197 Yuqi Li explained that the internal determinants refer to the factors originating from bank accounts (balance  
198 sheets and/or profit and loss accounts) and therefore could be termed micro or bank specific determinants of  
199 profitability. The external determinants are variables that are not related to bank management but reflect the  
200 economic and legal environment that affects the operation and performance of financial institutions. A number  
201 of explanatory variables have been proposed for both categories, according to the nature and purpose of each  
202 study.

203 Studies dealing with internal determinants employ variables such as size, capital, risk management, and  
204 expenses management. Akhavein et al. ??1997) and Smirlock (1985) find a positive and significant relationship  
205 between size and bank profitability.

206 Turning to external factors, Athanasoglou et al. (2005) observes several factors have been suggested as  
207 impacting on profitability and these can be further distinguish between control variables that describe the  
208 macroeconomic environment, such as inflation, interest rates and cyclical output, and variables that represent  
209 market characteristics such as market concentration, industry size and ownership status.

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210 **17 b) Review of Related Literature i. Types of risks affecting  
211 banks**

212 Commercial banks activities, such as borrowing and lending for various periods, and at various rates of  
213 interest engaging in many other interest-rate related activities, dealing in foreign exchange, undertaking different  
214 investments and dealing in derivatives markets make it to be exposed to a variety of risks like no other institution.  
215 The risks faced by banks apart from credit risk include the following: interest rate risk, market risk, liquidity  
216 risk, currency risk, operational risk, off-balance sheet risk, legal and compliance risk, reputation risk, strategic  
217 risk and capital risk. Each of these will be briefly discussed below.

218 **18 a. Interest rate risk**

219 Faure (2013) defines it as the risk of expected earnings being influenced negatively as a result of changes in the  
220 pattern and level of interest rates. In other words, it is the impact of changing interest rates on a financial  
221 institution's margin of profits.

222 More so, Hudgins et al. (2010) relates interest rate risk to the impact of changing interest rates on a financial  
223 institution's margin of profits. Movements in market interest rates can also have potent effects on the margin of  
224 revenues over costs for banks. For example, rising interest rates can lower the margin of profits if the structure  
225 of financial institution's assets and liabilities is such that interest expenses on borrowed money increase more  
226 rapidly than interest revenues on loans and security investments.

227 **19 b. Market risk**

228 Also called position risk, trading risk or price risk, it is the risk of a decline in the market value of financial  
229 securities (shares, debt and derivatives) that is caused by unexpected changes in market prices and interest rates,  
230 and changes in credit spreads.

231 Aaron Hou further defined it as the potential loss resulting from declining prices in the financial market. It  
232 includes stochastic market risk factors such as interest rate, FX, commodity and equity. There are two drivers  
233 of the market risk exposure: investment position and market volatility.

234 **20 c. Liquidity risk**

235 Liquidity risk for a bank is the risk of not being able to meet obligations in terms of funds demanded by clients.  
236 In other words, it is the danger of not having sufficient cash and borrowing capacity to meet with customers'  
237 withdrawals, loan demand, and other cash needs.

238 According to the Working paper series No 1008/Feb 2009 of the European Central Bank, risks relates to the  
239 probability of having a realization of a random variable different to the realization preferred by the economic  
240 agent. The economic agent will have a preference over liquidity. In that sense, the probability of not being liquid  
241 would suggest that there is a liquidity risk. The higher the probability, the higher the liquidity risks. When the  
242 probability equals unity (i.e. the possibility becomes a certainty) liquidity risk reaches a maximum and illiquidity  
243 materializes.

244 **21 d. Currency risk**

245 Also called foreign exchange risk (Forex risk), this is the exposure to loss due to the volatile foreign market  
246 conditions, changing government rules, and sometimes political instability overseas.

247 Moreover, Madura (1989) relates exchange rate risk to the effect of unexpected exchange rate changes on the  
248 value of the firm. In particular, it is defined as the possible direct loss (as a result of an unhedged exposure) or  
249 indirect loss in the firm's cash flows, assets and liabilities, net profit and, in turn, its stock market value from an  
250 exchange rate move. There exist three main types of exchange rate risk namely transactional risk, translational  
251 risk and economic risk.

252 **22 e. Operational risk**

253 Operational risk refers to uncertainty regarding a financial firm's earnings due to failure in information technology  
254 systems, errors, misconduct by employees, floods, lightning strikes, and similar events. It is also known as the  
255 transactional risk.

256 Faure (2013) expressed that each bank has its unique definition of operational risk. He reviewed a number  
257 of them including information technology systems risk, human resources risk, and other external risk. External  
258 risk here refer to the risk that parties itself than the bank itself and its employees undertake activities, or fail  
259 to deliver essential outsourced services, that harm the bank in a financial or other sense, and natural disasters  
260 that affect the services or viability of the business. Examples include a fire at the only checkbook printer in the  
261 country which puts it out of business for a long period or a power-delivery blackout for three days.

262 **23 f. Off-balance sheet risk**

263 One of the newest forms of risk faced by leading financial institutions is associated with the rapid build-up of  
264 financial contracts that obligate a financial firm to perform in various ways but are not recorded on its balance  
265 sheet. Examples include indemnities, guarantees, irrevocable letters of credit, and underwriting, effective net open  
266 position in foreign currencies, portfolios managed by others on behalf of the bank, and securities or commodities  
267 broking. These items or instruments are highly complex and volatile in their market values, creating substantial  
268 off-balance sheet risk for management to deal with.

269 **24 g. Legal and Compliance risks**

270 According to Hudgins (2010), legal risk creates variability in earnings resulting from actions taken by our legal  
271 system. Unforeseeable contracts, lawsuits, or adverse judgments may reduce a financial firm's revenues and  
272 increase its expenses. In a broader sense, compliance risk reaches beyond violations of the legal system and  
273 includes violations of the rules and regulations. For example, if a depository institution fails to hold adequate  
274 capital; costly corrective actions must be taken to avoid its closure. These corrective actions are laid out in  
275 capital adequacy regulations.

276 **25 h. Reputation risk**

277 Rose et al. ( ??2010) defined reputation risk as the risk associated with public opinion. Negative publicity,  
278 whether true or not, can affect a financial firm's earnings by dissuading customers from using the services of the  
279 institution, just as a positive publicity may serve to promote a financial firm's services and products. Perry and  
280 Fontnouvelle (2005) defined it as being the potential that negative publicity regarding an institution's business  
281 practices, whether true or not, will cause a decline in the customer base, costly litigation, or revenue reductions.  
282 Any reputation event that reduces present or future expected cash flows will reduce the equity value of the firm.

283 **26 i. Strategic risk**

284 Variations in earnings due to adverse business decisions, improper implementation of decisions, or lack of  
285 responsiveness to industry changes are parts of what is called strategic risk. Allan and Beer (2006) define  
286 strategic risk as being any risk (threat or opportunity) that materially affects the ability of an organization to  
287 survive. All organizations are vulnerable to strategic threats to varying degrees despite their greatest efforts to  
288 manage them.

289 Kambil et al. ( ??2005) study of the 1000 largest international organizations found that nearly half had lost  
290 up to 20% of their market value over a month long period in the last decade, with the value losses often taking  
291 longer than a year to be regained. When strategic threats occur, the results are devastating and long lasting.

292 **27 j. Capital risk**

293 The impact of all these risks can affect a financial firm's long-run survival, often referred to as its capital risk.  
294 According to Rose (2010), because of the variability in capital stems for other types of risk, it is often not  
295 considered separately by government regulatory agencies. However, risk to the capital that underlies every  
296 financial firm captures the all-important risk of insolvency or ultimate failure. For example, if a bank takes an  
297 excessive number of bad loans or a large portion of its security portfolio declines in market value, generating serious  
298 capital losses when sold, then its equity capital, which is designed to absorb such losses, may be overwhelmed  
299 if investors and depositors become aware of the problem and begin to withdraw their funds, regulators may have  
300 no choice but to declare the institution insolvent and close its doors.

301 **28 ii. Credit risk management and banks**

302 As defined earlier, credit risk management as a process that involves the identification of potential risks, the  
303 appropriate treatment and the actual implementation of risk models according to Tony Van Gestel and Bart  
304 Baesens (2009). granted are conducted through the current account. This enables the bank to monitor the  
305 business of the borrower.

306 **29 d. Screening**

307 In order to overcome the adverse selection problem, the obvious tool to mitigate credit risk is the careful screening  
308 of potential borrowers. This involves information gathering. Much personal information is gathered in front of  
309 individuals who wish to borrow, and there are grades of information gathering. In the case of small sum for the  
310 purchase of say a washing machine, the information required is far less than that required for the mortgage loan.  
311 In the latter case, the information required would include: Work history and record, salary and salary history,  
312 other bank accounts, other debt, credit card payment history, statement of liabilities and assets.

313 In addition to this information, the lender may require references, which in many cases are followed up on, and  
314 some lenders (particularly the banks) put in place local boards of directors comprised of persons well known and  
315 connected in their relevant areas in order to provide information on the borrower of the area. The information  
316 gathered enables the lender to statistically calculate a score for each borrower. It should be apparent that in

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317 many cases the score is border line in terms of credit risk, and the lender uses a measure of discretion, rather  
318 than send the client off to a competitor.

319 Information gathering in the case of loans to companies is similar except that much emphasis is placed on  
320 past financial statements and a business plan for the future, including of course the purpose for which the loan  
321 is required.

## 322 **30 e. Monitoring**

323 Monitoring is also an information gathering exercise, but after the event of granting the loan, and this links with  
324 the problem of moral hazard. A client may be suitably screened and ultimately selected as a client, but may  
325 engage in activities totally different than the actual loan purpose once the money is in his or her hands. To reduce  
326 the risk of this coming about, many lenders include restrictive covenants (provisions) in their loan contracts, and  
327 monitor adherence or not to these on a regular basis.

## 328 **31 f. Long-term relationship building**

329 Lenders encourage long-term relationship building between loan officers of the institution and their clients. This  
330 practice reduces the cost of information gathering because records already exist and monitoring procedures are  
331 already in place. The borrower also has an incentive for encouraging a long-term relationship with the lender,  
332 and this is because a good credit record not only reduces the risk for the lender but also the borrowing rate for  
333 the borrower.

## 334 **32 a. Avoidance**

335 The obvious approach to alleviating credit risk is to avoid it. This can be achieved by only providing loans to,  
336 or buying the bonds of government, the best credit. Government securities are known to be risk-free securities,  
337 and because of that, the returns on such investments are the lowest available. Because the return on government  
338 securities is the risk-free rate (rfr), all other investment should yield  $rfr + rp$  ( $rp$  = risk premium).

## 339 **33 b. Diversification**

340 Diversification is the first principle of risk management as applied in portfolio theory. Banks do not lend a major  
341 proportion of their funds to individual borrowers. Rather, they restrict the amount loaned to a percentage of their  
342 capital. They are also diversified across economic sectors and countries. In most countries, the bank regulator  
343 or supervisor stipulates a strict constraint in terms of loan concentration.

## 344 **34 c. Compensating balances and monitoring of business 345 transactions**

346 Often, loans are granted with the commitment by the borrower of maintaining a balance with the bank. This  
347 increases in the likelihood that the loan will be repaid. The commitment may also take the form of a current  
348 account with an undertaking that all transactions by the borrower in the business for which the loan was

## 349 **35 g. Loan commitments**

350 This is another tool of credit risk management and is related to the former. Many lending intermediaries provide  
351 borrowers with a commitment of a loan up to a specific amount that can be utilized at any time. This provides  
352 the borrower with flexibility in loan utilization, and encourages a long-term relationship with the lender, which  
353 in turn reduces the information gathering cost. The loan interest rate reflects the long-term relationship.

354 h. Collateral requirement Collateral means the ceding of assets (usually property, equipment financed, the  
355 debtors book, deposit, policy at appropriate discounted values) as security for the loan. This is a legal commitment  
356 to surrender the underlying assets to the lender in the event of default, which the lender is able to sell in order to  
357 recover the amount of the loan. It is known as the lost common method of "insurance" against credit risk, and  
358 the problems of adverse selection and moral hazard. A dubious borrower will be reluctant to borrow if collateral  
359 is required because she or he has much to lose in the event of default.

360 i. Credit rationing Credit rationing takes on two forms: outright rejection and providing less credit than sought.  
361 Outright rejection refers to loans where the borrower is willing to pay a higher interest rate to compensate the  
362 lender for the risk, but the bank rejects the application because the higher interest rate will contribute toward  
363 the failure of the project.

364 Providing credit less than sought is often a tactic of the lender to prevent moral hazard. A loan that is smaller  
365 than sought will tend to ensure that the funds are efficiently allocated, whereas a loan of the desired size may  
366 bring about moral hazard.

367 **36 j. Specialization in lending k. Credit derivatives**

368 The use of credit derivatives consists of the purchase and sale of credit risk across sectors and countries. Credit  
369 derivatives are bi-lateral financial contracts with payoffs attached to a credit related event such as a default,  
370 bankruptcy or credit downgrade.

371 Generally, the largest banks are net buyers of credit protection.

372 **37 iii. Credit assessment of banks**

373 The bank's division in charge of assessing, analyzing and making recommendations on the destiny of most loan  
374 applications is the credit department. Each loan application must be fully examined before the loan request  
375 is granted or refused and before offering any credit. The procedures followed by banks in credit evaluation  
376 may differ. These stages are the collection of information, credit investigation, financial statement analysis, and  
377 project evaluation and perfection and the decision stages.

378 **38 a. Collection of credit information**

379 When a customer comes for a loan, he will not receive the loan on the same day. He must first fill a loan  
380 application form (LAF), giving information of him and other information. Usually, he will be asked by the  
381 bank to go and come back later. During this time, the banker will collect the information that will be used to  
382 investigate or carry out credit rating to evaluate the credit worthiness of the customer. This information can be  
383 from primary and secondary sources. For convenience, they may be classified into five categories:

384 ? Those that come from the credit applicant (loan application form). ? Information from the bank's own  
385 records (financial statements). ? Information from other sources (credit agencies, credit bureau). ? The  
386 customer's payment history with the firm.

387 ? Credit reports on the customer's payment history with other firms.

388 This information ensures that the banks laiddown policies and regulatory constraints are followed. The  
389 information collected will help to determine the applicant's character, condition, capacity, capital and collateral  
390 securities.

391 **39 b. Credit evaluation**

392 Credit evaluation can also be referred to as loan appraisal techniques. These techniques are quite vital in banking  
393 because they usually involves a detailed study of the critical aspects of a loan application known as the 5 C's of  
394 credit, namely capital, condition, capacity, character, and collateral.

395 **40 c. Capital**

396 It is a measure of a customer's assets. If a credit customer's earnings power fails, assets can be sold to repay the  
397 loan. It is therefore a very crucial aspect of evaluating credit too. If financial statements are drawn properly,  
398 the analyst studies it with attention to either over capitalization or under capitalization. In case of a fall in  
399 the customer's earnings power, there is a danger that overdraft will increase or other credit facilities will remain  
400 unpaid. C

401 Some lenders practice specialization in lending; this may refer to geographic area of industry. In the former  
402 case the lenders rely on personal relationships to ensure prompt and full repayment of interest and principal.  
403 Certain other lenders specialize in making loans to specific industries. For example, a bank may specialize in  
404 leasing contracts with the medical fraternity. The line of reasoning here is that the information costs are reduced  
405 because the lending institution is concerned with gathering information about only one industry (and its related  
406 industries). The counter-argument is that a downturn in the particular industry may place the bank at risk.  
407 This brings one back to the first tool, diversification, which is a major risk mitigation factor.

408 **41 d. Condition**

409 Conditions of the individual credit customer (how well the business is doing at a given time) and of the economy  
410 in general have an important effect on creditworthiness. Therefore, the loan officer and credit analyst must be  
411 aware of recent trends in the borrower's industry and how changing economic conditions might affect the loan.  
412 A loan can look very good on paper, but one must understand that its value may change because of a decline in  
413 sales or income in recession or because of high interest rates occasioned by inflation. In this sense, in order to  
414 assess the industry and economic changes, most lenders maintain files of information such as newspapers clipping,  
415 magazines articles, and research reports on the industries represented by their major borrowing customers.

416 **42 e. Collateral**

417 This is anything of value that a borrower promises to give the lender if the borrower is unable to repay the  
418 loan. A loan for which collateral is held is said to be a secured loan and that which no security is held is called  
419 an unsecured loan. This is an asset pledged by the customer for security in case of default. In assessing the  
420 collateral aspect of a loan request, the loan officer must ask: Does the borrower possess adequate net worth or  
421 own enough quality assets to provide adequate support for the loan? The loan officer is particularly sensitive

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422 to such features as the age, condition and degree of specialization of the borrower's assets. Technology plays an  
423 important role here as well. If the borrower's assets are technologically obsolete, they will have limited value as  
424 collateral because of the difficulty of finding a buyer for those assets if the borrower's income falters.

## 425 **43 f. Character**

426 The loan officer must be convinced the customer has a well-defined-defined purpose for requesting credit and a  
427 serious intention to repay. If the borrower is not sure why the customer is requesting a loan, this purpose must be  
428 clarified to the lender's satisfaction. The loan officer must determine if the purpose is consistent with the lending  
429 institution's loan policy. Even with a good purpose, the credit expert must determine that the borrower has a  
430 responsible attitude toward using borrowed funds, is truthful in answering the questions, and will make every  
431 effort to repay what is owed. We must underline that responsibility, serious purpose and serious intention to  
432 repay all monies owed make up what the loan officer calls character. If the lender feels the borrower is insincere  
433 in promising to use borrowed funds as planned and in repaying as agreed, the loan should not be made, it may  
434 certainly become a problem credit.

## 435 **44 g. Capacity**

436 Here, the lender must be sure the customer has the authority to request a loan and the legal binding to sign  
437 a loan agreement. This characteristic is known as the customer capacity to borrow money. For example, in  
438 most areas, a minor (under age 18 or 21) cannot legally be held responsible for a credit agreement; lenders will  
439 have great difficulty collecting on such a loan. Similarly, the lender must be sure that the representative from  
440 a corporation asking for credit has proper authority from the company's board of directors to negotiate a loan  
441 and sign a credit agreement binding the company. Usually, this can be determined by obtaining a copy of the  
442 resolution passed by the corporate customer's board of directors, authorizing the company to borrow money. In  
443 case of a business partnership agreement, the loan officer must ask to see the firm's partnership agreement to  
444 determine which individuals are authorized to borrow for the firm. It is important to note that a loan agreement  
445 signed by unauthorized persons could prove to be uncollectible and result in substantial losses for the lending  
446 institution.

## 447 **45 h. Financial statement analysis**

448 This is the quantitative aspect of credit assessment. The financial statements usually required are the Income  
449 Statement, the Balance Sheet, Cash flow statements, cash budgets, etc. bankers are advised to ask for cash  
450 flows statement because they show the true liquidity position of a business. It is preferable to ask for statements  
451 prepared by independent accounting firms. When these statements have been presented by the customer, the  
452 banker will carry out a performance assessment by using trend analysis (comparing the figures over a number of  
453 years) and ratio analysis. If we are to use ratios, we must calculate ratios like profitability, liquidity, efficiency  
454 and stock markets (for listed companies).

## 455 **46 iv. Decision stage**

456 The decision on whether to give the loan lies in the hands of the credit officer, managers and sometimes the  
457 Board of Directors.

## 458 **47 c) Empirical literature**

459 Credit risk is the most serious danger or threat to commercial bank's profitability. In this regards, various  
460 researchers have examined the impact of credit risk with diverse aspects of banks. This part of our writing  
461 provides related empirical findings on the subject matter.

462 Various empirical findings, both from developed and developing countries have recorded mixed results.  
463 Some researchers have noted a negative relationship between either credit risk or credit risk management and  
464 profitability or performance of commercial banks; while some found a positive relationship.

465 Kargi (2011) evaluated the impact of credit risk on the profitability of Nigerian banks. Financial ratios as  
466 measures of bank performance and credit risk were collected from the annual reports and accounts of sampled  
467 banks from 2004-2008 and analyzed using descriptive, correlation and regression techniques. The findings revealed  
468 that credit risk management has a significant impact on the profitability of Nigerian banks. It conducted that  
469 banks' profitability is inversely influenced by the levels of loans and advances, non-performing loans and deposits  
470 thereby exposing them to great risk of illiquidity and distress.

471 Kithinji (2010) assessed the effect of credit risk management on the profitability of commercial banks in  
472 Kenya. Data on the amount of credit, level of nonperforming loans were collected for the period 2004 to 2008.  
473 The findings revealed that the bulk of the profits of commercial banks are not influenced by the amount of credit  
474 and non-performing loans.

475 Hosna, et al, (2009), in the assessment of the effect of credit risk management and profitability in commercial  
476 banks in Sweden used two credit risk indicators (NPLR and ROE). The findings and analysis revealed that credit  
477 risk management has effects on profitability in all the 4 banks selected.

478 IndiaelKaaya and Dickson Pastory (2013), in their study "Credit risk and commercial banks performance in  
479 Tanzania", used a sample of 11 banks in Tanzania with secondary research methods and concluded that increase  
480 in credit risk tends to lower bank performance, which tends to lower profit level. He added that the bank need to  
481 maintain substantial amount of capital reserve to absorb credit risk in event of failure, moreover, the bank need  
482 to enhance lending criteria, grading and credit mitigation techniques to reduce chance of default. Meanwhile the  
483 adoption of sound practices and corporate governance will reduce credit risk.

484 Benedikt et al, (2006), examined credit risk management policies for ten banks in the US using a multivariate  
485 model and found that banks that adopt advanced credit risk management techniques (proxies by the issuance of  
486 at least one collateralized loan obligation) experience a permanent increase in their target loan level of around  
487 50%. Partial adjustment of this target, however, means that the impact on actual loan levels is spread over several  
488 years. The findings confirm the general efficiency-enhancing implications of new risk management techniques.

489 Ngugi, (2010) postulates that in order to determine the needs of the local banking sector with regard to risk  
490 management, the central bank of Kenya conducted a survey in September 2004 that would provide a status  
491 position on the extent to which risk management is practiced in the financial institutions operating in Kenya.  
492 The survey revealed that there is a high level of awareness in banking institutions on the importance of employing  
493 systematic methods of identifying, analyzing, and controlling or mitigating risks.

494 **48 d) Theoretical literature i. Portfolio Theory of Credit Risk  
495 Management**

496 According to Margrabe, (2007), since the 1980s, banks have successfully applied Modern Portfolio Theory (MPT)  
497 to market risk. Many banks are now using earnings at risk (EAR) and value at risk (VAR) models to manage  
498 their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest  
499 risk facing most banks, the practical of MPT to credit risk has lagged.

500 Banks recognize how credit concentrations can adversely impact financial performance. As a result, a number  
501 of sophisticated institutions are actively pursuing quantitative approaches to credit risk measurement, while data  
502 problems remain an obstacle. Significant progress are been made towards developing tools that measure credit  
503 risk in a portfolio context. Credit derivatives are also been used to efficiently transfer risk while preserving  
504 customer relationships. The combination of these two developments has precipitated vastly accelerated progress  
505 in managing credit risk in a portfolio context over the past several years.

506 **49 ii. Asset-by-asset Approach**

507 Traditionally, banks have taken an asset-by-asset approach to credit risk management. While each bank's method  
508 varies, in general this approach involves periodically evaluating the credit quality of loans and other credit  
509 exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's  
510 expected losses. The foundation of the assetby-asset approach is a sound loan review and internal credit risk  
511 rating system. A loan review and credit risk rating system enable management to identify changes in individual  
512 credits, or portfolio trends in a timely manner. Based on the results of its problem, loan identification, loan  
513 review, and credit risk rating system management can make necessary modifications to portfolio strategies or  
514 increase the supervision of credits in a timely manner.

515 **50 iii. Portfolio Approach**

516 While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete  
517 view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected  
518 losses. Therefore to gain greater insight into credit risk, banks increasingly look to complement the asset-by-  
519 asset approach with a quantitative portfolio review using a credit model.

520 Banks increasingly attempt to address the inability of the asset-by-asset approach to measure unexpected  
521 losses sufficiently by pursuing a portfolio approach. One weakness with the asset-by-asset approach is that it has  
522 difficulty identifying and measuring concentration. Concentration risk refers to additional portfolio risk resulting  
523 from increased exposure to a borrower, or to a group of correlated borrowers.

524 **51 iv. Traditional Approach**

525 It is hard to differentiate between the traditional approach and the new approaches since many of the ideas of  
526 traditional models are used in the new models. The traditional approach is comprised of four classes of models  
527 including:

528 **52 a. Expert Systems**

529 In the expert system, the credit decision is left in the hands of the branch lending officer. His expertise, judgment,  
530 and weighting of certain factors are the most important determinants in the decision to grant loans. The  
531 loan officer can examine as many points as possible but must include the five "Cs". These are; character,  
532 credibility, capital, collateral and cycle (economic conditions) in addition to the 5 Cs, an expert may also take  
533 into consideration the interest rate.

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## 534 **53 b. Artificial Neural Networks**

535 Due to the time consuming nature and errorprone nature of the computerized expertise system, many systems  
536 use induction to infer the human expert's decision process. The artificial neural networks have been proposed as  
537 solutions to the problems of the expert system. This system simulates the human learning process. It learns the  
538 nature of the relationship between inputs and outputs by repeatedly sampling input/output information.

## 539 **54 c. Internal Rating at Banks**

540 Over the years, banks have subdivided the past/performing rating category, for example at each time, there is  
541 always a probability that some past or performing loans will go into default, and that reserves should be held  
542 against such loans.

## 543 **55 d. Credit scoring systems**

544 A credit score is a number that is based on a statistical analysis of a borrower's credit report, and is used to  
545 represent the creditworthiness of that person. A credit score is primarily based on credit report information.  
546 Lenders, such as banks use credit scores to evaluate the potential risk posed by giving loans to consumers and  
547 to mitigate losses due to bad debt.

# 548 **56 Chapter Three**

## 549 **57 Research Methods**

550 Research methodology is a vital part of the research dissertation because it is the background against which the  
551 reader evaluates the findings and draw conclusions. This chapter presents the research method adopted for the  
552 study and discusses the technique applied for the analysis of the data gathered.

## 553 **58 a) Background to the area of study**

554 The study sought to assess the effects of credit risk management on the performance of commercial banks in  
555 Cameroon with the case study of BICEC Bamenda branch. In this light, we are going to expand on the bank's  
556 historical evolution, its various products and services and its organizational structure.

557 BanqueInternationale du Cameroun pour l'Epargne et le Credit (BICEC) was set up on ??arch 14, 1997  
558 following the liquidation of BICIC (BanqueInternationale du Cameroun pour l'Industrie et le Commerce) that  
559 took place under particularly challenging economic circumstances. It was indeed necessary to restructure BICIC  
560 given that economic crisis of the 80's and 90's did not spare it.

561 Therefore, in March 1997, the Board of Directors of BICIC decided to establish BICEC. Its management was  
562 entrusted to GroupeBanquePopulaire, a French banking group that accomplished its mission namely: making  
563 the bank profitable and paving the way for its privatization in 3 years. In 2000, BICEC became a subsidiary of  
564 GroupeBanquePopulaire.

565 Since 2011, BICEC has continued benefiting from the extensive experience brought about by the merging of  
566 the BanquesPopulaires and Caissesd'Epargne (BPCE) Groups. Today, BICEC is the major stakeholder in the  
567 Cameroonian banking sector with a solid overall performance.

## 568 **59 i. Products and services**

569 BICEC provides a wide range of products and services to all its clientele. These products and services are  
570 classified according to the types of customers; private customer and civil servants, students, professionals SMEs,  
571 SMIs, farmers, corporate bodies, and institutions.

572 Therefore, the bank's products and services are as follows:

573 a. Bank cards Visa Gold: This is a universal payment and withdrawal card accepted worldwide at any time.  
574 Holders of Visa Gold have privileged relationship with BICEC. It is BICEC most advanced premium card.  
575 The targeted clientele is therefore high-income private customers and it offers the holder exceptional services,  
576 recognition and quality reception.

577 Visa Classic: It is a universal payment and withdrawal card accepted worldwide at any time. It is a mid-range  
578 BICEC VISA product. The clientele is private customers with an income of more than or equal to 500,000FCFA.  
579 It guarantees the holder phone support 7days/week and 24h/day on the number 33 42 29 09.

580 Visa Electron: It is a universal payment and withdrawal card accepted worldwide at any time. The targeted  
581 clientele is customers with income between 200,000FCFA and 500,000FCFA and holders of checking accounts.

582 Express Card: This is a domestic withdrawal card that allows the holder to withdraw cash from ATMs of the  
583 BICEC network all round the clock. It is a low-end product that target customers with an income less than  
584 200,000FCFA and are checking accounts holders.

585 Comfort Card: It is a domestic withdrawal card that allows the holder to withdraw cash from ATMs of the  
586 BICEC network all round the clock. Target clientele is private customers that are savings account holders.

587 MOOV Card: It is a domestic withdrawal card that allows the holder to withdraw cash from all the ATMs of  
588 the BICEC network. It is a low-end product with a targeted clientele of students basically.

## **67 CHAPTER FOUR PRESENTATION OF RESULTS AND ANALYSIS A) PRESENTATION AND ANALYSIS OF SECONDARY DATA RESULTS**

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### **60 b. Insurance**

589 Schengen Travel Insurance: This is a contract that guarantees assistance and health insurance to all BICEC  
590 customers seeking entry VISAs to any country of the Schengen zone. It is a mid-range product aimed at private  
591 customers (both BICEC and non-customers).

592 Super Retraite: It is a life insurance plan with two components: Pension insurance coverage, that allows  
593 insured to constitute a supplementary pension. And supplementary pension coverage whereby the insured is  
594 covered by the insurance provider with regards to pension contributions left to be paid on such a person's date  
595 of death prior to the end of the contract.

596 Securicartes: This is a policy that covers the customers against: The fraudulent use of bank cards and cheque  
597 books, loss or theft of the official documents (National Identity Card, Passport, car registration documents,  
598 driver's license) and theft or cash withdrawal from BICEC counters.

599 Securitedecouvert: This is an insurance contract whereby an insurance pledges to pay back an overdraft  
600 granted to a customer (the insured) in case of death, up to a maximum nominal amount of 400,000FCFA. c.  
601 Short-term financing BICEC issues three types of short term loans that include: Reserve Leader (a credit facility,  
602 intended to finance daily common needs like equipment, family events and needs), school fee loan (granted to  
603 finance school resumption expenditures, land acquisition/home renovation loans(personal loans meant for real  
604 estate acquisition or improving security and purchasing equipment.) and overdraft facilities (to finance customers  
605 daily needs, shelter them from end of month financial difficulties and render their budget more flexible. It can  
606 be permanent or spontaneous).

### **61 d. Investment savings**

602 BICEC Immo: It is the perfect way to add value to customers' savings and then finance their construction  
603 project. It is available to all customers, holders of checking accounts between 18 and 55 years.

### **62 Certificate of deposit:**

604 BICEC offers to all its customers the possibility to subscribe for certificates of deposits (CD). In return for this  
605 interest-bearing saving, BICEC issues the customer a negotiable instrument.

606 There are other types of credit facilities that the bank offers such as: BICEC Junior (it is the best way  
607 to maximize the customers' savings and assist them in preparing their children's future), remote banking for  
608 corporate bodies, professional SMEs and SMIs, international expertise, and other financing facilities for farmers.

### **63 b) Method of collecting data**

609 The main source of data collection for this research is the secondary source because based on our research  
610 objectives, secondary data are more appropriate for the various analyses that were to be done. Data has been  
611 collected from the BICEC balance sheet, trading profit and loss statements, journals, annual reports and other  
612 related document.

613 BICEC has been used as a sample of a commercial bank from which a period of 5 years will be used for the  
614 study.

### **64 c) Method of data analysis**

615 Data collected on deposits, loans and profits and losses and credits will be analyzed using inferential statistics.  
616 Variables will be analyzed based on the correlation that exists between them. Correlation is used because this  
617 research is out to study the relationship that exists between profitability and credit risk.

### **65 d) Sample design**

618 The research design used in this study is the descriptive research design because we wanted to determine  
619 relationships between variables and on the longitudinal study basis, since we were investigating on sample elements  
620 that were measured repeatedly for 5 years. BICEC branch was chosen because BICEC is among the three best  
621 performing commercial banks of the Cameroonian banking sector.

### **66 e) Limitation of the study**

622 Due to the limited time and availability of data, the researcher was unable to enter in possession of more recent  
623 financial statements from the bank.

### **67 Chapter Four Presentation of Results and Analysis a) Pre- 637 sentation and analysis of secondary data results**

638 i. Presentation of trend analysis Ratios were calculated and inserted in Tables as follows.

639 Table ??: BICEC NPL to total loans ratios ??2007) ??2008) ??2009) ??2010) ??2011) Source: author (2014)  
640 Source: author (2014) Figure ??: Trend of NPL to total loan ratio As seen from Table1 and Fig1 above, the bank's  
641 NPL to total loans ratio was at his pick in 2007 at 0.18 and it went lower from then till 2011 namely from 0.18

642 to 0.13. This indicates that the bank has been able to reduce the level of its NPL which is quite a good trend.  
643 The loan to deposit ratio indicates the proportion of deposits that is constituted by loans. Therefore, from table2  
644 and Fig2 above, we see that BICEC increased its loans to deposits ratio from 0.56 to 0.73 respectively in 2007  
645 and 2009, indicating that more loans were given out that period only from deposits. But, in 2010, this dropped  
646 to 0.64 probably due to liquidity problems, the bank may have decided to lower it, and at 2011, it tends to rise  
647 again to 0.70 which may be a little risky.

## 648 **68 C**

649 The loans to total assets ratio measures the extent to which total assets are composed of loans. Therefore, as  
650 seen in table 3 and fig 3 above, this ratio rises from 0.41 to 0.51 from 2007 to 2009. But, it fell to 0.49 in 2010  
651 and rose back to 0.54 in 2011. This is because in 2010, there was a marginal increase in the bank's total assets  
652 due to its subscription to buy government bonds issued during that period and still maintained its loans at the  
653 current level. As seen in table ?? and fig 4 above, the NPL to total deposits which indicates the proportion  
654 of total deposits that are constituted by NPL, is quite fluctuating over the years but do not go lower than 8%  
655 nor greater than 10%. This shows that BICEC is able to maintain the amount of NPL to total deposits at a  
656 minimum. But from then, the ratio goes decreasingly right to 0.95 in 2011. This indicates that the institution  
657 has been able to cover its NPL from 2007 to 2010 because the ratios are greater than 1.00. On the other hand,  
658 this was not the case in 2011 where the ratio 0.95 shows that the loan provision for that year has just been able  
659 to cover up to 95% of the NPL which reveals an uncovered 5%. This can be probably due to other factors such as  
660 investments undertaken during that period such as new branches creation and renovation of existing ones. But  
661 the ratio rose to 23% in 2010 and again dropped to the lowest in 2011 at 6%. This shows that the bank is not  
662 able to maintain certain constancy in the percentage changes in its profits.

## 663 **69 ii. Presentation of correlation analysis**

664 In order to further the analysis to be more efficient, we will use the correlation between these variables so that  
665 we can have a better view of the ratios. The correlation was done over 4 years.

666 Table ??: Correlation results of NPL to total loans ratios (X) and percentage changes in profits (Y) for  
667 2007-2011.

## 668 **70 Source: Author (2014)**

669 Source: author (2014) Figure ??: Representation of the correlation between NPL to total loans ratios and  
670 percentages Therefore,  $r^2 = 0.585$ , which means that there is a strong positive correlation between BICEC's  
671 percentage changes in profits and its NPL to total loans ratios. This means that the variation in percentage  
672 change in profit moves the same way as variations in NPL to total loans ratios. If one increases, it will cause the  
673 other to do such. This indicates that only 58% of the variation in percentage change in profitability is due to NPL  
674 to total loans ratio of BICEC. Figure ??: Representation of the correlation between total loans to deposits ratios  
675 and percentages Figure ??: Representation of the correlation between loan to total assets ratios and percentages

676 Using the formula,  $r = -0.804$  thus,  $r^2 = 0.65$ , meaning that there is a strong negative correlation between X  
677 and Y which are the bank's Loan to deposit ratios and the percentage changes in its profits respectively. Any  
678 increase in loan to deposit ratio will lead to a decrease in the BICEC percentage change in profitability.

679 This implies that 65% of BICEC percentage change in profits is due to their loans to deposits ratio. Or put  
680 another way, 35% of variation of the percentage change in profit is due to factors other than loan to deposit  
681 ratios. In other words the more loans are taken from deposits, the lesser the profits realized.

682 The correlation coefficient from these series is:  $r = -0.593$  and  $r^2 = 0.35$ . This indicates that there is a strong  
683 negative correlation between BICEC's percentage changes in profits and its loan to total assets ratios over the  
684 years. This means that only 35% of variation of the percentage change in BICEC profits is not due to the value  
685 of its loan to total assets ratio. The correlation coefficient is  $r = -0.255$  thus,  $r^2 = 0.065$ . This shows that there  
686 is a weak negative correlation between the bank's profit percentage changes and its NPL to total deposits ratios  
687 over the years, revealing also that 6.5% of variation of the bank's profits percentage changes is due to its NPL  
688 to total deposits ratios. The correlation coefficient is  $r = 0.884$  therefore,  $r^2 = 0.781$ . The results indicate that  
689 there is a strong positive percentage changes in profits and its Loan Provision to NPL ratios over the years. It  
690 also reveals that 78% of variation in percentage changes in profits of BICEC is due to its loan provision to NPL  
691 ratio. An increase in loan provision to NPL ratio is associated with an increase in the percentage changes of  
692 profits. works were mentioned, followed by credit risk management theories and models including the portfolio  
693 theory, the asset-by-asset approach and the traditional approach.

694 Using a descriptive research design, we gathered secondary data from BICEC's financial statements extracted  
695 from its annual reports (2007-2011) and any other related document. The data collected on loans, deposits,  
696 total assets, NPL and profits over the period of study were then analyzed using inferential statistics and used  
697 to compute credit risk management ratios and correlation between those ratios and percentage changes in the  
698 bank's profitability values for the period and presented both in tables and charts and graphs.

699 In this section, the data collected for 5 years (2007-2011) from BICEC have been analyzed using ratio analysis  
700 and correlation coefficients between variables. Table ?? to 6 present descriptive statistics of the various ratios

### 73 C) RECOMMENDATIONS

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701 computed based on financial statements of the periods. The study revealed that: For BICEC's NPL to total  
702 loans ratios, the maximum was attained in 2007 at 18% and minimum in both 2010 and 2011 at 13%. This  
703 ratio indicates the proportion of the total loans that are not performing. On the other hand, total loans to total  
704 deposits reached their maximum value in 2009 at 73% and minimum in 2007 at 56%. This shows that BICEC  
705 increased its loans proportion from deposited funds. But it is worth to attend to it as it is rising back to 70% in  
706 2011. This is almost the same regarding its total loans to Chapter Five V.

## 707 71 Summary, Conclusion and Recommendations a) Summary 708 of the study

709 The study sought to examine the impact of credit risk management on commercial banks performance. In order  
710 to achieve this, first, a good number of concepts were developed and discussed; also, other researchers' works on  
711 this area were brought forward to bring more light to the research. Our conceptual literature emphasized on the  
712 various concepts such as risk, loans, credit risk, credit risk management, commercial banks, performance and its  
713 determinants, bringing out for each concept various definitions and explanations from different authors. Then we  
714 went further to elaborate on the various types of risk that affect banks; they include: interest rate risk, market  
715 risk, liquidity risk, currency risk, operational risk, offbalance sheet risk, reputation risk, legal risk, strategic risk  
716 and capital risk. More so, we developed on credit risk management since it is the key area of focus of the study;  
717 where we gave the various tools and/or techniques used by banks such as avoidance, diversification in lending,  
718 screening, compensating balances and monitoring business transactions, long term customer relationship, loan  
719 commitments, collateral requirements, credit rationing, specialization and credit derivatives. After which, some  
720 empirical C

721 total assets went increasingly from 2007 to 2011 respectively from 0.41 to 0.54. Regarding the institution's  
722 NPL to total deposits ratios, table ?? shows that there is an average ratio of 9% with a maximum of 10% attained  
723 both in 2007 and 2009, and a minimum of 8% in 2010. It shows that there is still a certain degree of default risk.  
724 Moreover, the bank has been able to cover its NPL over the first 4 years. But as seen in table 5 and Fig5, the  
725 trend of the loan provision to NPL loans ratio is decreasing over time as from 2008 revealing that there are not  
726 sufficient tools to monitor, control and cover those NPL because it even went worst in 2011 where the bank has  
727 not been able to cover all NPL as in the precedent years but just up to 95% of it.

728 The correlation matrices in Table ?? to 11 indicate the degree of correlation between each pair of variables.  
729 Therefore, Table ?? and 11 show a significant relationship and to be more precise, a strong positive correlation  
730 between percentages changes in profits to NPL to total loans ratios on one hand and loan provision to NPL ratio  
731 on the other hand. The findings indicate thus that all the risk management indicators have a direct relationship  
732 with performance. On the other hand, table 8 and 9 show the degree of correlation between each pair of variables;  
733 namely percentage changes in profits (dependent) and both total loans to total deposits ratios and loans to total  
734 assets ratios (both independent) and from correlation results obtained, the variables are negatively correlated.  
735 However, the findings indicate that these ratios are directly related to the bank performance but negatively.  
736 Thus, the lower these ratios, the more profits are made and vice versa. Furthermore, observations from Table  
737 10 and Fig 10 reveal that there is a weak negative correlation between the dependent and independent variables  
738 respectively percentage changes in profits and NPL to total deposit ratios. However, this relationship is not  
739 significant which indicates that there is no any relationship between the bank's performance and the NPL to  
740 total deposits ratio.

## 741 72 b) Conclusion

742 The general objective of the study was to examine the effects of credit risk management on performance of  
743 commercial banks and our specific objectives were to find out the various risk management tools used by banks  
744 to manage credit risk and to evaluate loan assessment techniques used by the institution.

745 The results of the research showed that credit risk management is an important predictor of a bank financial  
746 performance; thus bank's performance depends on credit risk management.

747 The study also showed that the NPL to total loans ratio as one of the risk management indicators is a major  
748 predictor of the bank financial performance to the extent of 58%, and followed by both total loan to total  
749 deposits ratio and loans to total assets ratio which both affect financial performance negatively by respectively  
750 65% and 35%.

751 Credit risk management is very crucial to the bank performance since it has a significant relationship with  
752 bank performance.

## 753 73 c) Recommendations

754 Based on the findings above, the following recommendations were made which can be used to improve the credit  
755 risk management of the institution so as to improve the financial performance:

756 First, the bank's loan to deposit ratio should be kept around 65% so that it will not put the bank at a liquidity  
757 risk situation; this is because if majority of loans are made from deposits, in case there is illiquidity due to  
758 non-repayment of the loans issued, it may lead to a bank run and thus create at the same time a reputation risk.

759 Then, the bank should as much as possible be able to maintain its loan provision to NPL ratio at about 1.25.  
760 This is to avoid any situation of uncovered loans. In the case NPL are not fully covered, obviously it implies a  
761 loss. Thus, the bank's provisions for bad debts should out raise the amounts of NPL as time goes.

762 Since credit risk management has an important contribution to the bank's performance, the institution should  
763 put more accent on its loan assessment techniques and accurately evaluate credit applications before issuing funds  
764 so that there will no longer be NPL in its financial statements, even though the risk is always present but it  
765 should be minimized to its fullest by minimizing the NPL to total loans ratio.

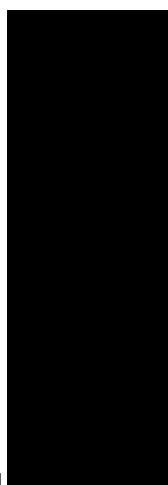
766 Banks must adhere to prudential banking practices and even diversify more in lending to avoid repetitive losses  
767 in particular types of loan issued to their customers.

768 BICEC should have adequate provision for doubtful debts and renegotiate loan terms for insolvent customers  
1 2 3  
and even extend their credit maturity.



2

Figure 1: Figure 2 :



331

Figure 2: Table 3 :Figure 3 :© 2018 Global Journals 1 Global

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<sup>1</sup>The Impact of Credit Risk Management on the Performance of Commercial Banks in Cameroon. Case Study of BICEC Cameroon

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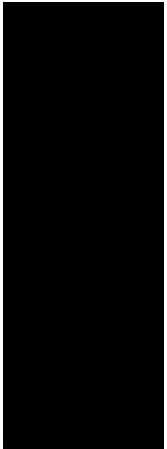


Figure 3: Table 4 :Figure 4 :

11

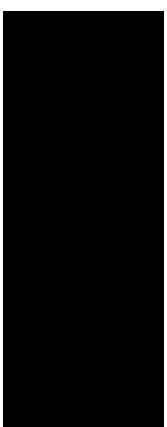


Figure 4: GlobalCFigure 11 :

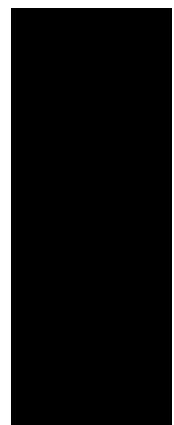


Figure 5:



Figure 6:



Figure 7:

### 73 C) RECOMMENDATIONS

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Figure 8:

Year 2018  
Volume XVIII Issue VII Version I  
( )  
Global Journal of Management and Business Research  
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*[Note: CMETHODS used by banks to mitigate credit risk include: Avoidance, diversification, compensating balances and monitoring business transactions, screening, long-term customer relationships, loan commitments, collateral requirements, credit rationing, specialization in lending and credit derivatives.]*

Figure 9:

Year 2018  
25  
Volume XVIII Issue VII Version I  
( )  
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Figure 10:

**2**

Source: author (2014)

Figure 11: Table 2 :

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5

Source: Author (2014)

Figure 12: Table 5 :

6

1.15					
1.1					
1.05					
1					
0.95					
0.9					
0.85					
2007	2008		2009	2010	2011
	Year			Percentage Changes	
	2007-2008			0.52	
	2008-2009			0.10	
	2009-2010			0.23	
	2010-2011			0.06	
					Source: Author (2014)

0.6					
0.5		0.52			
0.4					
0.3					
0.2				0.23	
0.1			0.1		0.06
0					
2008			2009	2010	2011
					Source: author (2014)

Figure 6: Trend of percentage changes in profits

Figure 13: Table 6 :

Figure 14: C

8

Year	X	Y	XY	X 2	Y 2
2008	0.15	0.52	0.0780	0.0225	0.2704
2009	0.14	0.10	0.0140	0.0196	0.0100
2010	0.13	0.23	0.0299	0.1690	0.0529
2011	0.13	0.06	0.0078	0.1690	0.0036
SUM	0.55	0.91	0.129	0.7590	0.8130

[Note: CSource: author(2014) ]

Figure 15: Table 8 :

### **73 C) RECOMMENDATIONS**

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**9**

Source: author (2014)

Figure 16: Table 9 :

**10**

Source: author (2014)

Figure 17: Table 10 :

Year	X	Y	XY	X 2	Y 2
2008	0.09	0.52	0.0468	0.0081	0.2704
2009	0.10	0.10	0.0100	0.0100	0.0100
2010	0.08	0.23	0.0184	0.0064	0.0529
2011	0.09	0.06	0.0054	0.0081	0.0036
SUM	0.36	0.91	0.0806	0.0326	0.8130

Source: author (2014)

Figure 18: :

**11**

Source: author (2014)

Figure 19: Table 11 :

770 .1 Appendix

771 .2 Ratios formulae:

772 NPL to total loans ratio = NPL / total loans Loans to total deposits ratio = total loans / total deposits Loans to  
773 total assets ratio = total loans / total assets NPL to total deposits ratio = NPL / total deposits Loan provision  
774 to NPL ratio = loan provision / NPL Acknowledgements I would like to express my immense thankfulness to my  
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782 [ Global Association of Risk Professionals] , *Global Association of Risk Professionals* (GARP)

783 [Perry and Fontnouvelle ()] , Jason Perry , Patrick Fontnouvelle . 2005.

784 [Rösch ()] , Daniel Rösch . 2006.

785 [ BICEC Annual Reports ()] , *BICEC Annual Reports* 2008-2011.

786 [Nikolaou ()] , Kleopatra Nikolaou . 2009.

787 [Tegwi ()] , P N Tegwi . 2010. (Banking for professionals 1st Edition)

788 [Dansonmuyoki and Kadubo ()] , Adano Salad Dansonmuyoki , Kadubo . 2011.

789 [ PWC ()] , *PWC* 2011.

790 [Turner ()] , Grant Turner . 2012.

791 [Nasr ()] , Sahar Nasr . 2012.

792 [ The China Regulatory Commission Report ()] , *The China Regulatory Commission Report* 2012.

793 [ Research Journal of Finance and Accounting ()] , *Research Journal of Finance and Accounting* 2013. 4 p. 16.

794 [ International Journal of Business (2012)] , *International Journal of Business* October 2012. 2 p. 6. (Humanities  
795 and Technology)

796 [An empirical comparison of default risk forecasts from alternative credit rating philosophies] *An empirical  
797 comparison of default risk forecasts from alternative credit rating philosophies*,

798 [Peter et al. ()] *Bank management and financial services 8th Edition*, S Peter , C Rose & Sylvia , Hudgins . 2010.  
799 2007. 326273 p. 441521.

800 [Ap Faure ()] *Banking: An introduction*, Ap Faure . 2013.

801 [Kolabo and Funso ()] *Credit risk management and commercial banks performance in Nigeria: A panel model  
802 approach*, T Kolabo , Funso . 2012.

803 [Girmamekasha ()] *Credit risk management and its impact on performance of Ethiopian commercial banks*,  
804 Girmamekasha . 2011.

805 [Van Gestel and Baesens ()] *Credit risk management: Basic concepts: financial risk components, rating analysis,  
806 models, economic and regulatory capital*, Tony Van Gestel , Bart Baesens . 2009.

807 [Khalil Elian ()] *Effectiveness of credit risk management of Saudi banks in the light of global financial crisis: A  
808 qualitative study*, Abdelrahim Khalil Elian . 2013.

809 [Egyptian banking system] *Egyptian banking system*,

810 [Federal Reserve Bank ()] *Federal Reserve Bank*, 2013. (list of US largest banks)

811 [Ghana banking survey] *Ghana banking survey*,

812 [IMF Country Report (2009)] N°13/146. *IMF Country Report*, February 2009. May 2013. 22. (IMF Country  
813 Report)

814 [Liquidity (risk) concepts, definition and interactions] *Liquidity (risk) concepts, definition and interactions*,

815 [Hou ()] *Market risk management*, Aaron Hou . 2005.

816 [Measuring reputation risk: the market reaction to operational loss announcements] *Measuring reputation risk:  
817 the market reaction to operational loss announcements*,

818 [Sam and Neamie ()] *Performance risk in banking: A comparative study for Egypt and Lebanon*, Simon Sam ,  
819 Neamie . 1998.

820 [Allan and Beer ()] *Strategic risk: It's all in your head*, Neil Allan , Louise Beer . 2006.

821 [The Chinese banking system] *The Chinese banking system*,

### **73 C) RECOMMENDATIONS**

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822 [Prakashshama ()] *The impact of credit risk management on financial performance of commercial banks in Nepal,*  
823 Ravi Prakashshama . 2012.

824 [The impact of credit risk management on the financial performance of banks in Kenya for the period ()] *The*  
825 *impact of credit risk management on the financial performance of banks in Kenya for the period, 2000-2006.*

826 [Njanike ()] *The impact of effective credit risk management on banks survival, Kosmas Njanike . 2009.*