

**WORKING CAPITAL MANAGEMENT PRACTICES AND FINANCIAL  
PERFORMANCE OF SUGAR CANE OUTGROWER COMPANIES IN  
KENYA**

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## DECLARATION

This research project report is my original work and has not been presented for an award in any university.

Sign:..... Date:.....

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I confirm that this research report was prepared and presented to the University of Nairobi for examination by the student under my supervision.

Sign:..... Date:.....

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## **DEDICATION**

This academic research project is dedicated to my wife Angeline and our children Allan, Daisy and Diana for their love and for allowing me to spend precious family time pursuing further education.

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## ABSTRACT

Working capital management is considered to be a crucial element in determining the financial performance of an organization. In this study, the purpose was to investigate working capital management practices and their effect on financial performance among the sugarcane out-grower companies in Kenya. Using descriptive research design, a total of 30 managerial staff members from the ten out-grower companies were targeted by way of completing a standardized and semi-structured questionnaire. Data were processed and then analyzed using descriptive statistics and correlation analysis. The study found that sugarcane out-grower companies' WCM practices were comparatively more conservative and as a result weakened the companies' financial performance indicators. Specifically, it was observed that the companies' receivables were concentrated on loans advanced to members and accruing interests. However, trade receivables period was longer than payables period, indicating that the companies did not accelerate receivable periods to secure profitability. Also, the study found that receivable acceleration schemes adopted by the companies were not competent enough to mop-up receipts. Under payables, there was a possibility that majority of companies did not utilize payables as sheer source of financing. This was the case because payables were more accelerated than receivables, yet delay instruments were inadequate to relatively shorten the firm's receivables. In inventory management, the companies held stock unnecessarily for long yet they were in a lower stock-out risk zone. Moreover, the companies demonstrated naivety in order management and control of inventory shocks. There was too much cash held compared to any other current asset signifying higher preference to liquidity as opposed to profitability. Moreover, the companies lacked innovation in investing the excess cash and there were weaknesses in internal controls. Based on these findings, the study concluded that poor financial performance was dependent on weak WCM practices adopted by the out-grower companies. It was recommended to management to establish a credit control systems preferably with a full-time credit officer and follow credit control policy procedures. In addition, there was need for appropriate collection policies to ensure that amounts owing are collected as quickly as possible. Further, it was highly necessary for out-grower companies to be capacity-built both financially and technically to shift from the manual accounting controls to computerized platforms. Finally, there was need for the companies to engage suppliers to allow for reasonable credit periods.

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## ABBREVIATION AND ACRONYMS

<b>ANOVA:</b>	Analysis of Variance
<b>CCC:</b>	Cash Conversion Cycle
<b>COMESA:</b>	Common Market for Eastern and Southern Africa
<b>ECM:</b>	Efficiency in Cash Management
<b>EIM:</b>	Efficiency in Inventory Management
<b>ELI:</b>	Empirical Leanness Indicator
<b>EMU:</b>	Efficiency Monitoring Unit
<b>EPM:</b>	Efficiency in Payables Management
<b>EPZA:</b>	Export Processing Zone Authority
<b>ERM:</b>	Efficiency in Receivables Management
<b>EU:</b>	European Union
<b>FP:</b>	Financial Performance indicator
<b>IGAD:</b>	Inter-Governmental Authority on Development
<b>ISE:</b>	Islamabad Stock Exchange
<b>JIT:</b>	Just-In-Time
<b>KESGA:</b>	Kenya Sugarcane Growers Association
<b>KSB:</b>	Kenya Sugar Board
<b>KSE:</b>	Karachi Stock Exchange
<b>LSD:</b>	Least Significant Difference
<b>NSE:</b>	Nairobi Securities Exchange
<b>ROA:</b>	Return On Assets
<b>SACCOS:</b>	Savings and Credit Cooperative Societies
<b>UK:</b>	United Kingdom
<b>US:</b>	United States

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Business entities exist for purposes of enhancing owners' investment value. Realization of this objective requires finesse in financial strategy and entrenchment of responsive adoption systems. As a result, a firm is required to maintain a balance between liquidity and profitability while conducting its day to day operations. Liquidity is a precondition to ensure that a firm is able to meet its short-term obligations and its continued flow can be guaranteed from a profitable venture (Gitman, 2005).

The relationship between working capital management and financial performance may be seen through the liquidity-profitability trade-off theory. This theory proposes that there is a trade-off between liquidity and profitability; gaining more of one means giving up some of the other. At one end of the spectrum there are highly liquid firms which are not very profitable while at the other end are firms which are highly profitable but are not very liquid. The basic challenge is therefore to determine where in the middle ground the firm should reside (Bhattacharya, 2001).

The theory of working capital management describes how working capital should be managed and demonstrates the benefits in terms of liquidity, solvency, efficiency, profitability, and shareholder wealth maximization which accrue to the company from appropriately managing working capital. Declining levels of liquidity, unless remedied, may result in insolvency and eventually bankruptcy as the business's liabilities exceed its assets (Brigham, et al., 2009).

Kenya is well suited for sugarcane development particularly in the lowlands around Lake Victoria in the western part of the country as well as in the coastal area on the south eastern part of Kenya. According to Karekezi and Kimani (2010), in spite of the significant potential for sugarcane development, the country is yet to realize its full potential. This is partly due to over-reliance on rain-fed cultivation of sugarcane. In addition, the mismanagement of state-owned sugar factories has discouraged small holder farmers from expanding sugarcane farming. Pegged on challenges associated with sugar industry, sugarcane-farmers are organized in outgrower companies spread across the sugar-belt region to mitigate risks collectively. Currently, there are 10 outgrower companies with regionally-defined membership. These organizations are understood within the broadest framework of cooperative movements in Kenya with the enactment of Cooperative Societies Act of 1966 (Karekezi and Kimani, 2010).

### **1.1.1 Working Capital Management Practices**

Management of working capital is a fundamental part of the overall corporate strategy to create value and is an important source of competitive advantage in businesses (DeLoof, 2003). In practice, it has become one of the most important issues in organizations with many financial executives struggling to identify the basic working capital drivers and the appropriate level of working capital to hold so as to minimize risk, effectively prepare for uncertainty, and improve the overall performance of their businesses (Lamberson, 2005).

By definition, working capital is current assets less current liabilities. The major elements of current assets are inventories, accounts receivables and cash (in hand and at bank) while that of current liabilities are accounts payable and bank overdrafts. According to Atrill (2006), working capital represents a net investment in short term assets. These assets are continually

flowing or circulating into and out of the business and are essential for day-to-day operations. Van Horne and Wachowicz (2004) argue that the various elements of working capital are interrelated, and can be seen as part of a cycle called the cash conversion cycle. The working capital management practices adopted by a firm determine the length of time a particular element of working capital takes in the cycle.

Van Horne and Wachowicz (2004) provide that companies seek to minimize risk and improve the overall performance by understanding the role and drivers of working capital management. Consequently, a firm may adopt an aggressive working capital management policy with a low level of current assets as percentage of total assets or it may also be used for the financing decisions of the firm in the form of high level of current liabilities as percentage of total liabilities. Excessive levels of current assets may have a negative effect on the firm's profitability whereas a low level of current assets may lead to lower level of liquidity and stock-outs resulting in difficulties in maintaining smooth operations. They conclude by emphasizing that the main objective of working capital management practices is to maintain an optimal balance between each of the working capital components. On their part, Filbeck and Krueger (2005) infer that business success heavily depends on the ability of financial executives to effectively manage receivables, inventory, and payables. Kwame (2007) retorts that the existence of efficient working capital management practices can make a substantial difference between the success and failure of an enterprise and it is of particular importance to the managers, because it is they who strive for finances and the opportunity cost of finances; for them is usually on the higher side.

### **1.1.2 Financial Performance**

A company's financial performance is an essential measure to management as it is an outcome which has been achieved by an individual or a group of individuals in an organization related to its authority and responsibility, not against the law, and conforming to the morale and ethic. Such performance is the function of the ability of an organization to gain and manage the economic resources in several different ways to develop competitive advantage (Hansen and Mowen, 2005). Naser and Mokhtar (2004) contend that high financial performance reflects management effectiveness and efficiency in making use of company's resources, and is often expressed in terms of growth of sales, turnover, employment, or stock prices.

According to Dong (2010), the firms' financial performance is affected by working capital management practices. Based on empirical findings, Chatterjee (2010) defends the importance of fixed and current assets in the successful running of any organization. He recognizes a common phenomenon observed in the business cycle that most of the business entities increase their margin for the profits and losses because of shrinking of the size of working capital relative to sales. Effectively, if the entity wants to increase or improve its liquidity, then it has to increase its working capital. In response of this policy, the organization has to lower down its sales and hence the profitability will be affected due to this action (Chatterjee, 2010).

In the SME segment, financial performance forms an important part of the business and it is crucial for their survival. Successful financial performance in the SMEs has a positive association with the capacity to manage financial issues effectively (Thachappilly, 2011). Haber & Reichel (2005) provide evidence of a positive association between financially

related activities (such as planning and financial control) and the successful financial performance of an SME. Further, Haber & Reichel (2005) argue that financial performance can be one of the biggest challenges faced by businesses in the SME sector, especially with regard to their survival, if management is not trained on how to manage finance and measure performance. Mbonyan (2006) sees financial performance as the life blood of small-scale organizations, since without them, no growth decisions can be made. And, according to Mutezo (2005), small businesses fail because more often than not, cash flow is not properly managed.

### **1.1.3 Kenya Sugar Industry**

Kenya is well suited for sugarcane development particularly in the lowlands around Lake Victoria in the western part of the country as well as in the coastal area on the south eastern part of Kenya. The western part of the country is comprised of three sugarcane growing sub-regions, namely: Nyando Sugar Belt, Western Sugar Belt and South Nyanza Sugar Belt (Kenya Sugar Board, 2010). In Kenya, the competitiveness of the sugar sector is affected more by the comparatively high degree of state involvement in the sector than by the practices of private firms. In 2010, out of 8 sugar companies, all except one had some degree of state ownership. The company with the biggest market share, and most efficient production, is the one with the least degree of state ownership (20% ownership) compared with the others (with the exception one new but small, fully private mill) (Kegode, 2010).

There is a continuing decline in productivity of the industry because the production technology used is becoming increasingly obsolete. At the mill level, crushing of cane into sugar is inefficient due to out of date technology and frequent breakdowns. At the farm level, cane yields are low because smallholder farmers have little incentive to increase their

output (such as by using faster ripening seed varieties) as it would require higher maintenance, and they would not be able to sell their extra produce in any case, due to limited milling capacity. In addition, mills often owe money to farmers, who cannot be sure if or when they will receive payment. As a result, farmers often fail to repay loans made to them by their out-grower associations. Furthermore, farmers are generally paid for the amount of sugarcane they deliver to the mills in terms of weight, rather than sucrose content. This does not incentivize farmers to improve the quality of the cane they produce, which in turn reduces the efficiency of the mills (Ellis, Singh and Ong'olo, 2010).

Kegode (2010) points out that the Kenyan sugar industry has been revolving around shortages, inefficiencies, inability to compete with imported sugar, perennial losses and political interferences which cumulatively have a negative bearing on industry's financial performance. Despite huge stakeholder investments, self sufficiency in sugar has remained elusive over the years as consumption continues to outstrip supply (Kegode, 2010).

#### **1.1.4 Sugarcane Outgrower Companies in Kenya**

According to Karekezi and Kimani (2010), in spite of the significant potential for sugarcane development, the country is yet to realize its full potential. This is partly due to over-reliance on rain-fed cultivation of sugarcane. In addition, the mismanagement of state-owned sugar factories has discouraged small holder farmers from expanding sugarcane farming. Pegged on challenges associated with sugar industry, sugarcane-farmers are organized in outgrower companies spread across the sugar-belt region to mitigate risks collectively. Currently, there are 10 outgrower companies with regionally-defined membership (Masayi and Netondo, 2012).

Outgrower companies are understood within the broadest framework of cooperative movements in Kenya with the enactment of Cooperative Societies Act of 1966. Underlying the enactment of this legislation was the perception by the Kenyan policymakers that such movements could provide viable instruments for integrating smallholders with the modern economy. In this role, the companies would offer a service network in rural areas, which combined input provision, credit and agency services (Kegode, 2010)

## **1.2 Research Problem**

According to Padachi (2006), a well designed and implemented working capital management contributes positively to the creation of a firm's value. This is supported by Peel and Wilson (2006) who assert that management of working capital is important to the financial health of businesses of all sizes. Since the amounts invested in working capital are often high in proportion to the total assets employed, it is vital that these amounts are used in an efficient and effective way. Deloof (2003) acknowledges that smaller firms should adopt formal working capital management routines in order to reduce the probability of business closure, as well as to enhance business performance. However, there is evidence that small businesses are not very good at managing their working capital. Given that many small businesses suffer from under capitalization, the importance of exerting tight control over working capital investment is difficult to overstate (Peel and Wilson, 2006).

According to Kegode (2010), the Kenya sugar industry is an important component of the national economy, sustaining the livelihoods of millions and contributing significantly to the gross domestic product. However, the sector has remained hostage to different debilitating conflicts, pitting in some cases companies against out-growers, investors against communities, and business rivals against each other. At the same time, lack of clear and

effective regulations and policy guidelines has made it difficult to resolve some of these issues. Despite all these, there is an increasing demand in sugar consumption coupled with rapid increase in population and diversifying export potential, which calls for advanced intents to strengthening of key industry institutions. Consequently, the significance of individual farmers cannot be overemphasized since they supply over 90% of the required cane for processing. Hence, efforts to stabilizing their respective outgrower companies are socio-economically rational.

Various studies had been done relating to WCM. Nyabwanga et al. (2011) studied on effects of WCM on financial performance but targeting SMEs in Kisii South, while Kotut (2003) focused on WCM and performance on listed firms in Nairobi. Waswa et al. (2011) argue that the outgrower companies have not performed to the expectations of farmers. There are many reasons for this state of affairs. First, is the deliberate misuse of funds by the officials who use the organizations as a platform to further their individual objectives. More often than not they are guided by their personal interests disregarding what is best for the organization. This is exacerbated by illiteracy among the officials which breeds incompetence and poor bookkeeping, the effect being apathy among the members. Another factor tends to accentuate the inefficiency of these organizations is the nature of the peasant society itself (Waswa et al., 2011). Masayi and Netondo (2012) inferred that the reason for out-grower companies' failure is not clear but there is a question of how they manage their finances. Notably, however, there were no empirically documented findings and recommendations on WCM practices and their specific influence on financial performance; a gap this study sought to address. Specifically, the question guiding this study was “what working capital management practices are adopted by sugarcane outgrower companies in Kenya and what influence these practices have on their financial performance?”

### **1.3 Research Objectives**

The general objective of the study was to investigate the effect of working capital management practices on financial performance of Sugarcane Out-grower Companies in Kenya.

The study was guided by the following specific objectives:

- i. To establish the working capital management practices of sugarcane out-grower companies in Kenya.
- ii. To establish the influence of working capital management practices on the financial performance of sugarcane out-grower companies in Kenya.

### **1.4 Value of the Study**

The sugar sub-sector played a major role in the Kenyan economy and was a source of livelihood for millions. Therefore, pegged on the sub-sector's irreplaceable indispensability, stable synergy was of essence to strengthening and harnessing stakeholders' collective contributions. The study's findings were anticipated to contribute in solidifying scholarly contributions towards establishing an ideal working capital practice in the context of outgrower/other related companies serving vast interests.

In addition, it was imperative that stakeholders were consistently updated and made to understand institutional weaknesses in order to factually design a responsive policy. An output of this study was therefore important to players both in the industry and outside especially government agencies (Kenya Sugar Board, Vision 2030, and EMU), other

industry institutions, individual farmers, out-grower companies, and researchers in advocating and adopting policy guidelines aimed at protecting sugarcane farmers.

Finally, the study recommendations focused on institutional weaknesses on working capital management to trigger managerial refocusing of their practices and work towards investment value creation. This did not only benefit the companies in terms of sustainability but also individual farmers who resorted to borrowing in boosting their produce. The anticipated improvements in sugarcane produce would to a large extent enhance industry performance which in turn would enrich the economy's performance.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter discusses both the theoretical and empirical literature on the study's thematic areas. These areas include concept of working capital, working capital practices, influence of working capital on firm performance, and performance of the Kenyan sugar industry.

### **2.2 Theoretical Foundation of the Study: Trade-off Theory**

Under perfect capital market assumptions, holding cash neither creates nor destroys value. The firm can always raise funds from capital markets when funds are needed, there are no transaction costs in raising these funds, and the funds can always be raised at a fair price because the capital markets are assumed to be fully informed about the prospects of the firm (Myers, 2003). The trade-off theory suggests that firms target an optimal level of liquidity to balance the benefit and cost of holding cash. Eljelly (2004) adds that firms save transaction costs to raise funds and do not need to liquidate assets to make payments. Moreover, the firm can use liquid assets to finance its activities and investment if other sources of funding are not available or are extremely expensive.

According to Eljelly (2004), the concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations in order to meet their obligations as they fall due and increase profitability and shareholder's wealth. The importance of liquidity management as it affects corporate profitability in today's business cannot be over emphasis. The crucial part in managing working capital is required maintaining its liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004). Liquidity plays a significant role in the successful functioning of

a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions (Bhunia, 2010). The dilemma in liquidity management is to achieve desired trade-off between liquidity and profitability (Raheman and Nasr, 2007).

According to Charitou et al. (2010), management of current assets and current liabilities is important in creating value for shareholders. If a firm can minimize its investment tied up in current assets, the resulting funds can be invested in value-creating projects, thereby increasing the firm's growth opportunities and shareholders' return. Filbeck and Krueger (2005) point out that the ability of financial managers to effectively manage receivables, inventories, and payables has a significant impact on the success of the business. If capital invested in cash, trade receivables, or inventories is not sufficient, the firm may have difficulty in carrying out its daily business operations. Charitou et al. (2010) emphasize the trade-off between liquidity and profitability when they argue that working capital management can play an essential role not only in a firm's profitability and risk, but also in its value.

### **2.3 Working Capital Management Practices**

According to Smith and Sell (2008) wide range of surveys have been used to study working capital policies overall and the practices to manage different components of net working capital separately. Cash and marketable securities, accounts receivable, inventories, accounts payable and short-term loans have been studied. These surveys show that most of the companies have informal policies for working capital management. The most important action in working capital management is the collection of accounts receivable followed by efficient inventory management.

Belt and Smith (2001) argue that institutional differences such as the banking system cause some variation to working capital management policies. International working capital management has been studied by Ricci and Morrison (2006) concentrating on international cash management operations, financing vehicles of international sales and foreign exchange activities. They conclude that companies prefer reliable and least-risky vehicles in their foreign exchange and vehicles such as factoring, currency swaps, leading, lagging and futures. Howorth and Westhead (2003) studied the working capital management practices of small firms in the UK. They found four types of firms: companies which concentrate on cash management routines; companies concentrating on inventory management routines; companies emphasizing revenue management routines; and firms which are less likely to utilize any working capital management routines.

Meszek and Polewski (2006) identify three working capital management strategies, which determine the structure of working capital, the way it is financed, and the length of the CCC. Aggressive working capital management strategy is based on a high level of current liabilities and a low level of current assets. Conservative strategy is the opposite with low level of current liabilities and high level of current assets. The third moderate strategy positions itself between the aggressive and the conservative strategies. Further, Meszek and Polewski (2006) argue that working capital management requires controlling mechanisms. As working capital is a complex issue, it requires other perspectives to be taken into account than just financial, such as investment process, production process and logistics.

### **2.3.1 Cash Management Practices**

Davidson (2002) defined cash management as a term which refers to the collection, concentration and disbursement of cash. It encompasses a company's level of liquidity, management of cash balance and short term strategies. Pindado (2004) also defines cash management as part of working capital that makes up the optimal level needed by a company. Bort (2004) noted that, cash management is of importance for both new and growing businesses. Companies may suffer from cash flow problems because of lack of margin of safety in case of anticipated expenses such that they experience problems in finding the funds for innovation or expansion. Further Bort (2004), alludes that effective cash management is the fundamental starting point to ensure that the company's finances are in strong position.

According to Bort (2004) cash is the lifeblood of the business. The key to successful cash management lies in tabulating realistic projections, monitoring collections and disbursements, establishing effective billing and collection measures, and adhering to budgetary parameters because cash flow can be a problem to the business organization. Gitman (2008) offers theoretical positions drawn from observations and consulting experience on the fact that a firm can improve its cash management efficiency by collecting accounts receivable as soon as possible. The most obvious way of bringing forward cash inflows, would be to press debtors for earlier payment although this policy will result in goodwill and problems with customers.

Gitman (2008) advocates for cash budget as another cash management tool. It is used by the firm to estimate its short term requirement with particular attention being paid to planning for surplus cash or for cash shortages. Kirkman (2006) arrived at the same idea by

highlighting that as a component of implementing an effective cash management program, a cash flow statement called a cash budget may be prepared. Chastain (2008) asserts that budgets are the financial road map companies' use, when planning business expenses and tracking the cash flow throughout the business year.

### **2.3.2 Inventory Management Practices**

Managers act rationally in managing their inventory efficiently if they are convinced that the practice enhances firm performance. Traditionally, inventories of raw materials, work-in-progress components, and finished goods were kept as a buffer against the possibility of running out of needed items. However, large buffer inventories consume valuable resources and generate hidden costs. Inventory management leading to inventory reduction has become the primary target, as is often the case in just-in-time (JIT) systems, where raw materials and parts are purchased or produced just in time to be used at each stage of the production process. This approach to inventory management brings considerable cost savings from reduced inventory levels. As a result, inventories have been decreasing in many firms (Chen et al., 2005).

According to Chen et al. (2005), firms with abnormally high inventories have abnormally poor stock returns. On the other hand, firms with abnormally low inventories have ordinary stock returns. In addition, firms with slightly lower than average inventories perform best over time. Inventory management leads to inventory reduction, as is often the case in JIT. Fullerton et al. (2003) give support that firms that implement higher degrees of JIT manufacturing practices should outperform competitors who do not; it was also found that a positive relationship exists between firm profitability and the degree to which waste-reducing production practices, such as reduced set-up times, preventive maintenance

programs and uniform workloads are implemented. Eroglu and Hofer (2011) argue that inventory leanness is the best inventory management tool. Lean production itself considers inventory as a form of waste that should be minimized and it has become synonymous with good inventory management

Cannon (2008) introduces contradictory perspective that inventory performance should not be measured as a robust indicator of overall performance. Cannon (2008) indicates that when the effects of time are taken into account, turnover improvement on average has a slightly negative effect on ROA. Additionally, turnover improvement exhibits a prominent random effect. Consistent with Cannon (2008), another Koliass et al. (2011) present that inventory turnover ratio (as a measurement of inventory management), is negatively correlated with gross margin. Moreover, there exists a negative relationship between gross margin and inventory turnover. This implies that retailers' trade off gross margin for inventory turns to achieve similar return on inventory investment since, if inventory turnover ratio is lower than targeted given the level of gross margin, then management should be alarmed with this inefficiency.

### **2.3.3 Receivables Management Practices**

Provision of trade credit is normally used by businesses as a marketing strategy to expand or maintain sales (Pandey, 2004). Efficient receivables management augmented by a shortened creditor's collection period, low levels of bad debts and a sound credit policy often improves the businesses' ability to attract new customers and accordingly increase financial performance hence the need for a sound credit policy that will ensure that value is optimized (Lazaridis and Dimitrios, 2005). Costs of cash discounts and costs of managing credit and

credit collections constitute the carrying costs associated with granting a credit which increase when the amount of receivables granted are increased. Lost sales resulting from not granting credit constitute the opportunity cost which decrease when the amounts of receivables are increased (Lazaridis and Dimitrios, 2005).

Michalski (2007) provides that an increase in the level of accounts receivables in a firm increases both the net working capital and the costs of holding and managing accounts receivables and both lead to a decrease in the value of the firm. Lazaridis and Dimitrios (2005) argue that firms who pursue increase in their accounts receivables to an optimal level increase their profitability resulting from increase sales and market share. Juan and Martinez (2002) emphasize that firms can create value by reducing their number of days of accounts receivable, while Deloof (2003) writes that the length of receivables collection period has a negative effect on a firm's performance. Sushma and Bhupesh (2007) also affirm that, putting in place a sound credit policy ensures proper debt collection procedures and is pivotal in improving efficiency in receivables management hence the performance of firms.

### **2.3 Working Capital Management Practices and Financial Performance**

Efficient management of working capital is a fundamental part of the overall corporate strategy in creating the shareholders' value (Deloof, 2003), and firms try to keep an optimal level of working capital that maximizes their value (Afza and Nazir, 2007). According to Eljelly (2004), financial performance of corporate organizations is a major source of concern to the financial manager, entire management, as well as the shareholders. This is more so as it is expected that every corporate organization of any kind should make a fair return to justify its existence. Deloof (2003) argues that the requirement that organizations realize reasonable financial performance calls for proper management of working capital

which has a significant impact on corporate continuity, while Pandey (2004) agrees that there is a significant impact of working capital management policies on organizational financial stability.

Aminu (2003) alludes that working capital management is an essential tool in the success story of any firm in terms of profitability. A good or positive working capital enables a firm to access finance from short-term creditors and even long term creditors. In the long-run, creditors seek firms with a positive working capital since it serves as an assurance of loan repayment. The issue of a positive working capital calls for working capital management which, according to Pandey (2004), is the administration of all components of working capital-cash, marketable securities, debtors (receivables) and stock (inventories) and creditors (payables). Further, Pandey (2004) states that the financial manager must determine levels and composition of current assets by determining the right source to finance current assets and that current liabilities are paid in time. Smith and Sell (2008) contends that the goal of working capital management is to ensure that the firm is able to continue its operation and that it has sufficient cash flows to satisfy both maturing short-term debt and upcoming operational expenses. This will obviously have significant effect on the firm's financial performance (Smith and Sell, 2008).

For small and growing businesses, an efficient working capital management is a vital component of success and survival in terms of both profitability and liquidity (Howorth and Westhead, 2003). Howorth and Westhead (2003) further suggest that the small firms need to focus on some areas of working capital management where they can expect to improve marginal returns. Ideally, therefore, they need to adopt formal working capital management routines in order to reduce the probability of business closure, as well as to enhance business

performance. Grablowsky (2006) portrays a significant relationship between various success measures and the employment of formal working capital policies and procedures. Managing cash flow and cash conversion cycle is a critical component of overall financial management for all firms, especially those who are capital constrained and more reliant on short-term sources of finance (Grablowsky, 2006).

## **2.5 Empirical Literature Review**

Melita, Maria and Petros (2010) empirically investigated the effect of working capital management on firm's financial performance in an emerging market. Their data set consisted of firms listed on the Cyprus Stock Exchange for the period of 1998 - 2007. Using multivariate regression analysis, their results specifically indicate that the cash conversion cycle and all its major components namely - days in inventory, days' sales outstanding and creditors' payment period – are associated with the firm's profitability. Vida, Seyed, and Rezvan (2011) studied the relationship between working capital management and corporate profitability of 101 listed companies on Tehran Stock Exchange (TSE) during the period of 2004-2008. Multivariate regression and Pearson correlation were used to test hypotheses. Findings revealed that cash conversion cycle, a key measure of working capital management, has a relationship with corporate profitability. Findings also show that a positive significant relationship exists between logarithm of sales and profitability, and a negative significant relationship exists between financial debt ratio and profitability.

In the Kenyan context, Bowen, Morara and Mureithi (2009) carried out a study on management of business challenges among small and micro enterprises in Nairobi. It dwelt on amongst other challenges faced by small and medium enterprises, the challenge of working capital management and took a sample of small and micro enterprises in Nairobi.

The study found that working capital management is one of the serious challenges facing these enterprises. Kotut (2003) carried out a study on WCM practices by Kenyan firms using listed firms in Nairobi. It adopted a stratified sampling of the firms listed in the NSE under different sectors. The study concluded that working capital management practices influenced corporate profitability in variant proportions dependent on the sector the firms operated as well their sizes.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter presents the study methodology followed towards attainment of the objectives. Specifically, it outlines the research design, population, data collection, research validity and reliability, and data analysis.

### **3.2 Research design**

The study adopted a descriptive cross-sectional survey research design. According to Polit and Beck (2010), this design necessitates a more economical collection of data at one point in time and is fundamental in objective analysis due to timing similarity. Further justification for its adoption was based on Oso and Onen (2005) that the design provides a quick, efficient and accurate means of accessing information about the population and it is more appropriate where there is a gap of secondary data.

This design was considered appropriate because this study focused on the data relating to working capital management practices at the time of the study for all the entities being studied. The data collected also provided descriptive information about the study subjects and were sourced from a mix of primary and secondary sources.

### **3.3 Population of Study**

The study targeted obtaining research data from the only 10 sugar out-grower companies in Kenya (see appendix II). These companies were concentrated in the western part which was the main sugarcane growing area in the country. In total, there were three sugar belts, namely the Nyando, the western sugar belt and the south Nyanza sugar zone. Aggregately,

the area under cane was estimated at 123,622 hectares of which 111,189 hectares were farmed by smallholders and 12,433 under nucleus estates. This provided a strong foundation to existence of out-grower companies in all the 10 sugar companies.

### **3.4 Data collection**

To ensure comprehensive examination and inter-firm comparison, both secondary and primary sources of data were adopted. The secondary data were ascertained from financial statements and inventory records with the aid of predesigned desk review checklist. On the other hand, primary data collection was accomplished by use of a semi-structured and self-administered questionnaire. According to Burns and Grove (2005), a questionnaire is well thought-out tool designed to elicit information that can be obtained through written responses from the study subjects.

Dillman (2005) also supports use of questionnaire as it is made to accomplish a wide range of feedbacks because each respondent is asked to respond to the same set of questions. The questionnaire was given to respondents drawn from representatives of top management, finance and procurement sections. Hence, there were three inclusions from each company with top management represented by managing directors, finance by head of accounts, and procurement by head of supply chain sections.

Primary instrument validity was gained through scholarly critique and professional input from one financial manager/practitioner and two research experts. Moreover, the instrument was triangulated to ensure collection of both in-depth and closed feedbacks. In addition to these, using both secondary and primary data sources was helpful in enhancing reliability of findings due to minimal inconsistencies from the respondents. The researcher's availability

during data collection also ensured that respondents were assisted in completions by way of giving guided clarifications.

### **3.5 Data Analysis**

The researcher examined the collected quantitative data to make inferences through a series of operations involving editing to eliminate inconsistencies, classification on the basis of similarity and tabulation to relate variables. Subsequently, the refined data were analyzed using descriptive statistics such as percentages, measures of central tendency, and measures of dispersion. Textual data portions were analyzed by content analysis.

## CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION OF FINDINGS

### 4.1 Introduction

This chapter presents outputs of data analysis and discussions thereof. The statistical analyses are based on the study's thematic areas which include working capital management practices, and the effects of WCM practices on financial performance.

### 4.2 Response Rate

The study sought to obtain data from a total of 30 management representatives comprising of managing directors, finance officers and procurement managers from the ten targeted out-grower companies in the three sugar-belt regions of Western Kenya. By the end of the study period, however, 28 questionnaires were completed and returned. This translated to a response rate of 93%.

Study participants indicated that they had served the out-grower companies in similar positions for time-lengths varying from one and ten years as further detailed in Table 4.1.

**Table 4.1: Work Experience in the Out-Grower Companies**

<b>Experience (Years)</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
0 - 2 years	4	14.3	14.3
3 - 5 years	8	28.6	42.9
6 - 8 years	11	39.3	82.1
8 - 10 years	5	17.9	100.0
<b>Total</b>	<b>28</b>	<b>100.0</b>	

*Source | Out-Grower Sugarcane Companies (Kenya), 2013*

Table 4.1 illustrates that majority of the companies' managers had accumulated between 6 – 8 years of experience (39.3%) in the top level. Yet another cluster of managers (28.6%) had a non-disrupted working stint ranging between 3 to 5 years. There were also 17.9% of the managers who had stayed longest between 8 – 10 years while those with the least work-life durations, less than 2 years, constituted a response portion of 14.3%. Averagely, the work-life experience in the units of analysis was found to be 7.6 years and this was considered sufficient to enable quality dissemination and informed topical opinions.

### **4.3 Financial Performance of Out-Grower Companies**

According to Panwala (2009), the object of WCM is to maximize the owners' wealth which is measured in terms of profitability. Effectively, therefore, a firm in losses does not answer to the business intent of the owners. In this study, financial performance of the out-grower companies was measured on the basis of their asset accumulation, membership and net profits realized.

Under asset accumulation, the study established that the smallest out-grower company had an asset base of Sh.48 million while an equivalent in the biggest company was Sh.180 million. The mean asset value was found to be Sh.111.29, with a standard deviation of Sh.36.49 million. This showed inherent resource-base dissimilarities among the sugarcane out-grower companies, signaling to a justifiable basis for application of various approaches in their WCM.

The companies' membership was constituted by small scale sugarcane farmers affiliated to respective sugarcane companies. In this study, it was established that the smallest company had registered a total of 560 full-subscription members while the largest membership size

was 3,021. This variation gave a membership range of 2,461 which again hinted to wider dispersions in financial performance among the firms. Given that out-grower companies depended almost entirely on proceeds from their listed members, it was observed that smaller companies had liquidity and profitability challenges which would only be mitigated by adoption of responsive WCM practices.

Based on the companies' estimated assets and membership, a correlation analysis confirmed that asset appreciation was predominantly dependent on the number of members subscribing to a company. Table 4.2 illustrates the correlation between company assets and membership.

**Table 4.2: Correlation between Assets and Membership**

		<b>Company Asset Base (KSh.'000,000')</b>	<b>Company Membership</b>
Company Asset Base (Millions)	Pearson Correlation	1	.887**
	Sig. (2-tailed)		.000
	N	28	28
Company Membership	Pearson Correlation	.887**	1
	Sig. (2-tailed)	.000	
	N	28	28

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source | *Out-Grower Sugarcane Companies (Kenya), 2013*

The Karl Pearson's Correlation Coefficient between company assets and membership was found to be 0.887, implying existence of a significant direct relationship between the two variables. Further, this illustrated that membership size was a significant predictor of company profitability. Hence, profits earned were not entirely dependent on the companies' WCM approach.

Regarding profitability, the study determined that between the calendar years 2008 and 2012, the out-grower companies posted an aggregate increase in net profits despite observed and significant periodic under-performances. Table 4.3 presents the summarized performance trend using mean scores and standard deviations.

**. Table 4.3: Net Profit Trend between 2008 - 2010**

<b>Performance Period</b>	<b>Mean</b>	<b>Std. Deviation</b>
Company Performance in 2008 (Net Profits - Millions)	8.11	3.621
Company Performance in 2009 (Net Profits - Millions)	7.90	2.885
Company Performance in 2010 (Net Profits - Millions)	8.00	3.645
Company Performance in 2011 (Net Profits - Millions)	8.20	5.116
Company Performance in 2012 (Net Profits - Millions)	8.90	2.906
Valid N		

*Source* | *Out-Grower Sugarcane Companies (Kenya), 2013*

In the year ending December 2008, the out-grower companies had aggregately mobbed-up Sh.8.11 million in net profits. This, however, dipped to Sh.7.9 million in the following year before a slight upward to Sh.8.0 million in 2010. In the years 2011 and 2012, there were significant margins resulting to Sh.8.2 million and Sh.8.9 million respectively. Over the five-year period, therefore, the cumulative sub-industry increase was Sh.0.79 million. This meant that each company increased its worth by an average of Sh.79, 000 in five years and Sh.15, 800 in one year.

Assuming a constant net-profit rate, Sh.9.4925 (Sh.0.94925 per company) would have been realized as sub-industry (company) net profits by end of September 2013 against an average asset value of Sh.111.29 million. Thus, Return on Assets (ROA) =  $0.94925/111.29 \times 100\% = 0.85\%$ .

The calculated ROA was less than 1% which illustrated poor utilization of company assets in quest of maximizing return. Specifically, this was a sufficient pointer that WCM practices were not optimally utilized to enable the out-grower companies stabilize their financial performance pillars.

Further information obtained from the companies' financial statements showed that six out of ten made consecutive losses between 2009 and 2012. In addition, 70% of the firms had liabilities surpassing their equity levels. These findings led to conclusion that the out-grower companies were financially under-performing. Partly, this was attributed to uncontrolled gearing levels, limited investment options, and dismal membership.

#### **4.4 Working Capital Management Practices**

The working capital management practices were investigated under each of the WCM components: receivables, payables, inventory, and cash.

##### **4.4.1 Receivables Management Practices**

Under this objective area, the study's purpose was to determine the existence and effectiveness of the companies' credit policy and its application in maximization of value of the firm. The indicators used included payable sources, duration till actual receipts, and receipt acceleration approaches.

The out-grower companies had options of generating receivables from distinct transactions involving their members. Table 4.4 illustrates the four identified options at the companies' disposal.

Table 4.4: Sources of Receivables

Sources of Payables	Frequency	Percent	Cumulative Percent
Loans and Interests	21	75.0	75.0
Sales	3	10.7	85.7
Subscriptions and Charges	2	7.1	92.9
Return on Investments	2	7.1	100.0
Total	28	100.0	

Source | *Out-Grower Sugarcane Companies (Kenya), 2013*

Table 4.4 illustrates that 75% of the companies' receivables were a derivative of loans advanced to members and accumulating interests. Other options, but quantitatively slim, involved sale of farm inputs (10.7%), membership subscriptions and other charges (7.1%), and return from the companies' investments (7.1%). These findings showed that at least 75% of the firms' investment was in form of credit. This high demand for credit was justified by high farm preparation and input costs which made the farmers seek financial help from their member companies. Therefore, it was in the interest of the companies to advance loans to their members so as not only to improve their produce but also to place the companies at vantage financial positioning.

The amounts owed to the companies were paid under different trade periods depending on the nature of credit. Table 4.5 presents the findings' details.

**Table 4.5: Trade Receivable Period**

<b>Duration</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
0 - 15 days	2	7.1	7.1
15 - 30 days	2	7.1	14.3
30 - 45 days	3	10.7	25.0
45 - 60 days	3	10.7	35.7
More than 60 days	18	64.3	100.0
Total	28	100.0	

*Source* | *Out-Grower Sugarcane Companies (Kenya), 2013*

Table 4.5 illustrates that company debtors met their payments obligations within varying durations ranging from zero to more than 60 days. At the high end, company management allowed 64.3% of the receivables to be effected after a period of 60 days or more from transaction date. This category was predominated by loans advances to members which were recoverable after cane harvests. The cumulative 35.7% of the receipts were remitted to the companies within 60 days. Notable, only 7.1% receivables were actualized in less than 15 days. The study, therefore, established that a higher proportion of receivables to the out-grower companies were long term. This was attributed to the long wait prior to receipts of cane proceeds which took a minimum of 18 months.

On an ascending scale of 1 – 3 points, respondents were asked to rate the companies' approaches in accelerating receipt of receivables. The various approaches adopted and extents of preference were found as presented in Table 4.6.

**Table 4.6: Accelerating Receipt of Receivables**

<b>Acceleration Techniques</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Insistence on Lumpsum Payments	28	2.98	.407
Prompt Invoicing	28	2.71	.600
Overdue Notices	28	2.18	.670
Asset Attachment	28	2.29	.535
Additional Charges	28	2.60	.577
Debt Collection Services	28	1.25	.441
Valid N	28		

Source | *Out-Grower Sugarcane Companies (Kenya), 2013*

Table 4.6 shows a higher degree of agreement ( $0.407\sigma$ ) that out-grower companies to a higher extent preferred lumpsum repayments (2.98 mean score) especially at expiry of trade receivable period. This was strategically meant to help in accelerating receipts from the indebted members. Prompt issuance of invoices was also adopted at a higher level (0.71 mean score and  $0.600\sigma$ ) especially on sale of farm input. This enabled some of the members make transaction payments for farm inputs promptly or any other time within the contract period. Another highly preferred repayment acceleration scheme was loading of additional charges (2.60 mean score and  $0.577\sigma$ ) on amounts that remained unpaid at expiry to discourage defaults. At the moderate level, assets were attached (2.29 mean score and  $0.535\sigma$ ) in case of failure to remit the required amounts to the companies' accounts. This was paired with issuance of overdue notices (2.18 mean score and  $0.67\sigma$ ) in delayed repayments. Notably, there was another closer agreement ( $0.441\sigma$ ) that firms lowly preferred delegating collection duties to debt collection agencies (1.25 mean score) from their members perhaps cautious not to antagonize their clientele.

#### 4.4.2 Payables Management Practices

Other than their receivables, the out-grower companies were found to also owe other individuals and institutions significant amounts in whose contracts they were under repayment obligations. A trend of company indebtedness for a period of five years was analyzed as presented in Table 4.7.

**Table 4.7: Level of Company Indebtedness**

<b>Debt Period</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Outstanding Debt 2008	9	181.44	55.575
Outstanding Debt 2009	10	161.10	79.170
Outstanding Debt 2010	10	168.70	81.269
Outstanding Debt 2011	10	181.50	77.976
Outstanding Debt 2012	10	180.40	82.782
Valid N			

*Source* | *Out-Grower Sugarcane Companies (Kenya), 2013*

Table 4.7 illustrates a high-level indebtedness among the out-grower companies in Kenya. In the year ending 2008, the level of sub-industry debt was at Sh.181.44 million which subsided to Sh.161.10 in 2009 before an upsurge to Sh.168.7 million in 2010. The year 2011 experienced the highest degree of indebtedness to a tune of Sh.181.5 million which marginally declined to Sh.180.4 million in 2012.

Assuming a constant debt in 2013, the debt/asset ratio was estimated at  $180.4/111.29 = 1.62$  which indicated that the companies had more debts than assets. Therefore, most of the companies' assets were more financed by debt than equity, making the entities financially riskier. The study further established that 93% of the company's debts were business loans advanced by commercial banks which required regular servicing. This association with the

lending institutions would require that companies retained sufficient liquidity to meet the monthly repayment obligations.

The study further analyzed the companies' payable periods and established that like receivables different durations were applicable. Table 4.8 gives the details.

**Table 4.8: Payable Period**

<b>Payable Period</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
0 - 15 days	1	3.6	3.6
15 - 30 days	2	7.1	10.7
30 - 45 days	2	7.1	17.9
45 - 60 days	2	7.1	25.0
60 - 75 days	4	14.3	39.3
75 - 90 days	6	21.4	60.7
More than 90 days	11	39.3	100.0
<b>Total</b>	<b>28</b>	<b>100.0</b>	

*Source* | *Out-Grower Sugarcane Companies (Kenya), 2013*

Table 4.8 illustrates that 39.3% of the companies delayed making payment till after 90 days. This was followed by another class of 21.4% who cleared their outstanding debts between 75 – 90 days while 14.3% complied in payments between 45 – 60 days. There were only 17.9% of the transactions whose payments were effected less than 45 days.

Table 4.9 shows a correlation analysis between receivable and payable periods among the out-grower companies.

**Table 4.9: Correlation between Receivable and Payable Periods**

		Number of Days prior to Receipts	Credit Repayment Period
Number of Days prior to Receipts	Pearson Correlation	1	-.143
	Sig. (2-tailed)		.468
	N	28	28
Credit Repayment Period	Pearson Correlation	-.143	1
	Sig. (2-tailed)	.468	
	N	28	28

Source | *Out-Grower Sugarcane Companies (Kenya), 2013*

There was a statistically significant relationship between receivable and payable periods. The Karl Pearson Correlation Coefficient was -0.143 and this indicated that the companies' receivable periods were generally longer than their payable period.

In quest of lengthening their trade payable periods, the companies adopted various techniques as illustrated in Table 4.10.

**Table 4.10: Delaying Payables**

Delay Techniques	N	Mean	Std. Deviation
Payment in Installments	28	2.71	.460
Negotiations for Extensions	28	1.93	.604
Alterations of Payment Conditions	28	2.07	.466
Settlement in Cash	28	2.54	.637
Investing to Pay at Maturity	28	2.14	.591
Valid N	28		

Source | *Out-Grower Sugarcane Companies (Kenya), 2013*

Table 4.10 illustrates a closer agreement ( $0.46\sigma$ ) that out-grower companies delayed making payments to their creditors by engaging in installment arrangements (2.71 mean score). Nevertheless, settlement in cash (2.54 mean score) was also applied to derail any liability accumulation to the companies. At a moderate extent, companies invested available funds (2.14 mean score and  $0.591\sigma$ ) prior to expiry of payables period in addition to seeking alterations to repayment conditions (2.07 mean score and  $0.466\sigma$ ). There was also negotiation for repayment extensions (1.93 mean score and  $0.604\sigma$ ) which was slightly below the moderate application extent.

### 4.3.3 Inventory Management Practices

There were two key forms of inventory that the companies were required to manage. These included farm inputs such as fertilizers, spray chemicals and cane seedlings; and general merchandise mainly for office use. The farm input inventory constituted 82% while the general merchandise were 18%.

Acquisition and maintenance of inventory quantities were determined by various factors which were established as presented in Table 4.11.

**Table 4.11: Considerations for Inventory Quantities**

<b>Considerations</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Actual Demand	5	17.9	17.9
Demand Projections	7	25.0	42.9
Stock Replenishment	11	39.3	82.1
Unpredictable Supply	5	17.9	100.0
Total	28	100.0	

*Source* | *Out-Grower Sugarcane Companies (Kenya), 2013*

The highest push for inventory variation was the need for replenishment (39.3%) followed by the companies' demand projections (25%). The other factors considered were actual demand (17.9%) and provision for unpredictable demand (17.9%). The inventory orders were received within an average of 22 days but the average time taken to issue them was 61 days. This implied that other than carrying costs, companies had to meet the holding costs in form of storage and insurance for a length of 39 days. This also meant that out-grower companies experienced longer inventory conversion cycles. The respondents further opined that they did not have standard minimum and maximum inventories as the cases were most often than not demand-driven.

Still inventory, respondents were asked to rate on an ascending scale of 1 – 5 the extents of inventory control measures. Responses were as presented in table 4.12.

**Table 4.12: Inventory Control Techniques**

<b>Inventory Controls</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Extent of Stock-Outs	28	3.39	.786
Extent of Inventory Surpluses	28	3.37	.917
Extent of Emergency Ordering	28	1.57	.634
Extent of Supply Stoppage	28	1.82	.670
Valid N	28		

*Source | Out-Grower Sugarcane Companies (Kenya), 2013*

The Table shows that despite the long inventory holding period that companies experienced, there was a closer agreement ( $0.786\sigma$ ) pointing to stock-out tendencies (3.39 mean score) and some other times inventory surpluses (3.37 mean score). Emergency ordering and supply stoppages were experienced at low levels of 1.57 and 1.82 mean scores respectively.

This implied that out-grower companies lacked adequate knowledge and skill on inventory optimization.

#### 4.3.4 Cash Management Practices

The availability of cash balances was regarded a key determinant of the companies' competitive ability because it would provide the means to invest in people, technology, and other assets. Efficient cash management was therefore indispensable to the out-grower companies. This study investigated cash management practices on the basis of cash proportions held, conversion to marketable securities, and company alternatives to cash optimization.

First, the proportions of current assets held in cash and in near-cash forms such as marketable securities and time deposits were estimated as shown in Table 4.14.

**Table 4.13: Proportions held in Cash and Short Term Securities**

Descriptions	N	Mean	Std. Deviation
Proportion of Current Assets held in Cash	28	12.09	4.631
Proportion of Current Assets held in ST Securities	28	2.43	2.937

*Source* | *Out-Grower Sugarcane Companies (Kenya), 2013*

From Table 4.13, it is shown that averagely companies retained 12.09% of their current assets in the form of cash ( $4.63\sigma$ ) while a paltry 2.43% of the current assets were held in the form of short term securities ( $2.94\sigma$ ). Comparatively, therefore, there was more cash at hand or bank in the companies as opposed to near-cash investments. This was attributed to

limited investment vehicles available to the companies whose markets were constrained by the number of members they served. Holding of too much cash indicated that the out-grower companies preferred liquidity to profitability, and pointed to a more conservative practice in managing the companies' cash flows.

The study further observed that all out-grower companies experience a near-similar cash conversion cycle of 18 months. This meant that monetary advances to farmers could only become available to the company after the 18-month cane-maturation wait, assuming no damages. This was longer than an accounting period and a prelude to making companies inflexible to reinvestments.

The respondents' views were also sought regarding their companies' ability in managing available cash in relation to the object of optimizing profitability. The opinions obtained were grouped and summarized as presented in table 4.15.

**Table 4.14: Optimal Cash Management**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
There is well defined policy on minimum liquidity	28	2.71	1.049
There are regular cash flow projections	28	2.29	.810
There are regular bank reconciliations and audits	28	1.96	.744
There are ready investment avenues for excess cash	28	2.93	.663
Excess cash is held to meet future obligations	28	3.29	.659
Valid N	28		

*Source | Out-Grower Sugarcane Companies (Kenya), 2013*

From the opinions ascertained, shown in Table 4.15, the rationale for holding more current assets in the form of cash was established. The excess cash was held in readiness to meeting anticipated future obligations (3.29 mean score and 0.650 $\sigma$ ) some of which were found to be

more erratic in nature. In addition, the respondents decried lack of adequate investment avenues for the excess cash (2.93 mean score and  $0.663\sigma$ ). This was particularly a serious challenge during bumper harvests when majority of farmers received their proceeds from the sugarcane companies, leading to massive loan repayments. The study also established ineffectiveness of minimum liquidity policies (2.71 mean score and  $1.049\sigma$ ) in the companies which showed a major concern. There were not proper references regarding the minimum and maximum liquidity standards, making the companies seem partly misguided on how much cash to retain or convert in assets. It was evident also that the companies did not have appropriate tools to enable them project with precision their future cash demands (2.29 mean score and  $0.810\sigma$ ). Their vulnerability was further precipitated by their low level bank reconciliations and audits to ensure cash safety (1.96 mean score and  $0.744\sigma$ ).

#### **4.4 Discussion of Findings**

Working capital is considered an essential input towards realization of company profitability. Padachi (2006) examined the trends in working capital management and its impact on firm's performance for 58 Mauritian small manufacturing firms during 1998 to 2003. He explained that a well designed and implemented working capital management is expected to contribute positively to the creation of firm's value. This idealism contrasted the case of out-grower companies in Kenya. The companies' misguided working capital management practices which were more conservative had a significant bearing on the dismal financial performance post by the candidate companies. According to Barrow (2001), there is enough evidence which point to small and medium enterprises being inefficient users of working capital. As he puts it, "the smaller they are, the less efficient they tend to be" (119). The argument is strengthened by Atrill (2006) arguing that there is evidence that many SMEs are not very good at managing their working capital and this has

been cited as a major cause of their high failure rate compared with that of large businesses. Atrill (2006) asserts that small and medium enterprises often lack the resources to manage their trade debtors (receivables) effectively

The study found that out-grower companies' receivable periods were longer than the payables period. This partly meant that the companies' acceleration techniques were deficient in mobbing-up receivables to the required profitability levels. Atrill (2006) attributes low receivable collection potential among the SMES to lack of proper debt collection procedures such as prompt invoicing and sending out regular statements. This causes the increase risk of late payment and defaulting debtors. Deloof (2003) also found that firms can increase their profitability by reducing the debtors' collection period.

Christopher (2009) asserts that the longer the accounts payables period the more advantageous for the firm as such fund can be put to other uses. However, longer accounts holding period can erode a firm's credit worthiness. In this study, the trade payables period was found to be substantially shorter than the receivables period. This meant that the out-grower companies were accelerating their payables more than their receivables. Atrill (2006) found that less than half of small business (SME) owner-managers surveyed view accounts payable as a source of finance for their businesses. Hence, the time for repayment was insignificant to them. Davidson (2002) found a positive relationship between payable period and firm profitability. Deloof (2003) also reported an unanticipated negative impact associated with the number of days for accounts payable. He further found that poorer firms prolonged the time to pay their debts.

This study found that out-grower companies held inventory longer; it took an average of 22 days to receive orders but more than 61 days to effect issuance and collection of payments. Moreover, the companies did not have a defined inventory model but relied on demand projections, actual demand estimation, unpredictable supply, and need for replenishments. Resultant inventory decisions were proven defective in the face of stock-outs and surpluses. Longer holding of inventory was conservative and was an additional cost centre to the companies. In Padachi (2006) examination of trends in working capital management and its impact on firm's performance, results proved that a high investment in inventories is associated with lower profitability. Further, he showed that inventory holding period had a negative relation with profitability. Deloof (2003) also analyzed a sample of Belgian firms and found that firms can raise their performance by shortening the periods for inventory conversion.

The out-grower companies demonstrated preference to holding more current assets in cash than in any other forms such as marketable securities. Comparatively, 12.09% of the current assets were held in cash while only 2.43% was in the form of near-cash instruments. Moreover, the cash conversion cycle for a typical out-grower company was to a large extent at least 18 months which was more than a conventional accounting period of one year. It was also observed that companies held more cash due to limited investment vehicles, payable anticipations, lack of cash management policies, and dearth of bank reconciliations and audits. Cumulatively, these served to deny the companies essential resources through reinvestment, hence there was a higher probability to diminished profitability. Deloof (2003) investigated the relationship between working capital management and firm profitability by using Cash Conversion Cycle (CCC) as a measure of working capital management. He found a negative relation between gross operating income and receivables

collection period, inventory turnover period and creditors' payment all of which influenced the CCC.

Mathuva (2009) also conducted a study on impact of working capital on productivity using firms listed in NSE using data between 1993 and 2008. The study found a negative relationship between the time when the cash is collected from the customers and the firm's productivity. This depicted that firms that are more profitable enjoy less time period for the collection of cash from the customers as compare to ones which are less profitable. Thus, when CCC is shorter, firm's profitability is most likely to be higher. Deductively, therefore, the out-grower companies had to shorten their CCC and reduce the proportion of cash held to consolidate a basis for profitability.

## **CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

The chapter presents summary of the study's findings, conclusion, policy recommendations, limitations and suggestions for further studies.

### **5.2 Summary of Findings**

The study sought to establish the various WCM practices adopted by out-grower companies in Kenya and how they affected their financial performance. First, the companies' financial performance was established using the indicators of asset accumulation, membership and net profits. It was found that the smallest out-grower company had an asset base of Sh.48 million while the biggest company prided of Sh.180 million asset value. The mean asset value was found to be Sh.111.29, with a standard deviation of Sh.36.49 million. Moreover, it was found that the smallest of companies had enrolled a total of 560 members while the largest had member population of 3,021. Based on the companies' estimated assets and memberships, a Karl Pearson's Correlation Coefficient of 0.887 was obtained, implying existence of a significant direct relationship. Thus, membership predicted company profitability.

Between the calendar years 2008 and 2012, the companies posted an aggregate increase in net profits despite significance annual underperformances. In 2008, the companies had aggregately mobilized Sh.8.11 million in net profits. This, however, declined to Sh.7.9 million in the following year before a slight upward to Sh.8.0 million in 2010. In the years 2011 and 2012, there were significant margins resulting to Sh.8.2 million and Sh.8.9 million

respectively. Over the five-year period, the cumulative sub-industry increase was Sh.0.79 million. This meant that each company increased its worth by an average of Sh.79, 000 in five years and Sh.15, 800 per year. Assuming a constant net-profit rate, Return on Assets (ROA) was found to be 0.85% which was far insignificant. This illustrated poor utilization of company assets to maximize return.

The second part involved investigating the working capital management practices under receivables, payables, inventory, and cash. Under receivables, payable sources, duration till actual receipts, and receipt acceleration approaches were used as indicators. It was found that the out-grower companies had options of generating receivables from distinct transactions involving their members. At least 75% of the companies' receivables were a derivative of loans advanced to members and accumulating interests. Other options involved sale of farm inputs (10.7%), membership subscriptions and other charges (7.1%), and return from the companies' investments (7.1%). The amounts owed to the companies were paid under different trade periods depending on the nature of credit. Company management allowed 64.3% of the receivables to be effected after a period of 60 days or more from the transaction date. This category was predominated by loans advances to members which were recoverable after cane harvests. The cumulative 35.7% of the receipts were on the other hand remitted to the companies within 60 days. There was only 7.1% receivables actualized in less than 15 days.

There was a higher degree of agreement ( $0.407\sigma$ ) that the out-grower companies to a higher extent preferred lumpsum repayments (2.98 mean score) especially at expiry of trade receivable period. This was strategically meant to help in accelerating receipts from the indebted members. Prompt issuance of invoices was also adopted at a higher level (0.71

mean score and  $0.600\sigma$ ) especially on sale of farm input. This enabled some of the members make transaction payments for farm inputs promptly or any other time within the contract period. Another highly preferred repayment acceleration scheme was loading of additional charges ( $2.60$  mean score and  $0.577\sigma$ ) on amounts that remained unpaid at expiry to discourage defaults. At the moderate level, assets were attached ( $2.29$  mean score and  $0.535\sigma$ ) in case of failure to remit the required amounts to the companies' accounts. This was paired with issuance of overdue notices ( $2.18$  mean score and  $0.67\sigma$ ) in delayed repayments. Moreover, there was another closer agreement ( $0.441\sigma$ ) that firms lowly preferred delegating collection duties to debt collection agencies ( $1.25$  mean score) from their members.

Other than their receivables, the out-grower companies also owed individuals and institutions significant amounts in whose contracts they were under repayment obligations. In the year ending 2008, the level of sub-industry debt was at Sh.181.44 million which subsided to Sh.161.10 in 2009 before an upsurge to Sh.168.7 million in 2010. The year 2011 experienced the highest degree of Sh.181.5 million which marginally declined to Sh.180.4 million in 2012. This gave a debt ratio of 1.62, which indicated that the companies had more debts than assets. The study further established that 93% of the company's debts were business loans advanced by commercial banks which required regular servicing.

Further findings showed that 39.3% of the companies delayed making payment till after 90 days. This was followed by another class of 21.4% who cleared their outstanding debts between 75 – 90 days while 14.3% complied in payments between 45 – 60 days. There were only 17.9% of the transactions whose payments were effected less than 45 days. The research found a statistically significant relationship between receivables and payables

payments by way of regression yielding a correlation coefficient of -0.143, and indicating that the companies' receivables periods were generally longer than their payables period.

In quest of lengthening their trade payables period, the companies adopted various techniques. There was a closer agreement ( $0.46\sigma$ ) that out-grower companies delayed making payments to their creditors by engaging in installment arrangements (2.71 mean score). Nevertheless, settlement in cash (2.54 mean score) was also applied to derail any liability accumulation to the companies. At a moderate extent, companies invested available funds (2.14 mean score and  $0.591\sigma$ ) prior to expiry of payables period in addition to seeking alterations to repayment conditions (2.07 mean score and  $0.466\sigma$ ). There was also negotiation for repayment extensions (1.93 mean score and  $0.604\sigma$ ) which was slightly below the moderate application extent.

The study established two key forms of inventory that the companies were required to manage. These included farm inputs such as fertilizers, spray chemicals and cane seedlings; and general merchandise mainly for office use. The farm input inventory constituted 82% while the general merchandise were 18%. Acquisition and maintenance of inventory quantities were determined by various factors. The highest push for inventory variation was the need for replenishment (39.3%) followed by the companies' demand projections (25%). The other factors considered were actual demand (17.9%) and provision for unpredictable demand (17.9%). The inventory orders were received within an average of 22 days but the average time taken to issue them was 61 days. This implied that other than carrying costs, companies had to meet the holding costs in form of storage and insurance for a length of 39 days. Despite the long inventory holding period that companies experienced, there was a closer agreement ( $0.786\sigma$ ) pointing to stock-out tendencies (3.39 mean score) and some

other times inventory surpluses (3.37 mean score). Emergency ordering and supply stoppages were experienced at low levels of 1.57 and 1.82 mean scores respectively.

Finally, the study investigated cash management practices on the basis of cash proportions held, conversion to marketable securities, and company alternatives to cash optimization. The study found that averagely companies retained 12.09% of their current assets in the form of cash (4.63 $\sigma$ ) while a paltry 2.43% of the current assets were held in the form of short term securities (2.94 $\sigma$ ). Comparatively, therefore, there was more cash at hand or bank in the companies as opposed to near-cash investments. This was attributed to limited investment vehicles available to the companies whose markets were constrained by the number of members they served. Moreover, the rationale for holding more current assets in the form of cash was corroborated by opinions that excess cash was held in readiness to meeting anticipated future obligations (3.29 mean score and 0.650 $\sigma$ ). In addition, the respondents decried lack of adequate investment avenues for the excess cash (2.93 mean score and 0.663 $\sigma$ ). The study also established ineffectiveness of minimum liquidity policies (2.71 mean score and 1.049 $\sigma$ ) in the companies which showed a major concern. It was evident also that the companies did not have appropriate tools to enable them project with precision their future cash demands (2.29 mean score and 0.810 $\sigma$ ). Their vulnerability was further precipitated by their low level bank reconciliations and audits to ensure cash safety.

### **5.3 Conclusion of the Study**

Based on the obtained findings, the study concluded that sugarcane out-grower companies' WCM practices were more conservative than aggressive. The study established that the companies' receivables were concentrated on loans advanced to members and accruing interests. However, trade receivables period was longer than payables period, indicating that

some companies did not conveniently link receivables to profitability. It was also observed that receivable acceleration schemes adopted by the companies were not competent enough to mob-up receipts.

Regarding payables, there was also a possibility that majority of companies did not utilize payables as sheer source of financing. This was the case because payables were more accelerated than receivables, yet delay instruments were not adequate enough to relatively shorten the firm's receivables. In inventory management, the companies held stock unnecessarily for long yet they were in a lower stock-out risk zone. Also, the companies demonstrated naivety in order management and control of inventory shocks. Finally, too much cash was held compared to any other current asset signifying higher preference to liquidity as opposed profitability. Moreover, the companies lack innovation in investing the excess cash and were weak in cash pilferage controls. In aggregate, therefore, the weaker financial performance of the out-grower companies was dependent on the poor and misguided WCM practices adopted by the out-grower companies.

#### **5.4 Recommendations of the Study**

Poor management of working capital means that funds are unnecessarily tied up in idle assets hence reducing liquidity and also reducing the ability to invest in productive assets such as plant and machinery, so affecting profitability. In order to improve on the working capital management practices of sugarcane out-grower companies, it is recommended that management should establish a credit control systems preferably with a full-time credit officer and follow credit control policy procedures. Also, the companies must have collection policies to ensure that amounts owing are collected as quickly as possible.

Sugarcane out-grower companies did not have proper systems in managing their working capital. This disabled their abilities in specifically pursuing a definite WCM policy or practice. This was not satisfactory especially in today's computer age where managerial decision making is vastly aided by customized software systems. It is thus recommended that out-grower companies are capacity built both financially and technically towards ushering in a paradigm shift from the manual accounting controls to computerized platforms.

The inventor management at the studied companies was inadequate in terms of inventory conversion cycle, order management, and inventory shocks. Based on this, the study recommends that there should be a proper inventory management system to avoid over-stock and stock-outs. Also, there is need to have a defined model on whose basis orders, buffer stocks, and reorder levels are determined. Also, companies should engage in relationship with those suppliers who allow long credit time period and those customers who allow short payment period.

## **5.5 Limitations of the Study**

The study was conducted among the sugarcane out-grower companies in Kenya but was largely delimited to views and opinions of the Managing Directors, Finance Officers and Procurement Managers. These participation options effectively locked out indispensable contributions from other primary stakeholders such as the small scale farmers and Board of Directors. There was also a possibility that their views could be more inclined to portraying themselves and their entities as financially and technically sound.

Further, owing to seasonal variations rampant in the sugar industry, obtained data sets were prone to changes and possibly misrepresentations if dissimilar seasons are considered. Therefore, application of these findings would only be applied with caution and within similar study situations.

Lastly, the indicator options adopted under each objective area to measure the companies' WCM practices may not be exhaustive. There is thus a propensity of the not measuring variables under study with precision.

## **5.6 Suggestions for Further Studies**

Suggestions for future research are made based on the inherent limitations of this study. First, it is suggested that a more detailed study targeting all the primary stakeholders is made to derive a comprehensive models explaining the quantitative relationship between financial performance of out-grower or related companies and their respective WCM practices.

Second, a full seasonal cycle study is suggested to fit the various short-term variations into the model. This will be of help in developing an all-time WCM surveillance tool to aid farmers and other stakeholders in measuring their investments' net worth and subsequently making financially sound decisions.

Last, future researchers are advised to adopt other sets of WCM indicators to test how respective practices influence the companies' financial performance. This will significantly make contributions towards establishing a comprehensive scholarly opinion relating to corporate finances and WCM modifications.

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## APPENDIX I: QUESTIONNAIRE

Questionnaire Code:...../07/13

Completion Date:.....

This questionnaire is designed to assist in studying “*working capital management practices and financial performance of Sugarcane Outgrower Companies in Kenya*”. Information provided will only be used for purpose of this study and will be kept confidential. Kindly complete it as required.

Company Code:..... Sugar Company Code:.....

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1. What is your position in the company?

- Managing Director
- Finance Officer/Accountant
- Procurement Manager/Officer

2. How long have you served in the current position?

- Less than 2 years
- 2 – 4 years
- 4 – 6 years
- 6 – 8 years
- More than 8 years

3. What is the company’s current asset base? (Ksh)

.....

4. What is the company’s current membership size (No of outgrower farmers)?

.....

5. What is your leading source of your receivables?

- Loans and interests
- Sales
- Subscriptions and fines
- Return from other investments
- ..... (Specify)

6. How many days do you allow prior to actual receipts from day of notice/invoice?

- 0 days
- 15 days
- 15 – 30 days
- 30 – 45 days
- 45 – 60 days
- More than 60 days

7. From your experience, how would you classify the following tools in terms of their application to realizing the company’s receivables? (1-Highly Preferred; 2-Moderately Preferred; 3-Lowly Preferred)

	1	2	3
Insistence on cash payment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prompt invoicing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sending overdue notices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asset attachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional charges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debt Collection services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What are the company’s outstanding annual debts in the last five years, each ending 31<sup>st</sup> December?

Year	2008	2009	2010	2011	2012
Debts (Ksh)					

9. How would you classify the company in terms of its credit uptake?

- High credit consumer
- Moderate credit consumer
- Low credit consumer
- No credit at all

10. Rank the following creditors depending on their credit-volume advancement to the company.

- Suppliers
- Lending Institutions

- Members
- .....(Specify)

11. What is the company's preferred period (days) for credit payment?

- 0 days
- 15 days
- 15 – 30 days
- 30 – 45 days
- 45 – 60 days
- More than 60 days

12. How significant are the following payment techniques to the company? (1-Not Significant; 2-Moderately Significant; 3-Highly Significant)

	1	2	3
Payment in installments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Negotiation for extensions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change of payment conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Immediate settlement when cash is available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Investing cash to pay at maturity of grace period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. What is the leading form of inventory in the company?

- Farm inputs
- General merchandise
- .....(Specify)

14. How long (days) does it take to receive ordered goods from suppliers?

- Less than 10 days
- 10 – 20 days
- 20 – 30 days
- 30 – 40 days
- More than 40 days

15. What is the company's key consideration leading to inventory ordering?

- Actual demand
- Demand projections

- Stock replenishment
- Unpredictable supply
- No definite consideration

.....(Specify)

16. How common do the following inventory situations affect the company (in the past 5 years)?

	High	Moderate	Low	Non-Existent
Stock-outs				
Inventory surpluses				
Emergency ordering				
Supply stoppage				

17. What is the company's average inventory conversion cycle (days)?

..... days

18. What is the company's recommended value of buffer inventory?

- A tenth of ordered quantities or less
- Tenth – a third of ordered quantities
- Third – half of the ordered quantities
- There is no recommended buffer quantity

19. What proportion of your current assets is held in form of cash?

.....%

Justification?

.....  
 .....

20. What proportion of your current assets is invested in short-term securities?

.....%

Justification?

.....  
 .....

21. The following statements relate to corporate efficiency in cash management. To what extent do you agree or disagree with each of them in the context of your entity?

	1	2	3	4	5
There is a well-defined policy on minimum liquidity	[ ]	[ ]	[ ]	[ ]	[ ]
There are regular cash flow projections	[ ]	[ ]	[ ]	[ ]	[ ]
There are regular bank reconciliations and audits	[ ]	[ ]	[ ]	[ ]	[ ]
There are ready investment avenues for excess cash	[ ]	[ ]	[ ]	[ ]	[ ]
Excess cash is held to meet future obligations	[ ]	[ ]	[ ]	[ ]	[ ]

22. How has the company performed in the last five years on net profits and total assets?

(Complete the table below)

Year	2008	2009	2010	2011	2012
Net Profit (Ksh)					
Total Assets (Ksh)					

23. From your experience, what hinders Sugarcane Outgrower Companies from optimizing their returns through management of their working capital?

.....  
 .....  
 .....

24. What would be your advice to finance practitioners in the industry regarding working capital management?

.....  
 .....  
 .....

End

## **APPENDIX II: LIST OF OUTGROWER COMPANIES**

1. Mumias Out-growers Co. Ltd. (MOCO)
2. Busia Out-growers Co. Ltd. (BOCO)
3. Nzoia out-growers Co. Ltd (NOCO)
4. West Kenya Out-growers Co. Ltd. (WECO)
5. Miwani Sugarcane Out-growers Co. Ltd. (MISOCO)
6. Kibos Out-growers Co. Ltd
7. Chemelil Out-growers Co. Ltd. (COC)
8. Nandi Escarpment Out-growers (NEOC)
9. Muhoroni Sugarcane Out-growers Co. Ltd (MUSOCO)
10. South Nyanza Sugar Out-growers (SOC)