

**THE EFFECTS OF CAPITAL STRUCTURE ON THE PROFITABILITY  
OF MICRO FINANCE INSTITUTIONS IN THE FAKO CHAPTER OF  
THE CAMEROON COOPERATIVE CREDIT UNION LEAGUE  
(CAMCCUL) NETWORK**

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**ABSTRACT**

The Microfinance sector is very important to any country's socio-economic development given the fundamental role it plays in financial inclusion. However, the sector has been facing numerous challenges which have threatened the survival and growth of the industry. It is based on this background that this research aimed at examining the extent to which capital structure affects the profitability of MFIs under the CamCCUL network was undertaken. The research adopted the Ex-post facto causal research design with main source of data being secondary data collected from the period of 2007-2015 using a sample of nine (9) credit unions selected from Fako Division. Using panel regression and specifically random effect regression to examine the effect on profitability measured by Return on Assets (ROA) of equity and debt capital alongside membership and liquidity, the study found that for the selected credit unions, both forms of capital negatively affect their profitability. However, we found that whereas the effect of debt capital on profitability is significant, that of equity was insignificant. Overall, we found that debt capital, equity, liquidity and membership accounted for only 37.9% of the total variation in the profitability (ROA) of the selected credit unions. Hence, it is recommended that the choice of debt as a source of capital finance should be done in line with the costs and benefits associated with its use because any change to the capital structure is likely to provoke some form of market reaction. Therefore, it is necessary to determine how any change e.g raising more debts will be perceived by shareholders, lenders and rating agencies. Strategies should be put in place for monitoring, reporting and reviewing liquidity levels to ensure the long and short term stability of the entire system. The gearing ratio should also be calculated to be able to know whether the credit unions are highly leveraged or not and this will enable them know the best option to maximize. It shows that high debt credit unions perform less than low debt credit unions. The

difficult objective is therefore to find that capital structure that satisfies all parties and offers the best tradeoff between capital cost, financial needs, bankruptcy risks, and market perceptions.

**Keywords:** Equity, Debt, Profitability, Micro Finance, Liquidity, Gearing.

## 1. INTRODUCTION

Microfinance has been a hot topic in the media over the last twenty (20) years, and is not without disadvantages, but there are also many who benefit from it and are able to get a better life, because of it. Financing is a scarce factor for many financial institutions around the world wishing to improve their financial positions. In order for microfinance institutions (MFIs) to be able to help poor people gain access to financial sources, they need to be able to cover their costs and earn profits. It is hard for MFIs to achieve their goals if they are not performing well financially. Capital structure decisions are an important factor for a firm's profitability. This study therefore focuses on the effect of capital structure on the sustainability and financial performance, hence profitability of MFIs in Cameroon.

In 1987, the Brundtland Report first provided the concept of sustainability development describing it as "a development that meets the needs of the present without compromising the ability of future generations, to meet their own needs" (WCED, 1987). Kleindorfer et al. (2005) developed the concept of sustainable operations management, which is defined as integrating "the profit and efficiency orientation of traditional operations management with broader considerations of the company's internal and external stakeholders and its environmental impact."

Furthermore, there are different ways to measure company performance. A common categorization has been to divide performance into financial and non-financial performance (Ittner, 2008). Traditional accounting measurements of financial performance have included sales growth, return on equity (ROE), earnings before interest and taxes (EBIT), and return on investment (ROI), among others (Orlitzky 2011; Zahra 1995). Such financial measurements often measure an organization's profitability. On the other hand, innovation performance, market share, and other operational key performance indicators (KPIs) are usually applied to measure non-financial performance (Hyvönen, 2007). Moreover, in the sustainability research literature, scholars have argued that company performance should have a broad scope that includes a triple bottom line, instead of only focusing on a single aspect of company performance, such as financial performance. More specifically, company performance refers to environmental performance, social performance, economic performance, operational performance, and innovation performance.

For companies operating in a competitive global environment, studying sustainability issues is necessary and should be prioritized in the decision-making processes by company management. Otherwise, companies will not be able to maintain their competitive advantage in the long run (López et al., 2007). However, there is still a question as to whether investments in environmental management practices and other corporate social responsibility (CSR) initiatives offer direct returns in terms of improvements to a company's performance. Several studies have supported the notion that there is a positive relationship between sustainable practices and better company performance. Some previous studies indicated that there was a medium to strong association between financial indicators, such as profitability, and some environmental indicators, such as pollution control, especially for the pulp and paper industry. Further research by Zhu et al. (2012), Hart (2005), Shrivastava (1995) among others have supported this conclusion, suggesting that improved environmental and social practices can help companies to gain competitive advantage and subsequently improve their performance. Hart (1995), used a natural-resource-based view to explain the above link.

The central idea of the natural-resource based view is that companies that foster and maintain good relationships with the ecosystem can achieve sustainable competitive advantage from their efficient usage of natural resources. Shrivastava (1995) further argued that such a positive relationship can be facilitated through technology transfer, total quality and environmental management, and so on. At the same time, some studies have supported the opposite claim that there is a negative relationship between sustainable initiatives and company performance. The main argument here is that sustainable initiatives often increase operational costs and boost product prices, thus having a negative impact on financial performance and market share (Brammer and Millington, 2008; Cornell and Shapiro, 1987). Therefore, it is necessary to conduct an in depth investigations into the relationship between capital structure and profitability of the micro finance sector in Cameroon.

There exists a strong separation between ownership, and control, that present critical issues in modern corporate governance in both financial and non-financial entities. As a result of this, managers have their specific objective which is different from that of the shareholders of the firm there by bringing in an agency cost arising from separation that exist between ownership and control of the firms. To solve this problem and to mitigate against agency cost, mechanisms have been proposed, of which as an example of this mechanism is the capital structure of the firm.

The capital structure of a firm is a decision of that firm to finance its business operations using a mix of debts and equity (Damodaran, 2001). For a firm to take a decision on how to finance its business operations, it needs to take into consideration the risk involved and the profit obtained

from the decision. This decision is more complicated where the environment in which the firm is operating presents a high degree of instability.

Theories put forth have proved that the capital structure of a firm is very important in determining the profitability of the firm. For instance the Pecking order hypothesis which says that firms which are profitable and generates high earnings are expected to use less of debt capital than those firms that do not generate high earnings. Hence internal funds are used first and if they are insufficient, the firm can use debt to finance its operations and when it seems inappropriate to issue more debt the firm should continue its financing process by using equity (Myers and Majluf, 1984).

According to Berger and Udell (2006) the capital structure of the firm increases the value of that firm (profitability). They pointed out the view that, high leverage or low equity/asset ratio reduces the agency cost of external equity there by enabling managers to work for the interest of the shareholders (maximizing shareholder's wealth).

In contrary to the fact that the capital structure of a firm has an impact on its profitability, Modigliani and Miller (1958), argued the fact that the capital structure of a firm has got nothing to do with the firm's profitability. However, this all depends on how leverage/gearing the institution is, because the higher the leverage/gearing, the higher the risk that the debt cannot be serviced and the institution may get into difficulties. These theorists introduced a risk-transference concept, which in essence means that when an institution takes on more debts, the risks involved will be transferred to the equity holders. The equity holders will in return expect a higher risk premium. So, the costs of equity capital will rise with an increase in gearing.

In addition to the above view, Modigliani and Miller (1963) reviewed their theory and included the tax benefit of the debt. Thus, they considered that the cost of debts is smaller than the cost of equity because the government plays an important role by indirectly subsidizing the expenses with interest on debts that is, the fiscal legislation allows the firm to deduce the operational profit, the expenses on interest payment, value on taxes levied on revenue will be reduced in the same proportion as on the income for tax. Therefore a firm with a high debt will experience a high profit and that with low debt will experience low profit.

Another school of thought Warner (1977), in Brealey and Myers (1992), brought up the idea that firms highly financed by debt face difficulties of managing their operations most especially during the process of bankruptcy. This is as a result of increase in the cost of debt, legal and administrative cost, and direct cost during this bankruptcy process that allows the firm to lose its value.

Furthermore, several factors according to Graham (2000), explains the choice of financing to be used by a firm. According to him, the low liquidity and irregularities of cash flows in most firms affects their decision as on which investment projects to invest in as they turn to elevate the cost of debt.

This shows that the attitude of administrators towards the firm will be conservatively employ debt instruments either because they will not like to assume risk or because they will like to increase shareholders participation in the firm's activities.

Lastly the capital structure of a firm can be determined by the relationships that exist between the firm and the financial market. By using information as on the level of interest rates charged on debts, inflation rates of the economy in relation to its participation in the stock market. Thus, it can be seen from this point of view that firms financed by low debt will have very low capitalization structure.

## **2. STATEMENT OF THE PROBLEM**

Microfinance sector is very important to the country's socio-economic development given the fundamental role it plays in financial inclusion. The sector focuses mainly on the hitherto unbanked population mostly the low-income earners in the society. However, the sector has been facing numerous challenges which have threatened the survival and growth of the very industry. The fact that many MFIs are not deposit-taking, a departure from other financial institutions, yet they give out loans to their customers implies that they rely heavily on debt and possibly retained earnings. This is a huge challenge due to inadequacies of retained earnings and exorbitant interest rates charged by commercial banks when lending to MFIs. When there are challenges on capital structure of MFIs, these firms will have inadequate funds to loan out to their customers. Interest charged on credit advanced to borrowers is the spine of MFIs. Therefore, when MFIs lack sufficient funds to give their customers in form of loans is likely to lead to foregone profits, losses, and ultimately collapse of these institutions. Indeed, it 2014 Sector Report on the Microfinance Sector in Kenya by the Association of Microfinance Institutions (AMFI, 2014) indicated that MFIs portfolio yield reflects higher operational costs incurred. Operating expenses ratio as at 2014 was 23.5% amongst credit-only MFIs. Moreover, these MFIs have limited availability of affordable financial resources and also have limited bargaining power to source funds at competitive rates as compared to microfinance banks (MFBs) and banks. Therefore, such MFIs have lower portfolio quality compared to banks and MFBs. In the same light, the report indicated that, MFIs capitalization is not deemed sufficient because, unlike MFBs and banks, they are not regulated, a situation that presents a higher risk profile. The present study aimed to address the problem of capitalization affecting MFIs as one way of enhancing their profitability.

There seem to exist a correlation between the capital structure of microfinance institutions (MFIs) and their profitability. The choice of the proportion of either debt or equity or the proportion of the mix of both debt and equity to be used to finance the microfinance activities, affects their values and their risk of return they receive from the decision of what proportion taken. Using the ordinary least square method to estimate the relationship that exist between the return on equity (ROE), indexes of long and short term debt, total owner's equity are used. The result proves that there is a positive co relationship between short term debt and equity, thereby generating high rates of return. However, it shows that a high return represents a negative correlation between a long term debt and equity.

On the contrary, Modigliani and Miller (1958) argued on the fact that the capital structure of Microfinance Institutions has no impact on its profitability. This is because their arguments were based on the assumption that there exist perfect market situations in which there is no transaction cost, debts are interest free, and there is no asymmetric information. These assumptions put forth by Modigliani and Miller (1958) are unrealistic in the real world of the microfinance market because even though the evolution of microfinance institutions was for poverty alleviation, most of them have deviated from this objective by charging higher annual interest rates as compared to the annual interest rates charged on loans by other financial institutions.

The capital structure of MFIs is made up generally of debt and equity. Thus, the following research questions can be derived. The main question goes thus:

To what extent does the capital structure affect the profitability of microfinance institutions in Cameroon?

The specific questions are;

- i) To what extent does debt capital affect the profitability of MFIs under the CamCCUL network in Cameroon?
- ii) What effect does the equity capital have on the profitability of MFIs under CamCCUL in Cameroon?
- iii) Does the liquidity ratio of MFIs under CamCCUL influence their Profitability?
- iv) What role does membership play in the profitability of CamCCUL MFIs?
- v) What trend has the various aspects of capital structure and other performance determinants in MFIs exhibited over time?

### **3. OBJECTIVES OF THE STUDY**

The main objective of this study is to examine the extent to which capital structure affects the profitability of MFIs under the CamCCUL network. The specific objectives of the study include;

- i) To assess the trend of the various elements of capital structure of selected MFIs affiliated to CamCCUL over time;
- ii) To evaluate the extent to which debt capital influences the profitability (ROA) of MFIs under the CamCCUL Network;
- iii) To assess the effect of equity capital on the profitability of MFIs under the CamCCUL network
- iv) To assess the role of the liquidity management on the profitability of MFIs under CamCCUL;
- v) To assess the role of changes in membership towards the profitability of CamCCUL MFIs and;
- vi) To make necessary recommendations on improving the relationship that exists between the capital structure and financial performance (profitability) of MFIs in Cameroon.

### **4. SIGNIFICANCE OF THE STUDY**

The findings of this study have several areas of significance. To begin with, the management of CamCCUL and its affiliated MFIs as well as other financial institutions will be equipped with the knowledge on how to optimise their capital structure which increases shareholder's wealth. Furthermore, other researcher will use it as a reference point for further investigation on relationship between capital structure and other measures (variables) of firm performance. Moreover, the study shall help increase the researchers' knowledge in the sphere of capital structuring especially in financial institutions. Finally, the study adds more to the relatively scanty literature in the domains of capital structure management for MFIs in Cameroon.

### **5. SCOPE OF THE STUDY**

The study covers a time scope spanning a period of nine (9) years (2007-2015) and focuses on the Buea Police Cooperative Credit Union Limited, Sonel Workers Cooperative Credit Union Limited, Tiko Banana Credit Union Limited, Victoria Customs Credit Union Limited, Tiko Progressive Credit Union Limited, P&T Credit Union Limited, Bomaka Credit Union Limited, National Ports Authority Credit Union Limited, and lastly Tole Tea Credit Union Limited all affiliated to CamCCUL. This is because study is limited in respect to time and resources,

## **6. LITERATURE REVIEW**

### **6.1 Conceptual Issues**

The main concepts examined are the concepts of capital structure, profitability, performance and microfinance.

#### **i. Capital Structure**

The capital structure of a firm is described as the components of its sources of financing, broadly categorized as equity and debt finance, Brockington (1990).

The capital structure decision is a very important decision for any business organization including MFIs. The decision even though it is crucial, it is important, because it raises research and policy questions regarding the MFIs. It enables the microfinance industry to maximize its returns and also helps it to determine the impact of the decision on the institution's ability to work efficiently with its competitive environment.

A firm's capital structure mix of its' financial resources available for carrying on the business and is a major determinant on how the business operates. As financial capital is an uncertain, but critical resource for all firms, suppliers of the finance are able to exert control over firms. The two major classes of financing for a business are debt and equity. While debt holders exert lesser control over the company, and do not determine how the business is run, they earn a fixed rate of return and are protected by contractual obligations. The contractual obligations dictate what return is to be paid for the finance and when it is due. Equity holders are the residual claimants of all the business' returns, bearing most of the risk and having greater control over decisions, Kochhar (1997).

Equity finance is finance provided by owners of the business and it is the risk bearing finance. The holders of this finance own a portion of the firm denominated in shares and they are entitled dividends. However, it is not mandatory to pay a dividend all the time as the company may retain the profits for financing expansion of its operations. Equity owners also share in the risks of the business and are the last to benefit when a business is wound up after debt holders have been paid.

Debt finance is finance generated through borrowing from external sources such as banks or from issues of bonds, all of which attract a fixed return. Debt may be short term, (repayable over periods shorter than one year) or long term, (repayable over periods longer than one year. The lender does not gain a control of the business, but is paid interest for the use of his funds. The borrower has a contractual obligation to pay the interest and to repay the principal when due, in



spite of the performance or profitability of the business. Brealey and Myers (2003) defined capital structure as the firm's mix of different securities. The firm may issue dozens of different securities, but it attempts to find a combination that maximizes its overall market value by minimizing the cost of capital. When the firm is financed entirely by common stock, all its resultant cash flows will go to the stock holders.

## **ii. Capital Gearing**

The above analysis of the capital structure of an enterprise shows that the debt and equity of the enterprise can be analyzed as a ratio. Such analysis is the capital gearing. The term 'capital gearing' refers to the relationship between equity capital (equity shares plus reserves) and long-term debt. In simple words, capital gearing means the ratio between the various types of securities in the capital structure of the company.

The gearing ratio measures the proportion of a company's borrowed funds to its equity. The ratio indicates the financial risk to which a business is subjected, since excessive debt can lead to financial difficulties. This ratio is similar to the debt to equity ratio, except that there are a number of variations on the gearing ratio formula that can yield slightly different results.

The most comprehensive form of gearing ratio is one where all forms of debt - long term, short term, and even overdrafts - are divided by shareholders' equity. The calculation is:

$$\begin{aligned} & \textit{Capital Gearing Ratio} \\ & = \frac{\text{Long - term debt} + \text{Short - term debt} + \text{Bank overdrafts}}{\text{Shareholders' equity}} \dots \dots \text{Equation 1} \end{aligned}$$

Generally and depending on the formula adopted in a given enterprise;

A business with a gearing ratio of more than 50% is traditionally said to be "highly geared".

A business with gearing of less than 25% is traditionally described as having "low gearing"

Something between 25% - 50% would be considered normal for a well-established business which is happy to finance its activities using debt.

A high gearing ratio represents a high proportion of debt to equity, and a low gearing ratio represents a low proportion of debt to equity. Furthermore, a high gearing ratio is indicative of a great deal of leverage, where a company is using debt to pay for its continuing operations. During economic slowdown or business downturn, such businesses may find it difficult meeting their debt repayment schedules, and could risk bankruptcy. The situation is especially dangerous

when a company has engaged in debt arrangements with variable interest rates, where a sudden increase in rates could cause serious interest payment problems.

On its part, a low gearing ratio may be indicative of conservative financial management, but may also mean that a company is located in a highly cyclical industry, and so cannot afford to become overextended in the face of an inevitable downturn in sales and profits.

When it issues debt alongside the equity, the cash flows are shared between the common stockholders and the debt holders, with the debt holders getting a fixed amount, while the common stockholders get the residual amount depending on the overall performance of the business.

Capital structure (financing choice) involves a tradeoff between risk and return in order to maximize shareholder's wealth (Berger and di Patti, 2006). Thus the capital structure of any firm is a mix of debts, preferred stocks equity that the firm uses to finance its business (Damodaran, 2001).

Today, MFIs are opened to a brighter range of financial sources which makes it more complex for them to make decisions on the optimum capital structure. Examples of such sources include; customers' deposits, equity, donations from foreign entities and retained earnings. Amongst the above sources, customers' deposit may be the cheapest source of fund if volume and terms leverage potential market demand. Globally, it is realized that most MFIs rely heavily on foreign donations and retained earnings to finance their activities. This is in contrast to African MFIs that rely more on savings to finance their activities. In Africa about 25% of microfinance assets are financed with equity while 75% are financed using deposits (Lafourcade et al, 2006).

Nevertheless, the choice of financing mix to be used by MFIs depends on the type of MFIs. For instance a non- governmental MFIs (NGO) will rely more on debt financing since it may not be regulated to mobilize deposits.

### **iii. Performance of MFIs and its Measurements**

A firm's financial performance, in the view of the shareholder, is measured by how better off the shareholder is at the end of a period, than he was at the beginning and this can be determined using ratios derived from financial statements; mainly the balance sheet and income statement, or using data on stock market prices, Berger and Patti (2002). These ratios give an indication of whether the firm is achieving the owners' objectives of making them wealthier, and can be used to compare a firm's ratios with other firms or to find trends of performance over time. Charreaux (1997) states 'that an adequate performance measure ought to give an account of all the consequences of investments, on the wealth of shareholders'. The main objective of shareholders

in investing in a business is to increase their wealth. The measurement of performance must give an indication of how wealthier the shareholder has become as a result of the investment over a specific time.

The ratio of profits of the company over shareholder capital employed measures the use of the owners' funds in producing the overall profit of the firm and is given as:

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit After Tax}}{\text{Equity}} \times 100 \dots \dots \text{Equation 2}$$

Where; equity is the shareholder's funds at the end of the same period.

Other ratios employed to measure the performance of a firm in relation to shareholders' interests are the dividend rate, which measures the cash return to the shareholder from his investment in the share of the firm, and the market value of the company compared to its book value, which measures the change in shareholders' value of investment. Brockington (1990) gives the dividend payout rate as:

$$\text{Dividend Payout Rate} = \frac{\text{Dividend}}{\text{Share Price}} \times 100 \dots \dots \dots \text{Equation 2.3}$$

Where the dividend is the amount of dividend per share and the share price is the nominal price. The ratio of market value (MV) to book value (BV) of the share denotes how the share has appreciated from the nominal value to the market price, and is expressed as:

$$\text{MV: BV} = \frac{\text{Market Value per Share}}{\text{Book Value per Share}} \times 100 \dots \dots \dots \text{Equation 2.4}$$

#### **iv. The Concept of Profitability**

Any ordinary business organization is concerned with either profit making or break-even in order to be sustainable in future. This might not be the case with some MFIs since subsidies and donations work or assist as a kind of safety net for such institution such as other priorities come first. However, due to the rapid growth and expansion of the microfinance industry, profitability has become an important priority and a step to microfinance profitability.

Profitability of microfinance institution is the ability of that institution to make profit from its activities. The profitability of microfinance industry is vital in maintaining the stability of the industry. Hence the profitability of CamCCUL reflects its ability to transact business effectively in its given environment that is including the various MFIs under its control. This is due to difficulties it has to encounter at the end of the year going through the financial reporting of all

the institutions under its umbrella and also the competition it faces with other umbrella institutions of neighboring countries like Nigeria, Gabon, Central African Republic and Equatorial Guinea. This also has to do with its ability to have an efficient risk management system, quality management system, and an adequate amount of capital. This is due to the fact that CamCCUL is making negative profits that weaken its ability to absorb negative shocks which can subsequently lead to solvency and liquidity problems and this will have a great impact on the microfinance market in Cameroon thereby causing the collapse of many of such institutions. In order to measure the profitability of MFIs, we make good use of profitability ratios. The profitability of a MFI is measured as that institution's ability to translate assets into profit at each stage of business activity.

Looking at the return ratios, they represent the institution's ability to measure its overall efficiency in generating returns from their investments. Here, the researcher uses the return on assets (ROA), which is defined as a percentage of net income earned divided by total assets owned by the institution. In other words, return on assets measures a company's net earnings in relation to all of the resources it had at its disposal; the shareholders' capital plus short and long-term borrowed funds. Thus, return on assets is the most stringent and excessive test of return to shareholders. If a company has no debt, the return on assets and return on equity figures will be the same.

$$ROA = \frac{\text{NET INCOME}}{\text{TOTAL ASSETS}} \times 100 \dots \dots \dots \text{Equation 2.5}$$

Profitability as an important aspect of every institution also has weaknesses, window dressing of the financial transaction of the institution and also application of different accounting principles in drawing up financial statements. Profitability is always believed to be positive but an institution can also make negative profits. In such cases, expenses are often greater than income generated from the institution's investments.

**v. The Concept of Microfinance**

Microfinance refers to giving poor and low income people with no access to financial services through the ordinary formal financial sector the provision of different types of small-scale financial services. However, the essence of the definitions is usually the same. Microfinance is the provision of small scale financial services to low income or unbanked people (Hartarska, 2005). It is about provision of "a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to the poor and low income households and their farm or nonfarm microenterprises" (Mwenda and Muuka, 2004, p.145). Similarly, the Asian Development Bank (ADB) defines 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 microenterprises (ADB, 2000). The fundamental services that the MFIs provide are the same that conventional financial institutions offer to their clients but the only difference is the scale and method of service delivery (Ledgerwood, 1999).

Here Microfinance is often defined as financial services for poor and low-income clients offered by different types of service provider (Gateway, 2012). Some MFIs also provide enterprise development services, such as skills training and social services, these are not included in this definition, and it only focuses on the financial side of microfinance. There have been a huge growth in the microfinance industry for over a decade, but there is still a long way to go, it only reaches a small percentage of its potential market worldwide (Ledgerwood & White, 2006). Microfinance can be a powerful instrument against poverty, but it is only when supply meets demand that the poor people can find their way out of poverty (Helms, 2006). According to the most recent estimates microfinance has reached one hundred and fifty million individuals worldwide (Armendariz & Labie, 2011). Still 90 percent of the population of the developing world does not have access to formal sector financial services (Robinson, 2001).

The clients of microfinance are typically self-employed, low-income entrepreneurs from both rural and urban areas. As mentioned in the definition above from Gateway microfinance is provided to poor and low-income clients, but even though they are poor they are generally not considered to be among the “poorest of the poor” (Ledgerwood, 1999). Microfinance is often provided to clients who are traders, street vendors, small farmers, service providers, craftsmen, small producers and to other individuals or groups at the local levels of developing countries (Ledgerwood, 1999; Robinson, 2001). All though microfinance can be a powerful instrument against poverty is not always the answer. For people who are extremely poor and badly malnourished, ill, and without skills or employment opportunities there might be other kind of support that may work better (Helms, 2006; Robinson, 2001). Such people need food, shelter, medicines, skill training, and employment, and when they are ready to work microfinance might be the next step (Robinson, 2001).

Helms (2006) points out that there are three major challenges that defines the frontier of financial services for the poor:

Scaling up quality financial services to serve large numbers of people (scale)

Reaching increasingly poorer and more remote people (depth)

Lowering costs to both clients and financial service providers (costs)

Up until now microfinance has been very dependent on international donor funding (Helms, 2006).

According to FazleHasan Abed “The poor remain poor because they are powerless. Once empowered, the poor are able to change their lives and overcome seemingly impossible odds” (CGAP, 2006).

There is a huge demand for small scale commercial financial services among the world’s poor and low income people. The financial services can help them improve household and enterprise management, increase productivity, smooth income flows and consumption costs, enlarge and diversify their micro-businesses, increase their incomes, and empower their way out of poverty. But unfortunately the formal financial sector is rarely able to cover the demand for these financial services (Robinson, 2001). Credit is often widely available from informal commercial moneylenders, such as commercial moneylenders, pawnbrokers and rotating savings, and credit associations but typically at a very high cost to the client (Ledgerwood, 1999; Robinson, 2001). The nominal monthly effective interest rate can range from about 10 percent to more than 100 percent, which is many times the monthly effective rates of sustainable financial institutions, this rate are usually 2-5 percent (Robinson, 2001).

Microfinance institutions are considered as a tool for poverty alleviation through improving access to finance and financial services. According to Basu et al. (2004) MFIs complement effectively the formal banking sector in providing financial services to the poor. The rationale of improving finance comes from the premise that empowerment of the poor through creating income generating capacity enables the poor to access all development requirements to get out of multifaceted dimensions of poverty and reduce their vulnerability to unexpected events (Davis al., 2004). However, studies (e.g. Ahlin and Jiang, 2008) suggest that these benefits of microfinance can only be realized as long as the poor continue to be clients of microfinance institutions. Thus, it is suggested that microfinance institutions should consider further enabling the average borrower to graduate from the continual dependence on them to enhance long run development. This will make MFIs as the weapon to eradicate poverty.

#### **vi. Debt Financing**

Business enterprises use debt in their businesses, because it offers them potential to increase the volume of their operations and increase the average return on their equity funds. The use of debt will have this effect only if the rate of return on the investment is greater than the rate of return on the debt, Watkins (2002). The borrowing firm takes a chance to use debt in the hope that it will elevate the firm to a more valuable level, by increasing the turnover and therefore increase the profits. The financial leverage chance will arise if the rate of interest charged to the firm is lower than the internal rate of return (IRR) for the company, in which case the firm will be making enough to pay the interest charged and the principal repayment and retain the surplus for the shareholders. On the other hand the firm may experience a financial leverage risk that the

returns of the business are not enough to cover the interest charged. This occurs when the rate of interest exceeds the internal rate of return of the company. To avoid liquidation, the firm will have to use part of the shareholders' funds to repay the interest and principal. This could eventually lead to erosion of the equity and the collapse of the business. The simplest way to assess whether borrowing has increased the return on equity is to contrast the return on the investment with the loan interest rate. When the return is higher than the loan interest rate, there is positive leverage (that is the return on equity increases as more is borrowed, Rowland (2002).

**vii. Measurement of Indebtedness**

Bierman (1999) defines financial leverage as the use of debt in the capital structure and enumerates four ways of measuring it. The static measure of indebtedness using book values is the proportion of debt to the total capital or debt to the sum of debt and common stock, given as:

$$I_1 = \frac{D}{D + E} \dots \dots \dots \text{Equation 2.6}$$

Where D represents the book value of debt and E is the book value of equity (or shareholders' funds). A second measure of indebtedness is the static measure of indebtedness using market values and is defined as the proportion of debt to total capital or the sum of debt and common stock, with the debt and equity taken at market value. It is expressed mathematically in the same way as the first measure above. The third measure is the flows measure of indebtedness which uses interest and income and is expressed as the ratio of the earnings before interest and tax (EBIT) to the interest for the period. It is represented by:

$$I_2 = \frac{\text{EBIT}}{\text{INTEREST}} \dots \dots \dots \text{Equation 2.7}$$

This ratio measures the firm's debt servicing capacity and shows the number of times the interest charges for the period are covered by funds that are ordinarily available for the interest payment. A fourth measure is the flows measure of leverage, using cash flows and employs the ratio of cash inflows (income including depreciation and other non-cash expenses) and cash outflows (in terms of payment of debt). It is a measure of the ability of the firm to finance its debt obligations of paying the interest and the principle debt as they fall due. Nivorozhkin (2000) expresses a primary concern with the use of book values versus market value data, in the measurement of indebtedness and prefers to use market values, as they provide a more accurate description of future cash flows and their risks. This however, introduces the problem that market prices are frequently fluctuating. He concludes that the final and perhaps best measure of leverage is the ratio of total debt to the sum of total debt and shareholders' equity, using the book values.

**viii. Debt and Shareholders' Returns**

Watkins (2002) illustrates the effect of leverage on the shareholder's risk by describing, mathematically the rate of return on equity in terms of the rate of return on the debt and the rate of return on the asset that the debt is financing. Thus;

$$Req = ra + L (ra - rd) \dots \dots \dots \text{Equation 2.8}$$

Where *Req* is the return on equity, *ra* is return on asset, *rd* is return on debt and *L* is the leverage (debt/equity ratio).

This relationship is a major factor in the choice of funding for an asset, because when the return on debt (*rd*) exceeds the return on the asset (*ra*), the return on equity will be less than the return on the asset. It follows then that the asset cannot benefit the investor as the return on equity is reduced by the financing of the excess of return to debt over and above what the asset is generating, and the higher the leverage ratio, the more the negative effect on the return on equity. Myers and Majluf (1984) argue that a theory of capital structure can be constructed by ranking securities, where investment is financed first with internal funds, then by issue of debt before the issue of new shares can be considered. Other scholars yet base their arguments on the Pecking Order Theory which states that businesses choose their source of finance in a hierarchical manner preferring internal financing, where available, and if external financing is required, preferring debt to external equity sources, because debt is considered less risky than external equity.

Mayer and Sussman (2002) advance the thought that the Pecking Order theory denies the existence of an optimal capital structure. They argue that firms have a ranking of instruments to satisfy their financial needs without a tendency to revert to any particular capital structure. The capital structure therefore is a result of the supply of the preferred source(s) of funding.

**ix. Debt and Risk**

Risk is the variability in the earnings of a company which increases the likelihood of bankruptcy and the cost of debt. Risk can be broken down into two components:

- i) Operating risk is the variability in earnings due to the environment in which the firm operates and is unavoidable risk.
  
- ii) Financial risk is the variability in the earnings after interest and tax that is due to the use of financial leverage. Financial risk affects the shareholder's value in varying the Earnings Per Share (EPS) and rate of Return on Equity (ROE). This risk arises as a result of fixed payments



related to debt, namely interest and principal payments, that have to be paid regardless of whether the business is making profits or not.

According to Brealey and Myers (2003), in most years in a business' life there is a gap between the cash that the company needs and the cash it can generate internally for its operations and this is called the financing gap. To make up this gap, companies must sell new equity or borrow. They are faced with a decision on what proportion of the deficit must be financed by borrowing and how much by internal funds. This assumes that the borrowings at a fixed charge can be obtained at a cost lower than the firm's rate of return on its total assets, and the surplus of the return after paying off the interest will be distributed to the shareholders, then the earnings per share or the return on equity will rise. However, return on equity will fall if the company obtains the fixed charge funds at a cost higher than the rate of return on its total assets as the interest charged will erode the profits.

Reilly and Brown (2003) define financial risk as the uncertainty introduced by the method by which the firm finances its investments. If it employs only common stock to finance investments, it incurs only the business risk, the uncertainty arising from the nature of the business. If it borrows money to finance its investments, it must pay fixed financing charges prior to providing income to the shareholders, so the uncertainty of returns to equity holders increases by the risk introduced with the borrowing. If the profits are low, the business must still pay the lenders before the shareholders can be paid their return. This increases the variability of the return to them. Taking and managing risk is part of what companies must do to create profits and shareholder value, Buehler and Pritsch (2003). Risk is defined here broadly to include any event that might push a company's financial performance below expectations. It comes in four main categories namely:

Market risk (exposure to adverse market price movements),

Credit risk (exposure to the possibility that a borrower or client might fail to honor their contractual obligations),

Operational risk (the exposure to losses due to inadequate internal processes and systems)

Business - volume risk (exposure to revenue volatility arising from changes in demand and supply or competition).

A company must formulate a strategy that takes into account all these risks and plan their mitigation. One major aspect of the risk assessment and management involves decisions on the capital structure or the business financing of the company.

#### **x. Debt and Dividends**

A dividend is set by the firm's board of directors and it is announced at the annual general meeting of shareholders that the payment will be made to all shareholders who are registered on a particular date. The dividend declaration may be restricted by debt holders or lenders, who are concerned that the payments may not leave enough to cover their debts. Companies are legally not allowed to pay a dividend out of legal capital.

According to Brealey and Myers (2003) companies pursue a dividend policy that maximizes the shareholder's return so that the value of the investment is maximized. A dividend policy determines how much of the profit of a firm is distributed as dividends to the shareholders and how much is retained as reserves for financing the firm's growth. A high payout ratio policy implies less retained earnings resulting in slower growth and maybe lower market price per share. A low payout policy on the other hand may accelerate earnings and raise the share price and investors will realize most of their return through capital gain. The dividend per share may be low for such companies, but the market value to book value of the share will be high.

Managers tend to have a target dividend pay-out rate but tend to smooth it out to keep dividends as predictable as possible, in order to have a stable market value. A fall in dividend can send bad signals to the market and cause the value to fall drastically. They have an option to buy back shares or issue bonus shares instead (Brealey and Myers, 2003).

#### **xi. Debt and Share Value**

The Mayer and Sussman (2002) report the development of a new approach to testing the capital structure theory. On performing tests and event studies on financing of specific projects, they found that around time of investment spikes, both the trade-off and the pecking order theories played an important role in the firms' financing decisions. Profitable and large firms have a clear preference for debt over equity and increased their debt in line with their financing requirements. However, small firms are forced to turn to equity markets to finance their investments.

#### **xii. Debt and Interest Rates**

Interest rates represent the cost of borrowing capital for a given period of time. According to Myers and Stewart (1984), prevailing interest rates are key to many firms, because of indexing of interest rates to inflation. Studies show that interest rates affect capital structure decisions. Jalilvand and Harris (1984) in a study of United States of America(USA) Corporation obtained results which suggested that financial decisions are interdependent and firm size, interest rate conditions and stock price levels affect speed of adjustments to capital structure implying that they do influence it. Singh (1993) notes that if the interest rate is high investment falls, a low rate

of interest may lead to increase in investment activity. Increased investment may imply use of more debt. It can thereby be concluded that a relationship exists between investment and use of debt and level of interest rates

### **xiii. Debt and Agency Costs**

Agency costs are the disputes that occur between interested parties in an organization due to their various competing interests. Conflict of interest between the debt/bondholders and the equity holders may arise due to under investments. Myers (1977) argues that investment decisions in a firm can be affected by the presence of long term debt in the firm's capital structure. Shareholders may under invest and pass up positive NPV projects if they perceive that the profits will be used to pay off existing debt holders. This cost can be most acute among the growing firms, Myers argues that the firms may want to limit the total debt or use short term debt in order to limit underinvestment costs. Froot and Stein (1993) propose that firms may want to hedge or otherwise maintain financial flexibility to avoid cost of underinvestment.

At high debt ratios, friction between management and lenders escalates. Lenders will want to introduce restrictive covenants to prevent their wealth from being distributed to shareholders. At high debt ratios investors will want to engage in risky investments because in case of best outcomes major beneficiaries are their shareholders because lenders have fixed interest irrespectively of the projects undertaken. Asset substitution is where the shareholders are able to capture returns above those amounts required to service debt repayments and other liabilities and at the same time have a limited liability when the returns are insufficient to fully pay off the debts and the debt holders may have to write off the debts. Therefore shareholders will prefer high risk projects and the bondholders will prefer risk free projects that will guarantee repayments. Leland et al (1996) argue that the use of short term debt reduces agency conflict while Green (1986) argues that asset substitution can be avoided by use convertible debt so that if the shareholders insist on undertaking riskier project the bondholders can enjoy benefits of the project by converting their bonds to equity. In making debt decision managers take into account how it affects their ability to take additional projects in the future in practice many firms that have a high substantial investment opportunities will preserve their borrowing capacity to enable them have flexibility. This explains why there is lower debt financing in new industries.

### **xiv. Factors Influencing Debt Financing**

Safdar et al (2009) analysed the relationship between large external equity holder's ownership and financial leverage and realised that relationship between management ownership and leverage ratio is not significant in the presence of a large outside equity holders. An ownership structure with dispersed ownership, no single shareholder has a substantial controlling stake;

hence no one is able to call on the management to account. In such cases managers will have substantial decision making ability and debt levels will be low. In concentrated ownership where there is only a handful shareholders who have significant stake and control they are able to call on management to account and shareholder power is immense hence debt ratio will be higher

#### **xv. Advantages of Debt Financing**

Firms which experience high tax rates will have comparatively higher leverage ratios and likewise lower tax rate will lead to lower debt ratio. Mackie-Mason (1990) concluded that firms that have non debt tax shields are likely to borrow less than those that have no debt tax shield i.e. other shield like depreciation (Wear and Tear) or Accumulated losses. If taxes were to increase over time it is expected that industry debt ratio will group with time. Country differences in taxes may explain country differences in debt ratios i.e. with higher tax rates firms would tend to have higher debt ratios. Agreeing with this assertion Desai (1998) found that tax advantage is most important for large dividend paying corporations and companies that probably have a high corporate tax rate and therefore tax incentive to use debt. Firms also issue foreign debt in response to relative tax incentives. Jansen (1986) brought the rationale that use of debt facilitates discipline in management.

Managers tend to make wasteful decisions with free cash flows when given discretionary powers on how to use them. Free cash flow is the firm's cash that the management has discretionary powers and can be used to invest in new assets, pay dividends and finance management perks. Many companies with huge free cash flow and cash reserves and little or zero debt financing tend to have a huge cash cushion against mistakes and no incentive to be efficient.

Debt payment obligations will generally force managers to make the most competitive investment decisions. Debt can also be valuable in monitoring the implementation of investment decisions, ensuring that there is efficiency. This is done by ensuring that the free cash flow available to management is extremely small or insignificant, forcing managers to meet debt serving obligations. Also, the lenders to the firm will always do their own monitoring hence managers may not borrow much.

#### **xvi. Disadvantages of Debt Financing**

At high level of debt financing a firm is exposed to possibly of default (Bankruptcy cost). Bankruptcy costs of debt are the increased costs of financing with debt instead of equity that result from a higher probability of defaulting on debt repayments. They can be categorized into two; direct bankruptcy cost which is less significant (4% of company asset value) and indirect cost which is more significant and includes loss of credit facilities from 20suppliers leading to

firms having to dip into their cash resources or set cash reserves in cases where credit terms are reduced. Firms in this situation have to invest in more liquid assets. Implicit bankruptcy costs can be the positive NPV projects the firm may have to forgo due to its obligations to service debt repayments.

### **xvii. Factors Affecting Firms' Choice of Capital Structure**

Several Factors influence the capital structure of firms. Amongst these are the following;

- a. **Tangibility Tangible:** Tangibility Tangible assets can be used as collateral in external borrowing, the presence of large tangible assets can help a firm get bank loans at a lower interest rate, and it also helps to reduce the risk of the lender suffering from the agency cost of debt. Since the debts can be secured by the collateralization of tangible assets, the firm's opportunity to engage in asset substitution is reduced by the presence of a large fraction of secured debts. Johnson (1997) the costs of capital for firms with more intangible assets, are higher since monitoring is more difficult. Hence, a firm with a large fraction of tangible assets is expected to have more debt.
- b. **Effective Tax Rate:** Interest from loan is tax deductible; firms with higher taxable income ought to have more debt to benefit from tax-shield gain, Hauge and Senbet (1986). As a result, effective tax rate is expected to be positively associated with the level of debt. However, higher effective tax rate also reduces internal funds and increase the cost of capital. Therefore a negative relationship between effective tax rate and level of debt is expected.
- c. **Growth Opportunities:** Studies generally suggest a negative relationship between growth opportunities and leverage. In underinvestment situation, firms with high growth opportunities may forgo positive Net Present Value projects because of existence of outstanding debt, Myers (1977). Since the returns from such investment will be transferred to debt holders rather than shareholders. If management pursues growth objectives, management and shareholder interests tend to coincide for firms with strong investment opportunities. In overinvestment, debt limits the agency costs of managerial discretion. Hence firms with high growth opportunity may not issue debt in the first place and an inverse relationship between growth opportunities and leverage is expected to hold
- d. **Volatility of Earnings:** Firms with high volatility in earnings face a higher risk of earnings level dropping below the debt service commitment. This may force firms to arrange funds at high cost to pay the debt. However, if financed by equity, firms can choose to forgo dividends payments during the period of financial distress. This indicates

that firms with high earnings volatility will borrow least and prefer equity to debt when facing external financing choices.

- e. **Liquidity:** Pecking-order theory suggests that firms prefer internal financing to external financing, firms are likely to create liquid reserves from retained earnings. If liquid assets are sufficient to finance the investments, firms will have no need to raise external funds. Thus, liquidity is expected to be negatively related to leverage.

### **xviii. Financial Inclusion**

Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low income groups at an affordable cost in a fair and transparent manner by mainstream Institutional players (Joshi, 2011). On the other hand, World Bank (2014), defines financial inclusion as the share of individuals and firms that use financial services and went further to define financial services as the services provided to individuals and firms by financial institutions like banks, insurance companies, and other nonbank financial institutions as well as financial markets such as those in stocks, bonds, and financial derivatives.

Damodaran (2016), points out that the essence of financial inclusion is to ensure that a range of appropriate financial services is available to every individual and enable them to understand and access those services. Apart from the regular form of financial intermediation, it may include a basic no frills banking account for making and receiving payments, a savings product suited to the pattern of cash flows of a poor household, money transfer facilities, small loans and overdrafts for productive, personal and other purposes, insurance (life and non-life), etc.

He went further to summarize the importance of financial inclusion as below: If customer is financially educated, he will make better financial choices, for example what kind of financial products can fulfill his individual needs? It will help in improving overall growth of the country. Access to financial services at an affordable cost will improve life of the poor. Financial inclusion is a long term strategy, but to achieve its objectives we need to keep in mind what are the key areas it should address:

- a. It should provide access to basic financial services like banking etc.
- b. The usage of financial services should address needs of the poor.
- c. The financial product should be affordable.
- d. Quality of product and services must be enhanced.

All of the above reasons contribute in increasing the utility of the financial product (Damodaran, 2016).

## **6.2 Theoretical Framework**

Here, the researcher is going to bring out certain theories related to capital structure and also a discussion about the effect of capital structure on MFIs profitability.

### **i. Capital Structure Theory**

The capital structure decision is crucial for any business organization, including MFIs. This decision is important because of the need to maximize the returns off the firm, and also because of the impact such a decision has on the firm's ability to deal with its competitive environment. The capital structure of a firm is a mix of different securities (Abor, 2005). Berk and DeMarzo (2007) define capital structure like this: "The relative proportions of debt, equity, and other securities that a firm has outstanding constitute its capital structure" (Berk & DeMarzo, 2007).

Today MFIs have an increasingly broad range of financial sources at their disposal. This gives them a wider funding diversification, but it also makes it much more complex to make decisions about capital structure. Better capital structure decision making amongst MFIs will minimize risk, maximize financial flexibility, and encourage the long-term solvency needed to provide sustainable financial services to poor clients (CGAP, 2007).

### **ii. Modigliani and Miller Theorem (MM)**

Modigliani-Miller (1958) theorem is considered the greatest breakthrough in theory of optimal capital structure. The theorem specifies the financial decisions by firms that are irrelevant to the firm's value. Modigliani-It has four prepositions which are;

- a. The value of a firm is the same regardless of whether it finances itself with debt or equity. The weighted average cost of capital is constant. The assumptions of Modigliani-Miller theorem are; Perfect and frictionless markets, no transaction costs, no default risk, no taxation, both firms and investors can borrow at the same interest rate; there is homogeneous expectation homogeneous risk and equal access to all relevant information.
- b. The rate of return on equity grows linearly with the debt ratio implying that the higher the debt equity ratio the higher the expected return on equity.
- c. The distribution of dividends does not change the firm's market value it only changes the mix of Equity and Debt in the financing of the firm.
- d. In order to decide an investment, a firm should expect a rate of return at least equal to cost of capital no matter where the finance would come from. Hence the marginal cost of capital should be equal to the average cost of capital. The constant cost of capital is sometimes called the "hurdle rate" (the rate required for capital investment).

In summary the theory states that the value of a firm is invariant with respect to its leverage policy in an arbitrage-free market when there is no corporate income tax and no bankruptcy cost: whether firm is financed through debt or equity, its value remains the same.

The theory is however subject to some criticisms. For instance, Baxter (1976) advanced the theory by introducing the issue of bankruptcy costs and their effect on the value of the indebted firm. These costs include liquidation fees, legal fees and reorganization costs, which would result from the firm going bankrupt. Hence a firm with a higher debt would incur higher bankruptcy costs than one with less debt Berens and Cuny (1995) criticized the theorem proposition with corporate tax on the grounds that if firm value is an increasing function of indebtedness, due to tax deductibility of the interest payments on debt, then it implies that the more debt a firm employs the less tax it would pay, indicating that the value maximizing (optimal) capital structure should be all debt, since the tax benefits are maximized. This implication is not supported by empirical observations of firm behavior. Shuetrim, Lowe and Morling (1998) noted flaws in the first proposition of the theorem and stated that the cash flows of the firm are divided between debt holders, equity holders and the government, and that the capital structure of the firm that maximizes its value will be the one that minimizes the portion of cash flows that go to the government in the form of taxes.

### **iii. The Tradeoff Theory**

In this theory, the firm is viewed as setting a target debt-equity ratio and gradually moving towards it. The firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. In particular, capital structure moves towards targets that reflect tax rates, assets type, business risk, and profitability and bankruptcy costs. The firm is balancing the costs and benefits of borrowings, holding its assets and investment plans constant (Myers, 1984). The firm's optimal capital structure will involve the trade-off between the tax advantage of debt and various leverage-related costs. Due to the distinctions in firm-specific characteristics, target leverage ratios will vary from firm to firm. Institutional differences, such as different financial systems, tax rate and bankruptcy law etc, will also lead the target ratio to differ across countries. The theory predicts that firms with more tangible assets and more taxable income to shield should have high debt ratios. Firms with more intangible assets, whose value will disappear in case of liquidation, should rely more on equity financing. In terms of profitability, trade-off theory predicts that more profitable firms should mean more debt-serving capacity and more taxable income to shield, thus a higher debt ratio will be anticipated. Under trade-off theory, the firms with high growth opportunities should borrow less because they are more likely to lose value in financial distress.



#### **iv. The Pecking Order Theory**

The pecking order theory put forth by (Myers, 1984) presents the idea that firms will initially rely on internally generated funds, i.e. undistributed earnings, where there is no existence of information asymmetry and then they will turn to debt if additional funds are needed and finally they will issue equity, only as a last resort, to cover any remaining capital requirements. The order of preferences reflects the relative costs of the various financing options (Abor, 2005; Berk & DeMarzo, 2007).

Myers (2001) lists up four points to explain the pecking order theory of capital structure:

- a. Firms prefer internal to external finance
- b. Dividends are “sticky”
- c. If external funds are required for capital investment, firms will issue the safest security first, that is, debt before equity.
- d. Each firm’s debt ratio reflects its cumulative requirement for external financing. Source: (Myers, 2001, pp. 92-93)

“The pecking order theory explains why the bulk of external financing comes from debt. It also explains why more profitable firms borrow less: not because their target debt ratio is low-in the pecking order they don’t have a target-but because profitable firms have more internal financing available. Less profitable firms require external financing, and consequently accumulate debt” (Myers, 2001, p. 93).

#### **v. The Agency Cost Theory**

Jensen and Meckling (1976) argued that it is inevitable to avoid agency costs in corporate finance. Agency costs are the costs that arise when there are conflicts of interest between stakeholders and managers and between debt-holders and shareholders (Berk&DeMarzo, 2007; M. C. Jensen & Meckling, 1976).

Jensen and Meckling (1976) describe an agency relationship as “ a contract under which one or more persons (the principal(s)) engage another person (agent) to perform some service on their behalf which involves delegating some decision making authority to the agent” (M. C. Jensen & Meckling, 1976, p. 5). The principals have two main problems; adverse selection, because they are faced with selecting the most capable managers, and the problem of moral hazard, because they must give the agents (managers) the right incentives to make decisions aligned with shareholder interests (Kyereboah-Coleman, 2007).

Managers (agents) will generally make decisions that increase the value of the firm's equity, because top managers often hold shares in the firm and are hired and retained with the approval of the board of directors, which itself is elected by stakeholders (principals). When a firm has leverage, a conflict of interest will arise if investment decisions will have different consequences for the value of equity and the value of debt. This kind of conflict is most likely to occur when the risk of financial distress is high. In some circumstances, managers may take some actions that can benefit shareholders but harm the firm's creditors and also lower the total value of the firm (Berk & DeMarzo, 2007).

Jensen and Meckling (1976) define agency costs as the sum of:

- a. The monitoring expenditures by the principal, such as auditing, budgeting, control and compensation systems
- b. The bonding expenditures by the agent
- c. The residual loss, due to divergence of interest between the principal and the agent.

The share price that shareholders pay reflects such agency costs. So to increase firm value, the agency costs must be reduced (Jensen & Meckling, 1976; Kyereboah-Coleman, 2007).

In their paper Jensen and Meckling (1976) states that the existence of agency costs provide strong reasons for arguing that the probability distribution of future cash flows is dependent of the capital structure. They also argue that an optimal capital structure can be obtained by trading off the agency cost of debt against the benefit of debt.

As stated above there does not exist any universal theory of capital structure, however there are several useful conditional theories, and some of these has been presented above (Myers, 2001). But, does the capital structure influence the profitability of a firm? Kyereboah-Coleman (2007) argues that this relationship exists: "The capital structure of a firm is basically a mix of debt and equity which a firm deems as appropriate to enhance its operations. Thus, theory point out that high leverage or low equity/asset ratio reduces agency cost of outside equity and thus increases firm value by compelling managers to act more in the interest of shareholders, (Berger & Bonaccorsi-diPatti, 2006). Therefore capital structure is deemed to have an impact on a firm performance against the position held by Modigliani and Miller in their seminal work of 1958" (Kyereboah-Coleman, 2007,).

### **6.3 Empirical Literature**

There have been several studies investigating the determinants of capital structure of firms in different business sectors such as electricity and utility companies (Miller & Modigliani, 1966), manufacturing sector (Long & Malitz, 1985; Titman & Wessels, 1988), non-profit hospitals

(Wedig, Sloan, Hassan, & Morrissey, 1988), agricultural firms (Jensen & Langemeier, 1996) and joint venture-ships (Boateng, 2004). One of the main findings in the studies listed above is that industrial or sector classification is an important determinant of capital structure, because different sectors employ different mix of debt and equity for their operations (Kyerboah-Coleman, 2007).

Onaolapo and Kajola (2010) investigate the effect of capital structure on profitability of companies listed on the Nigerian Stock Exchange. This study was performed using 30 non-financial companies in 15 industry sectors in a 7-year period from 2001 to 2007. The results showed that capital structure (debt ratio) has a significant negative effect on profitability (ROA and ROE) of sampled firms.

Fosu (2013) examined the relationship between capital structure and firm performance using panel data approach comprising 257 South African firms for the period 1998-2009. The results uncover evidence that provides support for significant positive relationship between capital structure and firm performance.

Akande (2013) apply the Ordinary Least Square (OLS) regression analysis on panel data collected from financial statements of 10 Nigerian firms over 20 years from 1991- 2010. ROA, ROE, EPS and DPS on one hand and DC (total debts to capital employed) on the other hand, were surrogated for firm's performance and debt financing respectively. The findings show that positive relationships exist between DC and ROE, EPS and DPS, while negative relationship exists between DC and ROA. The study therefore, concluded that capital structure will considerably impact on firm profitability.

Maina and Kondongo (2013) in an attempt to validate Modigliani and Miller (1963) theory in Kenya examined the effects of debt-equity ratio on performance of firms listed at the Nairobi Securities Exchange for the period 2002- 2011. The study finds that firms listed at Nairobi Securities Exchange rely more on short term debt. The result also reveals that significant negative relationship exists between debt-equity ratio and all measures of performance. The result reveals that capital structure is relevant in determining the performance of a firm.

There have also been studies emphasizing on the relationship between capital structure and firm performance. Berger and Bonaccorsi di Patti (2006) argued that firm performance and capital structure could be closely correlated. They used data on commercial banks in the US and their results are consistent with the agency theory, under which high leverage reduces the agency costs of outside equity and increases firm value by constraining or encouraging managers to act more in the interests of shareholders (Berger & Bonaccorsi di Patti, 2006). Abor (2005) on "The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana", show a

significantly positive relation between the short-term debt ratio and profitability (measured by ROE). However, a negative relationship between long-term debt ratio and profitability was established. But in terms of the relationship between total debt ratio and profitability, the results of his study indicated a significantly positive association between total debt ratio and profitability (Abor, 2005).

Al-Taani (2013) investigate the relationship between capital structure and firm's performance across 45 Jordanian manufacturing companies listed on Amman Stock Exchange for a period of 5 years from 2005- 2009. The study variables include: return on assets (ROA), profit margin (PM), short term debt to total assets (STDTA), long term debt to total assets (LTDTA) and total debt equity (TDE). ROA and PM constitute the dependent variables and were used as proxies for performance, while STDTA, LTDTA and TDE represent the independent variables and were taken as proxies for capital structure. Two multiple regressions in which ROA was regressed on STDTA, LTDTA and TDE, and PM was also regressed on the same explanatory variables were used. The results show that there is no significant relationship between STDTA and ROA, TDE and ROA, STDTA and PM, LTDTA and PM, and TDE and PM. However, the result also reveals that significant negative relationship exists between LTDTA and ROA.

Studies emphasizing on linkage between capital structure and performance in MFIs have been few. Kyereboah-Coleman (2007) on "The impact of capital structure on the profitability of microfinance institutions" found that most of the MFIs use high. The study uses panel data covering a ten year period, 1995-2004, and consists of 52 MFIs from Ghana. ROA and ROE is used as performance indicators, and total debt, short term debt and long term debt are used as indicators for capital structure of MFI. As control variables size, age and risk level are used (Kyereboah-Coleman, 2007).

Maroko (2014) examined the influence of capital structure on organizational financial profitability of firms listed in Nairobi Securities Exchange. The study employs secondary data sourced from financial statements of sampled listed firms, which were selected using stratified random sampling technique. Multiple regression technique was used to explain the relationship between capital structure and organization financial performance. The findings showed that positive relationship exist between capital structure and organization financial performance.

Silva (2008) on "The effect of capital structure on MFIs performance" is consistent with the previous study by Kyereboah-Coleman (2007). This study found that total debt and short term debt ratio impacts positively and significantly on ROE while negatively and significantly on ROA. Long term debt ratio had a positively and significantly impacted ROE but no significant impact on ROA of MFIs. This shows that if MFIs use long term debt to finance their operations,

there may not be a pressure on management of MFI. This further suggests that profitable MFIs depend more on long term debt financing. The study uses a data set which consists of 290 MFIs from 61 countries. ROA and ROE is used as performance indicators, while debt to equity, long term debt to equity, short term debt to equity, debt to assets, long term debt to assets and short term debt to assets ratios are used as indicators of capital structure of MFIs. There also used some control variables in the study (Silva, 2008). Silva (2008) used exactly the same research problem as in this study, he has also used the same dataset, but in this study the dataset contains more variables.

David and Olorunfemi (2010) study the impact of capital structure on corporate performance of firms in the Nigerian petroleum industry for the period 1999- 2005. The study employed panel data analysis using fixed-effect estimation, random-effect estimation and maximum likelihood estimation. The study found that there is positive relationship between capital structure and firm profitability surrogated by earning per share and dividend per share.

Chinaemerem and Anthony (2012) carry out a study on the impact of capital structure on financial profitability of Nigerian firms using a sample of 30 non-financial quoted companies on the Nigerian Stock Exchange (NSE) for a period of 7 years from 2004- 2010. Panel data for the selected companies were generated and analyzed using ordinary least squares (OLS) method of estimation. The results show that a firm's capital structure surrogated by debt ratio has a significantly negative relationship with the firm's financial performance surrogated by ROA and ROE. This finding provides evidence in support of agency cost theory.

Kar (2012) seeks to answer the question "Does capital and financing structure have any relevance to the profitability of microfinance institutions?" from an agency theoretic standpoint. The results of the study confirm the agency theoretic claim that an increase in leverage raises profit-efficiency. It also finds that cost efficiency decreases with decreasing leverage.

## **7. METHODOLOGY OF THE STUDY**

The Cameroon Cooperative Credit Union League (CamCCUL) is an umbrella financial institution coordinating the activities of over 268 cooperative credit unions in Cameroon. Established in 1968, CamCCUL is one of the oldest cooperative networks in Africa and the largest MFI network in Cameroon. The League apex organization was formed in 1968 by 34 credit unions in Bamenda, the headquarters in North West region of Cameroon. The network created Union Bank of Cameroon (UBC) in 2000, and in 2008, CamCCUL selected Oceanic Bank from Nigeria as a partner, recapitalizing and reducing the percentage of shares held by the network, CamCCUL has also steps up its involvement in financing for agri-entrepreneurs with a facilitation fund for medium-term credit (Proxfin 2016). It has 350 service points today, spread

in ten areas, with 60 percent in rural areas. Its member credit unions and their network are owned by their respective members. Each of the ten chapters selects a president to represent it on the chapter's Executive Committee; each president is also a member of the network Board. Each credit union has its own Board and carries out a yearly general assembly. The credit unions have membership of about 196,922 with a turnover of about 41,000,000F CFA

These credit unions that make up CamCCUL has as an objective to collect savings for its members and also to reallocate them to interested members who wish to invest them in the form of loans so as to expect interest in return. CamCCUL has as its main objective to organize, protect, promote, expand and strengthen growth and development of the cooperative credit union movement in Cameroon.

This is done by the provision of products and services, and programs to members to meet their needs. They also represent their interest to other cooperative related institutions and government (CamCCUL, 1993). These credit unions are autonomous in the daily operations when it concerns the mobilization of customers to save or to take loans. CamCCUL is a central organ that lays down the principles for all the credit unions to follow. The credit unions are owned by the members who have shares and also save. Part of these shares and savings (25%) of each credit union is deposited to CamCCUL's central liquidity account as its own contribution as stipulated in the statutes. These money are used to refinance the credit unions and also in the provision of technical assistance to its member credit unions. During this period, the act of borrowing increased but at a slow rate because of the strict policy and later drop in 1994. The level of savings was increased as a result of the increase in membership and the need for these financial services began to gain grounds. Some international NGOs like the Canadian International Development Agency (CIDA) provide some incentives in the form of improving the achievements of its objectives. They provided them with institutional support, improve their skills and operating systems, increase access to productive microcredit, provides affiliates with modern and computerized systems and also improve their financial endeavors.

Yunus (2003) depicts that MFIs have specialized loan officers who are very versed with the businesses in their rural environment. Their function is to make sure that the members seeking for loans should be able to convince them with their loan application. When they find that the project is worth taking and profitable to the loan seeker, they then try to come out with a business plan and the strategy to follow to meet the set goals. Loan officers are in charge of handling members seeking for loans and are very much familiar with them and their needs. They are specially trained to handle such situations and to scrutinize applications for loans and to short list some that will be decided upon by the board of directors to be awarded the loan. They also initiate training sessions for their members who own businesses.

### **7.1 Research Design**

The Ex-post facto causal research design is employed in the study given that the effects of the independent variables (changes in capital structure) on the dependent variable (ROA) have already taken place and so cannot be influenced in any way. As argued by Kerlinger (1973), ex post facto research as empirical inquiry in which the scientist does not have direct control of the independent variables because their manifestations have already occurred. Inferences about relations among variables are made without direct intervention. Thus, the researcher is only allowed to interpret these effects as given.

### **7.2 Data Collection**

Data is defined as the information needed or used in relation to the chosen topic of discussion or subject matter. Data is collected using either primary source or secondary source or using both sources.

With respect to this research, this study uses secondary data obtained from annual reports and financial statements of the following Credit unions:

**Table 1: Lists of Credit Unions**

<b>S.N</b>	<b>Lists of Credit Unions</b>	<b>Town</b>
1	Buea Police Cooperative Credit Union Limited	Buea
2	Sonel Workers Cooperative Credit Union Limited	Limbe
3	Tiko Banana Cooperative Credit Union Limited	Tiko
4	Victoria Customs Cooperative Credit Union Limited	Limbe
5	Tiko Progressive Cooperative Credit Union Limited	Tiko
6	P &T Cooperative Credit Union Limited	Buea
7	Bomaka Cooperative Credit Union Limited	Bomaka
8	National Ports Authority Credit Union Limited	Limbe

9	Tole Tea Cooperative Credit Union Limited	Tole
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*Source: Visemih (2018)*

Secondary data is used as the main source to obtain the relevant information needed. The data was obtained from both the balance sheet and income statements of these listed credit unions above. Information that was obtained from the balance sheet includes; total assets, Liquidity position, total liabilities and total debts, while that from the income statement was the net income for the various years. These secondary data used was for a period of nine (9) years (2007-2015).

**7.3 Variables on which Data is Collected**

Data were collected on the independent variables which were various components of capital structure particularly; debts ratio, debts to equity ratio, liquidity ratio and ROA over time with the independent variable being return on assets which was taken as a proxy or measurement of performance.

**i). Debt ratio** is a ratio that indicates the proportion of a company's debt to its total assets. It shows how much the company relies on debt to finance assets. The debt ratio gives users a quick measure of the amount of debt that the company has on its balance sheets compared to its assets. The higher the ratio, the greater the risk associated with the firm's operation. A low debt ratio indicates conservative financing with an opportunity to borrow in the future at no significant risk. It is therefore, calculated thus;

$$\text{Debt ratio} = \frac{\text{TOTAL DEBTS}}{\text{TOTAL ASSETS}} \dots\dots\dots \text{Equation 3.1}$$

**ii). Equity** is the owner's value in an asset or group of assets. In accounting, equity is usually defined as the value of the assets contributed by the owners. This is added to the total income earned and retained by the company to give the company's total equity value. This description of equity is correct but very simplistic. A more profound description is really that used by the homeowner, that is, equity is the owner's value in an asset or group of assets. When the owners are shareholders, the interest can be called shareholders' equity. It is calculated thus;

$$\text{Debt to Equity ratio} = \frac{\text{TOTAL DEBTS}}{\text{TOTAL EQUITY}} \dots\dots\dots \text{Equation 3.2}$$

**iii). Liquidity** is the ability of an institution to meet its short-term financial obligations. Liquidity ratios attempt to measure a company's ability to pay off its short-term debt obligations. This is done by comparing a company's most liquid assets, those that can be easily converted to cash, with its short-term liabilities. In general, the greater the level of coverage of liquid assets to



short-term liabilities, the better. A company with a low coverage rate should raise a red flag for investors as it may be a sign that the company will have difficulty meeting its short-term financial obligations, and consequently in running its day-to-day operations. During hard times for the business or the economy, a company with insufficient liquidity might be forced to make tough choices to meet their obligations. These could include liquidating productive assets, selling inventory or even a business unit. These moves could prove detrimental to both the company's short-term viability and their long-term financial health. Liquidity ratios are based on different portions of the company's current assets and current liabilities taken from the firm's balance sheet. It is calculated in terms of current ratio thus;

Current Ratio = =  $\frac{\text{CURRENT ASSETS}}{\text{CURRENT LIABILITIES}}$  . . . . . Equation 3.3

iv). **Return on Assets (ROA):** The ROA is the reliant variable that measures the return on profits generated from the assets of the institution. It is measured as;

ROA=  $\frac{\text{NET INCOME}}{\text{TOTAL ASSETS}}$  ..... Equation 3.4

**7.4 Techniques of Analysis**

Since the study is a panel or cross-sectional time series the fixed-effect model or random-effect model are all feasible. However, the choice of the model to adopt depends on the results of the Hausman test. The Hausman test basically tests whether the unique errors (*u<sub>i</sub>*) are correlated with the regressors or not. The Hausman test thus works on the hypothesis that;

H<sub>0</sub>: Generalised Least Square under OLS (Random Effect) is more efficient

H<sub>1</sub>: Fixed Effect is unbiased and consistent.

Thus, the rule for testing these is that if the probability value is greater than 10% we fail to reject the null hypothesis and conclude that the random effect and OLS are more efficient than the fixed effect.

Results from the Hausman test for the study indicate that the random effects model is more suitable for this study. All regressions are therefore estimated using random-effect panel data model. This implies the Generalised Least Squares Technique and even the OLS produce more efficient estimates. This technique has an inbuilt ability to cater or control for heteroskedasticity in the data used in the study.

The Credit Unions were separated into two groups:

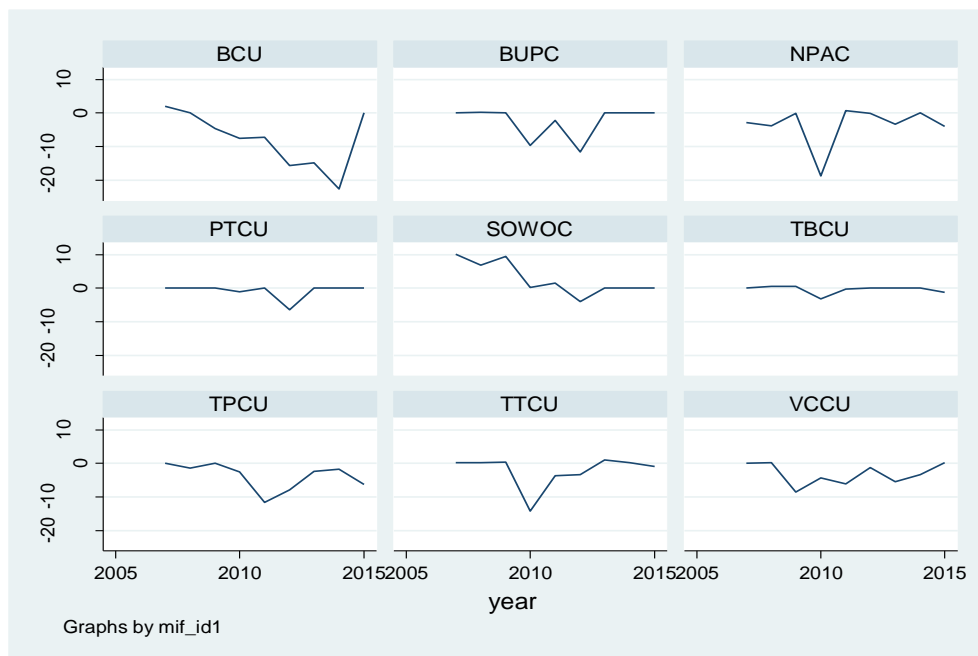
- i. The first group is made up of Credit Unions with High Debt and
- ii. The second group is made up of Credit Unions Low Debt.

The aim is to see the effects of low debt and high debt on the profitability of the Credit Unions.

## 8. PRESENTATION OF DATA AND DISCUSSION OF FINDINGS

### 8.1 Trend Analysis of Variables

The following figures show the trend of each of the variables of interest (ROA, Debt, Equity and Membership) over time (2007-2015) for each of the selected MFIs under the CamCCUL Network.

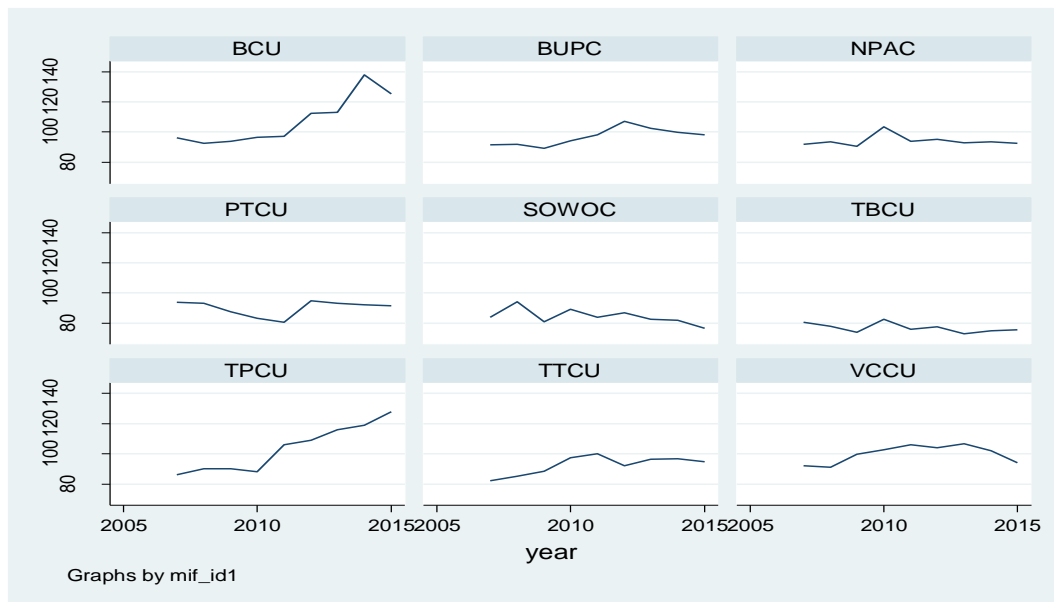


**Figure 2: Trend of Return on Assets (ROA)**

*Source: Visemih (2018)*

As would be observed from Figure 2, the ROA for most of the credit unions fluctuate within the years except for TBCU which has a fairly stable ROA at 0%. BCU started dropping until it reached its slums around 2013/2014 then, it started rising again at an increasing rate. BUPC was stable between 2007 and 2009 then it started dropping and again it rises but again dropped and rises and then finally it maintain its stability. NPAC started, it rises a little but dropped drastically to its slums and didn't end there, and it rises again and was trying to maintain a balance at that level. PTCU was fairly stable at 0% for some few years but it ROA (%) dropped

to a negative 8% and then rises to the same position as before. Except for SOWOC, which started with a very high ROA of about 10% then it dropped to 8% and later climbed again to 10% say with a year and later started falling at a slow rate but again it rises and became stable at 0%.



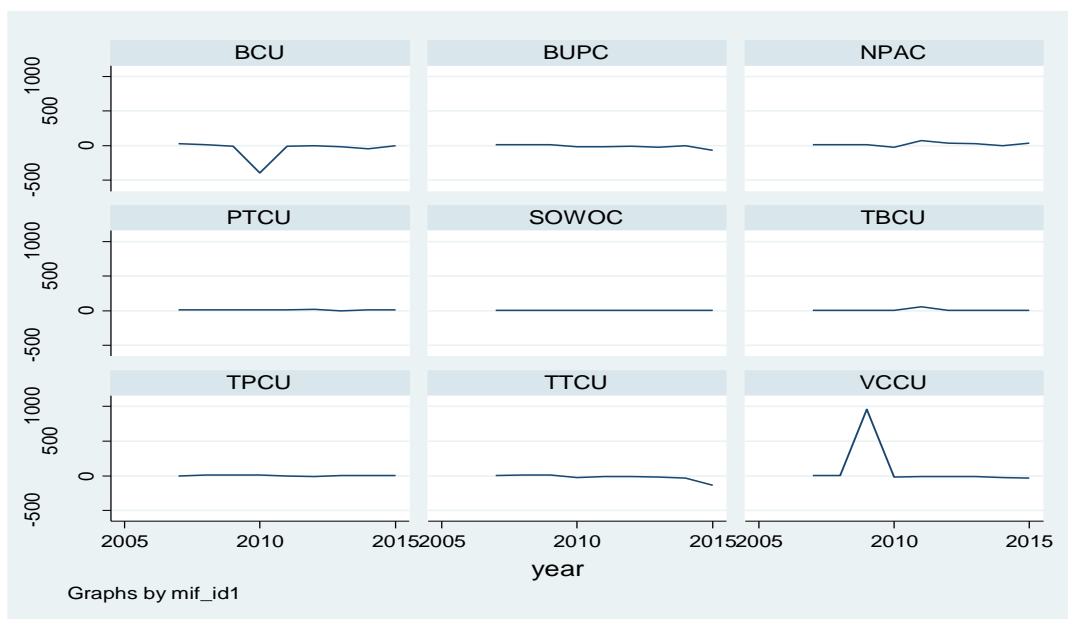
**Figure 3: Trend of Debt Ratio for Credit Unions**

*Source: Visemih (2018)*

Observations from Figure 3, show that BCU and TPCU have continues increase in leverage/gearing due to higher debts compared to the other credit unions. In theory, investors see the debt ratio as stability in business. The higher the level of borrowing (gearing) the higher are the risks to a business, since the payment of interest and repayment of debts are not “optional” in the same way as dividends. However, gearing can be a financially sound part of a business’s capital structure particularly if the business has strong, predictable cash flows. Credit unions take on debt even when they have assets that could pay for their expenses when they know they can get a better rate of return on the borrowed money than what they are paying out in interest. The leverage the borrowed funds create allows investors to have a greater amount of return on their money, increase cash flow and magnify the affects of appreciation and enhance the tax advantages of owning real estate. Therefore, not all debt is necessarily bad debt. Borrowing may be a quick and cheap form of financing a project compared to other means such as share issues which not all may be taken up. However, too much debt can be a sign of instability. If the company is already highly geared, it might find it extremely difficult to raise additional fund as would-be lender may take a closer look at its structure and believe that the credit union might not

be able to settle the debts as at when due as it is already exposed to so many creditors. The effect of having excess gearing is that such company would have to accumulate higher amount of profit before interest and tax to be able to meet demand for interest payment. Highly geared credit unions also have the risk of liquidation if they are unable to pay their debts. In some cases, a debt ratio of less than 1 means greater stability. As for BUPC, NPAC, TTCU, PTCU and VCCU are around the same position of debt of 100% even if they are some slightly below/above 100%. And as for SOWOC and TBCU they fall below 95% as peak for the former and 82% for the latter. TBCU operates below its peak for the years and same for SOWOC which continues to drop. These credit unions are not as highly geared as those formerly discussed. A greater proportion of equity provides a cushion and is seen as a measure of financial strength. Changes in interest rates especially upward trends have a lower effect on these credit unions. They also experience less risk of liquidation occurring due to not being able to pay off interest payments. Due to reduced Interest payments, more investment can occur elsewhere and the credit unions can have more cash flow to take on bigger and potentially more profitable projects. But on the contrary, they are expected to make regular dividend payments.

Whether leverage has an impact on a firm’s performance or not depends on how highly or lowly geared a company is.



**Figure 4: Trend of Equity Ratio for Selected Credit Unions**

*Source: Visemih (2018)*

Based on figure 4, it would be observed that most of the CUs have a stable equity at 0% except for BCU and VCCU. The former drops below 0% in the year 2010 and arises again to 0 while for the latter, it was stable from the beginning and around 2008, it rises to a peak of 1000% and immediately dropped to 0% as its constant and stable at that. This shows that VCCU was highly financed by equity capital that is raising money by selling new shares of stock – has no impact on a firm's profitability, but it can dilute existing shareholders' holdings, because the company's net income is divided among a larger number of shares. When a company raises funds through equity financing, there is a positive item in the cash flows from financing activities section and an increase of common stock at par value on the balance sheet. Also, a higher equity ratio lowers the volatility of equity and hence it's required return. In addition, higher equity ratio makes a bank's debt safer and lowers the required return on debt. Taking these two effects into account the Modigliani-Miller theorem implies that a bank's total cost of funding should not be influenced by the bank's equity ratio.

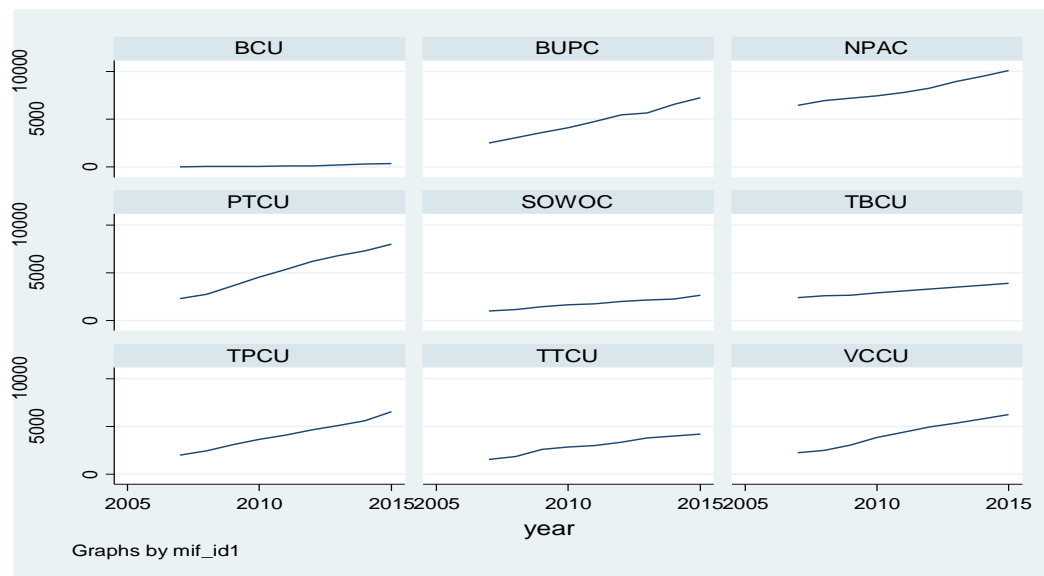
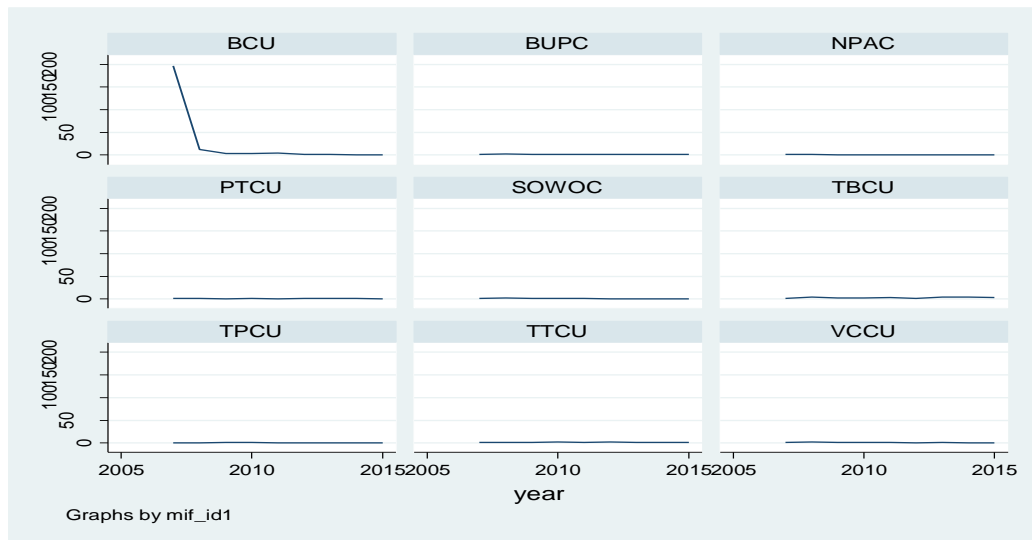


Figure 5: Trend of Membership in Selected Credit Unions

Source: Visemih (2018)

It is observed from figure 5, that membership within the CUs grow at an increasing rate except for SOWOC and TBCU which grows at constant rate and BCU which is fairly stable over the years.



**Figure 6: Trend of Liquidity Ratio in Selected Credit Unions**

*Source: Visemih (2018)*

Finally, it could be observed from Figure 6, that most of the CUs have a very stable liquidity at 0% except for BCU which started with a very high liquidity and it later on dropped to 0% over the years and was stable at that level.

### 8.2 The Effects of High and Low Debts

The nine Credit Unions have been classified under two headings, namely: High Debt and Low Debt. The return on assets over the period of nine years is used to analyse the effects on their profitability. The following credit Unions are classified in the Low Debt Group, with most of the Debt to Equity ratio being 95 % and below, as shown in Table 2.

**Table 2: Low Debt Group Credit Unions**

S.N	Lists of Credit Unions	Town	Average ROA %	Aver. Debt Ratio %
1	Sonel Workers Cooperative Credit Union Limited	Limbe	2.73	84.44
2	Tiko Banana Cooperative Credit Union Limited	Tiko	-0.34	76.90
3	P &T Cooperative Credit Union Limited	Buea	-0.78	90.03

4	National Ports Authority Credit Union Limited	Limbe	-3.56	94.11
5	Tole Tea Cooperative Credit Union Limited	Tole	-2.22	92.60

**Source: Visemih (2018)**

The following credit Unions are classified in the High Debt Group, with most of the Debt to Equity ratio being 96 % and above, as shown in Table 3.

**Table 3: High Debt Group Credit Unions**

S.N	Lists of Credit Unions	Town	Average ROA %	Aver. Debt Ratio
1	Buea Police Cooperative Credit Union Limited	Buea	-2.54	96.91
2	Victoria Customs Cooperative Credit Union Limited	Limbe	-3.16	99.81
3	Tiko Progressive Cooperative Credit Union Limited	Tiko	-3.73	103.56
4	Bomaka Cooperative Credit Union Limited	Bomaka	-7.38	107.22

**Source: Visemih (2018)**

The analysis brings out clear evidence that Low Debt Credit Unions perform better than High Debt Credit Unions.

## 9. SUMMARY OF FINDINGS

This study sought to examine the effects of capital structure on the profitability of MFIs under the CamCCUL Network, using a sample of nine (9) credit unions selected from Fako Division. The study applied a panel regression and specifically random effect regression to specifically examine the effect on profitability measured by Return on Assets (ROA) of equity and debt capital alongside membership and liquidity. The study finds that for the selected credit unions, both forms of capital negatively affect their profitability. However, we found that whereas the effect of debt capital on profitability is significant, that of equity was insignificant. The ratio of debt to equity is also known as leverage or gearing. The concept of gearing is based on the fact that debt is generally cheaper than equity. This is because in the case of bankruptcy, debtors have a claim on the company's assets before equity holders. As a result of this subordination and higher risk, equity holders will expect a higher return on their investment than lenders. In addition, debt carries a tax advantage over equity in the sense that interest payments on the debts

are tax deductible, whereas dividend payments to equity holders are not and it's applicable since the credit unions pay taxes. However, everything being equal, a more leverage firm should have a lower cost of capital. Similarly, an increase in a company's debt should translate into a higher shareholder return.

Meanwhile, the study finds that liquidity has a positive and statistically significant effect on the profitability of credit unions such that as the liquid assets of Credit unions increase, profitability also increases in contrast to theoretical expectations. Similarly, we found that increase membership leads to increase in profitability of the credit unions with the effect also being statistically significant.

Overall, we found that debt capital, equity, liquidity and membership accounted for only 37.9% of the total variation in the profitability (ROA) of selected credit unions implying that many other determinants of profitability were not accounted for by the model specified, although the model's predictive power was found to be significant and reliable.

## **10. CONCLUSION**

This study set out to close knowledge gaps and inform policy by establishing the effects of capital structure on the profitability of credit unions under Fako Chapter in the CamCCUL Network. The estimated results of the study highlighted a significant effect of form of capital (debt) on profitability of MFIs and the other insignificant effect though both sources of capital proved to retard profitability. Therefore, the question of whether to raise debts or issue equity is therefore dependent on the degree of the tax advantage gained by taking on the further debt and the increased risk of financial distress as a result of taking on this debt. While the tax effect is relatively easy to quantify, it is much more difficult to assess the cost of a growing risk of financial distress. While in theory the optimal capital structure can be approximated for any institution, it is very difficult to achieve it in practice as other factors may also need to be considered such as flexibility and the ability to service debt. In terms of financial flexibility, the institutions must maintain sufficient liquidity and access to capital as well as the ability to absorb unforeseen shocks. Lack of financial flexibility can lead to financial constraints as far as future funding is concern. Thus, an impact on credit unions operational flexibility. Therefore, credit unions tend to emphasis flexibility objectives over maximizing the tax shield of debts when they set capital structure targets. And the latter which is the ability to service debts talks on the extent to which a credit union can service its debts. Lenders may impose strict limits on the volume of debt and equity ratios. Credit agreements often include covenants that prescribe a maximum level of gearing, minimum interest cover or maximum level of borrowing against particular assets. This may be below the optimal funding structure. It is concluded that liquidity and membership which are not capital structure variables have high positive effect over Return on



Assets of the sector. Aspects of capital structure tend to instead inhibit the profitability of credit unions, this implies that whereas the call for increase equity capital and debt capital has to be decreased, there is need to continue ensuring sufficient liquidity so that liquidity will affect profits in credit unions. Conclusively, any change to the capital structure is likely to provoke some forms of market reactions. It is therefore also necessary to determine how any change e.g raising more debts will be perceived by shareholders, lenders and rating agencies. For lenders, it is often preferable that a credit union issues equity, because it increases the company's creditworthiness and financial stability. Shareholders may prefer a company to raise debt rather than equity, because it increases returns on equity, whereas raising additional equity could result in a dilution of share earnings.

## **11. RECOMMENDATION**

Based on the above results, several recommendations are tenable. To begin with, the study suggests that the COBAC which is in charge of regulating financial activities of MFIs should formulate and enact a policy which makes commercial debt cheaper hence reduces cost of operations. Moreover, to facilitate favorable financial performance of these institutions, strategies to facilitate increased liquidity of MFIs should be adopted by the institutions for their efficiency in financial operations. However, the MFIs should put strategies in place for monitoring, reporting and reviewing liquidity levels to ensure the long and short term stability of the entire systems. They should not solely concentrate on the profit maximization goal but should also adopt measures that will ensure proper liquidity management. The measures will help to minimize or avoid cases of excessive and deficient liquidity.

Furthermore, there is need for the MFIs to increase their network of branches countrywide to attract new customers to open new accounts and in so doing increase their deposits. This will increase the pool of funds for investment and impact positively on their profitability. Also, we recommend that microfinance institutions should invest more resources in innovation of products and services to broaden the scope of their products and service offerings. This will give customers an opportunity to choose from a variety of banking products or services based on their specific needs and as such increase membership.

Also, the choice of debt as a source of capital finance should be done in line with the costs and benefits associated with its use. The opening phase to assess the impact of using debt on firms' returns should start by comparing expected ROA to the estimated cost of debt. The difficult objective is therefore to find a capital structure that satisfies all parties and offers the best trade-off between capital costs, financial needs, bankruptcy risks and market perceptions.

## **12. SUGGESTION FOR FURTHER STUDIES**

The results and especially the coefficient of multiple determination (overall R-squared) has revealed that there are many other factors that influence the profitability of MFIs or credit unions that the study did not take into account. This therefore calls for future researchers to undertake studies by including other determinants of profitability or returns on assets and other financial performance measures of the MFIs. Moreover, it is recommended that a larger sample be used for a similar study to see if the current results will hold for a wider range of credit unions or MFIs.

It will be important for future studies should also consider employing primary sources of data to collect data for their studies. This would be time saving and would also facilitate detailed information collected from original sources which would as well give reliable and accurate results that explain the details of the subject.

Better still a duplication of this sort of research could be done in a different industry other than the banking sector such as the manufacturing firms. This will give room for comparison that might lead to future researchers to a more plausible conclusion so that the relevant conclusions can be reached as per the nexus between capital structure and performance of firms.

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