# WORKING CAPITAL MANAGEMENT AND PERFORMANCE OF AGRICULTURAL COOPERATIVE SOCIETIES IN IMO STATE, NIGERIA.

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***Abstract***

*The study examines working -capital management and performance of agricultural cooperative societies in Imo State, Nigeria. The study was motivated by the need to determine the influence of working capital management on cooperative performance. The specific objectives are to: ascertain the extent to which accounts receivables influences cooperative members return on Investment (ROI) in Imo State and determine the extent to which accounts payable influence cooperative members return on Investment (ROI) in Imo State. The area of study is Imo State where samples of 139 cooperatives were selected from the population of 213 registered cooperatives in the study area. The instrument used for data collection was questionnaire. The study employed regression technique, one sample T-test, mean, frequency and percentage in analyzing the data obtained. The study found out that the P-value of 0.031 is less than the alpha value 0.05 and is found to be significant. It was also found that account receivables affect cooperative profitability and size of dividend and welfare package. It was also revealed that accounts payable on cooperative performance ensures delivery of orders, increases credit worthiness, brings about sustainable stakeholder relations and increases inventory size. The study therefore recommends that proper management of various components of working capital need to be maintained to ensure adequate amount of working capital and liquidity. In order to successfully run the cooperative that control measures need to be taken on stock so as to help in preventing stock outs and also help in decision making in the procurement function. Proper training need to be organized by the cooperatives to ensure that the executives are well trained to execute working capital management practices which will in turn lead to improvement in the profitability of operations, managerial efficiency, minimize financial risk and ensure liquidity.*

***Keywords:*** *Working capital management; performance; agricultural cooperative; return on investment*

## Introduction

Working capital management has become an interesting construct that has attracted the minds of researchers, scholars and accountants globally, particularly in Nigeria where small businesses find it difficult to access funds. The survival of any organization whether profit oriented or not, irrespective of size and nature of business depends on how its working capital is being managed (Fasesin, Ayo Oyebiyi & Folajin, 2017). Working capital management deals with the management of all aspects of both current assets and current liabilities to minimize the risk of going bankrupt and at the same time increasing returns on assets (FTC Foulks Lynch, 2005). As cited by Wambugu (2013) it involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet short term

obligations as they fall due and avoiding excessive investment in the current assets. This requires a combination of techniques which includes cash management, inventory management, payables management and receivables management (Ejelly, 2004). As a critical part of the financial management any organization, working capital assumes an imperatives part in the growth of shareholder's wealth. Extant literature has shown a positive link between working capital management and profitability of the larger manufacturing companies (Gorondutse, Ali, Abubakar & Naalah, 2017; Chatterjee, 2010; Davis, 2016).

Discussions on working capital management focus mainly on SMEs and large business organizations, partly because most of the researchers do not come from cooperative background. Cooperative as an organizational form also runs businesses like other conventional businesses that employ working capital in their day to day business operations. It is involved in cash management, inventory management practices, accounts receivables and account payable. These elements are the major components of working capital construct. Therefore, cooperative as one of the most effective vehicles for organizing modernized production and also arguably one of the most important pre-condition for efficient mobilization of production recourses and accelerated business progress seems not to have been given due accentuation as it concerns working capital management.

Again, like every other business, the cooperatives manages their short-term capital and also promote a satisfying liquidity, profitability and shareholders' value which is the main cruse of working capital management. According to Fasessin, Ayo-Oyebiyi and Folajin (2017), working capital management is the ability to control effectively and efficiently the current assets and current liabilities in a manner that provides the firm with maximum return on its assets and minimizes payments for its liabilities. In recent time investors-both in cooperative and none cooperatives businesses are critical and also skeptical about their Return on Assets (ROA), Net Operating Profit (NOP) and Return on Equity (ROE). The vision of the cooperative development policy is to promote members' entrepreneurial capacities so that they can generate adequate surpluses for themselves and create opportunities for economic progress for the public (Oladejo, 2013). For an economy to experience development, two conditions are necessary and sufficient. These are the presence or availability of entrepreneur and providers of external finance (Oladejo, 2013). In line with the above assertion as it concerns cooperative businesses, if the available finance is not properly managed the business will collapse and investors will lose their money.

However, the management of working capital in any industry or business is a well thoughtful effort that cannot be over-emphasized. In most developing countries like Nigeria, cooperative movement is seen as a means of general economic development and increased agricultural production. Agricultural cooperative were the first to evolve in the history of Nigeria. Their primary objectives are the dispersal and

marketing of farm products to her members at the least possible price. They also help in the procurement of farm inputs to their members at reasonable cost and at appropriate time.

## Statement of the Problem

This study was necessitated by the perceived unimpressive performance of cooperative societies that has made the organizational form not to be seen as proactive in solving the business concerns of the populace. Arguably, most of the cooperatives apart from credit cooperatives hardly survive one decade of their business operation. This poor and unsatisfactory performance has been attributed by scholars to poor financial performance (Oladejo, 2013). Return on asset has been negative and assets continue to liquidate without replacement. Some of these cooperative are suffering from bad debt and unrecoverable loans; making it difficult for them to meet their financial obligation towards their creditors. According to (Nnadozie et al, 2015) who studied cooperatives in Nigeria, cash management has caused disagreement as people charged with cash management embezzle the money or get involved in frivolous spending. The problem was exacerbated by poor record keeping especially as it relates to account payable and account receivable. All these situations revealed that bankruptcy of some cooperatives can be linked to poor working capital management.

However, the attention of researchers and scholars seem not to have been drawn to ascertain the extent of working capital management in cooperatives and how it affects their performance. In as much as this area has been studied in the context of profit-oriented businesses, findings did not consider peculiarities of cooperatives. Working capital management is identified in literature as very important in measuring and balancing between risk and efficiency of firm's performance. However, working capital adequacy in cooperatives in Imo State need to be determined not only to ensure that they are adequately capitalized but also to ensure their solvency. As cooperatives and other business brace up for digitalization, the importance of understanding working capital management practices such as inventory control, cash management and relationship between accounts receivable and payable becomes significant. Cooperatives can win investors' confidence and attract funds if their working capital activities improve return on investment and assets. This study is therefore focused on examining the relationship between working capital management and performance of cooperatives. Various components of working capital were measured against various measures of cooperative performance.

## Objectives of the Study

The broad objective of this study is to determine the influence of working capital management and performance of cooperative societies in Imo State Nigeria. The specific objectives of this study are to:

i. Ascertain the extent to which Accounts receivables influences cooperative members return on Investment (ROI) in Imo State.
ii. Determine the extent to which Accounts payable influences cooperative members return on Investment (ROI) Imo State.

**Research Questions**

The following research questions are meant to guide the study.

i. To what extent have accounts receivables influences cooperatives members return on investment (ROI) in Imo State?
ii. To what extent has accounts payable influence cooperative members return on Investment (ROI) in Imo State?

**Research Hypotheses**

The following hypotheses are designed to guide the study:

**$Ho_1$:** Accounts receivables do not have significant influence on cooperative members return on Investment (ROI) in Imo State.

**$Ho_2$:** Accounts payable does not have significant influence on cooperative members return on Investment (ROI) In Imo State

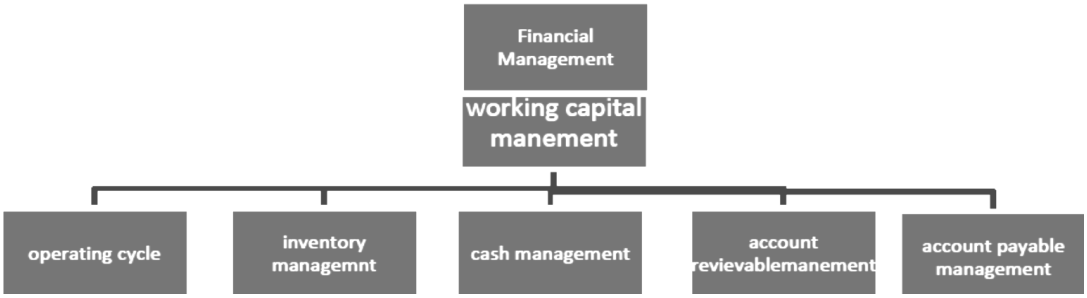
**Review of Related Literature**

**Working Capital Management**

Aravindan and Ramanathan (2013) were of the opinion that working capital management deals with decisions regarding the tradeoff between liquidity and profitability. Working Capital Management (WCM) refers to all the strategies adopted by the company to manage the relationship between its short term assets and short term liabilities with the objective to ensure that it continues with its operations and meet its debt obligations when they fall due. In other words, it refers to all aspects of administration of current assets and current liabilities.

Working capital management represents the decision about the manipulation of ratios which involves managing the relationship between a firm's current assets and current liabilities. One of the main purposes of working capital management is to provide sufficient liquidity to sustain firm's operations and to have to meet its obligations (Ejelly, 2004). All firms, regardless of their size and industry need to acquire positive cash flow and liquidity. The way that working capital is managed has also noted unworthy effects on the firm's profitability. For a firm's trading activities, working capital can be considered as a spontaneous fund, and the amount of funds tied up to current assets can exceed that of fixed assets in many firms. In this context, funds committed to working capital can be seen as hidden sources that can be used for improving firm's profitability. Hence it is the fact that working capital management involves a trade - off between profitability and risk. According to the theory of risk and return, investments with higher risk may create higher returns. Thus a firm with high liquidity of working capital will have low risk to meet its obligation and low profitability at the same time. Therefore, efficient working capital management plays

a significant role in overall corporate strategy in order to increase shareholder value by determining the composition and level of investments on current assets, the level sources and mix of short-term debt. Especially, an efficient working capital management can enable a firm to react quickly and genuinely to unexpected changes in economic environment and gain competitive advantages over its rivals. An efficient working capital management primarily aims to ensure an optimum balance between profitability and risk (Ejelly, 2004).




**Source**: Mengesha, 2014.
*Fig 1.1: The Concept of Working Capital Management*

**Working Capital**

Horne and Wachowicz (2000) define working capital as the nerve center and the life blood of any business. The excess of current assets over current liabilities is the firm's Working Capital. Working capital is required for daily routines and operations, such as paying salaries, suppliers, creditors, etc. Working Capital is a measure of the firm's liquidity. It is calculated using the assets and liabilities listed on the Balance Sheet. A significant amount of working capital indicates healthy levels of liquidity. Assets that increase over time are a good indication of the firm's growth. Effective current asset planning is the ability to accurately forecast sales, and match production schedules with the sales forecast. When actual sales and forecast sales are different, inventory reductions or build-ups likely occur, which affect receivables and cash flow.

Typically, a firm's fixed assets slowly increase as its capacity for production grows and equipment is upgraded. Current assets which are dependent on production and sales levels, however, fluctuate in the short-term. Inventory increases as the firm produces more than it sells. When sales outpace production, inventory decreases and receivables rise.

There are two concept used for working capital, which are;
1. Gross Working Capital
2. Net working Capital

**1. Gross Working Capital**

The sum total of all current assets of a business concern is termed as gross working capital (Trisha, 2016). In other words, gross working capital is the total amount available for financing of current assets. However, it does not reveal the true financial

position of an enterprise. Borrowing will increase current assets and, thus, will increase gross working capital but, at the same time, it will increase current liabilities also. As a result, the net working capital will remain the same. This concept is usually supported by the business community as it raises their assets (current) and is in their advantage to borrow the funds from external sources such as banks and the financial institutions (Sinha, 2014).

In this sense, the working capital is a financial concept. As per this concept:
Gross Working Capital = Total Current Assets

**Net Working Capital**

Working capital is made up of the net sum of current asset minus current liabilities and is often referred to as the net working capital (Penman, 2013). The net working capital is an accounting concept which represents the excess of current assets over current liabilities. Current assets consist of items such as cash, bank balance, stock, debtors, bills receivables, etc. and current liabilities include items such as bills payables, creditors, etc. Excess of current assets over current liabilities, thus, indicates the liquid position of an enterprise. The ratio of 2:1 between current assets and current liabilities is considered as optimum or sound. What this ratio implies is that the firm enterprise has sufficient liquidity to meet operating expenses and current liabilities. It is important to mention that net working capital will not increase with every increase in gross working capital. Importantly, net working capital will increase only when there is increase in current assets without corresponding increase in current liabilities (Sinha, 2014).

**Thus, in the Form of a Simple Formula:**

Net Working Capital = Current Assets-Current Liabilities
After subtracting current liabilities from current assets what is left over is net working capital.

Working capital normally refers to net working capital. The banks and financial institutions do also adopt the net working capital concept as it helps assess the requirement of the borrower. Yes, if in any particular case, the current assets are less than the current liabilities, then the difference between the two will be called ‘Working Capital Deficit’. What this deficit in working capital indicates is that the funds from current sources, i.e., current liabilities have been diverted for acquiring fixed assets. In such case, the enterprise cannot survive for a long period because current liabilities are to be paid out of the realization made through current assets which are insufficient. (Sinha, 2014).
Working capital is the net investment as a result of a business in commissioning current assets (such as cash and bank, inventories, and trade receivable) and commissioning current liabilities (such as overdraft and trade payables). More over Working capital management is the managing of current resources as well as current

liabilities (Creswell, 2003; Ward, 2010). The management of working capital is very crucial element in firm performance, (Paul & Boden, 2008).

**Components of Working Capital Management**

There is often interrelationship among the working capital components which create real challenges for the financial managers. Thus the different components of working capital management of any organization are: (Edupristine, 2015).

**1. Cash Management:**

One of the most important working capital components to be managed by all organizations is cash and cash equivalents. It is needed for performing all the activities of a firm, i.e. from acquisition of raw materials to marketing of finished goods. Therefore it is essential for a firm to maintain an adequate cash balance. One of the important functions of a finance manager is to match the inflows and outflows of cash so as to maintain adequate cash (Edupristine, 2015).

**2. Receivables Management**

The term receivable is defined as any claim for money owed to the firm from customers arising from sale of goods or services in normal course of business. The term account receivable represents sundry debtors of a firm. It is one of the significant components of working capital next to cash and inventories. The total volume of accounts receivable depends on its credit sale and debt collection policy, these two significantly influence the requirement of working capital. A firm grants trade credit to protect its sales from competitors and to attract potential customers to buy its product at favorable terms (Pandey, 2010; Waweru, 2011). Liberal credit policy increases the volume of sales but at the same time it also increases the investment in receivables. Therefore, examination of costs and benefits associated with credit policy is one of the important tasks of a finance manager.

**i. Cost of Maintaining Accounts Receivables:**

The following are costs associated with maintaining accounts receivables:

**Capital Cost**

There is a time gap between the sale of goods and payment by debtors during which time the firm has to arrange funds for meeting their obligations like payment for raw materials, wages, etc. This additional financing involves some cost, known as capital cost. Collection Cost: Collection costs are the administrative costs incurred by the firm for collecting money from the debtors.

**Default Cost:**

Default cost is the cost that arises from bad debt losses.

**Delinquency Cost:**

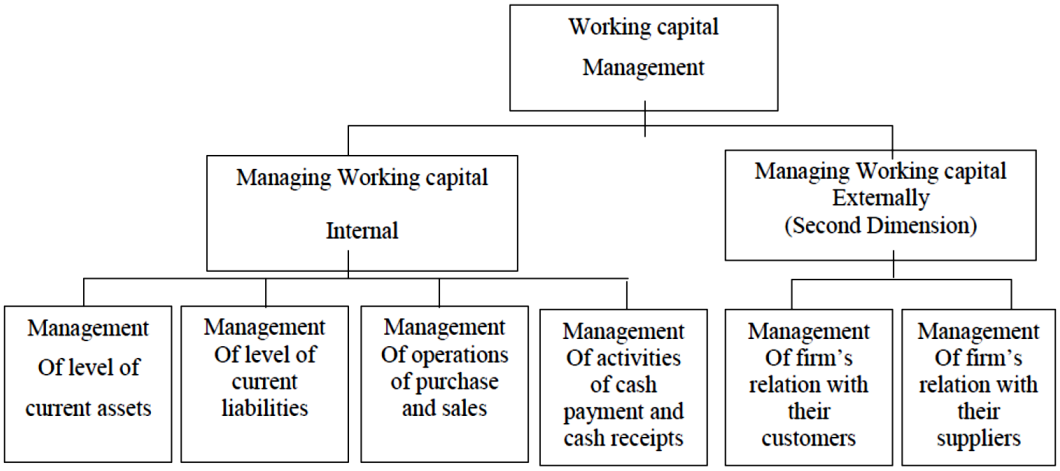
These costs arise for extending credit to defaulting customers. Such costs are legal charges, costs involved in putting extra effort for collection, costs associated with sending reminders, etc.

**Formulation of Credit Policies:**
Credit policy has significant impact on the profitability of a concern but it should be ensured that the profit on additional sales arising out of liberal credit policy is sufficiently higher than the cost involved for maintaining additional receivables.

### 3. Accounts Payable Management

Payable is a form of supplier financing that allows for the purchase of immediate inputs and delayed payment (Hill, D., Kelly, & Lockhart, 2012). Payables or creditors are one of the important components of working capital. Payables provide a spontaneous source of financing of working capital. Payable management is very closely related with the cash management. An efficient account payable policy requires firms to defer payments of payables, which will enable firms to use those capitals to finance investment in current assets. The creditor deferred period (CDP) is the length of time firms are able to defer payments in various resource or supplies purchased (Pandey, 2010). Effective payable management leads to steady supply of materials to a firm as well as enhances its reputation. It is generally considered as a relatively cheap source of finance as suppliers rarely charge any interest on the amount owed. However, trade creditors will have a cost as a result of loss of enjoying cash discount on cash purchases.

**Dimensional Approach of Working Capital Management**
**Fig 1.2: (Baig, 2009)**




The choice of a working capital management practices can be viewed in two dimensional perspectives which take a look at the internal and external perspective, Baig (2009),. The internal perspective deals with the management of investment in relation to current assets and short-term financing in addition to operational functions

that interferes with the balance of current assets and liabilities Baig (2009). This ensures the maximization of benefits and minimizing of the working capital assets cost with short term financing. The external management on the other hand deals with firm's supplier and corporation with customers This in a bid to minimize cost related to firms inter relations transactions, in an effort a synergy is created on firm value, by taking care of external generated problems Baig (2009).

**The Concept of Cooperative Performance**

Performance is the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost and speed. Measure can be defined as finding the size or quantity of something in standard units. In mathematical analysis, a measure on a set is a systematic way to assign a number to each suitable subset of that set.

Performance measurement is a tool to improve the cooperatives efficiency and effectiveness. Generally speaking cooperative have difficulty at staying clearly focused on their primary aim and at evaluating performance due to multiple and at times conflicting objectives.

However there are many ways to measure a cooperative's performance these examples of customized measurement help illustrate how the indicators and their measurements should evolve into more complex systems. Mellor (2009) Measures of cooperative performance are divided into three broad categories:

1. Financial profitability and performance;
2. Financial stability; and
3. Financial management.

**1. Financial Profitability and Performance**

For a cooperative, measuring business success is more complicated than for an investor-owned business. For the latter, the objective is to maximize profit or rate of return on equity. For cooperatives, the objective simply may be to give members a better price or service.

Three measures are used to determine profitability and performance:

- Gross sales or other measure of the size of the business, e.g. gross revenues, such as billings, loans, premiums;
- Gross expenses (the difference between sales and expenses is calculated as a measure of profit); and
- Total administrative/operating cost (calculated as a percent of sales and as change over time.)

For each of these measures, the data are collected for the past 10 years or the life of the cooperative, which-ever is longer, in order to examine change over time.

Inflation must also be taken into consideration. Accounting for inflation leaves an approximation of real change over time.

These data measure the size of the business. The resulting figure can be stated per member to see if the business is significant to the member. The data collected over time helps determine whether the cooperative is growing. (Mellor, 2009).

**Gross Sales and Related Measures**

For cooperatives as a whole, growth is a prime indicator of success. However for the individual cooperative, that is less certain to be true. Growth can be used to reduce the burden of fixed administrative costs, but once administrative costs as a percentage of total business have stopped declining, then further growth may not be an important objective.

For example, housing cooperatives may be only the units in a building, and growth is not an issue unless the building is small and administrative costs need to be spread over more than one building. At the other end of the spectrum, an agricultural marketing cooperative may garner substantial advantages from growth, not only spreading fixed overheads but also achieving economies of scale from greater volumes, access to larger markets, and the ability to take on other functions or services.

Consequently, the growth rate of a cooperative is important to examine for some and not for others. Of course, declining size is generally a problem because the fixed administrative costs do not decrease as size decreases. As a result, the cooperative's efficiency tends to decline. Calculations to be made are growth rate of sales; sales per member; and sales growth rate per member. (Mellor, 2009).

**Gross Expenses**

Gross expenses are subtracted from gross sales as an indicator of profitability. That number can be deflated by change in prices to put it in real terms and related to sales as a percent of sales. Cooperatives may choose to reduce prices to their members as their efficiency increases, rather than increasing profits as an investor owned firm might. However, a measure of profitability (revenues, minus sales) is still important. Of course, steady losses are not consistent with long-term survival of the cooperative. If profits are low relative to fluctuations in profit, modest fluctuations in volume or prices may eliminate any profit and move the cooperative to losses that cannot be sustained. Above this margin of safety, a cooperative may consider improving prices to their members, increase reserves or membership dividends.

Calculations to be made are expenses as a percent of sales and as change over time; profit, calculated as the difference between sales and expenses; and, growth rate of profit (Mellor, 2009).

**Administrative Costs**

Administrative costs also need to be measured. This is an area for cost inflation due to lax, incompetent or bureaucratic management. Changes should be measured over time and the costs should be related to sales. Administrative costs that are large relative to sales suggest areas for increasing efficiency. Can those costs be reduced?

With growth, it is normal for administrative costs as a percent of sales to decline. Is this happening? If not, why? If the government bureaucracy is running the cooperative, normal government practices may increase costs and provide scope for reduction. Member involvement, especially as volunteers, can reduce administrative costs. They also may serve a vital "watchdog" role, bringing attention to lax management. And they can take on some administrative tasks resulting in savings to the cooperative. All are major advantages of an active membership. However, reducing administrative costs is not an appropriate end in itself. (Mellor, 2009).

There may be an opportunity to increase sales and reduce operating costs by spending more on administration. Low administrative costs also may indicate that management is being underpaid and that efficiency could be increased with higher-quality management. One aspect of good cooperative management is recognizing the importance of the manager, the technical and business skills required and arriving at an appropriate pay scale. The fact that a good manager may require a salary considerably higher than the income of the typical member often is a source of concern, underpayment and poor performance. An apex organization can be consulted on pay issues. The simple statistics used here can be helpful in examining administrative costs. Answers will differ from one cooperative to another.
Calculations to be made are administrative cost as a percent of sales; and change over time in that ratio (Mellor, 2009).

**Financial Stability**
Is the cooperative financially stable? This requires different data than that for determining if a cooperative is profitable. One is a question for the profit and loss statement. The other is a balance-sheet question.
To succeed over the long term, a cooperative not only must be profitable and efficient, but also have staying power, particularly to get through hard times. . (Mellor, 2009).

**Assets**
One key measure of cooperative health is growth of total assets the physical and financial building blocks of the business. Generally, it is desirable for capital to be used efficiently so that sales per unit of capital grow over time. With data on asset growth, additional questions can be asked about the growth of components.
Calculations to be made are sales as a percent of assets; growth in assets; assets per member; and growth in assets per member.

**Debt and Equity**
Debt subtracted from assets equals equity — the ownership capital of the members. Equity should be growing over time as a primary means of ensuring the cooperative's sustainability. Declining equity per member can be a worrisome sign. While it may happen, especially if national or foreign governments are subsidizing the cooperative,

it generally bodes ill for the long-term. How equity is calculated varies with different types of cooperatives. For example, electric cooperatives should balance equity with debt because high-cost distribution assets purchased today will last up to 50 years. So the cost should be spread over time to current as well as future consumers. Calculations to be made are growth in equity (assets, minus debt); and equity per member.

**Reserves**

Negative events may occur, depressing a cooperative's profit and equity and requiring it to draw upon reserves until better times return. Reserves should be compared to the amount of debt (as a percent) and to sales (as sales per unit of debt). Reserves also need to be compared to specific sources of loss, such as;

- Bad debt (unpaid bills);
- Anticipated losses, as in the case of insurance; and
- Projected capital expenditures needed to maintain the asset, as in housing.

For the long-term success of most cooperatives, reserves in total, and as a percentage of sales, should be growing, constantly increasing the safety of the investment.

Measurement and management of risk is often a complex matter, requiring outside professional expertise. At the very least, the board needs to have a sense of the business' risks, how large and how likely they are. From this, they can take prudent steps to protect the cooperative by building reserves. Government involvement that gives the impression of insulation against risks is deleterious to the long-term development and viability of the cooperative.

Calculations to be made are growth in reserves; and reserves as a percent of assets (Mellor, 2009).

**Financial Management**

All too often, individual cooperatives fail because of misfeasance by the board, manager or members. It is essential to put these sound financial management practices in place:

- Dedicated bank account for all funds, and monitoring of that account;
- Outside auditors to review the finances once a year;

**Effect of Cash Position on Cooperative Performance**

- Cash management is an overriding consideration in understanding cooperative businesses. Too often, businesses fail before they have a chance to succeed because they run out of cash. Research statistical analysis indicated that the most crucial cause of business failure is due to the lack of planning. The second leading cause next to poor planning is the lack of adequate cash (McMahon 2006:15).
- Pandey (2010) asserted that Cash management is concerned with managing of Cash flows in and out of the firm, Cash flows within the firm, and Cash balances held by the firm at a point in time by financing deficit or investing

surplus cash. He further stated that objectives of cash management include maintaining adequate control over cash position, keeping the firm sufficiently liquid and to ensuring usage of excess cash in profitable ways. Cash management is a main area of working capital management. Other parts of it are inventory management, credit management and management of short-term liabilities. Cash management covers the management of the company's cash in the normal course of business i.e. making sure the company always have enough cash on hand to meet its bills and expenses, and investing any surplus cash (CIMA, 2002).

**Relationship between Account Receivables, Account Payable and Cooperative Performance**

Accounts receivables of a business Organization are created in two major ways. On one hand, the firm may advance payments to the suppliers of inventories to ensure timely supply, especially when the supplier hold a monopolistic position or when materials are in short supply or a firm desiring to develop a captive supply base or for short term financial and profitability considerations. On the other hand accounts receivables are created by a firm selling its output on credit, popularly termed as sundry debtors. Trade credit influences preferences of both sellers and the customers. The functions of accounts receivables management are intended to set out credit terms, selection of credit worth customers, installing an appropriate collection and monitoring system and financing the receivables for maximizing the firm's value (Bhattacharya, 2006).

According to Preve and Sarria-Allende (2010) firms invest in financing clients when their core business is not related to lending money or providing financial services because of various reasons. These reasons include, gaining competitive advantage, redistribution where firms with greater access to financing redistribute the available capital to clients facing credit constraints, information asymmetry where suppliers with close customer relationships have an advantage over financial creditors in obtaining information about their customer's credit worthiness, as they are able to observe customers' orders, and payments, among others. This information advantage lowers supplier's credit risk and in turn increases their willingness to finance customers. In addition, suppliers often offer credit because they want to maintain long-term business relationships with their clients.

According to Kontus, (2013) accounts receivable management includes establishing a credit and collection policy. The policy includes, credit period, discounts for early payment, and credit standards specifying to whom credit should be extended, the terms of the credit and the procedure that should be used to collect the money. Lower accounts receivable ratios may indicate that average investment in accounts receivable is unsuitable and the company's credit policy is too stringent. This may lead to loss of business with the company failing to tap into the potential for profit through sales to customers in higher risk classes. Investment in accounts receivable

represents the cost of capital tied up in those receivables. Therefore, a company has to weigh the profit potential against the risk inherent in selling to more marginal customers. The profitability on additional sales generated must be compared with the amount of additional bad debts expected, higher investment and collection costs, along with the opportunity cost of tying up funds in receivables for a longer period of time.

According to Pandey and Jaiswal (2011) accounts receivable conversion period is the average time taken to convert debtors into cash, represented by the average collection period. It is calculated by dividing the product of accounts receivable figure and 365 days by credit sales.

When establishing a credit policy, finance managers must consider three main variables; credit standards and analysis, credit terms, and collection policy and procedures (Pandey, 2007). Credit standards are the criteria to be followed in selecting customers worthy of credit extension. The three Cs, Character of customer, Capacity to pay and prevailing economic Condition are important considerations. Credit terms stipulate conditions under which the firm sells on credit to customers. They specify the credit limit, credit period and the cash discount. Lastly firms should follow a well-documented collection policy and procedure to collect dues from customers. If the credit period is over and the customer has not yet paid, for example, the firm can send a polite letter reminding the customer, the firm sends progressively strong-worded letters followed with telephone reminders if the customer intentionally fails to pay or may proceed with court action. Trade credit is an important source of finance for firms. Investment in accounts receivables is an important part of a firm's balance sheet. Trade credit granted by firms to customers can have important implications for firm's value and profitability. Suppliers extend credit mainly to enhance sales and consequently may result in higher profits, mitigate customer's financial frictions; trade credit enables price discrimination, by varying the period of credit or the discount for prompt payment. In the long run trade credit might give future profits by establishing and maintaining permanent customer relationships (Martinez-Sola, Banos C., Gracia T., 2014).

Many companies are too passive when it comes to collecting overdue invoices. The money customers owe the company plays a big role in the monthly cash flow, therefore it is important to develop a solid technique for tracking who owes the firm money, how much they owe and when the payment is due. Accounts receivable staff must take a proactive approach to collecting unpaid bills. Periodic reports showing the total amount outstanding, along with an explanation of why those payments have not been received is recommended. Building an accounts receivable database is one of the best ways to keep track of what the company is owed (Damodaran, 2012).

Accounts payable arise when firms purchase goods and services or supplies on credit. Accounts payable is the largest single category of operating current liabilities. It

arises from ordinary business transactions. An efficient account payable policy requires firms to defer payments of payables, which will enable firms to use those capitals to finance investment in current assets. The creditor deferred period (CDP) is the length of time firms are able to defer payments in various resource or supplies purchased (Pandey, 2010). Most firms that sell on credit have credit policy that includes the terms of credit. A firm may indicate that; goods sold on credit, if payment is made within ten days, the customer benefits from a 2% discount; otherwise pay the full amount within thirty days. A good and efficient account payable policy must consider and analyze credit terms before engaging in the creation of account payable. Credit terms that are flexible and beneficial to the firm should be considered (Pandey, 2010).

If you have a set of best practices in accounts payable management and you follow them, accounts payable can have quite a positive impact on your company's profitability. First, the company has to pay its bills on time. A simple best practice, but nothing else will work if you do not do this.

Second, if you pay your bills on time, you can elicit trust between you and your suppliers, regardless of how many suppliers you have. If you have trust, your suppliers will try to help you in a number of ways discussed above, including offering you discounts which will positively impact your profitability in a big way.
Third, a best practice is to try to facilitate processing of your accounts payable with a minimum of staff and paperwork. You do not need several accounts, payable clerks. Smooth out your accounts payable management, and you will increase your profitability by decreasing personnel and time spent on paperwork. (Peavler, 2018).
When there is too much going out through AP, and not enough coming into AR to balance it out, the business will run into negative cash flow issues. Staying on top of both departments ensures that the business will be able to handle financial issues as they arise.

**Theoretical Framework**

This research is anchored on two major theories, namely: risk-return trade off theory.

**Risk and Return Theory**

The risk and return theory by Harry (1952) is one of the most important theories in the field of portfolio management. The risk and return relationship has received considerable attention from researchers in business, economics and finance (Mukherji, Desai &Wright, 2008). Furthermore, every decision with respect to investment is based on risk and return relationship (Richard, Stewart & Franklin, 2008). Relating to that, two conflicting attitudes are always associated with the risk. That is, the risk-seeking behavior and the risk aversion. Risk seekers always prefer choices involving a higher potential loss or a greater probability of a loss and of course with a strong notion of over estimating gains. The main focus of risk-seekers is on the opportunities for gain.

Conversely, risk-averters are completely opposite of risk seekers, in the sense that they (risk averters) over estimate losses and underestimate gains. However, in order to integrate the risk and return theory in working capital management, it is imperative to stress that one of the cardinal decisions in working capital management is the trade-off between liquidity and profitability. If a firm chooses to be liquid, it should be at the expense of the profit and vice-versa.

Any of these two conflicting decisions may result in either of excess or shortage of the components of working capital and the current assets of a business. In the same vein, the risk and return theory which is an integral part of the portfolio theory can be associated to working capital when we look inwardly at the ability of a firm or financial manager to determine the collection of assets, or portfolio to be acquired, since it is impossible to own everything, decisions on what the composition of receivables, inventories, incentives and stocks viz-a-viz the profitability concern are all within the context of risk and return theory.

Zariyawati, Annuar, Taufiq and Abdulrahim, (2009) theory of risk and return states that investment with a higher risk may create a higher return, thus a firm with a high liquidity in working capital will have a low risk of failing to meet its obligations, and low profitability at the same time. That is, the greater the amount of NWC, the less risk-prone the firm is and the greater the NWC, the more liquid is the firm therefore, the less likely it is to become technically insolvent. Conversely, lower of NWC and liquidity are associated with increasing levels of risk. The relationship between liquidity, NWC and risk is such that if either NWC or liquidity increases, the firm's risk decreases (Zariyawati et al, 2009).

## Methodology

### Research Design

The research design adopted for this study is the survey research design.

### Sources of Data

Two major sources of data were referred to in the course of this study, the conventional sources of primary and secondary data. Data for this study was collected mainly from primary source. Data were gathered from the primary source through questionnaire that was self-administered while secondary source of information were journals, textbooks and other records that are relevant to the study.

### Area of the Study

The area of study is Imo State.

### Population of the Study

The population of the study consists of all registered and active credit and thrift cooperative societies in Owerri, Imo State. From the data gotten from the State Ministry of Cooperative (2018) report, there are a total of 1184 registered credit and

thrift cooperative societies that are active and functional with membership strength of 38,520.

**Sample Size Determination and Sampling Technique**

Multistage sampling technique was used in this study. All agricultural cooperatives in the area were categorized into the three agricultural zones in the state. In stage one, the local government areas that are predominantly agrarian where these agricultural cooperatives were based was purposively selected from each of the three agricultural zones: Owerri zone, Orlu zone and Okigwe z one. In stage two, all the registered cooperatives in these selected agrarian local governments were selected. In stage three, all the cooperatives who have audited accounts for 2016 and 2017 were selected.

To determine the sample size for the study, Taro Yamani formula was used

$$n = \frac{N}{1 + N(e)^2}$$

Where n = Sample size
N = Desired sample size
1 = Constant
e = The degree of error expected

N = 213
e = 0.05

Therefore,

$$n = \frac{213}{1 + 213(0.05)^2}$$

$$n = \frac{213}{1 + 213x0.0025}$$

$$n = \frac{213}{1.5325}$$

n = 139

**Table 1: Showing Agricultural Zones, Number of Cooperatives and members Selected.**

| Zones | No of registered cooperatives | No. Of Agricultural Cooperatives with audited account | No of cooperatives studied |
|---|---|---|---|
| **Owerri** | | | |

| | | | |
|---|---|---|---|
| Ikeduru | 148 | 24 | 16 |
| Ezinihite | 130 | 21 | 12 |
| NgorOkpala | 167 | 25 | 14 |
| **Okigwe** | | | |
| Obowo | 171 | 29 | 17 |
| Onuimo | 128 | 21 | 14 |
| Iheme | 92 | 21 | 15 |
| **Orlu** | | | |
| Njaba | 109 | 26 | 18 |
| Nkwere | 79 | 24 | 17 |
| Oru West | 133 | 22 | 16 |
| **Total** | | **213** | **139** |

**Source: Researcher Survey, (2022)**

**Sources of Data**

Primary and secondary data were employed in this study. Primary data was generated from the questionnaire which is based on the research questions for the study on the working capital management and performance of cooperative societies while secondary data was retrieved from the annual reports of the various corporative societies under study.

**Instrument for Data Collection**

The instrument for data collection is the structured questionnaire designed by the researcher in line with the objectives of the study. As a result, the questionnaire was designed to be filled by executive member of these cooperative in order to generate the missing data. A total of 139 copies of questionnaires was prepared and distributed, one for each cooperative studied. Out of the 139 copies of questionnaire distributed, only 120 were effectively filled and returned, giving a return rate of 86%.

**Reliability of the Research Instrument**

Reliability test to check the consistency of the measuring instrument over time was conducted in a test-retest manner, using Pearson Correlation coefficient. Under this procedure the instrument administered to a sample of 12 executive members of the selected cooperatives in the area of study. Their responses were noted and appropriately coded. Thereafter the same instrument was administered to the same group of farmers after 3 weeks and their first and second responses were examined using Pearson Correlation Analysis. The result showed a test result of 0.790 affirming that the instrument is reliable.

**Method and tools for Data Analysis**

Descriptive statistics such as frequency distribution, means and percentages was used to analyze the data obtained to address the objectives of the study. Also inferential statistics, such as one sample t-test and regression was employed to address the research questions and to test the promulgated hypotheses. Specifically, mean rating

and descriptive statistics were used to address the research questions while f-test, t-test was used to test the hypotheses at 5% level of significance.
Objective number one was achieved using one sample t-test.
Objective number two was achieved using regression analysis
The Statistical Package for Social Sciences (SPSS) version 22 was the software employed in the analysis of the data generated.

**Model Specification**

The relationship between the dependent and independent variable were measured by a linear regression expressed as: y=a+bx……. 1
The relationship between the dependent variable (Return on investment which is a measure of performance) and independent variables (netcashflow, stock level, turnover ratio and invoice lead time) which are components of working capital is stated thus:

$Y = \alpha + \beta_1 x1 + \beta_2 x2 + \beta_3 x3 + \beta_4 x4 + \varepsilon$……. 2

Where y= Cooperative performance (proxied by return on investment)

a = constant term

$x_1$= cash and bank proxied by net cash flow

$x_2$= inventory level proxied by stock level

$x_3$= account receivable proxied by turnover ratio

$x_4$= account payable proxied by invoice lead time

Therefore,

$Y = \alpha + \beta_1 x1 + \beta_2 x2 + \beta_3 x3 + \beta_4 x4 + \varepsilon$……. 3

Where: Y= return on investment

a= constant term

$\beta_1$-$\beta_4$= parameter of estimate

$x_1$= net cash flow

$x_2$=stock level

$x_3$=turnover ratio

$x_4$= Invoice lead time

e= error term

**Linear:**

$Y = \alpha + \beta_1 x1 + \beta_2 x2 + \beta_2 x3 + \beta_4 x4 + e$…….Equation 2

## DATA PRESENTATION AND ANALYSIS

**Extent account receivable influence cooperative performance**

| Effect | SA | A | N | D | SD | Mean | Remark |
|---|---|---|---|---|---|---|---|
| Affect cooperative liquidity | 18 | 29 | 11 | 53 | 9 | 2.95 | Reject |
| Affect cooperative profitability | 33 | 41 | 13 | 26 | 7 | 3.56 | Accept |
| Affect goodwill and reputation | 12 | 32 | 27 | 32 | 17 | 2.92 | Reject |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Affect size of dividend and welfare package | 39 | 47 | 18 | 10 | 6 | 3.86 | Accept |
| Affect capital base of the cooperative | 26 | 36 | 7 | 40 | 11 | 3.22 | Accept |

***Source: Field survey, 2022***

The Table above revealed that account receivable had significant influence on cooperative performance. Out of the five variables that were measured, four were significant. These variables were cooperative profitability, reputation/goodwill, welfare package, dividend payout and capital base of the cooperative. However, account receivable did not have significant effect on cooperative liquidity.

**Effects of account payable on cooperative performance**

| **Effects of account payable** | **SA** | **A** | **N** | **D** | **SD** | **Mean** | **Remark** |
|---|---|---|---|---|---|---|---|
| Ensures delivery of orders | 29 | 43 | 17 | 20 | 11 | 3.50 | Accept |
| Enhances invoice financing | 17 | 29 | 22 | 31 | 21 | 2.92 | Reject |
| Leads to positive net cash flow | 15 | 31 | 28 | 38 | 8 | 3.06 | Accept |
| Increases credit worthiness | 31 | 47 | 19 | 16 | 7 | 3.66 | Accept |
| Brings about sustainable stakeholder relations | 36 | 42 | 21 | 21 | 0 | 3.78 | Accept |
| Increases inventory size | 29 | 49 | 15 | 14 | 13 | 3.56 | Accept |

***Source: Field survey, 2022.***

The table analyzed the effect of account payable on cooperative performance. Findings revealed that account payable had significant effect on delivery of order, contribute to positive net cash flow, increases credit worthiness of cooperatives, increases inventory sizes and brings about sustainable stakeholder relations. Only one variable was rejected as being insignificant. Based on these findings, the researcher concluded that accounts payable had significant effect on cooperative performance.

**Hypothesis One**

***$Ho_1$:*** Accounts Receivables does not have significant influence on cooperative Return on Investment (ROI) in Imo State.

**Decision:**

From the output above the significant value was 0.263 which is higher than the alpha value 0.05 based on the above we do not have enough evidence to reject the null hypothesis we therefore conclude that Account receivables does not have significant influence on cooperative Return on Investment (ROI) in Imo State, based on the responses extracted from the respondents.

**Hypothesis Two**

***$Ho_2$:*** Accounts payable does not have significant influence on cooperative members Return on Investment (ROI) In Imo State.

**Decision**

According to the output, account payable was found to be significant at 0.05 level of significant. The null hypothesis was therefore rejected. So we conclude that account payable had significant influence on cooperative performance.

## Discussion of Findings

Analysis on hypothesis one on extent account receivable influence cooperative performance shows that account receivables affect cooperative profitability and size of dividend and welfare package. However it was found that account receivables do not affect cooperative liquidity, goodwill and reputation and capital base of the cooperative.

Analysis on hypothesis two showed that account payable on cooperative performance ensures delivery of orders, increases credit worthiness, brings about sustainable stakeholder relations and Increases inventory size. However account payable on cooperative performance does not enhance invoice financing and does not lead to positive net cash flow.

## Summary of Findings

It was revealed that account receivables affect cooperative profitability and size of dividend and welfare package. However it was found that account receivables do not affect cooperative liquidity, goodwill and reputation and capital base of the cooperative. Accounts payable on cooperative performance ensures delivery of orders, increases credit worthiness, brings about sustainable stakeholder relations and increases inventory size. However account payable on cooperative performance does not enhance invoice financing and does not lead to positive net cash flow.

## Conclusion

The study established that effective working capital performance provides a critical insight into the state of the cooperatives financial position. It is a crucial indicator of financial fitness. It was noted that the cooperatives ability to properly manage current asset and the association liabilities or current obligations may determine how well it is able to survive in the short run. Specifically, the findings of the study indicate that account receivables affect cooperative profitability and size of dividend and welfare package and that account payable has a significant influence on cooperative performance.

From the result of our analysis, we can conclusively say that working capital management has a significant influence on agricultural cooperative performance in Imo state Nigeria.

### Recommendations

Based on the analysis and findings of this study, the researcher therefore recommends that:

i. Cooperative societies need to have working capital management policies that will help them to remain profitable. This can be achieved by observing the duration of their account receivable days which should be shorter. Account payable days which should be longer and optimum debt ratio
ii. The influence of working capital management on agricultural cooperative performance

cannot be effective because the cooperative depends on the manner in which those in charge manage the working capital, thus, Proper training need to be organized by the cooperatives to ensure that the executives are well trained to execute working capital management practices which will in turn lead to improvement in the profitability of operation, managerial efficiency, minimize financial risk and ensures liquidity.

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