Journal of Management and Corporate Governance *© 2015 Cenresin Publications* *Volume 7, Number 2, 2015*
www.cenresinpub.org
ISSN: 2277-0089

Credit Risks Management and Financial Ratios in the Economy: An Empirical Overview of the Performance and Sustainability of Nigerian Microfinance Banks – NMFBS (2005 – 2014)

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ABSTRACT

Credit risk refers to certainty of loss due to beneficiary's inability to make payments on any type of debt, while credit risk management is practice of mitigating the loss by understanding the adequacy of both a bank's capital and loan loss reserves at any given time. Financial ratios are mathematical comparisons of financial statement in the balance sheet (BS) in question, helping the stakeholders to know the situation bank's situation for improvement. Microfinance Banks (MFBs) are financial institutions licensed to provide diversified, affordable and dependable financial services to the active poor, in a timely and competitive manner that would enable them to undertake, finance and develop long-term, sustainable entrepreneurial activities, established in December, 2005 in Nigeria, when it was obvious that with an overall data of over 140 million, only about 35 percentage of Nigeria have access to financial services and that the remaining 65 percentage relied on the informal sector. There are many types of financial ratios, but this paper will only concentrate on seven (7). The main objective of this paper is to assess the performance and sustainability of the Nigerian Microfinance Banks (NMFBs) in relation to credit risks and financial ratios positions. The specific objectives are to assess whether the seven calculated ratios of: Current; Quick; Debt-Equity; Total Assets to Total Debts; Proprietary; Inventory Turnover and Gross Profit conform to their standard ratios. The Balance Sheet (BS) of the selected NMFBs as at 31st December, 2014 as indicated in Table 2 as one of the secondary data as well as interviews conducted with the operators and borrowers of NMFBs through the questionnaires as primary data were used. The CAMEL approach analysis was used to arrive at the financial ratios positions of the NMFBs. This paper, therefore, recommends regular and continuous credit risk identification, assessment of performance and sustainability as well as sound corporate governance. If NMFBs are to survive and grow in order to achieve the developmental objectives to the economy, the calculated ratios must conform to their standards ratios as one of the findings.

Keywords: Credit Risk Management, Microfinance Banks and Financial Ratios

INTRODUCTION

The concept of micro financing begins to gain ground in Nigeria, at present, over one thousand microfinance banks so far were licensed to operate (AFDB, OECD, UNDP and UNDP, 2011; 2006). This paper identifies that credit risk management is an essential element of long term success and hence for financial institutions, to effectively manage risk and at the same time further identifies the following points: systematic approach to evaluate and measure risk so as to identify the risk in the early stage and hence fix it; a good risk management framework that allows the management to quantify the risk and fine tune to the capital allocation and liquidity needs to match the on and off balance sheet risks faced by the NMFBs and to evaluate the impact of potential shocks to financial system or institution; and an accurate information on potential consequences for both positive and negative (Youssoufou, 2002C; Baffa, 1990). There has been a significant increase in the emphasis on credit risk management, hence the operators of the NMFBs and the regulators are able to better anticipate risks, than just to react to them. Therefore, to foster stronger, the camels analysis approach (where: c = capital adequacy; a = assets quality; m = management quality; e = earnings; l = liquidity; and s = sensitivity to market risk) among the regulators of NMFBs emphasizes the quality of internal system to identify and address potential problems quickly. The proper internal risk management yields to practices, designed to limit risk, associated with individual product lines and systematic, quantitative methods to identify, monitor and control aggregate risks across NMFBs (Anyanwu, 2004; Gandy, 2003; Yaron and Charistoneko, 1998).

Nigerian Microfinance Banks (NMFBs) have been growing and serving large base of customers and also attract more mainstream investment capita and funds, hence they have to strengthen their internal capacity to identify and anticipate potential risks to avoid unexpected losses and surprises. Creating credit risk management framework and culture within the NMFB in the next step after mastering the fundamental of individual risks, such credit risk, treasury risk, and liquidity risk must be priority. Furthermore, credit risk management framework is a consciously designed system to protect the organization from undesirable surprised or downside risks and enable it to the advantage of opportunities or upside risks (CBN, 2013a; 2005; Sulaiman, 2002).

Lending to micro-entrepreneurs is based on promise to pay. Such transactions entail risks to the financial institution in the sense that the promise may or may not be honoured. When borrowers fail to pay, the defaults constitute losses to the financial institutions, and these will also impact on the capital base. Credit risk in the NMFBs could arise from various sources, which this paper will highlight under the problems (CBN, 2012; Banerjee and Duflo, 2006). In the above explanation, credit risk is most simply defined as the potential that a MFB borrower will fail to meet its obligations in accordance with agreed terms. To this respect, therefore, the goal of credit risk management is to maximize a MFB's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters (Fox and Sohnesan, 2013; CBN, 2011; Gandy, 2003).

STATEMENT OF PROBLEM

Credit risks in the NMFBs could arise from various sources such as lack of adequate and accurate information about the borrower and his debt capacity, poor loan monitoring, loan mismatch by the NMFB and natural occurrences. Early detection of the risks would give room for remedial action. Late detection leaves fewer options which are generally designed to protect the NMFBs than the borrower. Early warning signals of credit risks include liquidity problems evidenced by abnormal deposits or withdrawals, deteriorating prudential ratios, trade debts build up, poor asset maintenance and employee pressure. Others are, deteriorating product quality, inability and unwillingness to prepare timely financial statements, undue management changes, assets cannibalization and or sales (Mishra and Montiel, 2012; Ampka, 2002; WB, 2001). Credit risk management determines the features of the loan products offered such as interest rate, duration, collateral and other covenants. The nature and scope of credit risk management principle depends on the magnitude of the envisaged risks. Qualitative methods of assessing risk in the NMFBs involve objective assessment of the borrowers' qualities in terms of: character – reputation, willingness to pay, past repayment history, stability of residence and occupation; capital – equity contribution and its ratio to debt; capacity – nature of cash flow and its ability to make instalment repayments as they fall due; collateral – adequacy and reliability; conditions – economic conditions; and compliance – pattern of honouring obligations to tax authorities and workers' salaries (Anwar and Islam, 2011; Ampka, 2002; Yaron, 2002).

In quantitative methods, the observed characteristics of the loan applicants are used to determine the probability of default or of repayments. Such characteristics include: income; assets; age; occupation; location; and debt or equity ratio. The quantitative methods are more suitable for big firms and conglomerates. In microfinance, qualitative methods are often adopted, as the size of loan to individual borrowers do not often justify investment in complex risk analysis techniques that quantitative model entail (Sonja, 1999; Amendariz, 1998; Khandker, Baqui and Zahed, 1995).

Lack of credit policy by the board of the NMFBs that intend to curtail risks in terms of: outstanding loans, geographical or sectoral coverage, single obligor limits, maturity and loan pricing procedure; strong credit analysis derivable from simple historical and projected from cash flows; diversification of loan portfolios to avoid undue concentration to either single borrower, same geographical location or a group of borrowers with closely related economic activity; adequate client training prior to loan disbursement by the NMFBs; the needs of the borrowers are satisfied in granting suitable loans; strong credit review process to help in the monitoring of the loans in line with the prudential standards set by the regulations; procedures and technical support that will enable the defaulters to redeem their images through interim resuscitation measures; and failure to establish judicial and defaulters departments to assist loan recoveries department by way of taking the defaulters to court and publishing the defaulters names in the National Dailies (Beck, 2013; Ana, 2007; Brickly, Cole and Jarrell, 1997). Other problems facing credit risk management in the NMFBs are the failure of the absence of Judicial System and failure to publish defaulters in the National Newspaper affected the loans recoveries departments of the NMFBs.

RESEARCH QUESTIONS

Are the seven calculated ratios of: Current; Quick; Debt-Equity; Total Assets to Total Debts; Proprietary; Inventory Turnover and Gross Profit conform to standard ratios?

OBJECTIVES OF THE STUDY

The main objective of this paper is to assess the performance and sustainability of the Nigerian Microfinance Banks (NMFBs) in relation to credit risks and financial ratios positions. The specific objectives are to assess whether the seven calculated ratios of: Current; Quick; Debt-Equity; Total Assets to Total Debts; Proprietary;

Inventory Turnover and Gross Profit conform to their standard ratios using the Balance Sheet of the Microfinance Banks Limited Balance Sheet as at 31st December, 2014.

HYPOTHESIS OF THE PAPER

H_0: The seven calculated ratios of: Current; Quick; Debt-Equity; Total Assets to Total Debts; Proprietary; Inventory Turnover and Gross Profit do not conform to their standard ratios using the Balance Sheet as at 31st December, 2014.

JUSTIFICATION AND SIGNIFICANCE OF THE PAPER

The justification and significance of this paper is based on the findings, which are expected to benefit all and sundry in the Nigerian context that are willing and able to shake their laziness to be self-independent and self-employed through NMFBs. The study is also expected to be useful to professionals to assist in creating awareness to the beneficiaries engaging in NMFBs' activities as career choice, with a view to reducing unemployment, alleviating poverty in Nigeria. The study findings are expected to researchers, students and academics so that they can put in their best in understanding the importance of NMFBs activities in the economy. The study findings are expected to explore new ideas and strategies that would bridge the gap and advice policy makers, not to only relay on the output products of the participants, but to practically and collaborate with others to support the participants as an alternative for empowerment in Nigeria. Further findings are expected to expose the relevance of NMFBs activities in underestimating income and contributing to the growing literature on NMFBs development for economic growth in Nigeria.

SCOPE OF THE PAPER

The scope of this paper covers NMFBs. The study focused on the period NMFBs was fully functional from 2005 – 2014. The study covered 36 states and Federal Capital Territory (FCT) Abuja, where 5,500 questionnaires (Appendices 1 and 2) were distributed to NMFBs borrowers/beneficiaries and three NMFBs each were selected, giving a vtotal of 111 NMFBs as shown in Table 4. The target respondents were grouped into cluster: those who have the knowledge and those who have no knowledge of NMFBs activities. The selection of these categories is to bridge the gap between the two.

LIMITATION OF THE PAPER

The limitations encountered in this paper were: lack of co-operation by so beneficiaries of NMFBs, accurate and reliable data as well as time.

POPULATION OF STUDY

Three (3) NMFBs were randomly selected from the thirty six states and FCT, giving a total number of one hundred and eleven (111) NMFBS from the total number of 814 NMFBs as at December 2013.

Sample Size and sampling Technique

For this study, fifty (50) questionnaires were randomly distributed to the 111 NMFBs selected and yielded 5,500 customers who were interviewed to generate the primary data covering a period of 2005-2014. See Table 1.

Materials and Method

Sources of Data

The study obtained information and data from two major sources, primary and secondary sources as follows:

Primary data and information were collected through a combination of techniques: questionnaires, personal interviews, focus group discussions and observations. A set of questionnaire was administered to the Microfinance Borrowers (respondents) and Microfinance Banks, as indicated in Appendices 1 and 2. In the case of Microfinance Borrowers, personal interviews, focused group discussions and observations supplemented the questionnaires. The researcher, assisted by six research assistants administered questionnaires to the selected respondents and Microfinance Banks (MFBs).

Secondary information and data were obtained from various sources such as publications from the Central Bank of Nigeria (CBN) and Non-Governmental Organizations (NGOs), the MFBs institutions' publications, relevant published materials like books, journals, magazines and newspapers. Specifically, the National Board for Community Banks (NBCB) Annual Reports and Statement of Accounts, National Bureau of Statistics (NBS), National Planning Commission (NPC) and the World Bank Office in Nigeria. Relevant materials were also sourced from libraries at the University of Abuja, Ahmadu Bello University, Zaria and Bayero University Kano.

Model Specification

In determining the performance and sustainability of the Nigerian Microfinance Banks (NMFBs) in relation to the credit risks and financial ratios positions as at 31st December, 2014 as indicated in the attached Tables 1, 2, 3 and 4 in this paper, CAMEL approach was adopted (Muhammad, 2009; Yaron, 2000; Brigham and Weston, 1979; Altman, 1968) as:

(i) Current Ratio (CR) – Is the market liquidity and ability to meet credit demands and is used to measure the ratio of current assets (CA) to current liabilities (CL). The standard ratio used to be that the current assets should be four times the current liabilities (that is, 4xCA = CL or 4:1) and the equation is given as:-

$$CR = \frac{CA}{CL} \quad \ldots\ldots\ldots\ldots\ldots..(1)$$

(ii) Quick Ratio (QR) – Is also referred to acid test ratio or liquid ratio. Is the ability of the NMFB to use its near cash or quick assets to extinguish or retire its current liabilities immediately and is used to measure the ratio of quick assets (QA) to quick liabilities (QL). The standard ratio used to be that the quick asset should be equal to quick liabilities (that is, QA = QL or 1:1) and the equation is given as:-

$$QR = \frac{QA}{QL} \quad \ldots\ldots\ldots\ldots\ldots(2)$$

(iii) Debt- Equity Ratio (DER) - Is also closely related to leverage or risk or owners funds or borrowed funds invested in the business. Is the relative proportion of shareholder's equity and debts used to finance the NMFB's assets and is used to measure the ratio of debts (Ds) to equity (E). The standard ratio used to be that the equity should be two times to debts (that is, D = 2E or 1:2), lower ratio is always better and the equation is given as:-

$$DER = \frac{Ds}{E} \quad \ldots\ldots\ldots\ldots\ldots(3)$$

(iv) Total Assets to Total Debts Ratio (TATDR) – Debts ratio (DR) is the financial ratio that indicates the percentage of the NMFB's assets that is provided via debt. It is the ratio of total debt (sum of current liability) and total assets (sum of current assets and fixed assets, such as goodwill) and is used to measure the ratio of total asset (TA) to total debts (TD). The standard ratio used to be that total assets should be equal to four times total debts (that is, TA = 4TD), high total assets to debts proportion indicates that the NMFB heavily depends on outside loans for its existence. The equation is given as:-

$$TATDR = \frac{TA}{TD} \quad \ldots\ldots\ldots\ldots(4)$$

(v) Proprietary Ratio (PR) – Is also referred to capital ratio or net worth to total assets ratio. Is also a variant of debt – equity ratio? The term proprietary fund is called "net worth" and used to measure the relationship between the shareholder's funds (SHFs) to total assets TA). The standard ratio used to be that the shareholder's funds should be equal to two times total assets (that is, SHFs = 2TA or 1:2). If the SHFs is less than the TA, then the PR is considered low as considered in the range between 0.01 – 0.02, it reflects the general financial strength of the concern. Higher PR infers the good financial position of the NMFB and is considered between 0.5:1.0 or above is considered ideal. A higher PR indicates relatively secure position in the event of solvency of a concern. A lower ratio of PR indicates greater risk to creditors. A ratio below 0.5 is alarming for the creditors. Economically, if the NMFB shows a higher PR, it means that less danger to creditors in case of winding up and the equation is given as:-

$$PR = \frac{SHFs}{TA} \quad \ldots\ldots\ldots\ldots\ldots(5)$$

(vi) Inventory Turnover Ratio (ITOR) - Is also referred to stock turns or turns or stock turnover and used to measure the number of times inventory is sold (earnings) or used in a time period such as a year. It also measures the efficiency with which the affairs of the NMFBs are being conducted. The performance is related to sales. The high ratio of ITOR indicates that the NMFBs have liquidity positions and used to measure the relationship between the costs of goods sold (CGS) to average inventory (AI). The standard ratio used to be that the cost of goods sold equals to average inventory (that is, CGS = AI or 1:1). If the CGS is less than the AI, then the ITOT is considered low as considered in the range between

0.01 – 0.02, it reflects the general inefficiency or performance of the NMFB. Higher ITOR infers the good efficiency or performance or liquidity position of the NMFB and is considered between 0.5:1.0 or above is considered ideal. A higher ITOR indicates relatively secure position in the event of solvency of a concern. A lower ratio of ITOR indicates greater risk to creditors. A ratio below 0.5 is alarming for the creditors. Economically, if the NMFB shows a higher ITOR, it means that less danger to creditors in case of winding up and the equation is given as:-

$$ITOR = \frac{CGS}{AI} \quad \ldots\ldots\ldots\ldots\ldots(6)$$

(vii) Gross Profit Ratio (GPR) - Is the difference between net sales and cost of goods sold. This ratio shows the margin left after meeting manufacturing costs. It measures the efficiency of production as well as pricing. This ratio measures the margin of profit available (GP) on sale (S). It reflects the profitability of the NMFBs. Higher ratio is better to the concern. The equation is given as:-

$$GPR = \frac{GP}{S} \times 100 \quad \ldots\ldots(7)$$

Nigerian Microfinance Banks have Headquarters Office in Abuja; therefore, the choice of Abuja came as a result of being the headquarters. The source of data for this paper has to do with how and where recorded data were obtained. Importantly, inputs in this paper are those that will give the desired outlook as well as ensuring that data are obtained with the minimum accuracy, time and cost. More importantly, efforts were made in ensuring that all relevant data was gathered through the secondary. These were obtained and extracted from the already existing monthly, quarterly and annual records and returns.

Results

This section presents descriptive results of the supply of microfinance services, the results from the analysis of both primary and secondary data as well as econometrics results and the discussion of the findings of the study.

From the credit risks management analysis of the Microfinance Banks Limited as at 31st December, 2014 as indicated in the attached Balance Sheet, series of findings are listed, this exposed its present financial status. The elaborate details of the findings are highlighted below:

Table 1: NMFBs Borrowers (Respondents) Response Rate (2005-2014)

Type	No. Responded	No. Not Responded	Total	Percentage (%) As Per Total	
				% Response	% Not Responded
Q/nnaires Distributed	5,500	50	5,550	99.1	0.90
Total	**5,500**	50	5,550	**100.0**	

Source: Field Survey, 2014

Table 2: Summary of Comparative Balance Sheets of the NMFBS as at 31st December, 2014

PARTICULARS					
CR	**YEAR**	**CA (₦m)**	**CL (₦m)**	**CR**	**SR**
	2005-2007	131	84	1.56	
	2007-2009	153	95	1.61	
	2009-2011	158	120	1.31	
	2011-2014	50	14	3.55	
	TOTAL (X_1)	**492**	**313**	**8.03**	
	AVRAGE (X_1)			**2.01**	**4:1**
QR	**YEAR**	**QA (₦)**	**QL (₦)**	**RATIO**	
	2005-2007	131	84	1.56	
	2007-2009	152	95	1.59	
	2009-2011	157	120	1.31	
	2011-2014	48	14	3.38	
	TOTAL (X_2)	**488**	**313**	**7.84**	
	AVERAGE (X_2)			**1.96**	**1:1**
DER	**YEAR**	**DEBT (₦)**	**EQUITY (₦)**	**RATIO**	
	2005-2007	94	5	19.59	
	2007-2009	83	5	16.62	
	2009-2011	75	5	13.90	
	2011-2014	109	7	16.63	
	TOTAL(X_3)	**361**	**22**	**66.74**	
	AVERAGE (X_3)			**16.67**	**2:1**
TATDR	**YEAR**	**TA (₦)**	**TD (₦)**	**RATIO**	
	2005-2007	310	94	3.30	
	2007-2009	349	83	4.22	
	2009-2011	405	75	5.40	
	2011-2014	493	109	4.51	

	TOTAL (X_4)	**1,557**	**361**	**17.43**	
	AVERAGE (X_4)			**4.36**	**1:4**
PR	**YEAR**	**SH FUNDS (₦)**	**TA (₦)**	**RATIO**	
	2005-2007	5	310	0.02	
	2007-2009	5	349	0.01	
	2009-2011	5	405	0.01	
	2011-2014	7	493	0.01	
	TOTAL (X_5)	**22**	**1557**	**0.05**	
	AVERAGE (X_5)			**0.013**	**0.5-1.0**
ITOR	**YEAR**	**COGS (₦)**	**AI (₦)**	**RATIO**	
	2005-2007	1	227	5.08	
	2007-2009	6	589	10.33	
	2009-2011	5	835	6.45	
	2011-2014	10	4	2.78	
	TOTAL (X_6)	**22**	**1,655**	**24.64**	**3:1**
	AVERAGE (X_6)			**6.16**	
GPR	**YEAR**	**GP x 100 (₦)**	**SALES (₦)**	**RATIO**	
	2005-2007	47	1	4.19	
	2007-2009	414	6	7.19	
	2009-2011	452	8	5.89	
	2011-2014	185	10	1.89	
	TOTAL (X_7)	**1,098**	**25**	**19.16**	
	AVERAGE (X_7)			**4.79**	**6:1**

Source: Balance Sheets of NMFBs as at 31st December, 2014; NB = SH – Shareholders; AI – Average Inventory; CL – Current Liabilities; QL – Quick Liabilities; CR – Calculated Ratios; SR – Standard Ratios; CA – Current Assets; QA – Quick Assets; TA – Total Assets; GP – Gross Profits; TD - Total Debts; GP – Gross Profit; COGS – Cost of Goods Sold;

Table 3: Comparative Balance Sheet for 2005-2007 AND 2007-2009

Particulars	2005-2007 (₦m)	2007-2009 (₦m)	Increase/ Decrease (₦m)	Percen (%)
ASSETS				
Current	64	71	7	10.23
Loans & Advances	124	149	25	19.94
Current (Investment)	1,305	1	96	7.31
Fixed Assets	69	84	16	22.52
Net Loss	52	44	7	14.06
LIABILITIES				
Capital	5	5	0.20	3.86
Deposits	132	171	39	30.00
Borrowings	34	29	5	13.87
Current	140	144	5	3.36
Total (Assets)	310	349	40	12.80
Total (Liabilities)	310	349	40	12.80

Source: Balance Sheets of NMFBs as at 31st December, 2014

Comparing 2004-2006 and 2006-2008, the results of Table 2 showed that the amount of increase was =N=39,651,379.30 and the percentage increase was 12.80%.

Table 4: Comparative Balance Sheet for 2009-2011 AND 2011-2014

PARTICULARS	2005-2006 (₦m)	2006-2008 (₦m)	INCREASE/ DECREASE (=₦m=)	PERCENT (%)
ASSETS				
Current	71	58	(13)	17.73
Loans & Advances	149	205	56	37.36
Current (Investment)	1	2	0.91	6.49
Fixed Assets	84	105	21	25.10
Net Loss	44	36	86	19.48
LIABILITIES				
Capital	5	6	0.42	8.40
Deposits	171	209	38	53.99
Borrowings	29	37	8	28.18
Current	144	153	9	6.17
Total (Assets)	349	350	56	15.97
Total (Liabilities)	349	350	56	15.97

Source: Balance Sheets of NMFBs as at 31st December, 2014

Comparing 2008-2011 and 2011-2014, the results of Table 3 showed that the amount of increase was =N=55,815,912.20 and the percentage increase was 15.97%.

DISCUSSIONS

The interpretations in Table 1, showed that: In the financial year (FY) 2005-2007 showing an increase tendency in current ratio, a decrease in 2005-2007, an increase in 2007-2009 and a decrease in 2009-2011 with diminishing tendency. Quick ratio is increased in the FY 2005-20076 and it's down in the FY 2007-2009, an increase in 2008-2011 a decrease in 2011-2014. Bank's debt – equity ratios decreased for the first 4 years (2009-2011) and slowly grew up next from 2011-2014. Total assets to total debts increased from 2004-2006, suddenly decreased in 2006-2008 and increased in 2008-2011. Proprietary ratios decreased for the first 3 years (2005-2007) and slowly grew up next from 2007-2009 and suddenly decreased from 2009-2011. Inventory turnover ratio increased from 2005-2007, increased in 2007-2009 and decreased from 2009-2011. Gross profit ratios increased from 2005-2007, suddenly decreased in 2007-2009, increased in 2009-2011 and again suddenly decreased in 2011-2014.

Testing of Hypotheses

The results in Table 2, showed that H_0 (null-hypothesis) is rejected, while H_1 (alternative-hypothesis) is accepted.

I H_1: Current and quick ratios of the NMFBs in the Balance Sheet of the Microfinance Banks Limited in the Balance Sheet as at 31st December, 2014 are adequate and credit worthy. The ratios are within the standard ratios of 4:1 and 1:1 respectively.

The results in Table 2, showed that H_0 (null-hypothesis) is rejected, while the H_1 (alternative hypothesis) is accepted.

II. H_1: Debt-equity and total assets to total debts ratios have attributed to business risks of the NMFBs in the Balance Sheet of the Microfinance Banks Limited in the Balance Sheet as at 31st December, 2014. The ratios are within the standard ratios of 1:2 and 1:4 respectively.

The results in Table 2, showed that H_0 (null-hypothesis) is accepted, while the H_1 (alternative-hypothesis) is rejected.

III. H_0: Proprietary, inventory turnover and profitability ratios of the NMFBs in the Balance Sheet of the Banks Limited in the Balance Sheet as at 31st December, 2014 are not; strong, credit risk and profitable. The ratios are within the standard ratios of 0.5-1.0, 3:1 and 6:1 respectively.

ACKNOWLEDGEMENT

This paper acknowledged that financial ratios provide quick clues about the health of a company. Therefore, ratios are not considered in isolation. However, comparison of a company's ratios over time is crucial to gauging its prospects. It is also vital to look at ratios averages for companies in similar industries. Business news media provide ratio data and industry averages. Ratio analysis is an effective tool for selecting stocks to study further. Before investing money, conducting a thorough examination of a company's financial statements is very important. Also, read the notes to the financial statements, which provide supplementary information needed for sound investment decisions. Ratios that provide a picture of a company's cash compared to its debt indicate whether the NMFB is financially sound. The quick and current ratios are two examples. To compute the quick ratio, first add cash and cash equivalents, such as stocks or bonds. Then divide this number by current liabilities, defined as liabilities due within one year. If the result is greater than one, this ratio implies that the company has adequate cash to pay its bills. Compute the current ratio in the same way, but add inventory to the asset amount. *Investors should also examine ratios for long- term debt. Long-term liabilities extend beyond the one-year period used for current liabilities. The debt-to-assets ratio is a basic ratio that provides a snapshot of a NMFB's indebtedness. Is determined by dividing total assets to total liabilities. If the result is greater than one, this ratio indicates a company has a positive net worth as shown in Table of this paper.*

Earnings per share (EPS), which are well-known financial ratios. NMFBs typically report earnings per share quarterly and annually. To compute earnings per share, divide the earnings for the reporting period by the number of shares of stock the company has issued. A company may have several EPS ratios. If the company has issued bonds or other securities that could be converted to stock, investors should also look at fully diluted EPS. Compute fully diluted EPS using the total potential number of shares outstanding.

Profit ratios are calculated on a before- and after-tax basis. Calculate the gross profit ratio by subtracting the cost of goods sold from sales, and then dividing this number by sales. Tracking the gross profit ratio over several reporting periods can alert investors to profitability concerns. For example, lower gross profit ratios could indicate price increases for raw materials, or conversely, that sales prices are decreasing. Perform further analysis before investing to determine if profit ratios indicate problems for the company's profitability outlook. Loan should be issued only on the basis of repayment capacity of the parties. Formalities required by the scheme should be reduced to the minimum. So that it will attract more customers. There is a net increase in trend percentage of current assets. Hence, it is to be suggested to the bank management that, they can follow the same principles to keep trend percentage of current assets. So that they can meet there short term obligations appropriately. From the results of the findings in Table 2 of this paper, hypotheses H_1 for I and II were accepted, while the H_0 for III was accepted.

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Appendix 1

Memo to the Beneficiaries (Respondents) of NMFBs

Dear Beneficiaries of NMFBs (Respondent),

I am a research student of Department of Economics, Kaduna State University, Nigeria. I am at present carrying out a research on Performance and Sustainability of Microfinance Banks. Your opinion with those of others like you would be useful in improving the bank's services to you. You are thereby assured that the information you give would be strictly treated as confidential and for research purpose only.

Thank you.

A. TAFIDA

Appendix 2
Research Questionnaire for the Beneficiaries of NMFBs (Respondents)

1.Name of respondent (optional) ____________________________

2. Name and address of your Microfinance Bank:____________
3. Sex: Male ☐ Female ☐

4. Age: 18-60 ☐ > 60 ☐

5. Educational background (tick the highest obtained) Primary ☐ Secondary ☐ Higher school ☐ OND, NCE, ☐ Graduate ☐ HND, B.Sc., BA. Etc ☐ Postgraduate ☐

6. Marital status: Married ☐ Single ☐ Widow ☐ Divorced ☐

7. Number of children and other dependence __________________

8. Are calculated ratios conforming to their standard ratios? Yes ☐ No ☐

9 Occupation: Crop farmer ☐ Mixed farming ☐ Trading ☐ Food processing ☐ Civil servant ☐ Craft ☐ Artisan ☐ Others (please specify).

10. Amount of loans enjoyed since 2003-2008: *Amount in Naira:_____ Year:__*

11. Have you presented collateral security before getting loans from your Microfinance Bank? Yes ☐ No ☐

12. How easy were the loans approved for you? Easy ☐ Not easy ☐

13. How many people have you employed after the loans? ______________________

14. How long did it take the bank to release the loans granted? Less than two weeks ☐ More than two weeks ☐

15. By how much your average monthly income increased after utilizing the loans? ________

16 How would you rate your Microfinance Bank's performance in terms of credit risk? High ☐ Average ☐ Low ☐

17. Did the monitoring of credit risk introduced assist the Nigerian Microfinance Banks? Yes ☐ No ☐

18. Please rate the customer encouragement of your Microfinance Bank.: High ☐ Low ☐

19. State the value added to your durables after enjoying the loans: *Durable:___: Amount in Naira equivalent:____*

20. Is there improvement of credit risks improved the activities of the NMFBs? Yes ☐ No ☐

21. How many microfinance beneficiaries are being served?______________________

22. How easy are the NMFBs collecting their loans in terms of portfolio at risk's? Easy ☐ Not Easy ☐

23. How have the NMFBs recovered their loans and the problems encountered? Easy ☐ Not Easy ☐

24. Are the NMFBs profitable enough to maintain and expand their services? Profitable ☐ Not Profitable ☐

25. At what rates are the NMFBs providing services to their beneficiaries in terms of cost per beneficiary and operating expense ratio? High ☐ Low ☐

26. Are the sizes of loans given to the microfinance beneficiaries adequate? Adequate ☐ Not Adequate ☐

27. Why are the loans microfinance beneficiaries not servicing their loans as per the agreement?__________

28. What can one do to reduce default of loans?______________

29. Are the financial ratios better determinants in assessing the performance and sustainability of NMFBs? Yes ☐ No ☐

30. Has the CAMEL and Altman (1968) model adopted able to determine default likelihood among microfinance beneficiaries? Yes ☐ No ☐
Thank you.

Reference to this paper should be made as follows: Abdullahi Tafida, (2015), Credit Risks Management and Financial Ratios in the Economy: An Empirical Overview of the Performance and Sustainability of Nigerian Microfinance Banks – NMFBS (2005 – 2014). *J. of Management and Corporate Governance,* Vol. 7, No. 2, Pp. 29-45.