Effect of Cash Management Practices on Performance of Manufacturing Firms Listed at the Nairobi Securities Exchange, Kenya

Irene Cheruto Mrefu[1], Dr. Joseph Gichure[2]

[1]MBA (Finance Option) Student, School of Business of Jomo Kenyatta University of Agriculture and Technology, Kenya
[2]Director, Jomo Kenyatta University of Agriculture and Technology, Kenya, Kitale Campus

Corresponding Author: Irene Cheruto Mrefu

ABSTRACT

Managing cash in a business is to manage the ability of the entity/firm to acquire assets, service business debts, meet running expenses and control operations which effectively translates to proper cash management practices which correlates with firms' ability towards the realization of the mission, goals, and objectives. This study therefore aimed at examining the effect of cash management practices on performance of manufacturing firms listed at the Nairobi Securities Exchange, Kenya with the main focus on cash internal controls, and cash and cash equivalents as some of the study independent variables. While performance of manufacturing firms listed at the Nairobi Securities Exchange, Kenya was the dependent variable to be measured using return on assets ratio. The study referred to Monetary Theoretic Approach to Cash Management, and Financial Theoretic Approach to Cash Management as the main study theories. A correlational research design was adopted by the study while dealing with the research objectives with the scope of the study set to cover seven (7) listed firms as per the CMA records under the manufacturing and Allied sector at the NSE. Data was obtained through downloading the audited and published financial statements of the listed manufacturing firms covering the seven year period running from 2015 to 2021, as approved by the capital Markets Authority. Data analysis was carried out using the Statistical Package for Social Sciences version 24 and Microsoft Excel spreadsheet in respect to the study objectives. A multiple regression model and Pearson's correlation together with the ANOVA test was used in the data analysis and for making summary, conclusions and recommendations from the findings. The study findings revealed the existence of a statistically significant effect for independent variables on performance of the listed firms. The study further made recommendations on each of the variables for management consideration in future decision making processes. The study findings are expected to be of great assistance to management of listed manufacturing firms as well as other business entities in relation to cash management practices. The results will also add to the existing knowledge on cash management practices and provide scholars and future researchers with necessary literature review for future further research.

Keywords: [*Cash Management Practices, Cash Internal Controls, Cash and Cash Equivalents, Performance*]

INTRODUCTION

Background of the Study

The livelihood of every business, whether large or small, is cash (Enow and Kamala, 2016). According to Wesonga (2017), the most precious resource of a business enterprise is cash. A resource which maintains a constant value that is easily convertible into other forms of assets or business resources. Attom (2014) referred to cash as the basic input that keeps the

business operational for the foreseeable future as well as the output realizable after the sell of products and services. Aren and Sibindi (2014) on their part, quoting what they called "widely quoted adage in finance," quipped that "cash is King" which fundamentally accentuates the importance of cash and efficient cash flow in a business entity. Enow (2015) summarized the uniqueness of cash by saying that profitable businesses may have no cash to meet their maturing obligations and hence forced to close down in some circumstances while loss making businesses on the other hand may have enough cash to enable them continue operating.

This therefore makes it important for the business to manage cash efficiently for it to be liquid and a going concern. Wesonga (2017) avers that the main aim of cash management is for purposes of ensuring that the business has adequate cash to keep it liquid and allow it reinvest surplus cash in profitable projects. Aren and Sibindi (2014) concludes that effective management of cash results in to the success or survival of the business as well as attracting investors who can fund its expansion. Cash management involves the optimal cash determination by considering trade-off between the opportunity cost of holding too much cash and trading cost of holding too little cash (Ross *et al.,* 2011; Hamza, Mutala and Antwi, 2015).

According to Enow and Kamala (2016), the first thing considered by investors when evaluating business viability for investment is the cash flow which eventually reflects its cash management practices. Proper cash management practices effectively increases business flexibility and competitive advantage capable of dealing with emerging opportunities or emergencies (Gyebi and Quian, 2013; Enow and Kamala, 2016). Cash discounts can be taken advantage of by business employing effective cash management practices as well as avoiding high costs of raising capital (Uwonda, Okello and Okello, 2013; Enow and Kamala, 2016).

Wesonga (2017) states that managing cash in a business is to manage the ability of the entity/firm to acquire assets, service business debts, meet running expenses and control operations which effectively translates to proper cash management practices which correlates with firms' ability towards the realization of the mission, goals, and objectives. Wesonga (2017) therefore defines cash management as the series of processes employed by a firm to obtain maximum benefits from the firms' flow of funds. Abioro (2013) defines cash management as the ability of the firm having the right amount of money in the right place and time for purposes of meeting its financial obligations in the most effective of ways and ensuring positive cash flow for smooth operations.

Attom (2014) therefore defined cash management practices as the techniques implemented by business enterprises/firms concerning cash flows and cash balances held at a time. Muthama (2016) on her part defined cash management practices as the process of ensuring good cash balances for businesses/firms to enable them remain going concerns.

Global Perspective of Cash Management Practices

Okabe and Suez-Sales (2015) found that Japanese and Guamanian manufacturing firms had cash management practices well put in place and practiced and also considered to be very helpful tools for decision-making and other managerial purposes. Haavig (2019) quoted Haron, Yahya, and Haron (2014) who surveyed manufacturing businesses in Malaysia about their cash management practices and found that the firms had incorporated proper CMP whose information was helpful for investment and financing decision-making. They found a positive association between CMP and performance of the manufacturing firms in Malaysia (Haron, Yahya, & Haron, 2014) they stated that on the contrary, manufacturing firms who relied more on accounts receivable and accounts payable

information, without the implementation of the CMP, to make investment and financing decisions experienced lower business performance (Haron et al., 2014).

As for the Romanian firms, time, financial constraints, and managerial commitment were cited as reasons why managerial practices, including cash budgeting and other CMP were not adopted (Cuzdriorean, 2017). Belle-Isle *et al.,* (2018) by applying a mixed method approach studied the perceptions towards management commitment as regards to cash management in Australian manufacturing firms. The study found that over 91% of manufacturing firms adopted and operated proper CMP that significantly impacted positively on their overall performance. The opinion of the study from the findings was that cash management practices aids in properly understanding of cash flow, ability to establish procedures, utilize financial statements and proper overall management of the firms' liquidity.

Regional Perspective of Cash Management Practices

The current financing situation has put great pressure on domestic and international firms, especially the under-performing and with adverse credit rating index firms. Since 1987, structural adjustment program caused a change in the operating environment of firms by bringing in financial liberalization. The economic environment has not been conducive for business while both monetary and fiscal policies of government have not been stable. The negative effect felt on the economies of most African states implies that operation costs have gone up thus affecting firm liquidity levels too (Oyugi, 2021). Due to these reasons, cash management became one of the main financial management components of the manufacturing firms.

According to Olugbenga (2010), most firms in Nigeria suffer from inadequate liquidity to handle their day-to-day operational activities. The Nigerian manufacturing sector has really experienced great shocks and distresses in recent years in the Nigerian economy. Though the distress syndrome appears to be more prominent and far-reaching in the banking sector, the truth is that more manufacturing companies have failed than banking institutions in Nigeria of late. Besides outright failure, few manufacturing organizations utilize over fifty per cent of their installed capacities. The reasons for this ugly development range from poor cash management practices, exchange rate problems, inflation, government unstable policies and other macro economic challenges.

Firms in Uganda are going through a rough experience with regard to Cash management. They have reached a point where they agree that there is need for proper and frequent engagements with financial institutions as regards their liquidity situations (Birungi, 2020). Lack of sufficient funds is a concern that is well spread and Uganda Manufacturers Association is concerned that many businesses have resorted to commercial loans/overdrafts that have exposed them to certain risks such as failure to sufficiently payback.

Local Perspective of Cash Management Practices

Manufacturing sector in Kenya has continued to be among the top priority of government programs, for example in the current governments' Big Four Agenda, popularly known as the Big Four in Kenya. Virtually most, if not all firms in the sector collapse or even close down or put under receivership. The main reason being due to lack of proper management of debt acquired (GoK, 2019). Some listed firms in particular continue to face challenges such as overlap and inconsistencies in legal and sectorial policies, lack of clear boundaries in the institutional mandate, lack of suitable political will to salvage them and corruption e.g., Mumias Sugar Company. The main challenges are lack of raw materials, and management challenges.

By taking one sector of manufacturing in Kenya, the sugar sector, Kenya is well suited for sugarcane development both in the western part of the country as well as on the south eastern Kenyan coast (Kanyange, 2018). These are the regions in Kenya where the sugar factories are located. Mumias Sugar Company, one of the listed firms in Kenyas' NSE, and the largest sugar factory in Kenya is found in Kakamega County, Kenya.

Another critical element in the classification of firm size categories is the ownership structure of firms. Subsidiaries of large companies that fall into the different categories should be treated according to their turnover or number of employees differently from independent firms. For example in the banking sector in Kenya, bank size criterion as used by Central Bank of Kenya (CBK) applies. The net assets employed by the bank are used to measure its size. This is besides other variables such as amount of deposits, age in years and liquidity levels being included in the model. The manufacturing sector uses total assets of the firm, and the plant milling capacity per metric ton per day.

Waswa, Mukras and Oima (2017). According to Shen and Rin (2012), cited by Mule, Mukras and Nzioka (2015) in their study found that firm size had a positive relationship with performance, implying that bigger firms are expected to achieve better performance. However, in the case of UK firms, size had a negative and significant effect on performance of the companies. This implies that, small companies sometimes suffer less from agency problems and more flexible structure to fit the change. They further argued that management efficiency reflects the capability of the management to deploy its resources efficiently and can be measured by financial ratios. The higher the ratio, the more the efficient management is in terms of operational efficiency, income generation and asset utilization. Borghesi *et al.* (2014) and Audra *et al.* (2007) indicated that older firms are incapable of quick response to any

changes in the environment and thus does not easily adapt to changing business environments which affects their financial performance.

Statement of the Problem

Cash management is necessary because there are mismatches between the timing of payments and the availability of cash. Even if the annual budget is balanced, with realistic revenue and expenditure estimates, in-year budget execution will not be smooth, since both the timing and seasonality of cash inflows and of expenditures can result in conditions of temporary cash surpluses or temporary cash shortfalls (Lienert, 2013; Muthama, 2016).

However, studies have noted that cash shortage is a chronic challenge to most firms, and yet cash management is very crucial to the survival and growth of manufacturing firms (Attom, 2014). It has also been observed that many listed manufacturing firms maintain large cash reserves and liquidity positions within their investment portfolios in an effort to partially accommodate unforeseen expenditure (Muthama, 2016). Inadequate cash management practices may lead to slow rate of service delivery, accompanied with regular strikes of employees, insufficient output and other basic operational requirements. Employee strikes are also linked to management of funds within firms. Lobel (2013) found out that inadequate cash management procedure was some of the major challenges facing organizations leading to close up of the enterprises. It is for this reason that the study seeks to determine the effect of cash management practices on performance of listed manufacturing firms at the NSE, Kenya.

Objectives of the Study
The study objectives were as below;

General Objective
The overall objective of the study was to examine the effect of cash management practices on performance of manufacturing

firms listed at the Nairobi Securities Exchange, Kenya.

Specific Objectives of the Study
The following were the specific objectives of the study;
1. To examine the effect of Cash Internal Controls on Performance of listed manufacturing firms at the NSE, Kenya.
2. To determine the effect of Cash and Cash equivalents on Performance of listed manufacturing firms at the NSE, Kenya.

Research Questions
The study sought to answer the following research questions;
1. Do Cash Internal Controls affect Performance of listed manufacturing firms at the NSE, Kenya?
2. What is the effect of Cash and Cash Equivalents on Performance of listed manufacturing firms at the NSE, Kenya?

LITERATURE REVIEW
Theoretical Review
The study theoretical review literature was anchored on the following theories; Monetary Theoretic Approach to Cash Management, and Financial Theoretic Approach to Cash Management.

Monetary Theoretic Approach to Cash Management
This theory stipulates that the main focus of monetary economists is the cash management of an organization with a view of describing the mechanism of its demand for money, because it differs from the behaviour of other economic agents (Geteri, 2017). According to Attom (2014), the theory views cash management as financial transactions, which refers to the buying or vending of financial securities or borrowing or refunding of capital. The study argued that the demand for money is one of the most studied areas that in monetary theory, and that the demand for money determines the decisions made by an organization during the cash management process.

For this reason therefore, listed manufacturing firms should treat cash balances just as they treat inventories of goods (Ondiek, 2013). The theory views stock of cash as its holder's inventory, and that it is held because it can later be used as the holder's part of the bargain in an exchange. In this case, the variable of cash and cash equivalents very well relates with this theory since the firm is presumed to hold the amount of money, which minimizes the interest cost that could be incurred if the money was invested in short-term ventures and the fees incurred during the transfer between securities and cash.

Financial Theoretic Approach to Cash Management
Kytonen (2012) opined that studies in financial theory try to establish how cash and other liquid assets influence the optimal capital structure of an organization and also the value of an organization. This theory relates cash management to financial theory by disclosing its economic value in a flawed market. This study further posits that this situation can only be resolved through its addition to the financial theoretic models, such as the Capital Asset Pricing Model (CAPM) or the Modigliani-Miller (MM) model.
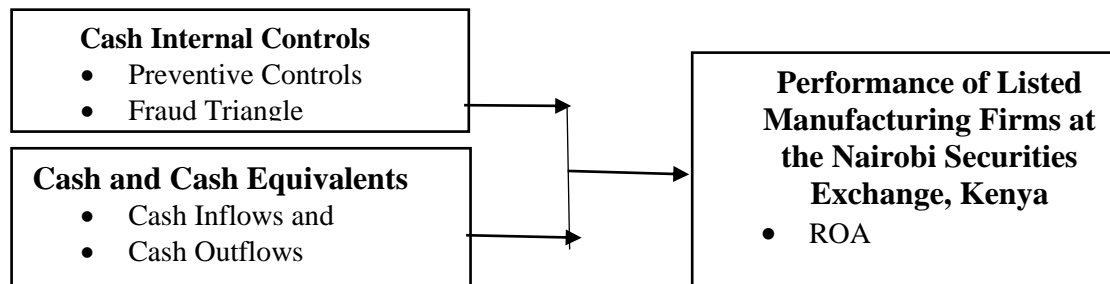
Geteri (2017) claimed that the impact of cash balances addition in these theoretical models provide a clear evidence that liquid assets play a vital importance not only in determining the value of a firm (through the systematic risk component) but also for exposing the firm's optimal capital structure (through the liquidity slack concept). This financial theoretic approach was key in the study of cash management practices with a focus on the four study variables

Conceptual Framework
The Conceptual Framework is a diagrammatic representation of the relationship between the study variables for the study (Oyugi, 2021). The independent

variables (Cash Internal Controls & Cash and cash equivalents) and the dependent variable (Performance of listed manufacturing firms) were as depicted below in the conceptual framework;

```
┌─────────────────────────────┐
│   Cash Internal Controls    │
│   •  Preventive Controls    │
│   •  Fraud Triangle         │                    ┌──────────────────────────┐
└─────────────────────────────┘ ──────┐            │  Performance of Listed   │
┌─────────────────────────────┐       ├──────────▶ │  Manufacturing Firms at  │
│ Cash and Cash Equivalents   │       │            │  the Nairobi Securities  │
│   •  Cash Inflows and       │       │            │   Exchange, Kenya        │
│   •  Cash Outflows          │ ──────┘            │   •  ROA                 │
└─────────────────────────────┘                    └──────────────────────────┘
```

Review of Variables
The study variables are as reviewed below;

Cash Internal Controls
When considering an internal control system, listed firms should have an understanding of the fraud triangle. Dr. Donald Cressey first developed the fraud triangle theory in 1953 (Kramer, 2015). Cressey posited that three conditions typically exist when employees steal or embezzle from their employer: unshareable pressure, opportunity, and rationalization (Bakri, Mohamed and Said, 2017). Unshareable pressure includes financial pressures that the employee feels they cannot share with family, friends or their employer (Omar *et al.*, 2016). The opportunity to misuse an employer's assets exists when internal controls are nonexistent or poorly enforced (Kramer, 2015).

As one might expect, the weaker the controls, the higher the opportunity exists for an employee to commit fraudulent activity (Bakri *et al.,* 2017). An employee may further rationalize the misguided act by believing that they deserve the stolen assets or that they will pay the employer back. When all three conditions exist, the likelihood of employees engaging in illegal activity increases (Bakri *et al.*, 2017). According to members of the Committee of Sponsoring Organizations, internal control "is a process, affected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives related to operations, reporting, and compliance" (Wilkins and Haun, 2014). Within this context, firms should establish internal control activities surrounding handling cash, credit card information, and cheques.

Some internal controls should come into play before hiring an employee since preventative controls can be effective to avert misappropriation of company assets (Kapardis and Papastergiou, 2016). Researchers have determined that lower-level employees internal to the organization are responsible for most cases of theft (Kapardis and Papastergiou, 2016) so it is important for management to screen employees before making a hire. Compounding this need for appropriate screening is the fact that the most common crimes perpetrated by employees are theft of cash, petty cash, and assets (Omar *et al.*, 2016).

Other commonly accepted activities include restrictively endorsing cheques as for deposit only, depositing cheques and cash into a business bank account within a reasonable amount of time, and reconciling bank statements promptly (Wilkins and Haun, 2014). Further, Free and Murphy (2015) recommend that to minimize fraud, managers should conduct surprise audits of internal control functions, and require employees to take vacations and rotate job duties with others. Bakri, Mohamed, and Said (2017) found that even when

individuals display high levels of integrity, that trait does not always moderate the positive relationship between the fraud triangle and fraud occurrence. Therefore, management should take an active role in creating an environment where all employees are encouraged and feel safe to report suspected wrongdoing (Hess and Cottrell, 2016). To achieve this environment, the listed manufacturing firms should establish and distribute a workplace code of conduct (Financial) and associated written procedures (Kennedy, 2018).

According to Oluoch (2018), cash management is the movement of funds with an intention of optimizing firm liquidity. Effective cash management internal controls leads to timely provision of required cash resources for supporting firms' operations. Employment of basic cash management tools and techniques ensures that cash becomes a corporate asset directly contributing to the bottom line (Oluoch, 2018). Good cash management is a critical component to the success of every company whether it's a flush with cash or experiencing funds shortfall. Yamoah (2015) averred that it's important for firms to keep proper records on transactions as a proof against fraudulent manipulation and as such, efficient cash management ought to be governed by a reliable cash internal control system that focus more on cash control practices in terms of proper record keeping. This study therefore measured the effectiveness or lack of cash internal controls using the current ratio as a measure of firm liquidity.

Cash and Cash Equivalents

According to Pandey (2015), the term cash refers to the legal tender which includes; bills, coins, cheques received but not deposited, and checking and savings accounts. While defining cash equivalents as any short-term investment securities maturing within 90 days which include bank certificates of deposit, banker's acceptances, treasury bills, commercial papers, and other money market instruments. Haavig (2019)

averred that cash and cash equivalents are part pf the current assets section of the statement of financial position and contribute to an organizations' net working capital, however based on their nature, they differ from other current assets like marketable securities and accounts receivable.

Prasad (2017) posited that organizations ought to ensure that adequate cash is available in order to meet maturing obligations and investing of excess cash to maximize investment returns. This can be achieved by processing proper cash management practices by the listed manufacturing firms. According to Jamil *et al.*, (2015), problems stemming from poor cash management practices manifest themselves in different forms including; risk of experiencing liquidity and performance problems such as bankruptcy, attracting and maintaining skilled employees, fall or lack of margin of safety to take care of depression times and depleted cash reserves. Survival of listed firms relies heavily on liquidity. Finance managers and accountants of the firm are required to know the cash position before disbursing any payment since the cash position is one of the most important and dependable to an organization (Oyando, 2018). Cash position is the core of cash management (Soaga, 2012). It acts as a pre-reconciliation that ensures limited errors of commission, omission, transposition and entry reversal errors, which ensures there is soundness in liquidity of the firm hence better performance (Soaga, 2012).

Cash and Cash Equivalent is one of important elements in cash management (Soaga, 2012). Cash is the amount of money that is ready to be used (Attom, 2014). Cash Equivalents are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes (IFRS Interpretations Committee, 2013). Cash movement in an organization can be tracked using a cash budget. Cash budget is a financial plan that shows the projected cash receipt and cash payments (Pandey, 2015). It shows the cash

position of the business during the budget period (Kiprotich, 2017). According to Weston and Copeland (2008), a cash budget shows the expected cash inflows and outflows over a budget period and highlight anticipated cash surpluses and deficits. Their preparation assists managers in the planning of borrowing and investment and facilitates the control of expenditure (Geteri, 2018).

This forecast gives the relevant information on the collection aspects for all credit sales transactions, and monthly cash receipts from sales can be predicted. The other cash receipts transactions to the business are then added to cash receipts from sales revenues to articulate the total cash receipts. Cash disbursements transactions must then be forecast and summed up for operating, financing and investment needs. According to Hamza, Mutala and Antwi, (2015), conventionally, if the closing cash balance is positive, then excess cash may be invested in marketable securities. If the closing cash balance is negative, then additional financing may be required.

According to Soaga (2012), the objective of the cash budget is to ensure that sufficient cash is available at all times to meet the levels of operations that are outlined in the various budgets. He further asserts that because cash budgeting is subject to uncertainty, it is necessary to provide for more than the minimum amount of cash required, to allow for some margin of error in planning and cushion any dangers that may affect the firm due to cash outage. This study therefore measured cash and cash equivalents using the cash ratio.

RESEARCH METHODOLOGY
Research Design
A research design is a framework or a blue print for conducting a research. It provides a clear plan on how the research will be conducted and helps the researcher in sticking to the plan (Oyugi, 2021). This study adopted a correlational research design while dealing with the research objectives. This research design was best suited for gathering quantitative information, and it was used to obtain information concerning the current status of phenomena with a purpose of data analysis in relation to the study variables (Osoro, 2018).

Target Population
According to Oyugi (2021), there are three types of population; general population, target population and accessible population. The entire elements or items of the population over which the study findings are generalized are referred to as general population (Rangui, 2016). Chaudhurry (2010), on his part, defined general population as the entire group of elements or participants sharing at least a single attribute of interest and from which required information can be extracted. Creswell (2013) posited that target population is the group of participants/elements comprising specific attributes of relevance and interest, while according to Creswell (2013) as quoted by Oyugi (2021), accessible population refers to the final group of participants from which data is collected by surveying either all its members or a sample drawn from it which represents a sampling frame if the purpose is to draw a sample from such population.

According to the NSE records, there are sixty-two listed firms at the NSE (nse.co.ke), this number is what constitutes the general population of the study, from which eight (8) firms fall in the manufacturing and allied sector which constitutes the accessible population of the study. Of the eight (8) firms, Mumias Sugar company was suspended from trading after it developed operational challenges and put under receivership, this development reduced the number of accessible population to seven (7) manufacturing firms listed and operational at the NSE, Kenya. The study used the seven firms' seven (7) year audited financial statements for the period running from 2015 to 2021 inclusive for data analysis purposes.

Sample Size and Sampling Techniques

A study sample size refers to the portion of the population subjects from which the information for the study is obtained or derived (Cooper and Schindler, 2016). A sampling technique is the method or mode of sample determination from the target population (Kothari and Garg, 2014). This study use census method since the target population of seven (7) manufacturing firms was such a small sample size that was used as a whole for analysis purposes. Due to the adoption of the census method, sampling was not necessary and hence no employment of a sampling technique.

Data Collection Instruments

The study required secondary data for the targeted firms which was downloaded from the CMA records. The data was from the audited financial statements (AFS) i.e. the income statements and the statements of financial position of the firms over the seven year period. The study carried out the pilot test to measure both the reliability and viability of the research constructs since both the qualitative and quantitative data for the study were obtained from the records prepared in accordance with the International Financial Reporting Standards (IFRS) which is the acceptable mode of preparing the financial statements of the listed business organizations or firms.

Data Analysis and Presentation

According to Nyukuri (2020), data analysis helps in fulfilling research objectives and provides answers to research questions. The pilot data collected was analyzed using statistical packages for social sciences (SPSS) version 24. The p- value of $p < .01$ was used to indicate significant deviation. ANOVA was used to compare for significant differences in the means of the cases in study variables. The output data was presented using both descriptive and inferential statistics where the multiple regression model was adopted with a full understanding of the key assumptions that hold the model true. The model took the following format in the study;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_{i\dots}$$

Where;
β_0 Is a constant, representing Performance when every independent variable is zero.
β_1 & β_2: Representing the regression coefficients established to indicate the magnitude of effect of independent variables on the dependent variable.
Y   Performance of listed manufacturing firms at NSE, Kenya
X_1 Cash Internal Controls
X_2 Cash and Cash Equivalents
ε Error term

RESEARCH FINDINGS AND DISCUSION

Performance of Listed Firms' at the NSE

The study sort to establish the extent to which performance in the manufacturing sector was affected by the predictor variables for the seven year financial periods from 2015 to 2021. Performance was measured using ROA which was determined as profit after tax divided by total assets.

The table below showed the return on assets per year per variable;

Table 1: Performance (ROA)

Variable	MIN	MAX	MEAN	STDEV
East African Breweries Ltd.	0.08	0.16	0.12	0.03
Kenya Orchards	(0.10)	0.08	0.02	0.06
BOC Kenya	0.03	0.07	0.05	0.01
Flame Tree Group	0.02	0.17	0.06	0.05
British American Tobacco	0.29	0.41	0.33	0.04
Unga Group Ltd.	(0.003)	0.08	0.04	0.03
Carbacid	0.08	0.13	0.10	0.02

The performance results above, measured by ROA, showed that East African Breweries Ltd had a mean of 0.12 and a standard deviation(σ) of 0.03, Kenya Orchards (0.02; σ, 0.06), BOC Kenya (0.05; σ, 0.01), FTG (0.06; σ, 0.05), British American Tobacco Ltd (0.33; σ, 0.04), Unga Group Ltd (0.04; σ, 0.03) and

Carbacid (0.10; σ, 0.02). The overall industry average mean was 0.10. The results indicated that BAT group Ltd had the greatest mean (0.33) and had better performance ratio compared to the other manufacturing firms under study. The results implied that besides BAT Ltd, East African Breweries Ltd (0.12) and Carbacid (0.10) also performed better than BOC Kenya (0.05), Flame Tree Group (0.06) and Unga Group Ltd (0.04) with Kenya Orchards performing the poorest in the sector at a mean of 0.02. These findings were in agreement with Oyugi (2021) who concluded that the firms in the sector performance (profitability) levels are healthy.

Analysis of Specific Variables

Cash Internal Controls on Performance

Proper cash internal controls in a firm ensure that firms' liquidity position enables the firm to be financially healthy since one of the important components of ensuring firm stability is liquidity (Oyugi, 2021). When a firm lacks cash or liquid assets at hand, the firm misses out on incentives from suppliers of goods, credit and services. This eventually increases the cost of goods leading to an adverse effect on firm performance (profitability). The study measured the effect of cash internal controls on performance of listed manufacturing firms at the NSE, using current ratio which was computed as current assets divided by current liabilities. This ratio helped in determining the amount of assets that the firms employed in the paying off current liabilities. The table below showed how current ratio affected performance of listed manufacturing firms;

Table 2: Current Ratio

Variable	MIN	MAX	MEAN	STDEV
East African Breweries Ltd.	1.02	1.80	1.31	0.30
Kenya Orchards	1.71	2.39	2.07	0.20
BOC Kenya	1.88	2.51	2.12	0.23
Flame Tree Group	1.05	2.06	1.39	0.37
British American Tobacco	1.59	4.29	2.29	0.94
Unga Group Ltd.	1.58	2.37	2.04	0.32
Carbacid	4.51	9.43	6.35	1.66

From the table above, results indicated that current ratio: East African Breweries had a (Mean of 1.31 and a standard deviation σ=0.30, Kenya Orchards mean = 2.07 and σ = 0.20, BOC Kenya mean = 2.12 and σ = 0.23, FTG mean = 1.39 and σ = 0.37, BAT mean = 2.29 and σ = 0.94, Unga mean = 2.04 and σ = 0.32, while Carbacid mean = 6.35 and σ = 1.66. The overall industry average was 2.51, the findings revealed that Carbacid, having the highest mean of 6.35 had greater chances of servicing maturing obligations in comparison to the other six firms. On aggregate, the results reflected a positive average implying that the listed firms are capable of timely meeting accounts payable obligations as they fall due. According to Enow and Kamala (2016), in relation to this results, it was concluded that firms had a healthy liquidity status which was key towards the detection of corporate survival or failure.

Cash and Cash Equivalents on Performance

The effect of cash & cash equivalents on performance of listed manufacturing firms was established. Cash and cash equivalents were measured by cash ratio which was calculated as cash divided by current liabilities. The results were as shown in the table below;

Table 3: Cash Ratio

Variable	MIN	MAX	MEAN	STDEV
East African Breweries Ltd.	0.06	0.49	0.20	0.14
Kenya Orchards	(0.09)	(0.01)	-0.06	0.03
BOC Kenya	0.02	0.32	0.15	0.14
Flame Tree Group	0.04	0.09	0.07	0.02
British American Tobacco Ltd	0.01	0.66	0.15	0.24
Unga Group Ltd.	0.08	0.57	0.23	0.16
Carbacid	0.01	0.67	0.15	0.24

From the results, East African Breweries Ltd had a mean of 0.20 and a standard deviation(σ) of 0.14, Kenya Orchards (-0.06; σ, 0.03), BOC Kenya (0.15; σ, 0.14), FTG (0.076; σ, 0.02), British American Tobacco Ltd (-0.06; σ, 0.03), Unga Group Ltd (0.23; σ, 0.16) and Carbacid (0.15; σ, 0.24). The overall industry mean was 0.13 and an overall standard deviation of 0.14, Unga Group Ltd had the greatest mean and hence the highest ability to pay off its maturing obligations due to its high degree of liquidity over the seven year period under study among the manufacturing and allied sector firms listed at the NSE, Kenya.

Summary of Findings

The descriptive analysis results were summarized as shown in the table below;

Table 4: Descriptive Statistics Summary

Variable	RATIO	MIN	MAX	MEAN	STDEV
Cash Internal Controls	Current Ratio	1.31	6.35	2.51	0.57
Cash & Cash Equivalents	Cash Ratio	-0.06	0.23	0.13	0.14
Performance	ROA	0.02	0.33	0.1	0.04

The presentation above covered all the seven (7) active listed manufacturing and allied sector firms for the seven (7) financial years from 2015 to 2021 inclusive. From the table; Current ratio (for Cash Internal Controls variable) ranged between 1.31 and 6.35 with mean of 2.51 and a standard deviation of 0.57; Cash Ratio (for Cash & Cash Equivalents variable) from -0.06 to 0.13 with a mean of 0.13 and a standard deviation of 0.14; and Return on Assets Ratio for the performance variable (dependent) had the mean that ranged from 0.02 to 0.33 with a mean of 0.10 and a standard deviation of 0.04.

Correlation of Variables

The study Pearson correlation matrix was extracted as shown in the table below;

Table 5: Pearson Correction Matrix

	Cash Internal Controls	Cash and Cash Equivalents	Performance
Cash Internal Controls	1		
Cash and Cash Equivalents	.552	1	
Performance	.714**	.584**	1

Correlation is significant at .1 level (2-tailed).

The table above indicated the relationship between the dependent and independent variables. The relationship was measured using the Pearson correlation and presented as shown in the matrix. From the findings, the relationship between the variable cash internal controls and performance was the highest and was perfect, positive and statistically significant (r=.714; p<.01) followed by cash and cash equivalents ((r=.584; p<.01), These findings were in agreement with Oyugi (2021) that these independent variables predict the dependent variable accordingly.

Cash Management Practices on Performance

The study findings indicated that AR^2 = .76558 which implied that 76.56% of the variations in performance of listed manufacturing firms was explained by the independent variables while the other 23.44% remained unexplained by the study predictor variables and presumed to have been caused by other factors not within the scope of this study. The model summary was as extracted below;

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.87371ᵃ	.76337	.76558	.20266
a. Predictors: (Constant), Cash Internal Controls & Cash and Cash Equivalents..				

Significance Testing

The ANOVA results were extracted from the analyzed data and presented as shown below;

Table 7: ANOVA

Mode		Sum of Squares	df	Mean Square	f	Sig.
1	Regression	41.702	1	41.702	7.9964	.005ᵇ
	Residual	245.112	47	5.215		
	Total	286.814	48			
a. Dependent variable: Performance						
b. Predictors: (Constant); Cash Controls & Cash and Cash Equivalents.						

The analysis of variances (ANOVA) results for the study variables indicated that the outcome variable was well predicted by the regression model. This was evidenced by the F-statistic value of 7.996 which was greater than the F-critical value (3.79). The p-value of .005 was also less than the study significance level of .05, results that indicated the model application was significantly reliable in predicting outcome of the dependent variable (Performance) as measured by the Return on Assets (ROA)

Simple Regression Analysis

The relationship between each of the independent variables (Cash Internal Controls & Cash and Cash Equivalents) and the dependent variable (Performance) was measured using the simple regression model.

Simple regression for Cash Internal Controls on Performance

The simple linear regression model between the variable cash internal controls and performance of listed manufacturing firms was measured and presented as indicated in the table below;

Table 8: Regression Coefficients for Cash Internal Controls

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	1.5324	.0654		4.6185	.000ᵃ
	Cash Internal Controls	.6189	.0348	.6222	3.1952	.001

a. Dependent Variable: Performance

From the table, the relationship between the variable cash internal controls and performance of the listed manufacturing firms is a positive beta coefficient of 0.6189 as indicated by the coefficient matrix with a p-value =0.001<0.05 and a constant of 1.5324 with a p-value=.000<.0.05. It was concluded that both the constant and cash internal controls contributed significantly to the model. The model was therefore accepted for use in providing required information to predict performance from

cash internal controls. The regression equation was then presented as follows;

$$Y = 1.5324 + .6189X_1$$

Where:

Y   Performance of listed manufacturing firms

X_1 Cash Internal Controls

Simple regression for Cash and Cash Equivalents on Performance

The simple linear regression model between the variable cash and cash equivalents and performance of listed manufacturing firms was measured and presented as indicated in the table below;

Table 4.12: Regression Coefficients for Cash Cash and Cash Equivalents

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	1.5324	.0654		4.6185	.000ᵃ
	Cash and Cash Equivalents	.5427	.0332	.5444	5.3885	.001

a.   Dependent Variable: Performance

The table above presented the relationship between the variable cash and Cash Equivalents and performance of the listed manufacturing firms with a positive beta coefficient of 0.5427 as indicated by the coefficient matrix with a p-value =0.001<0.05 and a constant of 1.5324 with a p-value=.000<.0.05. It was concluded that both the constant and cash and cash equivalents contribute significantly to the model. The model was therefore accepted for use in providing needed information to predict performance from cash and cash equivalents. The regression equation was then presented as follows;

$$Y = 1.5324 + .5427X_2$$

Where:
Y   Performance of listed manufacturing firms
X_2 Cash and cash equivalents

SUMMARY, CONCLUSION AND RECOMMENDATIONS
Summary of Findings
The findings were summarized per objective as shown below:

Cash Internal Controls
From the data analysis, cash internal controls had statistically significant and positive effect on performance of listed manufacturing firms. The cash internal controls variable showed a strong and positive coefficient value and a p-value which was less than the significance level. The variable had a positive and significant correlation being the strongest among the variables on performance of listed manufacturing firm.

Cash and Cash Equivalents
The effect of cash and cash equivalents on performance of listed manufacturing firms was the second study objective of the study against which data was collected and analyzed. The findings measured by cash ratio indicated that cash and cash equivalents positively and significantly affected performance of listed manufacturing. The correlation coefficient for this variable on the dependent variable was positive and strong.

CONCLUSION
The study findings for each explanatory variable were used in deriving the conclusions.
The conclusions per explanatory variable were as follows:

Cash Internal Controls
That cash internal controls had statistically significant and positive effect on performance of the listed manufacturing firms. The variable cash internal controls showed a 2.51:1 current ratio which was more than the advisable 2:1 ratio. The variable was considered to have a positive and significant effect on performance of listed manufacturing firms at a strong correlation.

Cash and Cash Equivalents
On Cash & cash equivalents, it was concluded that majority of the cash ratios in the analyzed results fell below the considered ideal cash ratio of 0.2. The overall ratio mean was .13 which was way below the recommended 0.2 ratio. The lowest ratio was -0.09 while the highest was 0.67 and since the ratio indicates the amount of cash on hand for meeting current liabilities, a higher cash ratio is not advisable because cash is an asset that earns no sufficient rate of return and hence need for locking it up in gainful employment investments (Pandey, 2015). From the wild fluctuations in the cash ratios computed for this variable, it was concluded that the listed manufacturing and allied sector firms had conveniently sunk their cash into profitable opportunities.

Recommendations of the study
The following recommendations were made from the study findings:

Cash Internal Controls
That the management of the firms ensure that proper cash internal controls are in place in order to provide a liquidity cushion since a good liquidity position enables the

firm to be financially healthy or stable (Oyugi, 2021). The management to ensure that the firms don't lack cash or liquid assets at hand in order to avoid missing out on incentives from suppliers of goods, credit and services in order to positively affect performance (profitability).

Cash and Cash Equivalents
The findings were statistically significant. Since a high cash ratio may not be recommended as such, this is because cash is an idle asset that does not earn sufficient rate of return, it was recommended that the listed firms constantly work towards keeping their cash locked up in gainfully employed investments. From the overall industry mean and overall standard deviation, Unga Group Ltd had the greatest mean and hence the highest ability to pay off its maturing obligations due to its high degree of liquidity over the seven year period under study among the manufacturing and allied sector firms listed at the NSE, Kenya.

Areas for Further Studies
The study specifically focused on the effect of cash management practices on performance of listed manufacturing firms at the NSE, Kenya with specific emphasis on the four variables of cash internal controls and cash & cash equivalents. It was suggested that more research should be carried out focusing on other variables not covered by this study in order to draw conclusions comparably as regards the manufacturing sector and its firms listed at the Nairobi Securities Exchange in Kenya. It is also suggested that further studies be carried out on other manufacturing firms not listed at the NSE since manufacturing is a wide area and most of the manufacturing firms are not listed at the NSE since some of them are still SMEs.

REFERENCES
1. Abioro, M. (2013). The Impact of Cash Management on the Performance of Manufacturing Companies in Nigeria. Uncertain Supply Chain Management, (1), 177–192
2. Ahmad, N. N., Ahmad, S., & Abdullah, W. M. T. W. (2018). Sustaining SMEs Through Resources Availability and Cash Management Practices: An Application of the Partial Least Squares (PLS). Global Business and Management Research: An International Journal, 10(3), 24-35. Retrieved from http://www.gbmr.ioksp.com
3. Aren, A., O. & Sibindi, A., B. (2014). Cash Flow Management Practices: An Empirical Study of Small Businesses Operating in the South African Retail Sector. Risk Governance & Control: Financial Markets & Institutions. 4(2), 87-100.
4. Asaad, T. C. (2015). Financial Literacy and Financial Behavior: Assessing Knowledge and Confidence. Financial Services Review, 24, 101–117. Retrieved from https://academyfinancial.org
5. Asensio, A. (2017). Insights on Endogenous Money and the Liquidity Preference Theory of Interest. Journal of Post Keynesian Economics, 40(3), 327–348.
6. Attom, E., B. (2014). Cash Management Practices By Micro and Small-Scale Enterprises at Kasoa in the Central Region Of Ghana. Asian Journal of Business and Management Sciences, 3(2), 1-12
7. Bakri, H., Mohamed, N., & Said, J. (2017). Mitigating Asset Misappropriation Through Integrity and Fraud Risk Elements: Evidence Emerging Economies. Journal of Financial Crime, 24, 242-255.

8. Belle Isle, M., Freudenberg, B., & Sarker, T. (2018). Is the Literacy of Small Business Owners Important for Cash Flow Management: The Experts' Perspective. Journal of the Australasian Tax Teachers Association, 13, 31–67. Retrieved from https://www.business.unsw.edu.au

9. Bernheim, B. D. (1995). Do Households Appreciate their Financial Vulnerabilities? An Analysis of Actions, Perceptions, and Public Policy. Tax Policy and Economic Growth, 1995a, 1-30. Retrieved from http://accf.org

10. Creswell, J. (2013). Research design: qualitative, quantitative, and mixed methods approaches. (4th Ed). Thousand Oaks, Sage Publications.

11. Cooper, D., R. & Schindler, P., S. (2016). Business research methods. Irwin: McGraw-Hill.

12. Cuzdriorean, D. D. (2017). The Use of Management Accounting Practices by Romanian Small and Medium-sized Enterprises: A Field Study. Accounting & Management Information Systems, 16, 291–312. doi:10.24818/jamis.2017.02004

13. Drexler, A., Fischer, G., & Schoar, A. (2014). Keeping it Simple: Financial Literacy and Rules of Thumb. American Economic Journal: Applied Economics, 6(2), 1-31.

14. Eniola, A. A., & Entebang, H. (2017). SME Managers and Financial Literacy. Global Business Review, 18, 559-576.

15. Enow, S. (2015). The Working Capital Management Practices of Small, Medium and Micro Enterprises in the Cape Metropolis. Unpublished Master of Technology Thesis. Cape Town. Cape Peninsula University of Technology

16. Enow, S., T. & Kamala, P. (2016). Cash Management Practices of Small, Medium and Micro Enterprises in the Cape Metropolis, South Africa. Journal of Investment Management and Financial Innovations, 13(1-1), 230-236. doi:10.21511/imfi.13(1-1).2016.10

17. Frazer, L. (2016). Internal Control: Is it a Benefit or Fad to Small Companies? A Literature Dependency Perspective. Journal of Accounting & Finance (2158-3625), 16, 149- 161. Retrieved from http://www.na-businesspress.com

18. Gyebi, F. & Quain, S. (2013). Internal Control on Cash Collection. A Case of the Electricity Company of Ghana Ltd, Accra East Region, International Journal of Business and Social Science, 4 (9), 217-233

19. Haavig, M., M. (2019). Cash Management Strategies to Improve the Sustainability of Small Tavern Businesses. Walden Dissertations and Doctoral Studies Collection ScholarWorks. Walden University.

20. Hamza, K., Mutala, Z., & Antwi, K.S. (2015). Cash Management Practices and Financial Performance of Small and Medium Enterprises (SMES) in the Northern Region of Ghana. International Journal of Economics, Commerce and Management, 3(7), 456-480.

21. Haron, N., Yahya, S., & Haron, H. (2014). Cash Flow Information and Small Enterprises' Performance. International Journal of Organizational Innovation, 7, 7-17. Retrieved from http://www.ijoi-online.org

22. Hess, M. F., & Cottrell, J. H. (2016). Fraud Risk Management: A Small Business Perspective. Business Horizons, 59, 13-18.

23. Invernizzi, A. C., Menozzi, A., Passarani, D. A., Patton, D., & Viglia, G. (2016). Entrepreneurial Overconfidence and its Impact Upon Performance. International Small Business Journal, 35, 709-723.

24. Jamil, S. A., Al Ani, M. K., & Al Shubiri, F. N. (2015). The Effect of Working Capital Management Efficiency on the Operating Performance of the Industrial Companies in Oman. International Journal of Economics and Financial Issues, 5(4), 897- 904. Retrieved from http://www.econjournals.com

25. Kennedy, J. P., (2018). Asset Misappropriation in Small Business. Journal of Financial Crime, 25, 369-383.

26. Kothari, C. & Garg, G., (2014). Research Methodology Methods and Techniques.(3rd Ed.). New Delhi: New Age International (P) Ltd

27. Kramer, B. (2015). Trust, but Verify: Fraud in Small Businesses. Journal of Small Business and Enterprise Development, 22, 4-20.

28. Lienert, I. (2013). Modernizing Cash Management. Fiscal Affairs Washington D.C.: World Bank; International Monetary Fund

29. Lobel, B. (2013). Small businesses still struggling with cash flow management.

Retrieved from http://www.smallbusiness.co.uk/news/outlook/2351828/smallbusinesses-stillstruggling-with-cash-flow-management.html

30. Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. Journal of Economic Literature, 52, 5-44.

31. Lusardi, A., Samek, A., Kapteyn, A., Glinert, L., Hung, A., & Heinberg, A. (2017).Visual Tools and Narratives: New Ways to Improve Financial Literacy. Journal of Pension Economics and Finance, 16, 297-323.

32. Lusardi, A., & Tufano, P. (2015). Debt Literacy, Financial Experiences, and Overindebtedness. Journal of Pension Economics and Finance, 14, 332-368.

33. Moore, J. (2018). The Relationship Between Organization Size and Occupational Fraud. International Research Journal of Applied Finance, 9, 248-276. Retrieved from https://www.irjaf.com

34. Muthama, R., A. (2016). Effect of Cash Management Practices on Operational Performance of Selected Public Hospitals in Kisii County, Kenya. Unpublished MBA (Finance) Thesis, Jomo Kenyatta University of Agriculture and Technology. Kenya

35. Ndirangu, L. W. (2017). Effect of Cash Performance on the Financial Performance of Companies Listed at The Nairobi Securities Exchange. Unpublished MBA Thesis, University of Nairobi, Kenya.

36. Nyukuri, D., W. & Otieno, C. (2020). Influence of Project Management Practices on Project Sustainability in Trans Nzoia County, Kenya. International Journal of Recent Research in Commerce Economics and Management. 7(1), 230-254

37. Oluoch, J. O. (2018). The Impact of Cash Management Practices on Performance of SMEs: A Survey of SMEs in Eldoret Central Business District. IOSR Journal of Economics and Finance, 7(III), 1-7.

38. Okabe, K., & Suez-Sales, M. G. (2015). Exploratory Research on SMEs' Utilization of the Statement of Cash Flows in Japan and Guam. Journal of International Business Research, 14(3), 29-40. Retrieved from http://www.alliedacademies.org/international-business-research

39. Omar, M., Nawawi, A., & Puteh-Salin, A. S. A. (2016). The Causes, Impact and Prevention of Employee Fraud. Journal of Financial Crime, 23, 1012-1027. doi:10.1108/JFC-04-2015-0020

40. Onyando, P. O. (2018). Cash Management and Financial Performance of Small and Medium Enterprises in Nakuru, Kenya. Unpublished MBA (Finance Option) Thesis, Kenyatta University, Kenya.

41. Osoro, H., K. (2018). To Assess the Effects of Financial Distress on the Financial Performance of Manufacturing Firms Listed in Nairobi Security Exchange. Kisii. Kenya: Unpublished Masters Project; Kisii University.

42. Oyugi, M., O., Wafula, C. & Ngacho, C. (2021). Effects of Capital Structure Composition on Financial Performance of Manufacturing Firms Listed at the Nairobi Securities Exchange in Kenya. International Journals of Academics & Research: 3(3), 8-28. ISSN: 2617-4138. DOI: 10.32898/ibmj.01/3.3article02

43. Prasad, M. (2017). Cash Management Practices of Small Business Owners: A Study in Urban Area of Siliguri Subdivision. ITIHAS The Journal of Indian Management, 7(1), 62-68. Retrieved from www.itihas.org

44. Ringui, P., M. (2016). Effect of Capital Structure on Financial Performance of Non Financial Firms Listed at the Nairobi Security Exchange

45. Ross, A., S., Westerfield, W., R., & Jordon, D., B. (2011). Fundamentals of Corporate Finance. (6th Ed). New York, USA: McGraw-Hill Primis

46. Siekei, J., Wagoki, J., & Kalio, A. (2013). An Assessment of the Role of Financial Literacy on Performance of Small and Micro Enterprises: A Case of Equity Group Foundation Training Program on SMEs in Njoro District, Kenya. World Academic Journal of Business & Applied Sciences, March-September,1(7),250–261. Retrieved from http://worldacademicjournals.weebly.com

47. Soaga, H. G. (2012). Basics of Cash Management for Financial Management and Reporting. Available at SSRN 2200432.

48. Sukumaran, K. (2015). Financial Literacy - Concept and Practice. DAWN: Journal for Contemporary Research in Management, 2(1), 59-65. Retrieved from http://dawn-svims.in/2021

49. Tily, G. (2006). Keynes's Theory of Liquidity Preference and his Debt

Management and Monetary Policies. Cambridge Journal of Economics, 30(5), 657–670.

50. Turyahebwa, A., Sunday, A. , Eliab, B., & Aluonzi, B. (2013). Financial Management Practices in SMEs in Selected Districts in Western Uganda.

51. Uwonda, G., Okello, N., Okello, N., G. (2013). Cash Flow Management Utilization by Small Medium Enterprises (SMEs) in Northern Uganda, Merit Research Journal of Accounting, Auditing, Economics and Finance, 1 (5), 67-80.

52. Vitt, L. A., Anderson, C., Kent, J., Lyter, D. M., Siegenthaler, K. K., & Ward, J. (2020). Personal Finance and the Rush to Competence: Financial Literacy Education in the U.S. Middleburg, VA: Institute for Socio-Financial Studies.

53. Wesonga, M. (2017). Influence of Cash Management Practices on Performance of Small Scale Enterprises in Mbale Town, Kenya. Unpublished MBA Thesis, Maseno University. Kenya

54. Wilkins, A. M., & Haun, A. L. (2014). Reframing the Discussion on Internal Control. The CPA Journal, 84(10), 48-51. Retrieved from http://www.cpajournal.com

55. Yamoah, G. (2015). Cash Management Practices: A Study on Residential Facilities for Kwame Nkrumah University of Science and Technology Students. An Unpublished MBA (Finance) Thesis. Ghana.

******