

# Evaluating Microfinance Banks' Capacity to Purvey Credits to Micro and Small Enterprises (MSEs) in South-West, Nigeria: Adopting Financial Ratio Technique

Obadeyi, J. A.<sup>1\*</sup> Oladejo Moruf O.,<sup>2</sup> Adesuyi, I. O.<sup>3</sup>

1.Department of Accounting & Finance, Elizade University, Ilara –Mokin, Ondo State

2.Department of Management and Accounting, Faculty of Management Sciences, Ladoko Akintola University of Technology, Ogbomoso, Oyo State

3.Department of Business Administration, Elizade University, Ilara –Mokin, Ondo State

## Acknowledgement

We would like to appreciate all the microfinance banks (MFBs) whose financial statements were assessed in the study. Also Mr. Afolabi Kehinde Victor of Banking Supervision Department, CBN, Lagos, for providing us with additional data used in the study.

## Abstract

Despite the review of Microfinance Banks (MFBs) regulatory and supervisory policy framework in the banking sub-sector in Nigeria, microfinance banks (MFBs) have not satisfied the intended purpose(s) for which it was created in 2005; such as provision of income, creation of employment opportunities and reduction of poverty among unbanked segment of the economy. This has further led to the premature death and untimely liquidation of micro and small businesses because many micro and small business owners found it difficult to access credits from MFBs. This problem has remained a major concern for stakeholders. In view of this, this paper intended to evaluate microfinance banks' capacity to provide credits to Micro and Small Enterprises (MSEs) in South-West, Nigeria; using financial ratio technique for a period of ten (10) years (2007 – 2016). The study used secondary data that was collected via the financial statements of eight (8) microfinance banks in Lagos–West Senatorial District (5 MFBs) and Ogun Central Senatorial District (3 MFBs). The MFBs were selected through purposive sampling. Data gathered was analyzed via the use of Capital Adequacy Ratio (CAR). Findings showed mixed results as CAR values varied among the selected MFBs. The MFB with the highest CAR was valued at 203% while the lowest CAR valued at 21.2%. CAR benchmark set by Central Bank of Nigeria (CBN) for MFBs was 10%. This explained that the MFBs under consideration were financially strong to provide credits to MSEs' operators. However, the paper recommended that MFBs should have access to Microfinance Development Funds (MDFs) to further strengthen their liquidity capacity in order to purvey more credits to micro and small entrepreneurs and regulatory authorities should review the current microfinance regulatory framework on a regular basis with global standard.

**Keywords:** Microfinance Bank, Capital Adequacy, Micro and Small Enterprises, Credits, Financial Ratio Technique, Central Bank of Nigeria.

## 1. Introduction

The financial reform in the banking sub-sector, has provided a platform for healthy competition among banks in order to be the strongest and the market leader in the promotion and marketing of banking products and services. The banking sub-sector remained an integral part of the broader financial system and constituted a key provider of funds/credits to business owners and other investors. However, a sound banking sector enhanced the exchange of goods and services which provided incentives for savings; and efficiently channelled them to investment opportunities. Furthermore, banks have assisted in the area of an effective and efficient allocation of scarce resources in the economy. Banks strategized so as to mop-up liquidities (deposit mobilizations) in the economy, and possessed the ability to create a very reliable and strong capitalisation base in order to have an edge among other competitors. The banking sector was one of the components of the financial sector responsible for achieving financial intermediation roles; that is, to channel credits from the surplus to the deficit units of the economy so as to achieve economic development. Studies (Merton, 1990; Crabb & Keller, 2006; Babajide, 2012; Oladejo, 2013) showed that Banks were referred to as 'engine of growth' in economic development process. Though, the development of banking sub-sector in Nigeria was terribly affected by the global economic crisis in the second quarter of 2008. Till date, some Banks have not fully recovered from the shocks and while other banks have ceased to exist. Therefore, there was need to closely examine the capability of MFBs to purvey credit to MSEs operators. Therefore, this study strongly believed that financial ratio method would be essential in order to analyse, examine potential financial strength of MFBs and capability to purvey credits to MSEs operators.

According to Igben (1999), financial ratio was regarded as a scientific tool for analysing the worth of an enterprise and its performance in a specific period. Financial ratio was an essential analysing instrument mainly

for the interpretation of financial statements of an entity (Chandra, 2005). However, all business and financial decisions contained some risk elements; and risks were the consequences of an ineffective and efficient credit decisions (Oyebanji, 2003). Financial ratio also provided a concise form of better idea about the financial position of an entity; and was an instrument that allowed lenders to derive decisions such as liquidity, solvency, financial stability, performance and safety of loans provided by the lender (Chandra, 2005). Dansby, Burton & Michael, (2000) claimed that ratio contained fractional relationship of one number to another. But Ayandele (2005) argued that ratio analysis could be regarded as a method of financial analysis showing meaningful relationships and inter-relationships among the components of financial statements, and not just ordinary fractional number.

Chandra (2005) claimed that ratios were useful tools in appraising a firm's financial position and operations. According to Lasher (1997), accounting ratios were only used to compare results and performance of companies, but explained that one measure could not be the only basis for a financial decision. Consequently, Hermanson, James & Michael, (1992) believed that there was need for best insight by computing, evaluating and analysing related ratios for firms. In recent years, developed and developing countries as well as emerging markets have a great support for Micro and Small Enterprises (MSEs) performance that had led to economic development and growth. This was because of the contribution of MSEs to the employment creation. Evidence further showed that a dynamic and growing MSEs sector could contribute to realization of series of developmental goals such as the attainment of income distribution and poverty reduction, creation of employment (Oladejo & Olowokere, 2011; Akande, 2014; Obadeyi, 2015); financial services such as collateral free loans, saving deposits (Armenda riz de Aghion & Morduch, 2005); savings mobilization (Barbosa, 2016; Shabbir, 2016); and production of goods and services that meet the basic needs of the poor (Bwisa & Wanambisi 2013). Robinson (2001) cited by Bates (2005) and Barbosa (2016) found that young firms that grew have twice the probability of survival unlike non-growing firms. It had also been found that strong growth might reduce the firm's profitability temporarily, but increased it in the long run (Perez, Amparo & Juan, 2004). The growth of MSEs was believed to be a desirable end as the key drivers of employment and economic development (Akande, 2014).

The inadequate and frequent dearth of credits for financing MSEs had been a major impediment to its development in most developing countries. MSEs' credits were essential for entrepreneurs to take advantage of new technology in the form of advertising their products / services on the internet – websites, googles and other social media platforms like face-book, Instagram, Imo, WhatsApp etc., in order to improve quality service delivery (Odongo, 2014; Shabbir, 2016). Considering the 'trader money' phenomenon, which explained provision of loans of ten thousand naira (#10,000) to micro business owners by Federal government. This single act by government might require less answer than questions such as; could government indirectly have hijacked financial responsibility of microfinance banks, did the real active poor in the society serve, was there any assurance that the loan collected by micro business owners would be genuinely repaid, was it not another political shenanigan? Therefore, MFBs major problem has been the lack funds. The Microfinance Development Funds (MDFs) needed to implement to compliment the efforts of MFBs in order to be able to provide credits for MSEs for development and sustainability of the informal sector.

## **2. Literature Review**

### **2.1 Contemporary Issues on Nigerian Banking Business**

The banking system was majorly to accept deposit, provide and recovery credits as when due. During the early banking era in Nigeria, risks and exposures were minimal, low level of stiff competition, no target for bank staff, and need for de-marketing of banks to meet set targets. But situation has since changed. Competition in the banking market was at increasing rate. Banks were in the market to out-compete the other in order to become the market leader. Banks' efforts were geared towards being the mega bank and potentially established a financial supermarket in the economy. Though, largest banks measured by asset size were not necessarily the most profitable as such banks harboured pockets of inefficiency. Therefore a big bank rarely never be a strong bank (Soludo 2005 & Lamido 2009).

However, where ratio techniques adopted were not relevant to the need of using it, such techniques might lead to pervading problems in banks such as distress and insolvency. This menace has led to a lot of concern to stakeholders, regulatory authorities, operators, International Financial Reporting Standard (IFRS) and general public. Furthermore, in the modern economy, banks were regarded as "bridge" mechanism, having considered its roles of financial intermediation- channelling funds from the surplus sectors to deficit sectors in order to ensure that there was a balance between these sectors. These financial intermediary roles have actually made banks the life-wire of both developing and developed economies and emerging markets. Banking sub-sector was the pivot of modern economy, the supplier of credits which lubricated the engine of growth of entire Nigerian economy (Ebhogaghe 1977 & Abiola 2003).

## 2.2 Concepts of Microfinance

Rodman (2010) defined microfinance as the provision of financial services to low-income clients, including consumers and the self-employed, who traditionally lacked access to banking and related services. According to Oladejo (2013) and Obadeyi (2015) microfinance banks were financial institutions that specialized in making very small loans to very poor persons in developing countries. Akande & Obadeyi (2017), reported that microfinance banks were financial institutions responsible for the provision of financial services to the active poor, low income group and unbanked segment of the economy. Furthermore, microfinance could be regarded as the process by which how low income households have a greater access to a variety of high quality financial services to finance their own small business enterprises. The services rendered by microfinance institution were not limited to credit facilities only, but it encompassed savings, insurance and money transfers. Typical microfinance clients included the poor and the low income people who found it difficult to benefit from the conventional or formal financial institutions (Ojo, 2009; Ogujiuba, K., Fadila, J., and Stiegler, N. (2013).

Microfinance clients were predominantly living along the poverty line engaged in small enterprises which consisted of small retail shops, street vending, artisanal manufacture, black smiting, welding and carpentry. In most cases, micro-credits clients received micro loan to start their businesses as acclaimed by these studies, (Wanjohi & Mugure, 2008; Obadeyi, 2015). Wellen and Mulder, (2008) and Wakaba, (2014) have suggested that only half or less of the total loan proceeds were used for business purposes. Most of the credit received tend to be spent on a range of households' cash management needs which consisted of stabilizing consumption, health and expenses on education. Asian Development Bank's Microfinance Development Strategy (2000) perceived the term microfinance as 'the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to poor and low income households and their micro enterprises.' The Asian Development Bank's definition of microfinance focused on low income households that were below the poverty line, but many households that were below poverty line were very common especially in rural areas (Storey, 1994; Rosenberg, 2009). Therefore, the concept of micro financing covered not only the provision of credit services to economically active poor and the low income who have no access to formal financial system but it also focused on the provision of financial services such as insurance, transfer payments and other forms of formal financial services.

Rodman, (2012) opined that in a global environment, the major players of microfinance industry included government, philanthropists and social investors. Microfinance institutions (MFIs) that provided services to the people majorly in the area of deposits, lending and savings etc. Most of the MFIs clients were rural and urban poor who borrowed mainly to finance farming, petty trading, arts and craft and other forms of small scale businesses or enterprises. The World Bank (2011) estimated that there were more than 9000 micro finance institutions serving some 18 million poor populaces in most of the developing nations. As at 2007, there were 73,500 existing microfinance institutions worldwide serving about 67.4 million borrowers which represented less than 1 percent. This simply implied that the number of MFBs was at minimum level compared to large number of borrowers; this could make administering the borrowers' credit difficult (MIX, 2009).

## 2.3 Definition of Enterprises

Firms differed with their levels of capitalization, scales and employment. Hence, definitions that were employed helped to measure size (number of employees, turnover, profitability, net worth, etc.); when applying to one sector, it could lead to all firms being classified as micro, small and medium, while the same size definition when applied to a different sector could lead to a different results (Orodje, 2012; Medvedev & Oviedo, 2013; SMEDAN, 2013). In a study that was researched by International Labour Organization (ILO), about fifty (50) definitions were identified in more than seventy (70) countries around the world. However, some of the variables considered included volume of sales, levels of energy consumption, production advance methods etc. (Perez, 2004; Onwumere, 2007). Enterprise moved along the spectrum of a scale that is, (micro, small and medium) and formality. Informality was common at the smallest "micro scales of enterprises. Informality has effect on well-beings. The Micro and Small Enterprises (MSEs) was believed to be the engine room for the development of any economy, because they formed the bulk of business activities in a growing economy like that of Nigeria (Ojo, 2009; Oladejo, 2013). It was estimated that MSEs employed 22% of the adult population in developing countries (Onwumere, 2007). The sector employed about 15.5% of the labour force in Nigeria.

MSEs in many developing countries have since shown its importance in industrialization process. But it must be understood that many developing countries have been making concerted efforts to promote the development of MSEs via increased funding (Lemo, 2007). In Nigeria, various government schemes have often been tried in the effort to boost the flow of encouraging and promoting finance to MSEs. In spite of these measures, it was generally acknowledged that having easy access to credit remained a fundamental problem of MSEs. The low credit rating of this class of enterprises was attributable largely to such features as low productivity, high mortality rate, weak capital base etc. It was obvious that for MSEs to play their role

effectively, a new and appropriate approach to financing them must be put in place. The development of micro and small sized enterprises has often been regarded as a “missing line” in development strategies of African countries, as several import-substitution policies have favoured large corporations at the detriment of MSEs. The main reason lied on the simple observation that constituted the largest portion of employment in developing countries (especially the micro-enterprise segment).

## **2.4 Micro and Small Enterprises (MSEs) Profitability Performance**

Micro and Small Enterprises (MSEs) represented a larger percentage of businesses in many countries and were drivers of the growth of an economy (Akande, 2014). MSEs comprised a variety of firms which possessed a wide range of skills and operated in most sectors of the economy with different markets, social and institutional arrangements. The ranges moved from a home-based unregistered business (informal) to a formal enterprise engaged in international businesses. Despite the heterogeneity, they were independent business establishments formed for profit making and mostly managed by the owners. The profit aim of the business enterprise was a fundamental factor for their existence. Many business decisions were considered based on their impact on profitability (Medvedev & Oviedo, 2013). Profitability determined the success, sustenance and survival of the firm (Katayama, Lu & Tybout, 2009). Where most of the MSEs operators refused to keep book of records, it became difficult to conclude that MSEs made profit. However, conducive and promising environment were essential for existing firms and new entrants to make profit and grow. Whether the profit was real, perceived or potential, the critical question was; what determined the profits among MSEs? This was because profit ultimately determined MSEs continuous business operation and survival in the market (Katayama *et al.*, 2009; Medvedev & Oviedo, 2013).

### **2.4.1 Microfinance Banks (MFB) Performance Indicators**

Studies have shown the comparison of ratios of the expected MFBs with the global average for MFBs as reported by the Central Bank of Nigeria (CBN). However, global aggregate for all countries irrespective of the degree of development have huge variance with the ratios obtained from the Nigerian Microfinance Sub-sector. The performance indicators include:

#### **i. Portfolio to Assets**

This ratio measured how much of the asset base of the MFBs that were invested in high performing loan portfolio. This ratio showed how well a MFB allocated its assets to its primary business particularly in profitable activity, i.e. by a way of granting loans. At a glance, a manager could quickly examined how well the MFB was deploying its funds into highly-yielding microloans. This ratio was valuable when calculated monthly. The gross loan portfolio could fluctuate dramatically, from month to month if the MFB experienced seasonal spikes in loan demand. Managers could also use the ratio to identify fluctuations that might result from structural or operational rigidities that caused a high number of loans to be disbursed or repaid at the same time. Depending on the context, this ratio indicated the need for additional funds or to just be a sign of excess liquidity. Much depended on the MFB's liquidity requirements and its asset liability management abilities. MFB's that relied heavily on saving to fund their portfolio tend to be more efficient at maintaining a high and steady portfolio to assets ratio (Chandra, 2005).

#### **ii. Return on Asset (ROA)**

Return on Asset (ROA) depicted the management of the MFBs assets to maximize profit. It indicated the profitability of the MFBs before leverage. It measured the amount of profit the MFBs would make per naira of its assets. Return on Assets (ROA) indicates how well a MFB was managing its assets to optimize its profitability. The ratio included not only the return on the portfolio, but also all other revenues generated from investments and other operating activities. If an institution's ROA were fairly constant, this ratio could be used to forecast earnings in future periods. Unlike ROE, this ratio measured profitability regardless of the institution's underlying funding structure; but did not discriminate against MFBs that were funded primarily through equity (Chandra, 2005).

## **2.5 Conceptual Model for the Study**

Terance (1989) opined that performance could be measured by a way of ensuring that resources available were used in the most efficient and effective way. The reason to measure the performance of banks was to assist financial analysts, experts and managers to determine the financial status of such bank. Some determinants were within the control of bank management such as financial statement components. The financial statement components related to the information in the balance sheet and income statement. Banks have a significant role to play in the economy particularly to serve as a source of finance for borrowers (Bernanke, 1983).

### **2.5.1 Capital Adequacy**

According to Jansen (1997), capital adequacy relatively measured the maximum level of leverage that a financial institution was permitted to attain on its operations. It measured the ratio of risk weighted assets (loans) relative to regulatory equity (shareholders' funds), which has been internationally recommended to be equal to 12.5

times, or commonly known as a capital adequacy of 8% (Jansen, 1997; World Bank, 2011). Each country's central bank has its own capital adequacy ratio to regulate the banking sector. Though, prudential standard was proposed by the Basel Committee to be applied to international and banking institutions from developed countries. Capital adequacy protected a bank against credit, market and operational risks so that it could absorb any losses that might arise and to protect debtors; and because it has a direct effect on the banks' profit (Jansen, 1997; Sherman, 2009; World Bank, 2012).

The capital adequacy ratio of an MFB measured percentage of the shareholders' funds unimpaired by losses to its risk weighted assets. The minimum Capital Adequacy Ratio (Capital/Risk Weighted Assets Ratio) for MFBs was 10%. Furthermore, every MFB was expected to maintain a ratio of not more than 1:10 for its shareholders fund unimpaired by losses to the net credits. Capital adequacy ratios measured the amount of a bank's capital in relation to the amount of its risk weighted credit exposures. The risk weighting process took into account, in a stylized way, the relative riskiness of various types of credit exposures that banks have, and incorporated the effect of off-balance sheet contracts on credit risk. The higher the capital adequacy ratios a bank has, the greater the level of unexpected losses it could absorb before becoming insolvent (CBN, 2011). Capital Adequacy Ratio (CAR) was basically the proportion of the bank's tier 1 & tier 2 equity (Qualifying capital or Equity) as a proportion of its risk weighted assets (loans). It is the proportion of a banks' own equity in relation to its risk exposure (Chandra, 2005).

### **2.5.2 Minimum Capital**

According to Staschen (2003), prudential standard was the minimum amount of liquid capital that banks raised to enter the regulated market. The minimum capital requirement was an absolute measure of banks' solvency behaviour and always established by the regulator. However, it helped to influence the structure of the financial sector; and served as a cushion for institution during unhealthy situation due to economic recession (Christen, Rhyne, Vogel & McKean, 1995). Jansen, (1997) opined that high minimum capital requirements acted as barriers to market entry to possible new players that were not able to raise capital for the initial stages as a regulated institution. According to Schmidt (2000), high minimum capital requirement helped to mitigate against moral hazard behaviour among shareholders.

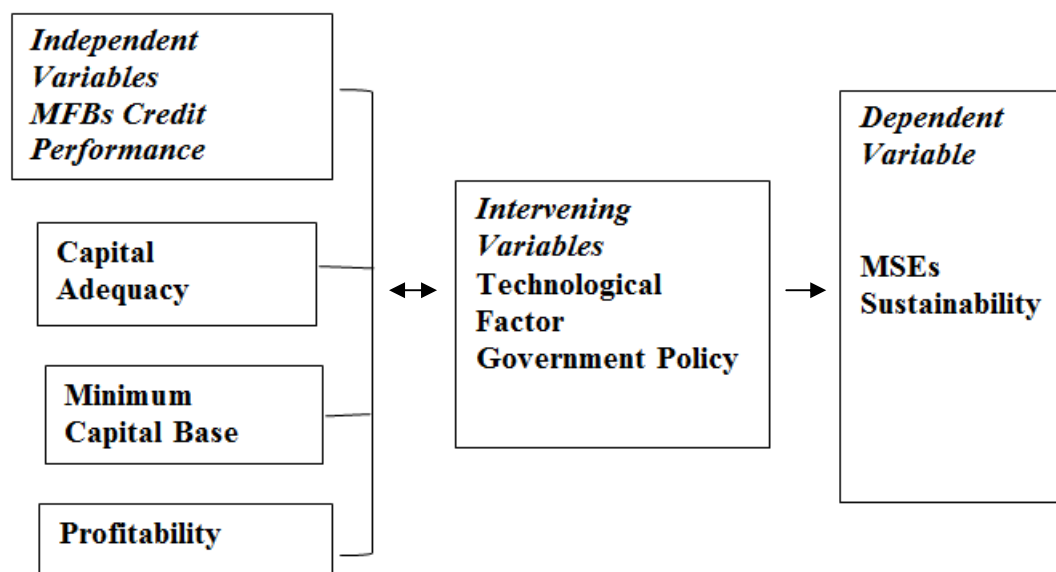
Though, there were numerous literatures and empirical studies on the effect of Microfinance on micro and small enterprises, but very few had emphasized on the evaluation of MFBs' capability to purvey credits to MSEs via financial ratio - Capital Adequacy Ratio (CAR). CAR measured the financial strength of MFBs to adequately purvey credit to the informal sector. Therefore, this current study has helped to create a literature gap. Furthermore, considering the various reviews, this study's model was formulated since it was related and relevant to the current research work. Also, having examined the literature, it has directed us to the conceptual models in fig. 2.1. The models showed the interactions between the explanatory, intervening, dependent factors and the prediction of the expected outcome (MSEs' sustainability).

### **2.5.3 Profitability**

According to Barbosa (2016), profitability involved the degree to which a business or activity yielded profit or financial gain. It was also a special difference between the amount earned and the amount spent in producing and distributing goods and services. Profitability referred to the operating efficiency of the enterprise. It also explained the ability of the enterprise to make profit on sales. Profitability was the ability of the company to make a profit in relation to sales, total assets and own capital.

The technological factor explained improvement in various modern machines that would assist enterprises in production process. The availability of credits to MSEs operators would help MSEs to easily acquire machines in the production of the goods. This further allowed MSEs to expand (creation of more branches) and diversify their investment thereby leading to increase in profit. The increase in MFBs capitalisation base allowed the channelling of more loanable funds to assist the development of informal sector. The availability of funds to micro and small business owners encouraged production and distribution products and services to achieve turnover increase. Thus, such scenario encouraged the MSEs' sustainability.

Government policy such as tax laws that involved managing the tax system, high tariffs and closure of factory for security reasons have affected the operations and performance of MSEs in Nigeria. This might affect their survival. The long credit period provided by MFBs for MSEs to repay their loans could be affected by high tariff and high tax law policies of government most especially on imported machines (e.g. Automated Teller Machine –ATM) and business operations respectively. This might compel MFBs to review their policies on credit periodic repayment system. The absence of high tariff and double taxation on the part of government on MFBs' activities would increase sales and assets of the enterprises so as to easily predict their sustainability level. Finally, sustainability of MSEs would be that profits realized must be greater and equal to zero ( $\text{profit} \geq 0$ ) at all time.



Source: Author's Compilation, (2018).

*The fig 2: The conceptual Model for Evaluating Microfinance Banks' Capability to Purvey Credits to Micro and Small Enterprises (MSEs): Adopting Financial Ratio Technique.*

## 2.6 Financial Analytical Tool

Financial ratio techniques were used to determine the prospects and possible features of an organization due to some factors such as accuracy and understanding of figures used in the financial statement. The financial ratios have shown the importance by means of serving as a useful guide in credit analysis and explaining significant relationship that exist between figures depicted in the balance sheet, the profit and loss Account etc. However, where these ratio techniques were properly adopted, it would provide important information on critical issues like efficiency, solvency and credit policy, profitability etc., vice versa. It must be noted that, it helped to determine trends in costs, sales and profitability in order to aid in likely forecasting of future events (Onanuga and Talabi 2000). Financial institutions (banks) via its intermediation roles were able to channel the surplus deposit of its customers as credit to the needy customers in order to earn a return. The success of banks depended on its ability to grant recoverable credit facilities and make reasonable margins. It must be noted that lending was perhaps one of the oldest and the most important functions of banks. To avoid biasedness, banks' credits have great impact on the economy of a nation by facilitating economic activities via the provision of funds for the deficit sectors that is, the informal sector, (Onanuga & Talabi 2000). Also, financial ratio helped to express significant relationships between figures in the financial statements and balance sheets. For the purpose of this study, the accounting ratio adopted was capital adequacy ratio (CAR).

## 2.7 The Theory of Financial Intermediation

This study anchored on financial intermediation theory. According to the theory of intermediation, current theories of the economic role of financial intermediaries built on the economics of imperfect information that began to emerge during the 1970s with the seminal contributions of Akerlof (1970) & Spence, (1973). According to Bernanke & Blinder (1992), financial intermediaries existed because they reduced information and transaction costs that arose from an information asymmetry between borrowers and lenders. Financial intermediaries assisted the efficient functioning of markets and channelling of credit from lenders to borrowers with significant macroeconomic effects (Adamolekun, 1993; Levine, R., Loayza, N., Beck, T. (2000). According to Levine (1999) and Levine *et al*, (2000), financial intermediaries (FIs) emphasized the provision of liquidity and helped to reduce the cost of channelling funds between borrowers and lenders, thereby leading to efficient allocation of resources. Merton, (1990) analysed the provision of liquidity and the transformation of illiquid assets into liquid liabilities by banks. Having examined Hoff & Stiglitz (1990); Adamolekun, 1993; Allen & Gale (1997) and Choudhury & Kumar, (2002), depositors were risk averse and uncertain about the timing of their future consumption needs; and banks improved on a competitive market by providing better risk sharing among agents who needed to consume at different times. The proponents of this theory explained that the modern theory of financial intermediation, financial intermediaries were active because market imperfections prevented savers and investors from trading directly with each other in an optimal way. This research work has anchored on financial intermediation theory. This was because the theory supported the advocates by making

credits available to economic agents from surplus to deficit system, to reduce poverty, creation of employment opportunities for active poor, to make mini and small loans available to active poor and low income people in the society.

### 2.8 Empirical Review

Numerous studies have been done on micro finance credit and performance of MSEs'. According to Gambo (2012) in the studies of evaluation of credit availability in Microfinance Institutions (MFIs): Evidence from Northern Nigeria; the study revealed that promotion of MSEs was a well-recognized and much heralded strategy of industrial development in many less developed countries. The study concluded that there was no specific reason for the increase in credits default of MFBs' customers. Babajide (2012) studied the effects of micro financing on micro and small enterprises (MSEs) in South-West Nigeria adopting Diagnostic Test Kaplan-Meier Estimate and Multiple Regression Analysis. The study revealed that microfinance promoted survival of small business in South West Nigeria; and concluded that microfinance never enhance growth and expansion capacity of MSEs in Nigeria. Goodman, (2004) recommended that the clients of the Malaysian microfinance institutions should be engaged in entrepreneurial and business skills trainings before to start operationalizing their microenterprises.

Several studies have investigated the relationship between capital adequacy and bank performance in different economies. In Uganda, Mpuga (2002), claimed that inadequacy of minimum capital of banks was the major cause of bank insolvent. According to Scott and Arias (2011), capital to asset ratio determined profitability level of banks in United States. Vong and Anna (2009) opined that profits realized by banks often depicted financial strength of any financial institution in Panama. According to Adamolekun (1993) and Obamuyi (2013), financial institutions particularly banks encountered greater challenges to provide credit facilities to clients whenever the banks were porously capitalized. Sufian (2009) in his empirical study of eight (8) banks in Bangladesh, the result showed that capital adequacy ratio reduced the likelihood of banks failure.

Guerin & Palier (2005) observed that MFBs played a vital role in the financial intermediation process and by also improving the lives of low income earners. Corroborating this opinion, Multhoni (2016) in his study, 'assessing institutional characteristics on microcredit default in Kenya: a comparative of microfinance institutions and financial institutions'; the results revealed that MFBs were concerned with provision of financial services to people who were economically poor and who therefore experienced financial exclusion in their activities and did not have ready access to mainstream and commercial financial services. The study concluded that in spite of the importance of an informal sector, experience showed that provision and delivery of credit services to the sector by formal financial institutions such as commercial banks and MFIs have been below expectation.

### 3. Methodology

The study made use of financial ratio technique – Capital Adequacy ratio (CAR) on eight Microfinance Banks in Lagos and Ogun States. Lagos and Ogun states were part of states that comprised the South-West, Nigeria. The choice of these MFBs and locations were the ability to assess the financial statements of the MFBs and large concentration of MFBs in Lagos and Ogun States. In addition, both states constituted 68% of total MFBs in South –West Nigeria. Also Lagos and Ogun States were regarded as economic hubs of the nation, (enriched with socio-cultural and economic activities enjoyed by other neighbouring states for business activities. Secondary data was employed. The secondary data was collected through referencing, books, newspaper, magazines, internet and others. For the purpose of this study, financial statements of the MFBs were assessed, analysed and interpreted. Data collected was analysed via Capital Adequacy Ratio (CAR).

### 4. Results

The results showed MFBs capability to adequately deliver credit to MSEs (capital adequacy ratio –CAR) was used. The result displayed in table 4. Table 4 showed mixed results as CAR values varied among the selected banks. The NPF MFB was with the highest CAR valued at 203% in 2016, while Emerald MFB was with lowest CAR value of 21.2%. Both results showed that the MFBs were liquid enough to purvey credits to MSEs operators. CAR values with asterisk such as in NPF and Accion MFBs were extremely significant and have more abilities than other MFBs to absorb losses and maintain a sound financial position. Furthermore, the minimum capital adequacy ratio for MFBs was 10% (CBN, 2011).

From table 4, Karis MFB showed that in 2007 (N/A), 2008(29%), 2009 (38%), 2010 (40%), 2011(45%), 2012(51%), 2013(48%), 2014(43%), 2015(43%) and 2016(42%). The result showed that Karis MFB could absorb some losses and purvey credits to micro and small business owners. Emerald MFBs depicted that in 2007(30%), 2008(24%), 2009 (22%), 2010 (22%), 2011(21%), 2012(22%), 2013(23%), 2014(30%), 2015(34%) and 2016(36%). The result of Emerald MFB further claimed high rate of consistency to deliver credit during the period under review. Consequently, the results were strong enough to meet the loan demands of customers; and

might have reduced non-performing loans; this statement was in tandem with (Lamido, 2009).

Moneywise MFB showed that in 2007(54%), 2008(58%), 2009 (60%), 2010 (62%), 2011(64%), 2012(63%), 2013(63%), 2014(67%), 2015(65%) and 2016(67%). The result explained that the bank could attain financial stability and promote efficiency. Table 4 captured Foresight MFB, in 2007 (74%), 2008(56%), 2009 (76%), 2010 (78%), 2011(65%), 2012(36%), 2013(31%), 2014 (46%), 2015 (44%) and 2016 (47%). The result depicted that Foresight MFB was financially strong enough to meet the loan demands of customers. However, there was great consistency in the result of NPF MFB with 2007(62%), 2008(68%), 2009 (72%), 2010 (84%), 2011(\*117%), 2012(\*130%), 2013(\*142%), 2014(\*160%), 2015(\*185%) and 2016(\*203%). The extra-ordinary result showed that NPF MFB's CAR performance was at a good and stable state, the asterisk values implied high significant of the value (i.e. the bank was highly liquid to absorb losses and could easily purvey credits to their customers who were micro and small business owners.

Olive MFB showed that in 2007(56%), 2008(61%), 2009 (72%), 2010 (\*133%), 2011(82%), 2012(62%), 2013(70%), 2014(82%), 2015(77%) and 2016 (77%). The result showed that Olive MFB has improved tremendously to purvey credit to MSEs operators during the period under review. Accion MFB result showed that in 2007(69%), 2008(75%), 2009 (44%), 2010 (76%), 2011(\*106%), 2012(\*108%), 2013(\*148%), 2014(\*155%), 2015(\*176%) and 2016(\*173%). The magnificent result further showed that Accion MFB was highly solvent to provide credit to assist MSEs operators. But the sudden decline in 2009 was as a result of the global economic crunch between 2007 and 2009. This decline in results in 2009 was applicable to all banks under review. This result corroborated with Littlefield & Kneiding, (2009), they claimed that economic crisis affected the performance of banks. Azsa MFB result showed that in 2007(69%), 2008(53%), 2009 (45%), 2010 (50%), 2011(54%), 2012(54%), 2013(59%), 2014(54%), 2015 (54%) and 2016 (52%). The result reflected that Azsa MFB was financially stable and could promote efficiency in order to absorb losses and purvey credit to MSEs owners. Conclusively, CAR benchmark set by CBN for MFBs was 10%. This showed that the MFBs under review were liquid enough to purvey credits to MSEs operators. Since minimum capital adequacy ratio was 21.2% for MFBs under review.

**Table 4: Capital Adequacy Ratio of Eight (8) Sampled MFBs in South-West, Nigeria.**

CAPITAL ADEQUACY RATIO (CAR) OF SELECTED MFBs								
Year	Karis	Moneywise	Emerald	Foresight	NPF	Olive	Accion	Azsa
2007	N/A	53.51%	29.71%	73.80%	61.70%	56.00%	69.44%	68.80%
2008	29.03%	57.49%	23.85%	55.73%	67.70%	61.20%	74.90%	53.10%
2009	37.50%	60.40%	21.67%	75.83%	72.24%	72.20%	44.30%	44.99%
2010	39.51%	61.58%	22.09%	78.13%	84.30%	*133.9%	75.90%	50.30%
2011	45.41%	63.64%	21.20%	65.44%	*116.7%	82.16%	*106.3%	54.40%
2012	50.71%	62.83%	22.26%	36.50%	*129.5%	61.80%	*108.1%	53.52%
2013	47.98%	62.64%	23.20%	30.70%	*141.9%	70.43%	*148.5%	59.40%
2014	42.74%	66.77%	29.70%	46.30%	*159.9%	81.80%	*154.83%	53.80%
2015	43.20%	64.80%	34.03%	43.80%	*185.4%	76.60%	*176.5%	54.20%
2016	41.49%	66.61%	35.50%	46.80%	*203.7%	77.30%	*173.4%	52.13%
Sources: Researcher's compilation, 2018								
* N/A	means	not available						

### 5.1 Findings

Findings showed that eight MFBs under review were liquid enough to purvey credits to MSEs for a period of 10 years. Since the CAR benchmark set by CBN for MFBs was 10%, which was less than 21.2%. Therefore, MFBs under review were capable to deliver credit by absorbing reasonable level of losses. Findings also showed that MFBs under review were strong enough to meet the loan demands of customers. Findings further showed great consistency in the capital adequacy ratio (CAR) result of NPF and Accion MFBs. This might be due to their capitalisation base of two billion naira (#2,000,000,000) as a national Microfinance bank. Findings also showed how all MFBs under review, as CAR decreased in 2009. The decrease was due to effect of the global cash crunch between 2007 and 2009 which have resulted to the decline in performance.

### 5.2 Conclusion and Recommendations

Also the MFBs under review have an improved capital adequacy standard to provide financial services to their clients (MSEs operators). The MFBs were financially capable and stable to absorb losses. The least CAR result



of MFBs in the study was greater than benchmark set by CBN. This further emphasized that MFBs were liquid enough to purvey credits to MSEs owners and operators. Therefore, strong liquidity position of MFBs reduced the likelihood of failure. Financial ratio technique briefly explained in this study would help to ascertain the prospect of emerging economies most especially in the Nigeria market and banks. Therefore, financial statement analysis could not be regarded as a perfect method, because of its lapses. Hence, it was a process that needed deep thinking and common sense - no substitute for accounting ratio. Government should review the current microfinance policy in order to strengthen and assist MFBs performance to adequately purvey credit to MSEs for improved business operations and to achieve sustainable development. MFBs should have access to Microfinance Development Funds (MDFs) to further strengthen their liquidity capacity to purvey more credits to MSEs operators.

## References

- Abiola, O. (2003), "Effects of Bank Distress on the Economy: The Nigerian Case", *A Journal of Nigerian Banker*, Jan – March, 16.
- Akande, O. O. & Obadeyi J.A. (2017), "Microfinancing and Entrepreneurship Development in Ilara -Mokin, Ondo State: A Case Study Approach", *International Journal of Research in Business Management*, **5**(9), 165 -178.
- Akande, O.O. (2014), "Entrepreneurial Business Orientation and Economic Survival of Nigerians", *International Review of Management and Business Research*, **3**(2), 1255 – 1259.
- Allen, F. & Gale, D. (1997), "Financial Markets, Intermediaries, and Intertemporal Smoothing", *Journal of Political Economy*, **10**(5), 523–546.
- Armendariz- De Aghion, B. & Morduch, J. (2005), "*The Economics of Microfinance*", UK: MIT Press.
- Ayandele, I.A. (2005), "*Quantitative Techniques for Managerial Decisions*", Ugo: Cle-print publishers.
- Babajide, A. (2012), "Effects of Microfinance on Micro and Small Enterprises (MSEs) Growth in Nigeria", *Asian Economic and Financial Review*, **2**(3), 463-477.
- Barbosa, E. G. (2016), "Determinants of Small Business Survival: The Case of very Small Enterprises of the Traditional Manufacturing Sectors in Brazil", *MPRA Paper No. 72304, July UTC*.
- Bates, T. (2005), "Analysis of Young, Small Firms that have Closed: Delineating Successful from Unsuccessful Closures", *Journal of Business Venturing* **20**, 343-358.
- Bernanke, B. S. (1983), "Nonmonetary Effects of the Financial Crisis in the Propagation of the great Depression", *American Economic Review*, **73**(3):257-76.
- Bernanke, B.S. & Blinder, A.S. (1992), "The Federal Funds Rate and the Channels of Monetary Transmission", *American Economic Review*, **82**(4), 901-921.
- Bwisa, H.M. & Wanambisi, A.N. (2013), "Effects of Microfinance Lending on Business Performance: A Survey of Micro and Small Enterprises in Kitale Municipality, Kenya", *International Journal of Academic Research in Business and Social Sciences*, **3**(7), 56-61.
- Central Bank of Nigeria (2011), "*Micro Finance Policy, Regulatory and Supervisory Framework for Nigeria*", A Publication of Central Bank of Nigeria, Abuja, Nigeria.
- Chandra, P. (2005), "*Investment Analysis and Portfolio Management*", (2nd ed.), New Delhi: Tata McGraw - Hill.
- Charles, H. & Corrine, P. (2010), "*Understanding Basic Statistics*", (5th ed.), California: Brooks / Cole Centage Learning.
- Choudhury, T. & Kumar, B. (2002), "Loan Classification, Provisioning Requirement and Recovery Strategies: A Comparative Study on Bangladesh and India", *Journal of Management*, **2** (4), 76 -84.
- Christen, R., Rhyne, E., Vogel, R. & McKean, C. (1995), "Maximizing the Outreach of Microenterprise Finance: An Analysis of Successful Programs, Program and Operations", Assessment Report No. 10, *United States Agency for International Development*, Washington, DC.
- Crabb, P.R. & Keller, T. (2006), "A Test of Portfolio Risk in Microfinance Institutions", *Faith and Economics*, Number 47/48, Spring/Fall; 25–39.
- Dansby, R. I., Burton S., K. & Michael D. L. (2000), "*Paracligin College Accounting*", (4<sup>th</sup> ed.), New York: Paradigm publishing Inc.
- Ebhodagbe, J. (1997), "*Financial Distress and Failure Resolution*", NDIC" Quarterly, **5**(3), 15.
- Gambo, B. G. (2012), "Evaluation of Credit Availability in Microfinance Institutions: Evidence from Northern Nigeria", *International Journal of Academic Research in Business and Social Sciences*, **2**(6), 379 -383.
- Goldberg, A. & White, L.J. (2004), "Small Banks, Small Business, and Relationships: An Empirical Study of Lending to Small Farms", *Journal of Financial Services Research, Springer*, **26**(3), 245-261.
- Goldberg, A. & White, L.J. (1999), "*The Dynamics of Market Entry: The Effects of Mergers and Acquisitions on De Novo Entry and Small Business Lending in the Banking Industry*", Center for Financial Institutions Working Papers 1-12, Wharton School Center for Financial Institutions, University of Pennsylvania.

- rosenberg/andrian gonzalez/sushma (November 2, 2009).
- Goodman, P. (2004), “*Microfinance Investment Funds: Objectives, Players, Potential*”, KFW Financial Sector Development Symposium, Berlin, 11th and 12th of November, 42-543
- Guerin, I. & Palier, J. (2005), “*Microfinance Challenges: Empowerment or Disempowerment of the Poor?*” Collection Sciences Sociales, Institut Français de Pondichéry.
- Hermanson, R. H., James, D. E. & Michael W. M. (1992), “*Accounting Principles*”, (5th ed.), Boston, MA: Richard D. Irwin, Inc.
- Hoff K. & Stiglitz, J. (1990), “Imperfect Information and Rural Credit Markets: Puzzles and Policy Perspectives”, *World Bank Economic Review*, 4(3), 235-250.
- Howells, P. & Bain, K. (2004), “*Financial Markets and Institutions*”, Edinburgh: Pearson Educational Limited.
- Jensen, M.C. (1997), “Self –Interest, Altruism, Incentives, and Agency Theory”, *Journal of Financial Management*, 2(3), 23-45.
- Katayama, H., Lu, S. & Tybout, J. (2009), “Firm-Level Productivity Studies: Illusions and a Solution”, *International Journal of Industrial Organization*, 27(3), 403-413.  
<http://dx.doi.org/10.1016/j.ijindorg.2008.11.002>
- Lamido, S. (2009), “*We Are Making the Banks Safer*”, Publication of the Federal Ministry of Information and Communications on Open Government, 1(1), 8 – 9, August.
- Lemo, T. (2007), “*Sustaining the Microfinance Sector in Nigeria*”, The Nigerian Microfinance Newsletter, 4(2), January-June, 13 -18.
- Letza, S. & Bakare, R. (2001), “Detecting Corporate Failures”, *Journal of chartered Institute of Bankers of Nigeria*, July – December, 36 – 37.
- Letza, S. (1994), “*Issues in Assessing MDA Models of Corporate Failure: A Supporting Research Note*”, British Accounting Review, 26(3), 13 -15.
- Levine, R. (1999), “Law, Finance, and Economic Growth”, *Journal of Financial Intermediation*, 8, 36–67.
- Littlefield, E. & Kneiding, C. (2009), “*The Global Financial Crisis and its Impact on Microfinance*”, CGAP Focus Note No. 52, February, 46 -57.
- Medvedev, D. & Oviedo, A. M. (2013), “*Informality and Profitability: Evidence from a New Firm Survey in Ecuador*”, World Bank.
- Mekernan, S. (2002), “The Import of Micro-Credit Programmes on Self-Employment Profits: Do Non-Credit Programme Aspects Matter”? *The Review of Economics and Statistics*, 84 (1), 9 -15.
- Merton, R.C (1990), “The Financial System and Economic Performance”, *Journal of Financial Services Research*, 263-300.
- Microfinance Information Exchange (2009), “*Micro-Banking Bulletin*”, Issue 18, Spring 2009. ISSN 1934-3884
- Mpuga, P. (2002), “The 1998-99 Banking Crises in Uganda: What was the Role of the New Capital Requirements? *International Journal of Financial regulation and compliance*, 10(3), 1145-1168.
- Multhoni, M.P (2016), “Assessing Institutional Characteristics on Microcredit Default in Kenya: A Comparative Analysis of Microfinance Institutions and Financial institutions”, *Journal of Education and Practice*, 7(18), 178 -190.
- Obadeyi, J. A. (2015), “Microfinance Banking and Development of Small Business in Emerging Economy: Nigerian Approach”, *Journal of Economics and Finance*, 6(2), 50-60.
- Obamuyi, T.M. (2013), “Determinants of Banks’ Profitability in a Developing Economy: Evidence from Nigeria”, *Organizations and Markets in Emerging Economies*, 4(2), 97-111
- Odongo, J. (2014), “Lending Terms and Financial Performance of Small Medium Enterprises in Uganda: Case of Soroti District”, *Research Journal of Finance and Accounting*, 5(2), 78 -89.
- Ogujiuba, K., Fadila, J. & Stiegler, N. (2013), “Challenges of Microfinance in Nigeria: Implications for Entrepreneurship Development”, *Mediterranean Journal of Social Sciences*, 4(6), 611 -615.
- Ogunrinola O. I & Alege, P. O. (2007), “Microcredit and Microenterprise Development: An Analysis of Some Rural Based Enterprises in Nigeria”, *Nigeria Journal of Economics and Social Studies*, 49(1), 95 – 113.
- Ojo, O. (2009), “*Impact of Microfinance on Entrepreneurship Development: The case of Nigeria*”, Proceedings of the International Conference on Administration and Business, Nov. 14-15, Faculty of Administration and Business, University of Bucharest, Romania.
- Oladejo, M.O (2013), “Evaluation of the Nigerian Microfinance Banks Credit Administration on Small and Medium Scale Enterprises Operations”, *International Review of Management and Business Research*, 2(2), 505 – 514.
- Oladejo, M.O. & Olowookere, J.K. (2011), “Automation of Microfinance Institutions in Nigeria: Implication for the Accountants”, *International Journal of Development and Management Review*, 6(1), 3 -6.
- Onanuga, A. & Talabi, S. (2000), “*Lending: Principles and Practice*, Ago-Iwoye: Centre for Sandwich Programmes, (CESAP), O.O.U.
- Onwumere, J. (2007), “The New Microfinance Policy and Poverty Alleviation in Nigeria”, *Journal of Economic*

- and Financial Research*, **1** (3), 30-41.
- Orodje, G. (2012), “*Microfinance in Nigeria Two Years after CBN Intervention; Microfinance Africa*”, August 23 2012, <http://microfinanceafrica.net/editors-views/microfinance-in-Nigeria-two-years-after-CBNs-intervention>.
- Oyebanji, A. O. (2003), *Principles of Economics*, Lagos: CEPDM.
- Pérez, S. E., Amparo, S. L. & Juan, A. S. L. (2004), “The Determinants of Survival of Spanish Manufacturing Firms”, *Review of Industrial Organization*, **25**(3):251-73.
- Robinson, M.S. (2001), “*The Microfinance Revolution – Sustainable Finance for the Poor*”, Washington D.C.; The World Bank – Open Society Institute.
- Rodman, D.M. (2012), “*Due Diligence: An Impertinent Inquiry into Microfinance*”, Center for Global Development, Washington, DC, USA.
- Rosenberg, R. (2009), “*Measuring Results of Microfinance Institutions Minimum: Indicators that Donors and Investors Should Track: A Technical Guide*”, Washington, DC: CGAP.
- Scott, J.W. & Arias, J.C. (2011), “Banking Profitability Determinants”, *Business Intelligence Journal*, **4**(2), 209-230
- Shabbir, M.S. (2016), “The Impact of Micro Finance Institutions on Economic Growth of Morocco”, Center of Professional Excellence, International Islamic University, Islamabad, Pakistan, *Journal of Tourism & Hospitality*, **5**(2), 1 -5.
- Shabbir, M.S. (2016), “The Role of Formal Academician in Promotion of Microfinance”, *International Journal of Research Grant-Haalayah*, **4**(5), 35 -50.
- Sherman, M. (2009), “*A Short History of Financial Deregulation in the United States*”, Centre for Economic and Policy Article, 3-5.
- Soludo, C. (2004), “*Towards Repositioning of Banks in Nigeria for the 21st Century*”, Keynote Address Delivered at the Annual Dinner Muson, Centre, Onikan; Lagos.
- Staschem, S. (2003), “Regulatory Requirements for Microfinance: A Comparison of Legal Frameworks in 11 countries”, *American Economic Review*, **3**: 56-89.
- Storey, D. (1994), “*Understanding the Small Business Sector*”, London: Routledge.
- Sufian, F. (2009), “Determinants of Bank Profitability in a Developing Economy: Empirical Evidence from Bangladesh”, *Journal of Business Economics and Management*, **10**(3), 207-217.
- Terence, J. (1989), “*Evaluation: Relating Training to Business Performance*”, Edinburgh: Chaucer Press.
- Wakaba, S.W. (2014), “*The Effect of Microfinance Credit on the Financial Performance of Small and Medium Enterprises in Kiambu County, Kenya*”, Master thesis of Science in finance, school of business, University Of Nairobi.
- Wanjohi, A.M. & Mugure, A. (2008), “Factors Affecting the Growth of MSEs in Rural Areas of Kenya: A Case of ICT Firms in Kiserian Township, Kajiado District of Kenya”, *Journal of Management*, **3**(2), 34 -42.
- Wellen, H. & Mulder, A. (2008), “Micro Credits in SMEs”, *Journal of Finance and Microfinance*, **7**: 122-34.
- Wole, Adamolekun (1993), “*Community Banking System: Modernizing the Informal Financial intermediaries in Nigeria*”, Innovative Banking Monograph Series 1, 8 – 30.
- World Bank. (2011), “*Industrial Clusters and Micro and Small Enterprises in Africa*”, Washington, D.C., World Bank.

**APPENDICES**

**APPENDIX A  
 Karis MFB (Unit)**

Year	Workings	CAR
2007	N/A	N/A
2008	= 23624/79,631 = 0.2903*100 = 29.03%	29.03%
2009	= 30,496/81,319 = 0.375*100 = 37.5%	37.5%
2010	= 33,632/85,123 = 0.395*100 = 39.5%	39.5%
2011	= 41,321/90,953 = 0.454*100 = 45.4%	45.4%
2012	= 45,947/90,618 = 0.5071*100 = 50.71%	50.71%
2013	= 48,231/100,519 = 0.4798*100 = 47.98%	47.98%
2014	= 50,463/118,056 = 0.4274*100 = 42.74%	42.74%
2015	= 56,891/131,698 = 0.4319*100 = 43.2%	43.2%
2016	= 58,221/140,364 = 0.4147*100 = 41.7%	41.7%

**Money-Wise MFB (Unit)**

Year	Workings	CAR
2007	= 36,492/68,200 = 0.5351*100 = 53.51%	53.51%
2008	= 40,813/70,983 = 0.5749*100 = 57.49%	57.49%
2009	= 44,234/73,218 = 0.604*100 = 60.4%	60.4%
2010	= 46,331/75,226 = 0.6158*100 = 61.58%	61.58%
2011	= 48,321/75,931 = 0.63638*100 = 63.64%	63.64%
2012	= 50,447/80,336 = 0.6283*100 = 62.83%	62.83%
2013	= 53,451/85,329 = 0.6264*100 = 62.64%	62.64%
2014	= 59,378/88,933 = 0.6476*100	64.76%

	= 64.76%	
2015	= 62,433/96,405 = 0.6476*100 = 64.8%	64.8%
2016	= 65,691/98,621 = 0.66609*100 = 66.6%	66.6%

**Emerald MFB (Unit)**

Year	Workings	CAR
2007	= 9871/33,219 = 0.2971*100 = 29.71%	29.71%
2008	= 11,596/48,623 = 0.23848*100 = 23.85%	23.85%
2009	= 12,187/56,244 = 0.21668*100 = 21.67%	21.67%
2010	= 14,631/66,238 = 0.22088*100 = 22.09%	22.09%
2011	= 15,948/75,210 = 0.2120*100 = 21.20%	21.20%
2012	= 16,741/75,210 = 0.22259*100 = 22.26%	22.26%
2013	= 23,012/99,211 = 0.23195*100 = 23.20%	23.20%
2014	= 32,729/110,332 = 0.2966*100 = 29.7%	29.7%
2015	= 42,952/126,216 = 0.3403*100 = 34.03%	34.03%
2016	= 49,856/140,253 = 0.35547*100 = 35.5%	35.5%

**FORESIGHT MFB**

Year	Workings	CAR
2007	= 21,736/29,454 = 0.737960*100 = 73.8%	73.8%
2008	= 26,883/48,235 = 0.5573*100 = 55.93%	55.93%
2009	= 40,287/53,131 = 0.7583*100 = 75.83%	75.83%
2010	= 48,391/61,933 = 0.7813*100 = 78.1%	78.1%
2011	= 51,894/79,295 = 0.6544*100 = 65.44%	65.44%

2012	= 33,260/91,255 = 0.36459*100 = 36.5%	36.5%
2013	= 29,593/96,414 = 0.3069*100 = 30.7%	30.7%
2014	= 52,440/113,212 = 0.4632*100 = 46.3%	46.3%
2015	= 53,691/122,636 = 0.4378*100 = 43.8%	43.8%
2016	= 61,415/131,252 = 0.4679*100 = 46.8%	46.8%

#### NPF MFB

Year	Workings	CAR
2007	= 1,843,962/2,986,485 = 0.6174*100 = 61.7%	61.7%
2008	= 2,153,472/3,182,437 = 0.67667*100 = 67.7%	67.7%
2009	= 2,390,825/3,309,709 = 0.72236*100 = 72.2%	72.2%
2010	= 2,894,344/3,433,265 = 0.8430*100 = 84.3%	84.3%
2011	= 3,735,068/3,199,667 = 1.167*100 = 116.7%	*116.7%
2012	= 4,780,336/3,690,841 = 1.295*100 = 129.5%	*129.5%
2013	= 5,559,453/3,916,894 = 1.419*100 = 141.9%	*141.9%
2014	= 6,527,210/4,079,893 = 1.5998*100 = 159.9%	*159.9%
2015	= 7,881,519/4,251,493 = 1.8538*100 = 185.4%	*185.4%
2016	= 9,095,801/4,463,398 = 2.037*100 = 203.7%	*203.7%

#### OLIVE MFB

Year	Workings	CAR
2007	= 1,205,887/2,153,214 = 0.5600*100 = 56.0%	56.0%
2008	= 1,342,336/2,192,468 = 0.6122*100 = 61.2%	61.2%
2009	= 1,588,944/2,201,433	72.2%

	= 0.72177*100 = 72.2%	
2010	= 1,625,312/2,213,487 = 1.3394*100 = 133.9%	*133.9%
2011	= 1,,843,219/2,243,362 = 0.8216*100 = 82.16%	82.16%
2012	= 2,012,436/3,256,391 = 0.6179*100 = 61.8%	61.8%
2013	= 2,296,222/3,260,423 = 0.7042*100 = 70.4%	70.4%
2014	= 3,509,105/4,289,413 = 0.8180*100 = 81.80%	81.80%
2015	= 4,832,216/6,310,958 = 0.7656*100 = 76.6%	76.6%
2016	= 6,512,413/8,430,256 = 0.7725*100 = 77.3%	77.3%

#### ACCION MFB

Year	Workings	CAR
2007	= 78,934/113,677 = 0.69434*100 = 69.44%	69.44%
2008	= 84,645/112,869 = 0.749*100 = 74.9%	74.9%
2009	= 90,482/204,396 = 0.4426*100 = 44.3%	44.3%
2010	= 1,003,475/1,321,468 = 0.759*100 = 75.9%	75.9%
2011	= 1,,558,051/1,465,994 = 1.0627*100 = 106.3%	*106.3%
2012	= 1,830,124/1,692,892 = 1.08106*100 = 108.1%	*108.1%
2013	= 3,002,293/2,002,212 = 1.4846*100 = 148.5%	*148.5%
2014	= 3,975,266/2,567,489 = 1.5483*100 = 154.83%	*154.83%
2015	= 5,294,462/3,000,360 = 1.7646*100 = 176.5%	*176.5%
2016	= 5,826,119/3,359,645 = 1.734*100 = 173.4%	*173.4%

**AZSA MFB**

Year	Workings	CAR
2007	= 22,432/32,616 = 0.68776*100 = 68.8%	68.8%
2008	= 27,281/51,413 = 0.5306*100 = 53.1%	53.1%
2009	= 28,439/63,212 = 0.4498*100 = 44.98%	44.98%
2010	= 42,363/84,220 = 0.503*100 = 50.3%	50.3%
2011	= 52,118/95,868 = 0.5436*100 = 54.4%	54.4%
2012	= 52,079/97,312 = 0.5351*100 = 53.5%	53.5%
2013	= 61,692/103,896 = 0.5938*100 = 59.4%	59.4%
2014	= 62,545/116,317 = 0.5377*100 = 53.8%	53.8%
2015	= 65,268/120,414 = 0.5420*100 = 54.2%	54.2%
2016	= 66,932/128,312 = 0.5213*100 = 52.1%	52.1%

**APPENDIX B**

CAPITAL ADEQUACY RATIO (CAR) OF SELECTED MFBs								
Year	Karis	Moneywise	Emerald	Foresight	NPF	Olive	Accion	Azsa
2007	N/A	53.51%	29.71%	73.80%	61.70%	56.00%	69.44%	68.80%
2008	29.03%	57.49%	23.85%	55.73%	67.70%	61.20%	74.90%	53.10%
2009	37.50%	60.40%	21.67%	75.83%	72.24%	72.20%	44.30%	44.99%
2010	39.51%	61.58%	22.09%	78.13%	84.30%	*133.9%	75.90%	50.30%
2011	45.41%	63.64%	21.20%	65.44%	*116.7%	82.16%	*106.3%	54.40%
2012	50.71%	62.83%	22.26%	36.50%	*129.5%	61.80%	*108.1%	53.52%
2013	47.98%	62.64%	23.20%	30.70%	*141.9%	70.43%	*148.5%	59.40%
2014	42.74%	66.77%	29.70%	46.30%	*159.9%	81.80%	*154.83%	53.80%
2015	43.20%	64.80%	34.03%	43.80%	*185.4%	76.60%	*176.5%	54.20%
2016	41.49%	66.61%	35.50%	46.80%	*203.7%	77.30%	*173.4%	52.13%