

**CASH FLOW MANAGEMENT AND FINANCIAL PERFORMANCE OF FIRMS  
LISTED UNDER MANUFACTURING SECTOR AT THE NAIROBI SECURITIES  
EXCHANGE, KENYA**

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## **DECLARATION**

**Declaration by candidate:**

This project is my original work and has not been presented for a degree in any other University or any other award.

**Signature:** .....

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**Declaration by supervisor:**

I confirm that the work reported in this project was done by the candidate under my supervision.

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## **DEDICATION**

For their commitment, moral and financial support, empathy, motivation and prayers I dedicate this research project to my wife Racheal, parents Mr and Mrs Stephen Mburu and children Amara and Ivanna.

## **ACKNOWLEDGEMENT**

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## **ABBREVIATION AND ACRONYMS**

<b>AfDB</b>	African Development Bank
<b>CCC</b>	Cash Conversion Cycle
<b>FASB</b>	Financial Accounting Standard Board
<b>KNBS</b>	Kenya National Bureau of standard
<b>KPMG</b>	Klynveld Peat Marwick Goerdeler
<b>MAPI</b>	Manufacturers Alliance for Productivity & Innovation
<b>MGI</b>	Mckinsey Global Institute
<b>MVA</b>	Manufacturing Value Added
<b>OLS</b>	Ordinary Least Square
<b>PPE</b>	Property, Plant and Equipment
<b>TSE</b>	Tehran Stock Exchange
<b>WEF</b>	World Economic Forums

## OPERATIONAL DEFINITIONS OF TERMS

- Cash Flow** It is the difference in the opening and closing balance of the amount of cash available at the beginning of accounting period and at the end of accounting period example; cash received or cash paid.
- Cash Flow Management** This the analysis of cash flows estimation used for business to activities summarize, monitor, analyze and optimize the net amount of cash receipts minus cash expenses. Examples operating, investing and financing activities.
- Financial Performance** The subjective measure of how well the companies are utilizing the assets to generate revenue or how well the firm is able to meet its obligation measured by profitability indicator return on equity.
- Operating Activity** This is the amount of money an organization must have made through the sale of its commodities on a daily basis; for example, cash from operations and profits from operations.
- Financing Activity** Details the sources and uses of funds raised from outsiders and the shareholders examples; interest paid, purchase of own shares and new borrowings
- Investing Activity** This represents cash inflow or outflow from sale or purchase of capital assets i.e Plant Property and Equipment

## **ABSTRACT**

Nairobi Securities Exchange listed companies in the manufacturing sector released financial reports in 2010 to 2019 showing declining revenue and issuing profit warnings, depicting a retinue of listed manufacturing companies struggling to sustain profitability. The poor output reflects a sector whose fortunes are fading, amid the government's expectations that it will be a stronghold for economic growth. The ultimate purpose of this study was therefore to determine the effect of cash flow management on financial performance of listed manufacturing firms in Kenya. The objectives guiding the analysis; to evaluate how net cash from operating activities, to evaluate the effects of net cash used in investing activities and to determine the effect of net cash used in financing activities on listed manufacturing companies in Nairobi Securities Exchange. Keynesian theory of money, stakeholders theory, Baumol model theory and free cash flow theory were used. The target population were the 8 listed manufacturing companies listed in Nairobi Securities Exchange. Secondary data was collected from published financial statements. Causal effect research design was used. Quantitative analysis was used and panel data presented in a random effect panel regression model. The findings indicate that net cash from the operating activities had a significant positive effect on return on equity. The results indicated that cash used in the investing activities significant and positively affected return on equity. The study found that net cash used in financing activities had no significant effect on financial performance. The study recommends that policy should be put in place by the directors of various manufacturing companies to concentrate on fast moving inventory which will eventually affect other components of operating activities. Cash used in the purchase of property, purchase of plant and equipment, purchase of intangibles, purchase of investment property and net investment in government securities should be carefully invested for the purposes of maximizing the value of the companies.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

The manufacturing sector is a main pillar of economic growth. The sector continues to be a vital force in both advanced and emerging economies. Overall, production output as measured by gross value added continues to grow by about 2.7 per cent annually in developed economies and by 7.4 per cent in large emerging economies. The sector contributes 10 to 33 per cent of the added value (UN Organization for Industrial Development, 2013). Economies like China, India and Indonesia rose to the top ranks of global manufacturing and to the world's fifteen largest manufacturing economies (Mckinsey Global Institute [MGI], 2012). China is the largest manufacturing economy in the world, with a 22% share of manufacturing activity, while the United States ranks second with a 17.4% share of manufacturing activity (MAPI, 2014).

Africa's manufacturing sector is widely seen as the ideal industry for driving Africa's growth. The Africa Progress Panel (2014) also acknowledges some degree of manufacturing development as a precondition for sustainable, solid economic growth on the continent. The continent generates only 1.5 per cent of world manufacturing activity (World Bank, 2012). Furthermore, development accounts for just about 25% of exports in sub-Saharan Africa, lower than any other region other than Mediterranean Africa (World Economic Forums [WEF], 2013).

The manufacturing sector plays a central role in Eastern African economic transition and growth. Following improvements over the last 15 years, the contribution of manufacturing to GDP in the region has remained relatively small and the value added to output (MVA) per capital is still lower than the average in Africa. Also, the sector contributes a relatively small share of GDP in the region, ranging from 3.8% to 11% (AfDB, 2014). The manufacturing sector in Kenya is comparatively large compared to countries experiencing a similar period of economic growth. The nation is among the top exporters of manufactured goods in the Sub-Saharan Africa region (KPMG, 2014).

Despite efforts by the Kenyan government to establish policies aimed at improving the manufacturing sector, the industry which is the backbone of the 2030 vision has stagnated (World Bank, 2014). Moreover, the share of GDP in the sector decreased from 9.6 percent in 2011 to 9.2 percent in 2012, although the growth rate worsened from 3.4 percent in 2011 to 3.1 percent in 2012 (Kenya National Statistics Bureau [KNBS], 2013). Consequently, significant investment is required to accelerate growth in Kenya's manufacturing sector (Bigsten, Peter & Mans, 2010). According to Akoto, Awunyo and Angmor (2013) successful cash flows management accomplishes this.

For the years 2010 to 2020, a bleak climate has suffocated Kenya's manufacturing sector's competitiveness. The hopes of industrialization-led development fade as the fortunes of leading companies deteriorate. The sector is in recession, as evidenced by Nairobi Stock Exchange listed companies reporting declining sales and issuing profit warnings in 2017, joining a slew of East African producers battling for survival (Manufacturers Alliance for Competitiveness and Innovation, 2018). Unga Group and Mumias Sugar Company both

announced a drop in profitability for the six months ending in December 2016, while East Africa Portland Cement Company continued to lose money during the same time span. Output is depressed as a result of a sector whose fortunes are deteriorating despite the government's expectation that it can anchor high economic growth by contributing at least 15% to GDP (Muchira, 2018).

### **1.1.1 Cash Flow Management**

According to the International Accounting Standard, cash and cash equivalents are short-term, highly liquid assets that are easily convertible to existing cash quantities and have a low risk of value changes (IAS 7). Cash consists of on-call cash and demand deposits, whereas cash equivalents are short-term, highly liquid assets that are easily converted to established cash amounts and have a low risk of losing value. Cash management, according to Allman-Ward (2013), is "the art and science of handling the organization's cash flow." The main features of good cash management, according to them, are consistent use of a company's current assets and current liabilities efficiently across each step of the business cycle, consistent preparation, tracking, and review of a company's sales, disbursement, and account balances, and collection and storage of information to effectively use the cash.

According to Pandey (2016), cash management is concerned with controlling cash flows into and out of the company, as well as cash balances kept by the business at any given time, whether by deficit financing or cash spending surpluses. He further claimed that the goals of cash management include maintaining reasonable control over cash position, maintaining ample liquidity for the company and ensuring that surplus cash is used profitably. Cash

management is an important function for every business since it entails controlling cash movements both inside and outside the firm, as well as cash balances held by the organization at any one time (Pandey, 2014). The generation, distribution, and payout of cash is referred to as cash management (Van Horne & Wachowicz, 2016). The goal is to manage an organization's cash flows in such a way that it optimizes the availability of funds not invested in fixed assets or inventory while reducing the risk of insolvency (Husted, 2015).

According to Wetson and Copeland (2018), cash flow management is concerned with maximizing cash accessible, increasing interest received on non-required surplus money as soon as possible, and preventing losses caused by fund transfer delays. The opportunity cost of holding cash to meet short-term demands is equivalent to the return that could have been achieved if the money had been saved or put to better use. Running on insufficient cash reserves to lower the opportunity cost may, however, increase the risk of not meeting commitments when they are due, therefore an optimal cash balance should be established.

Cash flow components include operating cash flow, investment cash flow, and finance cash flow (Block & Hirt, 2017). Cash flows from operations are often referred to as working capital, and come from internal activities such as the company's revenue or service delivery. Cash flow investment refers to the amount of money produced by unworkable activities, such as investment in plants and equipment or other fixed assets (McMahon, 2016). Cash flow financing refers to the money coming in and going out of the company from outside sources including lenders, shareholders, and investors. This component of the cash flow from

investing covers actions such as a new loan, a loan repayment, stock issue, and dividend payments (Atrill, 2013).

#### **1.1.1.1 Operating Cash flows Management**

The operating cash flow shows how much cash companies will have generated from their everyday product delivery. Cash receipts from transactions include income from the sale of goods and services, cash from debtors, cash interest gained, cash dividends collected from finance and investment (Simpasa, 2014). Cash and earnings do not mean equivalent facts. Cash flows are assumed to be higher than sales since expenditures will distort them. Profits are subject to manipulation by management, hence the need to follow standards which are less vulnerable to manipulation by management (Soyade, 2017).

The cash flow is characterized as the amount of cash paid to buy goods, tax settlements, seller payments, wage payments, and other operating expenses (Gordon, Henry, Jorgensen & Linthicum, 2017). Managers have an understanding of what the everyday activity or the cash that a company must make available to them is producing their business activities. Influxes include cash receivable from the sale of products and services or, more precisely, ordinary business operation, Cash sales from the acquisition of selling products or services and cash interest and investment dividends and other cash receipts not evident from the acquisition or investment financing (Kew *et al.*, 2006). Operational activities may include cash flows that include cash payments to purchase trading or manufacturing goods and distribution products, or to generate use of floors, cash payments to suppliers and service providers for services rendered, wage payments and job benefits.

### **1.1.1.2 Financing Cash Flow Management**

Taillard (2012) described financing activities as the procurement of start-up or expansion resources, or any other contribution that the organization might require from internal or external sources in order to provide additional funding. Financing indicates how and how many funds the operating and investment funds have been procured from outside or from within. It can also involve buying and returning stockholders' funds to their accounts, and borrowing and repaying the amount loaned under the contractual terms (Powers & Needles, 2011).

Cash flow from financing activities is reported in Kemboi (2010) by Cash proceeds from issued shares and lending borrowings. This includes cash on financial accounts; money spent on repayment of the principal loan amounts, bonus amount on both common and preferred shares. Accounting information is largely utilized to give meaningful and efficient financial support that is needed both employees and customers in making effective company decisions and outcomes, according to Wanja (2011). Net cash flow from the funding process will usually be negative for most well-run firms, since it indicates that these companies invest on development and growth.

The abject failure of the manufacturing firm's efficiency and weaknesses is primarily caused by the lagging and lack of cash flow management identifications. In the period of financial transactions, cash accumulation, and amplification, cash flow management is generated basically. Ultimately, that can lead to a financial crisis for a company. Cash flow is the

concept of firm financial efficiency, and the cyclical expression of which is an empirical rule unknown by shareholders; Therefore, control of cash flow is the cornerstone of financial success (Mong'o, 2010).

### **1.1.1.3 Investing Cash Flow Management**

Cash flows resulting from investment activities relate to the acquisition and disposal of productive assets, while cash flows resulting from borrowing relate to the issuance and repayment of long-term sources of capital, and the cash flow from operations relate to all cash flows not specified as borrowing or investment (Richardson et al., 2001). As it is calculated to spend cash flow rather than profits in the financial statement, its financial performance is typically very substantial. When making investment choices, asset solvency, volatility and mortality, investors are likely to focus further on risk management or a reduction in financial outcomes. Cash flow is one of the principles and metrics that customers rely on when taking financial and investment decisions, rather than accounting criteria that managers often distort and exploit (Nwanyanwu, 2015).

It explains the amount of money that the corporation has acquired and invested in investments in other businesses, for instance in acquisitions, bonds and other securities, in line with viable investment decisions. For long-term acquisitions and sales of land, a share of investment money is needed (Keown, Matrin, and Titman, 2011). The capital generated is related to the disposal, while cash flows exist, of long-term assets as well as buildings and equipment (Berry, 2011).

According to Power and Needles (2011), the category also can include the acquisition and selling of production assets such as equipment for manufacturing purposes, while cash inflows from the category investment include collection of main amounts of loans to other firms, cash from sales and cash from production of assets. In certain other situations, the disposition of properties that have ended their economic life can be removed from the list of organizations. However, it is necessary to note that the disposal of assets can often take place for the purpose of financing business operations or credit settlement (Jeter, 2005).

### **1.1.2 Financial Performance**

Eccles (2017) defines performance as a measure of the capacity of an entity to attain its goals. It explains how a firm uses human and financial capital, and how it uses them to achieve its objectives (Robins, 2005). Financial performance remains, according to Lynch (2003), a fixed scale for the success of organizations, as well as their lack of the basic level they need threatens their existence and continuity. This is a measure of how the central business of an organization, using its capital, generates its income (Waweru, 2007 & Alloyo, 2010). It is the enterprise's overall health metric for a set period of time, and it is often used to assess results in a sector or area.

Financial performance evaluation was made by applying possible metrics in most businesses by estimating asset returns and equity returns from the funds of shareholders. Profitability refers to a company's financial success as determined by financial ratios. Financial ratio analysis may also be used to assess the financial performance of a business. Return on assets, return on equity-invested shareholder capital, and net interest revenue are all indicators of a company's financial success. Return on equity was used to assess financial efficiency. One of

the key outcomes of forecasting success metrics market failures in Kenya is return on equity (Athanas, 2015).

Businesses are interested in their ability to make efficient use of their assets to generate sales (and positive cash flows). Returns are calculated by comparing profits against the volume and the sources of funding. Solvency affects profitability as well (Wild, Larson & Chiapetta, 2012). The principal measures of financial success are profit margin, total asset return (ROA) and general shareholder equity return (ROE). Net Profit Margin is the ratio of net profits to net revenue. The estimated return on total assets is shown at the average total assets by the net profit. Both the gross profit and total inventory turnover relate to the overall operating performance, as measured from the return on the assets invested. Return on equity of common stockholders (ROE) is indicated by the total net equity income of common stockholders available to shareholders (Niresh & Velnampy, 2014).

The most critical goal of a company's operations is to gain net income for its shareholders. Return on common shareholders' equity tests a company's performance in achieving that target (Muya & Gathogo, 2016). In comparison, a highly profitable business has the potential to reward its investors with a strong return on its investment. Growing profitability is one of the most important tasks for organization managers. Managers are constantly looking for ways to increase performance by company changes (Rafuse, 2016). One of the main factors considered in efficient management of working capital is cash management (Pandey, 2004). The current study will use net profit margin to measure profitability of Kenya's listed manufacturing firms. Working capital management is significant, because conventional manufacturing companies have more than half of their total assets in their present assets (Wetson & Copeland, 2008). Excessive rates of current assets can easily lead to a business

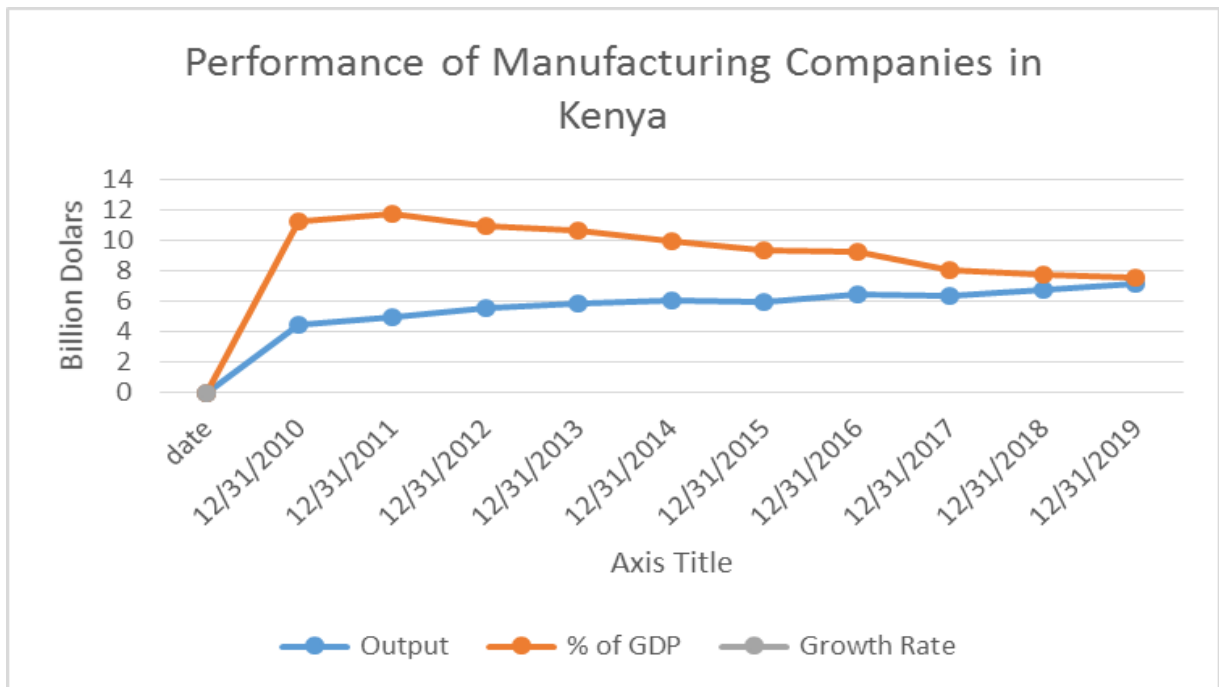
discovering an under-standard return on investment (Husted, 2005). Companies with too few current assets will face shortages and difficulties in sustaining smooth operations (Van Horne & Wachowicz 2000).

### **1.1.3 Manufacturing Firms Listed at Nairobi Securities Exchange, Kenya**

Manufacturing industries refer to those industries which are engaged in the manufacturing and distribution of goods and which are dedicated to producing or adding value to new materials. You may either market the final products as finished products or use them as intermediate products for the further processing of other goods (Lawrence & Chad, 2012). The Kenyan Association of Producers manages the development business. After agriculture, communication and transport, retail and wholesale commerce, manufacturing is the fourth largest industry. The industry is divided into nine companies listed on Securities Exchange in the manufacturing industry (Kenya Association of Manufacturers, 2019).

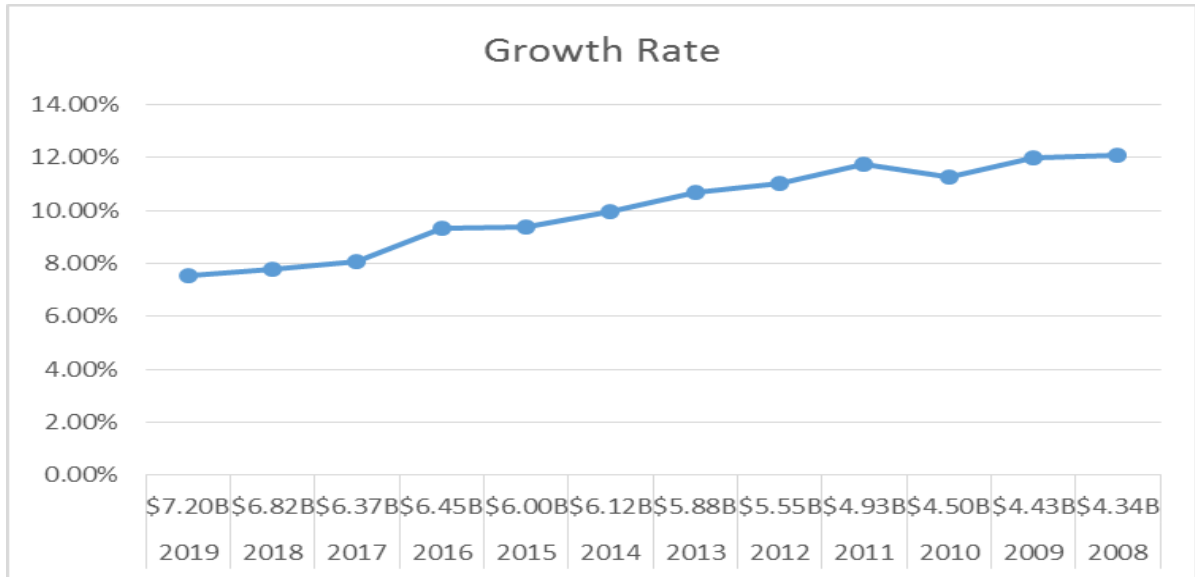
As a major sector of overall economic development, the manufacturing sector requires a comprehensive study at the business and corporate level. This is because Kenya's GDP, targeting the local and eastern African markets, accounted for around 10.1 percent in the amount (NSE manual, 2019). In Kenya, manufacturing makes up 70% of the manufacturing sector's GDP contribution (KIRDI, 2011). The official number of listed manufacturers is however limited and trends are unsustainable. The figure was just 11% of Kenya's GDP in 2013 and only employed 280 000 employees, which represents 12% of Kenya's 2.3 million workers (KNBS, 2019). Nevertheless, industry's contribution to wage employment is downward. The total salary employment have decreased gradually from 13.9% in 2008 to 12.9% in 2012 (World Bank, 2014).

According to the World Development Indicators (2020), revenue from Kenya's manufacturing exports has steadily declined. In 2013, Kenya's output exportations represented some 0.02% of world exports, down from 0.06% in 1994 and 0.18% in 1980. South Africa, which is the regional champion of manufacturing exports fifteen times higher than Kenya, was responsible for 0.03% of global manufacturing exports in 2019. In comparison, the share of products produced by the Eastern Africans imported from Kenya fell from 9% in 2015 to 7% (World Bank, 2019). But the manufacturing sector in Kenya still has enough space for expansion (KPMG, 2019). Kenya's 2019 production output was \$7.20B, a 5.66 percent increase from 2018, Kenya's 2018 manufacturing output was \$6.82B, a 6.95 percent increase from 2017, Kenya's 2017 manufacturing output was \$6.37B, a 1.14 percent decrease from 2016 and Kenya's 2016 manufacturing output was \$6.45B, a 7.49 percent increase from 2015 as shown in figure 1.1.



**Figure 1.1 Performance of Manufacturing Companies in Kenya**

Figure 1.2 presents that there was a decline in growth rate of manufacturing companies. The growth rate was more than 12% in 2008 but declined immensely to below 8% in 2019.



**Figure 1.2 Performance of Manufacturing Companies in Kenya**

**1.2 Statement of the Problem**

Kenya's trend of manufacturing sector performance has attracted interest from researchers and the government. Figures The Kenya National Statistics Bureau (KNBS) Economic Survey (2019) does not paint a rosy image of success in the field. This shows that in March 2019 the EAPC released a profit warning following a string of losses in previous years. The company then had a collapsing 10.8 billion Ksh debt, battling high production costs and manufacturing difficulties. EAPC has tried to slash its employee base, rein in operating costs, and has demanded government bailout of KSh 15 Billion. Unga group warned that their profits were more than 25 per cent lower in 2019 than in the previous year due to the lower demand for

flour (Unga Group First Quarter Report, 2019). British American Tobacco released full-year 2016 results showing a 15 percent fall in profitability to \$39.8 million. Unga Group and Mumias Sugar Company both reported that profitability would collapse for the half-year ended December 2016, while East Africa Portland Cement Company sunk deeper into loss-making during the same time (KPMG, 2019).

Despite the manufacturing sector's importance for the Kenyan economy, its financial output has remained volatile and unpredictable. Although empirical research has linked operating cash flow management to productivity, it remains unclear whether the same affects the financial performance of the manufacturing firms listed on the Nairobi Securities Exchange significantly. Oyieko, Nyang'au, Wafula (2017) investigated the effect of cash flow management activities on the financial performance of listed manufacturing firms in Nairobi Securities Exchange. The study found that there was a positive correlation between operating cash flows and financial performance on return on equity, using correlation results. The study concluded that in estimating return on assets of listed manufacturing companies, cash flow management practices are statistically and significantly related. The research considered a wide variety of many manufacturing firms and so it was not possible to draw conclusions based on data obtained from manufacturing firms that had different characteristics and sizes. The study used ROA as the measure of financial performance presenting a contextual knowledge gap. The Current study considered ROE as the measure for the financial performance.

Parsian and Amir (2018) carried out a research on the impact of operating cash flow on profitability in Tehran Securities Exchange. The research was conducted to relate the impact of different cash flow components on the increase in profitability. The study was based on the following objectives: investigating how depreciation expenditure affects profitability, assessing how the increase in current liabilities affects profitability, and determining the effect on profitability of the decline in current assets. The study used 42 firms sampled from Tehran stock exchange. The study adopted multiple regression models to analyze the data and provide a basis for the conclusion made. The study found that different operating cash flow components affect profitability. The study concluded that profits are improved for banks extremely throughout the financial years. The use of cash flows from operating activities has a great influence on profitability with negative effect. Further the findings recommended that net income from depreciation expense, increase in current liabilities, decrease in current assets and decrease in current liability should be analyze with profitability. The study failed to include correlation analysis to which was essential for determining the relationship between operating cash flows from Cash generated from operation and profits from operations on financial performance. These findings deviates from the current study since it does not specifically focus on firms listed under the manufacturing sector which is the focus of the current study. The current study sought the gaps identified by determining the effect of cash flow management on financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.

### **1.3 Objective of the Study**

#### **1.3.1 General Objective**

The general objective of the study was to investigate the effect of cash flow management on financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.

#### **1.3.2 Specific Objectives of the study**

The study was guided by the following specific objectives;

- i. To establish the effect of operating cash flow management on the financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.
- ii. To find out the effect of the investing cash flow management on the financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.
- iii. To establish the effect of financing cash flow management on the financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.

### **1.4 Research Hypotheses**

The study sought to test the following null hypotheses:

**H<sub>01</sub>:** Operating cash flow management does not significantly affect financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.

**H<sub>02</sub>:** Investing cash flow management does not significantly affect financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.

**H<sub>03</sub>:** Financing cash flow management does not significantly affect financial performance of firms listed under manufacturing sector at Nairobi Securities Exchange, Kenya.

### **1.5 Significance of the Study**

Statistical data is available to demonstrate varying relationship between financial results and cash flow management components. The literature available on the same is composed mainly of studies from the mostly developed nations. Most research in the developed economies concentrate on non-manufacturing companies with restricted national studies of other industries. Hence, this study would help bridge the gap between the different studies on cash flow management. Results from the study will provide information that will support Kenya's manufacturing industry in future policy formulation. Managers and managers of the manufacturing companies listed on the Nairobi Securities Exchange should consider the results of the study and conclusions important to their activities and the business management. It will also encourage them to devise strategies that would assist with successful cash management for reduced spillage, reduced wastage, reduced pilferage and improved profits. The report will be released and made available to all parties to advise them of the related cash flow management needs which need to be modified.

The Kenya Association of Manufacturers would benefit from empirical evidence regarding the contribution to financial performance of each component of cash flow management. These would allow them to plan how to handle various cash management components. Finally, the results and findings of the study would be perfect for the government in policy formulation to ensure that the companies in the manufacturing companies listed are able to avoid losses with the help of the government's flexible regulations in the sector. If the government were to help with these measures, the same would ensure that the listed manufacturing companies function comfortably with a focus on managing cash for improved financial efficiency. The research results would be useful in comparing the results to other academics and researchers.

## **1.6 Scope of the Study**

The focus of the project was on cash flow management and financial performance of manufacturing firms. The study focused on the effects of cash flow management on financial performance of Nairobi Securities Exchange-listed manufacturing firms. Management of cash flow was calculated by operating operation, investment activity, and cash flow from funding activity. Financial performance was calculated by return on equity. The 8 Manufacturing companies listed in the Nairobi Securities Exchange under the manufacturing sector were targeted and used the same methods as the sample members of the study. Most of Kenya's manufacturing firms are based in industrial area of Nairobi. Secondary data was obtained from the selected companies and from the NSE and the financial statements was used. The period of interest was set to be ten years between 2010 and 2019. It is the time the ROE had undergone the biggest decline in the manufacturing businesses.

## **1.7 Limitations of the study**

One of the main drawbacks of using secondary data is that it does not address the researcher's specific research questions or provide specific details that the researcher would like since the data was originally created for other purposes. Secondary data was obtained from reputable sources such as reports from the NSE and audited financial statements.

## **1.8 Organizational of Study**

Chapter one presents the background to cash management practices and financial performance. The study was organized as follows. In accordance with dependent variable and variable, the objectives and question of research were presented in this section. The literature review and empirical review were discussed in Chapter two. The literature review summary

was also presented with the conceptual framework. Chapter three provided the methods for analyzing the investigation including research design, target population, sample size, data collection techniques and data analysis. Chapter four presents research findings based on the research objectives. Chapter five presented the summary of the research findings, conclusions and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter presents the reviewed literature related to cash flow management and financial performance of manufacturing companies. The reviewed literature was sourced from journals, articles and related publication.

#### **2.2 Theoretical Review**

The study was guided by Baumol model Theory, Free cash flow theory, Agency Theory and Keynesian Theory of Money

##### **2.2.1 Baumol Model Theory**

Baumol (1952) introduced model of cash flow management. The model Baumol is a derivative of the economic order quantity (EOQ) models, developed using William Baumol. The model helps determine for company's optimum cash balances. It treats cash as a stock item and it is orders for purchase and sell investment transactions. This eliminates the fixed buying-and-sale charge and dramatically reduce the charge for keeping too much excessive cash. Baumol is a step component as is the case at the EOQ. Phase one is the best transaction size to be calculated. The second step is to determine the maximum length of the transaction line. Average cash reserves may be one-half of the final size of the deal.

However, the Baumol model is probably the simplest, most stretched and responsive model for optimum cash position determination (Ross,1990). There is a compromise between the expense, the wearing or expense or the savings value of the transaction in the Baumol variant of cash management. The Baumol cash control version facilitates the understanding of a

company's most desirable cash stability. It is used significantly because it is useful for cash management. Cash and stock distribution problems are synonymous according to the model. According to Richardson (2016), on the theory that firms with excess cash in ventures are translating into profitability, and therefore cash flow management depends on resources at the discretion of managers to be allocated.

However, the theory is applicable to assess how the firm uses its cash flow to invest available resources. A firm tends to rely more on cash flows to finance their investments than performance. This theory can be applicable in estimating annual holding cost of cash levels of managing accounts. It supports operating cash flow management, investing cashflow management and financing cashflow management activities. This theory fitted this study in that cash flow management activities involves giving out cash and receiving in cash, thus it explained the need for cash to the firm.

### **2.2.2 Free Cash Flow Theory**

Jensen (1986) developed free cash flow theory. The theory's premise is that companies with large free cash flows are likely to pursue investments that would undermine the firm's value. Cash flows above what a company needs to invest on infrastructure have had a beneficial impact on the net present value of what is called free cash flows. Using cash flow control reduces unnecessary costs in the company. Maximizing income is being sought to expand the firm at the expense of cash control. Cost increases are resulting in positive growth under cash flow models.

This theory indicates that net capital expenditure income (CAPEX), affects firms ' financial efficiency. The high free cash flow described by Schoubben (2008) is the net income that adds depreciation and amortization, less capital expenditure, less non-cash flow change, plus borrowing. Darek (2012) criticized theory that maximizing wealth among shareholders is not the only drive why managers seek to grow the company 's size. Expansion of cash flows does not mean an increase in wealth under a manager's stewardship, and may result in more compensation as compensation is linked positively to growth. The cash flow pattern is how to invest in the business than restricted cash receipts from businesses that require costs. The theory's application to cash flows is that it focuses on maintaining cash flows for economic operations and presents the cash balance as either a cash budget surplus or a deficit.

### **2.2.3 Keynesian Theory of Money**

Keynes started this theory in 1936. Keynesian theory stated three reasons for holding money in cash; one is the need to maintain liquidity, the other is transaction motives, speculative motives, and precautions. The assumption is that speculative motives are the need to hold cash to improve performance when purchase needs arise, or favorable exchange. The only need to keep cash to compensate for unforeseen incidents is precautionary motive. The motive for the transaction is the need for cash on hand to pay the daily expenses (Ali, 2013).

The limitations of this theory are that it has presented only motives for holding cash that cannot be relied upon in improving firms ' financial performance. Having good control of cash flows doesn't mean companies can boost financial efficiency. Therefore, a firm needs to preserve its declaration of cash flows in order to assess productivity that can adversely affect cash flows (Adelegan 2017). According to Richardson (2016), on the theory that companies

with surplus cash in projects are turning into productivity situation, and therefore cash flow control is based on capital at the discretion of the manager to be distributed.

The theory, however, applies to the assessment of how the firm uses its cash flow to invest available resources. A business appears to rely more on cash flows than on results to fund its investments. This hypothesis may be applicable in calculating the annual holding costs of handling accounts' cash rates. This theory suits this study in that cash flow management practices include cash disbursement and cash receiving, thereby justifying the need for cash to the company.

#### **2.2.4 Stakeholders Theory**

This theory was developed by Freeman (1984). A stakeholder's conventional definition is "any community or person who may or may be influenced by the achievement of the organization's goals". The Stakeholder concept's basic principle is a redefinition of the organization. The concept is generally about what the organization should be and how it should be conceptualized. Friedman (2006) notes that the organization itself should be viewed as stakeholder grouping, and that the organization's aim should be to control its priorities, needs and viewpoints. The control of the stakeholder is considered to be performed by a company's managers. In the one side, the managers will run the company for the good of their stakeholders, to ensure their interests and involvement in decision-making.

In build business strategies, a stakeholder strategy is very concerned with active management of the business climate, partnerships and the promotion of common interests (Friedman & Miles, 2001). Stakeholder priorities may cover a wide variety of topics, such as working

conditions, environmental concerns or social responsibility, some of which could be counter to the priorities of a company (Friedman & Miles, 2006). This builds on the argument made by Frooman (1999) that stakeholder management could be seen as handling possible conflicts resulting from divergent interests. Waddock (2001) argues in a related discussion on corporate responsibility and citizenship that becoming a good corporate citizen means defining and achieving responsible operating practices that are fully integrated into the entire corporate strategy, planning, management and decision-making processes. The theory of stakeholders is significant in this study because cash management plays a fiduciary role to the interests of the stakeholders. (Freeman, Edward 2006). Stakeholders have the right to be handled equally by management irrespective of how this results in financial output (Deegan, 2004)

## **2.3 Empirical Review**

The section presents reviewed empirical literature on operating, financing and investing activities.

### **2.3.1 Operating Cash Flows and Financial Performance**

Mehtari (2016) explored the relationship between operating cash flow and profitability of firm in TSE. Objectives were to identify the effect of dividend policy on profitability of firm, effect of liability on profitability of firm and establish the effect of retained earnings on profitability. The study used correlations analysis to analyze the relation between these two variables. The study investigated 19 quoted companies in USA and financial indicators and three variables to measure firm's performance, namely profitability (return on investment) market performance (measured by changes in stock market value) and cash flow performance (dividend per share). The study concluded that firms with low total assets, more liabilities, less equity, an unqualified opinion of an auditor and low retained earnings have better cash

flow performance (measured by cash dividend). The study targeted companies in USA while the current study focused on companies listed in NSE.

Nwanyanwu (2015) studied the relationship between operating cash flow activities and organization performance in the hospitality in Nigeria. The objective were; to examined the relationship between cash flows from operating activities on organization performance, to determine the impact of loans processing on organization performance and to establish the effect of equity investment on organization performance. The sample size was 45 hospitality and print media firms. The study used inferential statistics using correlations analysis. The study concluded that payment of cash to suppliers and taxes affected performance in cash flow statement. Thus, this study used manufacturing firms to analyze operating cash flow activities.

Muchiri (2014) examined the effect of operating cash flow on performance of firms listed in the NSE. The study aims to investigate how operating cash flow influence performance of firms. The study objectives were to establish effect of company size on performance of firms, to investigate how sales growth affects performance of firms, and to establish the effect of the dividend payout ratio Tobin's Q on performance of firms. The study used multiple regressions to analyze data: cash flows, sales growth and Tobin's Q. The sample of 12 listed firms' forms the source of data used in the study was from published financial statements by the NSE between the years 2003 and 2012. The study concluded that operating cash from current asset, current liability has always been an important measure of firm company size and sales growth

affect performance of firms. This study analyzed operating cash flow with inferential statistics.

Frank and James (2014) studied a study on the relationship between operating cash flow activities and corporate performance in the Food and Beverages sector in Nigeria. The main objective was to establish the effect of financial information on corporate performance. The data collected was derived from the financial statement of the companies under study. The study sampled 5 Food and Beverage companies listed in the Nigerian Stock Exchange. Multiple regression analysis technique was used to analyze data. The study indicated that there exists a significant positive relationship between operating cash flows and corporate performance in the Food and Beverage Sector of Nigeria. The study concluded that operating cash flows affect corporate performance in the Food and Beverage Sector of Nigeria. Thus, the study examined the effect of operating cash flow on financial performance using descriptive statistics.

Parsian (2018) studied the effect of operating cash flow on profitability in Tehran stock exchange. The study was conducted to relate the influence of different component of cash flows on profitability growth. The study was based on the following objectives which were; to investigate how depreciation expense affect profitability, to assess how increase in current liabilities affect profitability, and establish the effect of the decrease in current assets on profitability. The study used 42 firms sampled from Tehran stock exchange. The study adopted multiple regression models. The study found that different operating cash flow components affect profitability. The study failed to include correlation analysis to which was

essential for determining the relationship between operating cash flows from Cash generated from operation and profits from operations on financial performance.

Ali (2018) investigated the relationship between various earnings and cash flow operations of firm performance and stock returns in Iran. The objectives used were to assess the effect of earning, stock returns and cost of operation on firm performance. Simple and multiple regression analysis were used to analyze the data for the period from 2003 to 2011. The study concluded that the cost of operations to losses predicts financial performance. The study recommended that many firms to be concerned about their ability to performance. The study failed to analyze evaluate the effect of operating cash flows on financial performance using correlation analysis to establish the relationships.

Thanh and Nguyen (2013) studied the effect of operating cash flows on bank performance in Vietnam. The objectives were; to investigate the impact of operating cash flows on bank performance, cash flow statement on bank performance and to evaluate the need for generating cash on bank performance. Multiple regression analysis was used to analyze data of 465 companies listed. The study finding indicated that bank performance decreases as the number of operating cash flows increases. Thus, recommended that summary of how much cash should be available for operations of cash flow. The study analyzes operating cash flows using financial performance.

Chikashi (2018) investigated the operating cash flows income and firm performance. The objectives were to identify the effect of each component of cash flow operations on

performance, to identify obstacles that slow cash flows on performance and to establish the effect of operating cash flows on firm performance. The case study of the 3 electric appliances industry of the Tokyo Stock Exchange was used, The researcher used the data for the fiscal year of 2009 to 2011 and employed the pooled regressions (Panel data regression analyses). This study analyzed each component of operating cash generates more financial performance using measure of dispersion.

Damian (2013) examined the relationship between operating cash flows and productivity of Nairobi County Small and Medium Enterprises. The research focused primarily on the effects of expensive goods and corporate profitability, to analyze the influence of operating cash flows on profitability and the effect of consumer payments on profitability. The primary data used in the analysis were collected from individual small and medium-sized enterprises in Nairobi County. Time series data was used and impact regression model appended to extract the coefficient of regression. The study revealed that many companies are early payers and a recipe for late collectors to squander operating cash flows. Thus, the recommended that companies aim to reduce overdue payments and accelerate cash receivables collection, but this study did not analyze the sample size used to arrive at the findings.

Adelegan (2013) carried out an empirical analysis of the relationship between operating cash flows and dividend changes in Nigeria. The objectives of the were; to explore the relationship between operating cash flows and dividend changes, to identify the effect of capital structure choice, and size of each firm and economic policy changes on dividend changes. The researcher used the ordinary least squares (OLS) method to analyze the data on a sample of 63

quoted firms in Nigeria over a wider testing period from 1984 to 1997. The results revealed that the relationship between operating cash flow and firm performance is positively significant. The study concluded that there exist a relationship between operating cash flows and dividend changes. The study recommended that capital structure choice, and size of each firm and economic policy change should be used to analyze financial performance. This study will clarify the relationship between cash flow and financial performance regression analysis and correlations.

### **2.3.2 Investing Cash Flows and Financial Performance**

Agala (2017) examined the moderating role of firm characteristics on the relationship between investing free cash flows and financial performance of listed firms at the Nairobi securities exchange. The study sought to establish the moderating role of firm characteristics on the relationship between investing cash flows and financial performance. Specifically, the objectives of the were; to establish the effect of investing cash flows and financial performance of listed firms at the NSE, to determine the influence of firm characteristics on financial performance and cash flow investment size on financial performance. The study used secondary panel data which was obtained from 55 listed firms at the NSE for the period of 2006 to 2015. Regression analysis was used in data analysis. Findings indicate that in investing free cash flows has a significant positive effect on financial performance while firm characteristics have a negative effect. The study did not address cash flow invested which is the focus of this study.

Rehaman (2017) analyzed cash flow from investment activities on profitability in Pakistan firm. The study aimed to examine the differences between net cash flows from operating and profitability in Pakistan firm. Objectives were to establish effect of cash flow from investing

on profitability, effect of current assets on profitability and to assess the effect of current liabilities on profitability the firm. The sample size was 23 firms. The study used descriptive statistics. The findings show a great significance to a firm, because it directly influences both liquidity and profitability. Cash flow from investing comprises of both current assets and current liabilities of the firm. The study concluded that net investing cash flows affect profitability. The study recommended should be net investing should be used to determine the amounts of Interest received Purchases of PPE, and Disposals of PPE and its effects on profitability. However, the study did not examine the effect of investing activities on financial performance of firms using correlation analysis.

Asif (2015) conducted a study on investment cash flows and profitability evidence from firms listed on Karachi stock exchange. The study aims at investigating investment cash flows and profitability. Objectives of the study were; to analyze cash payment to acquire or construct long term fixed assets on profitability, to investigate the effect of cash receipts from sale of intangible assets of profitability, impact of cash payment to purchase bonds or shares of other firms on profitability and establish the influence of cash receipts on profitability. The sample of 37 firms listed on Karachi stock exchange was used. Descriptive analysis was used. The study indicated investment cash flows is an integral component of the corporate profitability of a firm and it is very crucial for the long-term survival of a business firm. The study concluded that current assets constitute a very significant portion of cash flow investment; it is significant for finance manager to efficiently manage investment activities. Further recommends that be cash flows reported from investing activities after cash payment to acquire or construct long term fixed assets, cash receipts from sale of bonds and shares of the firm, cash payment in the form of loans and advances and receipt related to payback of such

loans and receivables, but there is no clear me reached to investigate how investing activities affect financial performance.

Alloy (2014) analyzed the effect of investing activities from cash flows and profitability. The objectives were to examine the influence of firm size and net cash flow investments on profitability, analyze cash period. The study used 34 listed manufacturing firms in Sri Lanka. The study adopted descriptive statistics and inferential statistics for analysis. The findings indicated that firms and investors always like to observe positive cash flow from every aspect of investing operations. The study concluded that without positive cash flow may have to borrow money to improve profitability. The study recommended that there should be net spending period. This study examined if the firm has a negative cash flow from investing activities using the long-term benefit not addressed in the previous study.

Hina (2014) studied the impact of investment cash flows on organization's performance. The study sought to assess the impact of investment cash flows on organization's performance. The objectives were to examine the effect of investment cash flows, effect of acquisition on organization's performance and examine how assets invested which has been acquired, establishment of along cash flows from investing in balance sheet affect organization's performance. The sampled population was 43 organizations. Inferential statistic was used. The results show that cash flows from investment include organization's performance by liabilities. The study concluded that it is important that manager pays close attention to the balance sheet of a firm prior to its investment. Therefore, investment cash flows was addressed as a way to analyze strengths and weaknesses in improving financial performance.

Frank and James (2014) studied the correlation between investment cash flows and corporate performance. The objectives were to investigate; investment of cash flows, purchase and sales of investments and cash outflows on corporate performance. The study utilized a sample of 6 Food and Beverage companies listed in the Nigerian Stock Exchange. The study indicated that financial information affect corporate performance. The results of the study were that there exists a statically significant negative relationship between investing cash flows and corporate performance. Further, conclusion shows that cash flows from investing activities affect corporate performance. The firm cash flow statement shows its cash outflows and cash inflows related to the purchase and sales of investments. Net investment cash flow equals the total cash inflows minus the cash outflows from the section and can be positive or negative. They are various types of investment in the investments in the cash flows affects net investment. However no clear conclusion arrived to address investing cash flows on listed firms.

Nekhili (2014) investigated the effect of investing activities on earnings management. The study sought to investigate the effect of investing activities on earnings management. The study investigated the effect of investing activities on earnings management. The data was obtained from 58 firms in the Nairobi securities exchange 2012 to 2013. The study used Tobin's Q to ascertain whether firms had positive investment cash flows project from net present values determine earnings management. Results shows that market expects firms' sales growths and profitability, even very profitable sales growth should not be reflected in shareholders returns in the periods in which investment arose. The study conclude that firms with higher investing activities from cash flows achieve lower earning management, despite

the results, this study analyzed financial performance which was not addressed by reviewed study.

### **2.3.3 Financing Cash Flows and Financial Performance**

Rehaman (2017) investigated financing cash flows in a comprehensive income and firm performance. The study aims to investigate the effect of component of cash flow statement on firm performance; effect of debts financing on firm performance and tax deduction on tax deduction on firm performance. The study 19 firms listed in Tokyo stock exchange. Inferential statistics by use of multiple regression analysis was used to determine the relationship between financing cash flows and performance. The period of study was from 2007 to 2012 was used to collected secondary panel data. Performance was measured by net profit after tax was the dependent variable. Financing cash flows were the independent variables. The study shows that financing cash flows have a statistically significant positive influence on the Firm Performance. The study concluded that financing cash flows is a component of cash flow statement where a firm has ability to offset its debts debt coverage ratio. The study recommended that there is need to compare debt ratios reported earnings to scheduled amounts following cash payment and tax deduction to ascertain the availability of sufficient income for covering payment. The study failed to address how financing cash flows are analyzed which the study came up with standardized final accounts in such manner as to make comparison easy across industries and firms listed financial performance.

Gravetter (2016) analyzed the relationship between profitability and financing cash flows of small and medium enterprises in California. The study aims to investigate the relationship between long term liabilities or debt on profitability, effect of using owner's capital, and using

dividend on profitability. Secondary data used for 7 small and medium enterprise firms. Descriptive statistics were employed to analyze data collected. The results revealed that there is a positive relationship between financing cash flows and profitability. The study concluded that increase in long term liabilities or debt, decrease in long term liabilities or debt, increase in owner's capital, decrease in owner's capital and increase in dividend affect financial performance. The recommendation from the study is that there is need for cash flow statement to bear a similar to item in the balance sheet. There is a concern to adopt inferential statistics to analyze how financing cash flows affect financial performance of manufacturing firms.

Bragg (2014) examined the relationship between financing cash flows and corporate performance in the companies quoted in London. The objectives used were; effect of accruing from equity, using debt issue on corporate performance, payment of dividends on corporate performance, debt repayment on in corporate performance, and repurchase of shares on in corporate performance. The study used a sample of 8 companies quoted in the London Stock Exchange. The data analyzed was derived from the published financial statements of the 8 companies. Component analysis was used to establish the relationship that exists between financing cash flows and corporate performance. The study revealed that there is a statically significant positive relationship between investing cash flows and corporate performance of quoted companies in London. The study concluded that financing cash flows to be used in reference to cash accruing from equity, debt issue, payment of dividends, debt repayment, and repurchase of shares. However, there is need to establish the of effect dividends, loans, and debts accounted for in form of cash flows financing. The increase in capital, changes in cash derived from financing are termed as cash in while payment of dividends out. The action of a

firm issues its bonds to members of the public increases its cash inflow. Contrary, this study examined financing cash flows on financial performance using inferential statistics in manufacturing firms listed not addressed in early study.

Wanja (2014) analyzed the determinants of financing cash holdings and their effect on performance of small and medium enterprises in Nairobi Kenya. The study aims at investigating the determinants of financing cash holdings and their effect on cash levels of small and medium enterprises in Nairobi Kenya. The sample size comprised of 14 small and medium enterprises in Nairobi Kenya. Simple correlations and regression model were used. The study shows that cash flow financing affect performance of small and medium enterprises. The study concluded that m financing cash flows occupies a vital role in decision making process for a firm to finance, invest, the standard board of financial accountant (FASB) has been it fit to release a statement of cash flows. There is need to analyze financing cash flows which has become mandatory for firms to make preparing cash flows statement to the users of financial information. The issue of cash payment, cash receivables and net change experienced by cash in hand has not been well addressed. Thus, the study sought to analyze financing cash flow on financial performance of manufacturing firms listed with multiple regressions.

## 2.4 Summary of Literature Review and Research Gap

**Table 2.1 Summary of Literature Review and Research Gaps**

<b>Source</b>	<b>Title</b>	<b>Findings</b>	<b>Gaps Identified</b>	<b>Gap to be filled</b>
Rehaman (2017)	Analyzed cash flow from investment activities on profitability in Pakistan firm	The findings show a great significance to a firm, because it directly influences both liquidity and profitability.	The study did not examine the effect of investing activities on financial performance of firms using correlation analysis.	The study examined the effect of investing activities on financial performance of firms using correlation analysis.
Agala (2017)	Moderating role of firm characteristics on the relationship between investing free cash flows and financial performance of listed firms at the Nairobi securities exchange	Findings indicate that in investing free cash flows has a significant positive effect on financial performance while firm characteristics have a negative effect	The study did not address cash flow invested which is the focus of this study	The invested cash flow was the focus of this study
Rehaman (2017)	An investigation of financing cash flows in a comprehensive	The study shows that financing cash flows have a statistically significant positive influence on	The study failed to address how financing cash	The study presented how financing cash flows are

	income and firm performance.	the Firm Performance	flows are analyzed	analyzed
Gravetter (2016)	Analyzed the relationship between profitability and financing cash flows of small and medium enterprises in California	The study found that increase in long term liabilities or debt, decrease in long term liabilities or debt, increase in owner's capital, decrease in owner's capital	The nature and strengths of relationships between variables was not established	The study adopted inferential statistics to analyze how financing cash flows affect financial performance of manufacturing firms.
Nwanyanwu (2015)	Relationship between operating cash flow activities and organization performance in the hospitality in Nigeria	The study concluded that payment of cash to suppliers and taxes affected performance in cash flow statement. activities.	The context of the study was performance in the hospitality in Nigeria	Thus, this study used manufacturing firms to analyze operating cash flow
Muchiri (2014)	Examined how operating cash flow influencing performance in the NSE	The findings was that operating cash from current asset, current liability has always been an important measure of firm company size and sales growth affect performance of firms	Descriptive research design was used	This study analyzed operating cash flow with inferential statistics.
Alloy (2014)	Effect of investing activities from cash flows and profitability	The findings indicated that firms and investors always like to observe positive cash flow from every aspect of investing operations	Descriptive research design was used	This study analyzed operating cash flow with inferential statistics.

Bragg (2014)	The relationship between financing cash flows and corporate performance in the companies quoted in London	The study revealed that there is a statically significant positive relationship between investing cash flows and corporate performance of quoted companies in London.	There is need to establish the of effect dividends, loans, and debts accounted for in form of cash flows financing.	This study examined financing cash flows on financial performance using inferential statistics in manufacturing firms
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**Source: Researcher (2021)**

## 2.5 Conceptual Framework

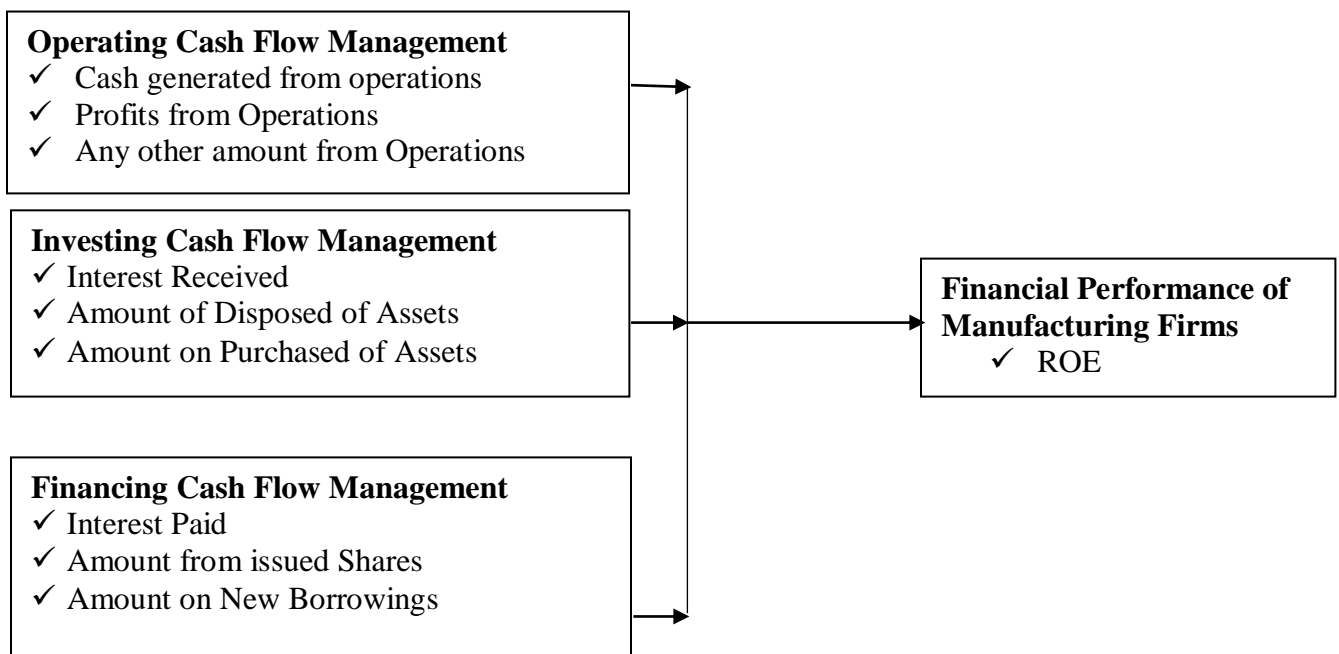
A conceptual framework is a hypothesized model which describes the variables under study.

A conceptual framework presents cash flow management activities and financial performance.

It is made up of independent variables and dependent variable.

### Independent Variables

### Dependent Variable



**Figure 2.1 Conceptual Framework**

Source: Researcher, (2021)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the study methodology. It presents the study research design, units/elements targeted by the researcher, instruments used to collect data and methods of analyzing data.

#### **3.2 Research Design**

The model for data collection, calculation used and data estimation by the researcher is presented in a study analysis design (Cooper & Schindler, 2009). Causal research design was adopted in the current study. The current study sought to establish causal effects of cash management on financial performance of firms listed under manufacturing sector at the Nairobi Securities Exchange, Kenya.

#### **3.3 Target Population**

The target population, according to Cooper and Schindler (2009), refers to the set of units / elements from which researchers may use inferences. The study targeted 8 firms listed under manufacturing sector at the Nairobi Securities Exchange as the target population (Appendix I). The firms were chosen simply because it was possible to get the secondary data for they were required to publish their accounts.

#### **3.4 Sampling Design**

The 8 companies listed on the Nairobi Securities Exchange under the manufacturing sector were included in this analysis and thus sufficient for a census report. Sampling design may not be used when the population is of manageable size or when it is appropriate to integrate the

total target population according to Mugenda and Mugenda (2003). However, Kothari (2011) submitted that the use of census in the analysis removes type I and type II errors.

### 3.5 Data Collection Instruments and Procedures

Only secondary data was used in study. Data was gathered using a document review guide. The study used data from secondary sources and therefore data was collected from the 8 companies listed under the manufacturing sector in the Nairobi Securities Exchange handbook and the companies' websites. The data obtained was collected by means of the review guide provided in Appendix II.

### 3.6 Operationalization and Variable Measurement

**Table 3.6 Operationalization and Variable Measurement**

Variable	Type	Operationalization	Measurements
Financial Performance	Dependent Variable	<ul style="list-style-type: none"> <li>✓ EBIT/share capital + Reserves</li> <li>✓ EBIT/Total assets</li> </ul>	Ratios
Operating Cash Flow Management	Independent Variable	<ul style="list-style-type: none"> <li>✓ Cash generated from operations</li> <li>✓ Profits from Operations</li> </ul>	Log of the total amounts
Investing Cash Flow Management	Independent Variable	<ul style="list-style-type: none"> <li>✓ Interest Received</li> <li>✓ Amount of Disposed of Assets</li> <li>✓ Amount on Purchased of Assets</li> </ul>	Log of the total amounts
Financing Cash Flow Management	Independent Variable	<ul style="list-style-type: none"> <li>✓ Interest Paid</li> <li>✓ Amount on Purchase of Shares</li> <li>✓ Amount on New Borrowings</li> </ul>	Log of the total amounts

**Source: Researcher (2021)**

### 3.6 Data Analysis and Presentation

Data analysis was conducted to enable making of inferences and conclusions. After the collection of research data, the data was analyzed through quantitative analysis. The annual

panel data was analyzed by the use of panel' regression' analysis. Descriptive analysis provided the descriptions of the study variables presented. The descriptions included parameters such as the percentages, mean, minimum, maximum observations and standard deviations. The data was presented in tables and figures.

Inferential statistics was used to make population inferences from the sample information. Inferential analysis tested that study's null hypothesis. In addition, the 5 per cent significant level threshold was used to evaluate the hypotheses which translates to a confidence level of 95 per cent. Value less than 5 percent would imply an independent variable's important impact on the dependent variable. Similarly, value above the threshold of 5 percent would imply insignificant effect of the independent variable on the dependent variable. Before drawing inferences, diagnostic checks for multicollinearity and normality were carried out.

### 3.6.1 Empirical Model

Panel regression model was adopted in performing the study review based on a panel data collected half a year. Consequently, cash management represented result from operating cash flow, cash flow investment, and financing cash flow.

$$ROE_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon_{it} \dots\dots\dots 3.1$$

$$ROE_{it} = \beta_0 + \beta_1 X_{it} * I_{it} + \beta_2 X_{2it} * I_{it} + \beta_3 X_{it} * I_{it} + \epsilon \dots\dots\dots 3.2$$

Where:

ROE<sub>it</sub> - Return on equity of firm i at time t

β<sub>0</sub> - Intercept

X<sub>1it</sub> – Operating cash flow of firm i at time t

$X_{2it}$  – Investing cash flow of firm  $i$  at time  $t$

$X_{3it}$  - Financing cash flow of firm  $i$  at time  $t$

$I_{it}$  = Inflation (The moderator)

$X * I_{it}$  = Interaction terms

$\beta_1, \beta_2,$  and  $\beta_3$  = Beta coefficients

$\varepsilon$  = Error term

### **3.7 Research Ethics**

Research ethics refers to the norms and principles to which the researcher must adhere before, during and after a study (Mugenda & Mugenda, 2011). This involves avoiding fraud and forgery. In addition, writers whose works were included in this report were acknowledged. The project was also guided by the rules and regulations regulating research at the University of Kenyatta. A data collection permit was also obtained from NACOSTI offices in Nairobi.

## CHAPTER FOUR

### RESULTS, INTERPRETATION AND DISCUSSION

#### 4.1 Introduction

The report of a study on the impact of cash flow management on the financial performance of manufacturing companies listed on the NSE are presented in this chapter. The findings of the analysis are presented in parts of the chapter. The first section examines descriptive effects on cash flow from operating activities, cash flow used in financing activities, and cash flow used in investing activities, as well as their effect on manufacturing firms' financial efficiency. The diagnostic tests are presented in the second section, and the panel regression model is presented in the third section.

#### 4.2 Descriptive Analysis Results

The descriptive results for cash from operating activities, cash used in financing activities, cash used in investing activities, and ROE are presented in this section. The information was gathered from 2010 to 2019. The information was gathered for eight (eight) manufacturing companies that are classified on the NSE. The four variables considered are mentioned in the variable column. The Obs column indicated the number of true (i.e., non-missing) findings (or cases) for that attribute. Obs consisted of eight (eight) businesses, each with ten (ten) observations for each of the four variables studied (cash from operating activities, cash used in financing activities, cash used in investing activities and ROE). The mean column indicates the mean rate of each of the variables considered in the study. The standard deviation of the variable is indicated in the Std. Dev column, which provides details about the spread of the variable's distribution. The Min column indicates the smallest values of the variable while the Max column indicates the largest values of the variable.

Variable	Mean	Std. Dev.	Min	Max
Net cash from Operations	9,042,051	31,000,000	-42,600,000	153,000,000
Net cash used in Investing	-10,200,000	38,800,000	-253,000,000	11,900,000
Net cash used in Financing	3,167,862	44,000,000	-119,000,000	288,000,000
ROE	0.2413162	1.246791	-8.99	4.7988

**Source: Survey Data (2021)**

The study results on net cash from operations indicated that the mean cash from operating activities from the 8 (eight) companies was Kshs. 9,042,051.00. The minimum cash from operating activities was Kshs. (42.6B) and the maximum was 153B. The dispersion as too huge has evidenced by a standard deviation of 31,000,000. Frame tree company Ltd had the lowest net cash from operating activities of Kshs. -42,592,190,000 in the financial year 2010 and the same company had the highest net cash from operations of Kshs. 153,028,524,000 in the 2015 financial year.

The findings on net cash used in investing activities included cash used in the purchase of property, plant and equipment, intangibles, investment property, sale of investment property, net investment of government securities at fair value by profit or loss, proceeds from equipment disposal, net proceeds on debt investments, and net proceeds on available for sale financial assets. The minimum cash used in investing activities was Kshs. -253Billion, while the overall cash used in investing activities was Kshs. 11.9B, according to the findings. The average amount of money spent on investing was Kshs. 38.87Billion. The high dispersion rate between the minimum cash used in investment and the minimum cash used in investing activities was indicated by the Std.Dev of 38.8Million. Free tree co. Ltd had the highest cash

used in investing activities indicating that it had invested a lot on long term assets. Kenya orchards Co.Ltd had the lowest investment.

The results on net cash used in financing activities included; loan repayments, dividend paid and borrowings. The results indicates that the minimum cash used in financing activities was Kshs. -119Billion and the Maximum was Kshs. 288Billion. The mean cash used in the financing activities was Kshs. 3.167Billion. The standard deviation of Kshs. 44Million indicates that there was a high dispersion or variation from the lowest cash used in financing activities to the highest cash used in the financing activities. Frame tree Co. Ltd had used the highest amount of cash in financing its activities Kshs. -119.182Billion while BOC Co. Ltd had the highest net cash received from the financing activities of Kshs. 287.848Billion. The study there indicates that there is high dispersion rate in the manufacturing companies on how they finance their activities.

The results on Return on Equity as an indicator of financial performance indicated that the minimum return on equity was -899% and the company with the maximum ROE had 479.88%. The mean ROE was 24.13162% and the standard deviation of 1.24679. The firm with the highest return on equity was BOC Co. Ltd with ROE of 479.88% and the company with the lowest ROE was Flame tree Co. Ltd. Flame tree company ltd was the only Manufacturing company with a negative ROE. The results clearly indicate the high variation in terms of the manufacturing companies' financial performance (ROE).

### 4.3 Diagnostic Testing

The research conducted diagnostic tests to the study hypotheses and to ensure that regression assumptions were not violated prior to regression analysis. Multicollinearity, normality, heteroskedasticity, autocorrelation, hausman tests and stationarity tests were tested. The results were presented in the subsequent sections.

#### 4.3.1 Testing on Multicollinearity

Using the Multicollinearity test, one or more of the variables of the analysis is tested whether it is strongly correlated with one or more of the other independent variables. Table 4.2 summarizes the multicollinearity results.

**Table 4.2: Multicollinearity test**

Variable	VIF	1/VIF
Net cash from Operations	8.96	0.111605
Net cash used in Investing	7.18	0.139273
Net cash used in Financing	2.4	0.417338
Mean VIF	6.18	

**Source: Survey Data (2021)**

According to the multicollinearity tests, net cash from operating activities had a VIF of 8.96, net cash used in investing activities had a VIF of 7.18, and net cash used in funding activities had a VIF of 2.4. None of the VIFs were greater than 10, suggesting that multicollinearity was not a possibility.

#### 4.3.2 Test of Normality

It is generally assumed that sample populations are distributed. Normalcy is important because incorrect assumptions make it difficult to draw precise and valid conclusions about

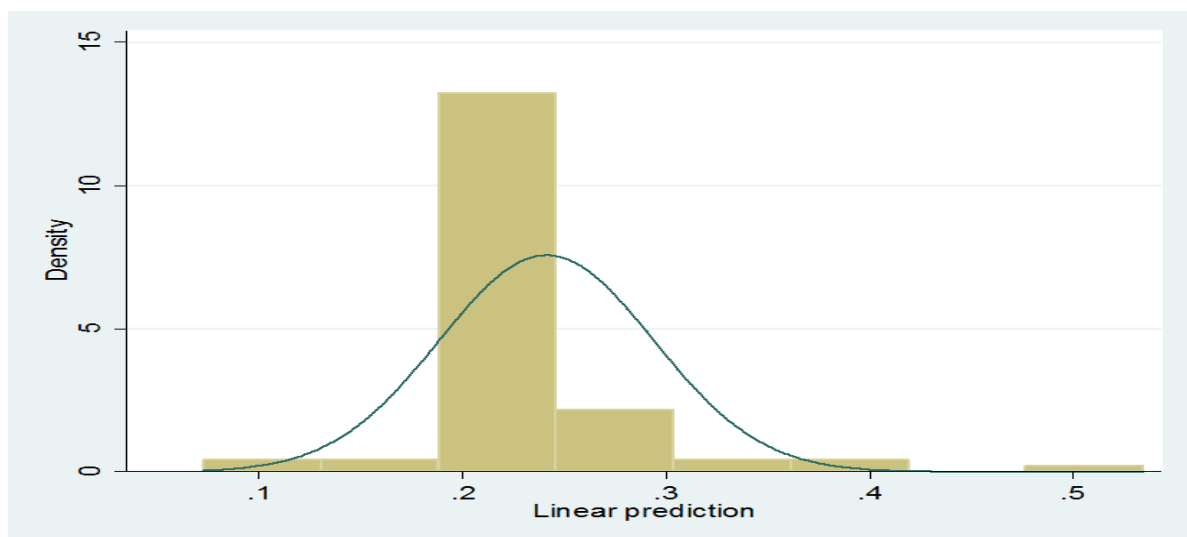
data. The results on normality tests through Kurtosis and skewness and normal distribution table is presented in table 4.3 and figure 4.1 respectively.

**Table 4.3 Normality test**

Skewness/Kurtosis tests for Normality						
----- joint -----						
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj	chi2(2)	Prob>chi2
Myresiduals	80	0	0		.	0

**Source: Survey Data (2021)**

The results on skewness and kurtosis tests indicates that the skewness and Kurtosis were equal to zero (0). The skewness of a symmetrical dataset would be 0. The dataset has heavier tails than a regular distribution if the kurtosis is greater than 3. (more in the tails). The dataset has lighter tails than a normal distribution if the kurtosis is less than 3. (less in the tails). Therefore, the data was normality distributed. These was supported by the results from the normal distribution figure 4.1.



**Source: Survey Data (2021)**

### 4.3.3 Tests of Heteroskedasticity

The Breusch-Pagan test was used to explain the heteroscedasticity issues in the analysis. The summarized results in table 4.4 presents the test results. Homoscedasticity, which states that the probability distribution of the perturbation concept is the same for all experiments, is one of the fundamental assumptions. This implies that for all explanatory variable values, the variance of each  $u_i$  is the same. Heteroscedasticity occurs when the disruption conditions may not have the same disparity or non-homogeneity in variance.

**Table-4.4-Heteroscedasticity- Test**

Breusch-Pagan / Cook- Weisberg Test for heteroskedasticity

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Ho: Constant variance

Variables : fitted values of ROE

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chi2 (1) = 1.94

Prob > chi 2 = 0.1642

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**Source:Survey Data(2021)**

If the p-value is meaningful at a 95% confidence interval, the data has a heteroscedasticity problem; if the value is marginal, the data does not have a heteroscedasticity problem (greater than 0.05). Since all p-values are greater than 0.05, there is no issue with heteroscedasticity, as shown in Table 4.4.

### 4.3.4 Autocorrelation Tests

To evaluate the autocorrelation assumptions that mean zero covariance over time, the researcher used error terms. This means that the errors related to one observation have no bearing on the errors related to another. According to Gujarati, the Durbin Watson test is the most well-known test for detecting serial correlation (2004). The test's null hypothesis is that the residuals have no serial correlation up to the stated order. The results in table 4.5 presents the autocorrelation results.

#### Table 4.5 Autocorrelation

Wool dridge test for autocorrelation in panel data

H0 : no first- order autocorrelation

F( 1, 7)	2.533
Prob > F	0.1555

Source: Survey Data (2021)

The results show that the coefficients are statistically important, and the fitness is extremely high. The no-serial association hypothesis is supported by the test. According to the test, the serial correlation between the residuals is  $0.1555 > 0.05$ ). As a consequence, the error terms for various observations in this analysis are not related to one another.

#### 4.3.5 Test of Stationarity

The Levin-Lin Chu unit-root test is appropriate because the analysis uses time series data and provides a test for stationarity and order of integration. This was done to make the variables stationary, which is needed for panel regression and other statistical inferences. The null hypothesis was tested to see whether the variables were stationary along a deterministic pattern.

#### Table 4.6 Levin-Lin Chu unit-root test

Variable	Hypothesis	p value	Verdict
NCOA	Ho : Panels contain unit roots Ha : Panels are stationary	0.0021	Reject Ho
NCIA	Ho : Panels contain unit roots Ha : Panels are stationary	0	Reject Ho
NCFA	Ho : Panels contain unit roots Ha : Panels are stationary	0.9868	Fail to Reject Ho
ROE	Ho : Panels contain unit roots Ha : Panels are stationary	0.0053	Reject Ho

Source: Survey Data (2021)

### 4.3.6 Hausman Test

Two panel data regressions were run by the researcher. Set and random effects are the two forms of effects. The Hausman test was used to see which of the two regressions was the best fit for the data. The test hypothesis were;

*Ho*: Accept Random Effect

*Ha*: Accept Fixed Effect

**Table 4.7 Hausman Test**

	(b) Fixed	(B) random	(b-B) Difference	Sqrt (diag(V_b- V_B))	S.E.
NCOA	4.14E-09	4.50E-09	-3.51E-10		2.43E-09
NCIA	3.49E-09	3.72E-09	-2.27E-10		1.85E-09
NCFA	1.41E-09	1.46E-09	-5.13E-11		8.60E-10
chi2(3)	3.00E-02				
Prob>chi2	0.9987				

**Source: Survey Data (2021)**

The Hausman test indicated that the random effects model should be used. As a response, the results of the random effects model are the only ones presented and discussed in the following section. The Hausman test showed a Prob>chi2 = 0.9987 significance level greater than the 0.05 level. As a result, the researchers' null hypothesis is not rejected ( $H_0$ ). This indicates that the Random effects panel data model is the best fit for the data and should be used. As a result, only the random effects panel regression results are recorded.

### 4.4 Random-Effect Regression Analysis

The coefficients and P values are presented in regression analysis, which aids in the development of the relationship between variables. The coefficients show how changes in the independent variable affect the dependent variable in terms of units. The direction in which the dependent variable changes as a result of changes in the independent variable is often

shown by the coefficient. The specific variable is said to be important in describing the changes in the dependent variable if the P values are less than 5% or 10% at 95% confidence interval and 90% confidence interval respectively.

**Table 4.8 Random-effects Regression Model**

ROE	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
NCOA	2.53E-08	6.00E-09	4.22	0	1.36E-08	3.71E-08
NCIA	5.16E-09	2.94E-09	1.76	0.009	-5.99E-10	1.09E-08
NCFA	-1.10E-09	4.32E-09	-0.25	0.8	-9.57E-09	7.38E-09
_cons	0.0685747	0.1207869	0.57	0.57	0.1681632	0.3053126
R squared	6.10E+01					
F statistics	5.29E+01					
Prob > chi2	0.00E+00					

**Source: Survey Data (2021)**

**The Model adopted was;  $ROE = 0.0685747 + 2.53E-08X_1 + 5.16E-09X_2 - 1.10E-09x_3 + \varepsilon$**

The findings of the Random-effects regression model show that net cash from operating activities (NCOA) has a positive and significant effect on ROE, with a P value of 0.05 at the 5% level of significance. Positive unit changes in net cash from operations translate into positive unit changes in ROE. The results are consistent with those of Nwanyanwu (2015), who investigated the relationship between operating cash flow activities and financial performance. According to the findings, net cash from operating activities has a substantial and optimistic impact on financial results. The results confirmed the finding of Adelegan (2013) that there was a significant positive correlation between financial performance and net cash from operating activities.

The results in table 4.8 indicates that net cash used in the investing activities (NCIA) has a positive and significant effect on ROE at 5% level of significance,  $0.009 < 0.05$ . A positive

unit change in net cash used in the investment results to a positive unit changes in ROE. The findings were supported Agala (2017) results that cash used in investment activities significantly and positively affects ROE. The study also concurs with Rehaman (2017) findings that cash used in investing activities had a significant and positive effect on ROE.

The findings also indicates that net cash used in financing activities (NCFA) has no significant effect on ROE, P of  $0.8 > 0.05$ . The results contradicts Rehaman (2017) study results that financing activities cash flow significant and positive affects financial performance. The results also contradicts Gravetter (2016) findings that cash from financing activities significantly affects ROE

The Coefficient of determination (R squared) result of  $6.10E+01$  indicates that 61% changes in the ROE was determined by changes in net cash from operating activities, net cash used in the investing activities and net cash used in financing activities. A constant factor of 0.0685747 (Cons=0.0685747) shows the value of ROE when the three independent variables were held constant.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS ANDRECOMMENDATIONS

#### 5.1 Introduction

The summarized findings, conclusion, and recommendations on how the effect of cash flow management on financial performance. The chapter is subdivided into four subsections; section 5.2 presents the summarized results on net cash from operating activities, net cash used in the financing activities and net cash used in the investing activities and how they affected ROE, The findings are presented in section 5.3, the recommendations are presented in section 5.4, and the recommendations for further research are presented in section 5.5.

#### 5.2 Summary of the Findings

The first null hypothesis that cash flow from financing activities had no significant effect on financial performance. Based on the study results, the research rejects  $H_{01}$ . The findings indicates that net cash from the financing activities had a significant positive effect on ROE. Net cash from the financing activities included; Interest earned, interest charged, and tax paid are all cash generated from operational activities. The findings revealed a wide range of outcomes, with some businesses reporting large net cash from operating activities and others reporting negative net cash from operating activities. Manufacturing firms are supposed to produce positive net cash from operations, but this was not the case, according to the findings.

The second null hypothesis stated that cash used in the investing activities does not significantly affect the ROE. The results indicated that cash used in the investing activities significant and positively affected ROE, As a result,  $H_{02}$  was found to be false: net cash used

in investment activities has no major impact on financial results. The research discovered a significant disparity between the amount of cash used in investment activities and the amount of cash used in investing activities. The majority of businesses had negative cash flow from their investment activities. This is due to the fact that the bulk of investing activities involved cash outflows, such as cash used in the acquisition of real estate, plant and equipment, intangibles, investment property, and net government securities investment.

According to the third theory, net cash used in funding operations has no major impact on financial results.  $H_{03}$  was approved because the results of the analysis showed that net cash used in financing activities had no substantial impact on ROE. The descriptive findings revealed a high level of dispersion in terms of cash used in financing activities. Loan repayments, dividend distributions, and borrowings are all indicators of net cash used in financing activities. The differences were evident because some firms borrowed large amounts of money, while others lacked the financial resources to compete with the market leaders.

### **5.3 Conclusions**

The study concluded that net cash from the financing activities have a positive significant effect on ROE. The findings concluded that cash used in the investing activities significant and positively affected ROE. The study results concluded that net cash used in financing activities had no significant effect on ROE. The study concludes that a unit change in net cash from financing activities and cash used in investing activities results to unit changes in ROE. The study concludes that unit changes in financing activities has no effect on ROE.

#### **5.4 Recommendations**

Following the findings that net cash from operations has a substantial positive impact on ROE. According to the report, directors of various manufacturing companies in Kenya should implement a policy focusing on quick moving inventory, which will eventually affect other components of operations such as cash earned from operational activities, interest obtained, interest charged, and tax paid. Following the conclusions that cash used in the investing activities significant and positively affected ROE. Cash used in the purchase of land, plant and machinery, intangibles, investment property, and net investment in government securities should all be carefully invested, according to the report, in order to maximize the value of the businesses. These should be guided by other economic indicators such as inflations, government regulations and internal operating activities.

#### **5.5 Recommendations for Further Study**

The report on manufacturing firms listed in NSE. There only 8 companies listed in NSE. The study collected secondary data of the eight listed companies and panel regression model was used. The study recommends a similar study in a different sector, based on secondary data to compare the study results. The study recommends an analysis based on primary data and a different methodology approach other than panel regression model. The study was limited to a small sample of 8 unit of analysis, therefore a large sample is recommended.

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## **APPENDIX I: LISTED MANUFACTURING COMPANIES IN KENYA**

- 1) BOC Ltd
- 2) BAT Ltd
- 3) Carbacid-Investments Ltd
- 4) EABL
- 5) Mumias SugarCo. Ltd
- 6) Unga Group Ltd
- 7) Kenya Orchards Ltd
- 8) Flame Tree Group Holdings Ltd

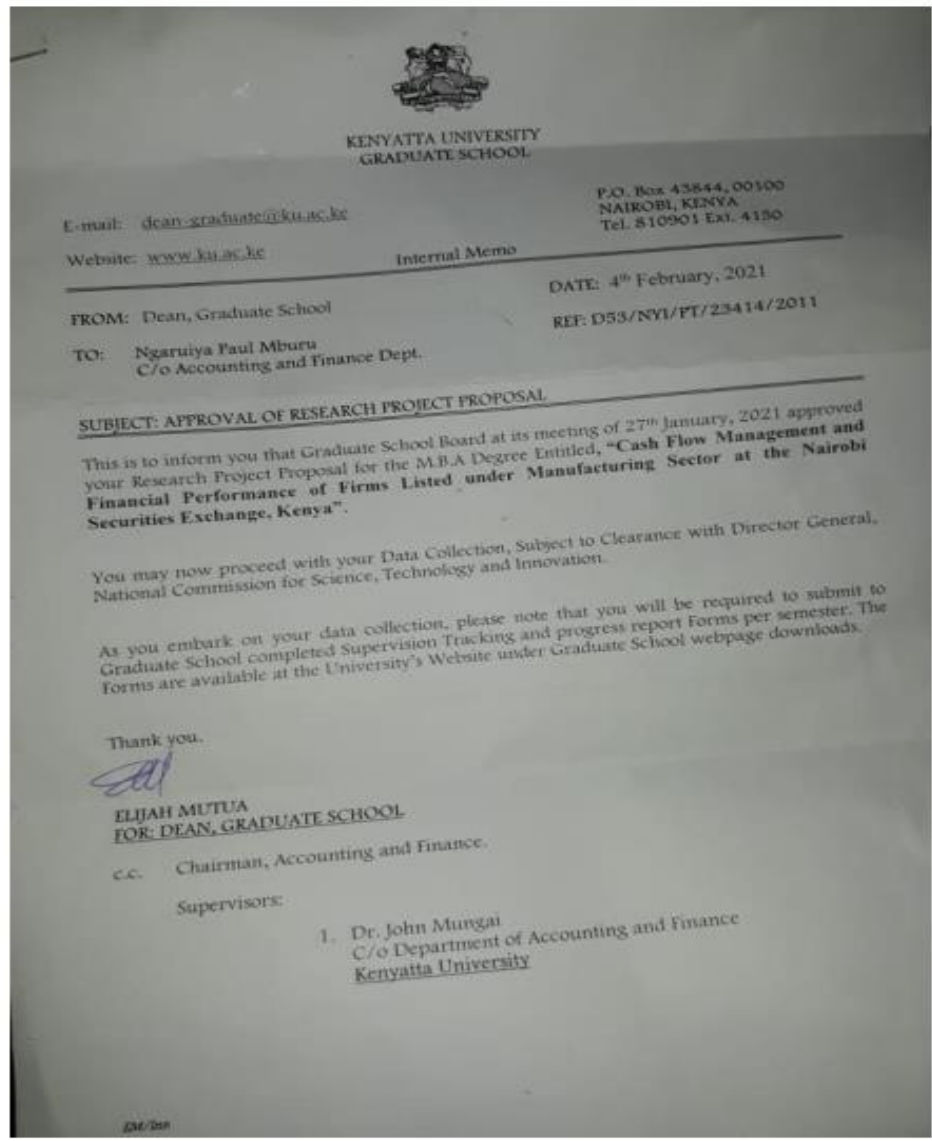
## Appendix II: Secondary Data Results

Firm	Year	NCOA	NCIA	NCFA	ROE
BOC	2009	-20,744	-27,657	-132,773	13.85%
BOC	2010	254,792	25,750	-132,773	7.91%
BOC	2011	223,734	-44,048	-183,540	11.34%
BOC	2012	348,679	-111,858	-132,773	13.57%
BOC	2013	139,192	-1,429	-110,319	9.76%
BOC	2014	103,325	70,607	-93,722	13.14%
BOC	2015	207,104	-169,726	-101,532	8.67%
BOC	2016	84,602	-304,675	-101,532	7.48%
BOC	2017	175,540	-71,482	-101,532	2.44%
BOC	2018	4,053	50,271	-104,461	4.32%
BAT	2009	1,834,693	-1,766,039	-190,211	35.82%
BAT	2010	1,598,755	-758,310	-274,855	42.81%
BAT	2011	3,868,818	-993,273	-1,761,297	48.31%
BAT	2012	4,004,450	-1,200,048	-3,347,344	52.63%
BAT	2013	3,420,729	-967,170	-2,903,200	49.18%
BAT	2014	4,730,110	-1,520,456	-3,649,000	52.36%
BAT	2015	3,930,350	-559,295	-4,250,000	56.21%
BAT	2016	5,161,435	-286,353	-4,950,000	55.14%
BAT	2017	4,713,472	-378,605	-4,300,000	42.64%
BAT	2018	5,300,226	-858,217	-2,600,000	43.86%
Carbacid Investments	2009	305976	37962	113267	21.96%
Carbacid Investments	2010	351363	490794	181229	23.76%
Carbacid Investments	2011	295,753	-177,663	-177,634	23.41%
Carbacid Investments	2012	572,224	-97,830	-202,321	23.56%
Carbacid Investments	2013	447,301	24,027	-198,864	24.71%
Carbacid Investments	2014	533,344	-286,773	-200,689	20.23%
Carbacid Investments	2015	560,378	-325,022	-74,121	18.41%
Carbacid Investments	2016	374,074	-136,011	-186,732	9.76%
Carbacid Investments	2017	327,107	-158,881	-175,551	11.34%
Carbacid Investments	2018	296,691	-110,548	-173,742	9.80%
EABL	2009	8,202,548	-1,235,616	-2,560,278	17.58%
EABL	2010	12,202,548	-3,235,616	-7,560,278	23.68%
EABL	2011	8,877,695	-9,734,506	-6,360,199	33.52%
EABL	2012	6,834,555	-20,414,888	12,708,159	67.85%
EABL	2013	-9,794,137	11,907,042	-5,861,000	92.55%
EABL	2014	-9,730,145	6,897,773	5,225,966	77.27%
EABL	2015	13,559,140	-4,683,695	-10,783,673	59.63%
EABL	2016	13,353,183	-1,329,944	-18,225,182	93.29%


EABL	2017	13,914,471	-4,667,567	-991,541	8.36%
EABL	2018	13,559,342	-10,492,133	-3,493,143	17.67%
Mumias Sugar	2009	1,563,224	-3,173,147	1,019,508	16.04%
Mumias Sugar	2010	3,004,318	-322,689	-938,195	14.29%
Mumias Sugar	2011	2,300,182	-4,393,919	-377,495	28.24%
Mumias Sugar	2012	2,114,552	-2,612,379	342,743	12.80%
Mumias Sugar	2013	932,444	-1,234,054	641,518	-12.41%
Mumias Sugar	2014	801,431	-494,363	-695,626	-25.43%
Mumias Sugar	2015	-537,877	-149,880	14,447	-79%
Mumias Sugar	2016	-2,592,661	-226,038	2,626,300	-61%
Mumias Sugar	2017	-1,317,201	-19,388	830,402	-899%
Mumias Sugar	2018	-526,373	-47,672	512,372	-105%
Unga Group	2009	-122,096	-31,314	-9,920	5.89%
Unga Group	2010	162,392	-84,490	-11,025	7.02%
Unga Group	2011	595,735	-285,338	-58,236	11.78%
Unga Group	2012	-56,889	-300,559	-87,354	8.77%
Unga Group	2013	415,747	-79,441	-76,458	7.88%
Unga Group	2014	469,489	-517,863	276,658	10.12%
Unga Group	2015	505,450	-15,426	-140,484	11.69%
Unga Group	2016	666,294	-470,859	-290,017	9.97%
Unga Group	2017	1,595,319	-801,854	-191,113	-0.14%
Unga Group	2018	-237,101	-878,309	492,095	13.96%
Kenya Orchards	2009	-122,128	0	-55,000	233.24%
Kenya Orchards	2010	-84,586	500,000	-55,000	77.37%
Kenya Orchards	2011	211,369	-235,157	-55,000	103.46%
Kenya Orchards	2012	386,927	0	-55,000	202.26%
Kenya Orchards	2013	-317,395	0	-55,000	97.34%
Kenya Orchards	2014	-282,720	0	-55,000	110.62%
Kenya Orchards	2015	-271,639	0	-80,000	479.88%
Kenya Orchards	2016	-1,974,352	0	-55,000	38.66%
Kenya Orchards	2017	4,055,857	0	-7,023,275	37.21%
Kenya Orchards	2018	2389511	0	-3675688	36.65%
Flame Tree	2009	70,379,313	-25,158,429	-45,622,010	11.78%
Flame Tree	2010	-42,592,190	-1,076,676	25,934,961	19.80%
Flame Tree	2011	23,096,678	-61,406,673	190,263,231	28.90%
Flame Tree	2012	133,231,537	-253,112,390	287,848,789	37.20%
Flame Tree	2013	107,183,594	-9,799,379	-99,444,160	75.23%
Flame Tree	2014	-11,210,914	-5,358,871	82,814,073	37.55%
Flame Tree	2015	153,028,524	-163,201,000	2,477,315	37.78%
Flame Tree	2016	-4,563,521	-13,914,049	2,182,709	19.08%

Flame Tree	2017	142,944,384	-169,278,450	-119,182,109	1.39%
Flame Tree	2018	23,012,709	-50,410,723	1,857,193	20.03%

### Appendix III: Data Collection Approval Letter




## Appendix Iv: NACOSTI Permit

  
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**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

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**Date of Issue: 19/February/2021**


**This is to Certify that Mr. Paul Ngaruya Mburu of Kenyatta University, has been licensed to conduct research in Nairobi on the topic: CASH FLOW MANAGEMENT AND FINANCIAL PERFORMANCE OF FIRMS LISTED UNDER MANUFACTURING SECTOR AT THE NAIROBI SECURITIES EXCHANGE, KENYA for the period ending : 19/February/2022.**

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