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EFFECT OF CASH FLOW MANAGEMENT ON FINANCIAL PERFORMANCE OF MANUFACTURING INDUSTRIES IN RWANDA: A CASE OF SULFO INDUSTRY RWANDA IN KIGALI

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ABSTRACT

This study evaluated the effect of cash flows management activities on financial performance of manufacturing industries in Kigali Rwanda. The study has been guided by the following specific objectives; to determine the effect of Cash flow forecasting on the financial performance of Sulfo Rwanda Industries Ltd; to examine the effect of mobilizing & managing the cash flow on the financial performance of Sulfo Rwanda Industries Ltd; to find out the effect of maintaining banking relations on financial performance of Sulfo Rwanda Industries Ltd and to find out the effect of investing surplus cash on the financial performance of Sulfo Rwanda Industries Ltd. The researcher used a descriptive research design. Sample size of this study was 198 employees of Sulfo-Rwanda. Questionnaire and documentary review were used as data collection instruments. Descriptive statistics, Correlation analysis and multiple linear regression analysis were used as method of data analysis. For the first research objective, the results revealed that cash flow forecasting has significance positive effect on financial performance of Sulfo Rwanda Industries Ltd *as indicated by β_1= 0.522, p-value=0.000<0.05, t=7.846. The implication is that an increase of one unit in cash flow forecasting would lead to an increase in* financial performance of Sulfo Rwanda Industries Ltd*by 0.522 units. For the second research objective, the results revealed that mobilizing & managing the cash flow has significance positive effect on financial performance of Sulfo-Rwanda Ltd as shown by β_2= 0.170, p=0.002<0.05, t=3.122. This shows that when there is an increase of one unit in mobilizing & managing the cash flow would lead to an increase in financial performance of Sulfo-Rwanda Ltd by 0.170 units. For the third research objective, the results revealed that maintaining banking relations has significance positive effect on financial performance of Sulfo-Rwanda Ltd as indicated by β_3= 0.103, p-value=0.008<0.05, t= 2.942. The implication is that an increase of one unit in Maintaining banking relations will increase financial performance of Sulfo-Rwanda Ltd by 0.103 units. For the fourth research objective, the findings revealed that investing surplus cash has significance positive effect on financial performance of Sulfo-Rwanda Ltd as indicated by β_4= 0.455, p-value =0.000<0.05, t=5.840. The implication is that an increase of one unit in investing surplus cash would lead to an increase in financial performance of Sulfo-Rwanda Ltd by 0.455 units. The study recommended that the management of Sulfo-Rwanda Ltd should be encouraged to use cash flow ratios in evaluating the performance of manufacturing firms before forming opinion on the firm. This will help them make good decisions with respect to their investments. The study concludes that 57.1% of the total variations of financial Performance of Sulfo-Rwanda Ltd can be attributed to the changes in the value of the independent variables (cash flow forecasting; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash) captured by the study model and at 95% confidence interval.*

Key words: *Cash flows management, financial performance, manufacturing industries*

1. INTRODUCTION

Cash flow management has become an important aspect of the operational strategies and planning of many organizations. Availability of cash plays an important role in the operational as well as financial wellbeing of organizations. Managers of many companies look at cash flow management as the core to the going concern mainly with great emphasis on the financial objectives (Okello and Uwondo, 2013). It is therefore important for organizations to align to cash flow management policies that can properly manage the working capital which include cash sales and debtors' collection from stock holdings, to customer account and release of payments to suppliers in order to boost financial performance (Okello and Uwondo, 2013). In accounting and finance perspective, cash flow includes the amount of money in the business at the start of the financial period vis-a-vis cash balances at the closing date of company's financial period (Faulkender, Flannery, Hankins, & Smith, 2012). According to (Frank and James 2014), cash flow is the net liquid amounts put together with the equivalents of cash that come into and move out of an organization.

In line with the above literature, maintaining of optimal cash amount therefore requires good cash flow management activities (Okello and Uwondo, 2013). Organizations with good cash management systems and planning have always stood out to be better placed to make investments decisions which are necessary to achieve better competitive edge (Okello and Uwondo, 2013). Holding of cash kind of management or cash flow in accounting has proven to be more costly to most manufacturing companies. Optimal cash management is critical because keeping idle cash results into diminished yield, increased cost on finances through insurance cover and risk of holding cash as the most volatile asset of an organization. Even though some companies are still involved in carrying out cash flow budgets there still exists effects that can either affect financial performance of an entity in good or adverse way

Globally, cash flow and cash flow management has attracted attention just like in the local commercial undertakings. In Poland, issues relating to cash flow have in the recent past raised concerns especially cash management which affects the day to day operations of the organization which is important to achieve better financial performance (Darek, 2012). In China, cash flow is looked at from an accounting perspective referring to expenditure and receipts within a firm in relation to its performance (Zhous, 2012). There is an increased need for regulators to come up

with cash management controls for all deposits aimed at increasing cash flows hence contributing to better financial performance of organization (Zhous, 2012). For adequate cash management policies in the American economy for instance, financial sector ensures optimal financial performance of organizations because there is desire to achieve economic growth. Essentially, cash is a critical resource for the purchase of assets and organization operations which is a priority for market return to cover interests of its stakeholders (Miles, 2015).

In Eastern African Countries Like Uganda, cash flows is an important that can be utilized to avoid misunderstanding of income statement on accrual basis. It is believed that cash flows are for better performance than profits since they can be manipulated by costs. Profits are liable to manipulation by management thus the necessity of adoption of standards that are less likely to be manipulated by the management (Soyade, 2007).

In Rwanda, free cash flow does not necessarily impact on financial performance of firms. However, operating activities of cash involve high cost of raw materials and other items for manufacturing companies, cash paid for salaries and wages paid to human resources related costs, cash paid to suppliers of goods supplied, fees paid out for licenses and government revenue, fines & penalties charged to organizations and tax paid not forgetting interest and other financial costs (Simpasa 2014). Many firms consider operating cash flow as a factor that boosts their financial good standing. This makes them avoid interest costs and avoid credit traps. In addition, in the event that a firm fails to make enough operating cash, it may to be forced into committing in credits to finance its investment plans. High operating cash flow tends to attract a low credit risk (Simpasa, 2014).

According to Nwanyanwu, (2015) the relationship between cash flows from operating, investing and financing activities in many firms has only focused on organization performance. However, cash flow management in operating activities affects profitability of firms which lacks evidence. The payment of cash to suppliers with taxes on income received is also incorporated when computing cash flow management activities. Hence, cash flow management activities should be as a result of operating, investment, financing, cash collection, equity investment, debt provision, plant and investment, as such an inventory purchased by for normally appear as an operating use of cash on a cash flow statement. Thus, this study focus on the impact of cash flow management

to the financial performance of manufacturing companies in Rwanda with reference of Sulfo-Rwanda Industries Ltd

2 Statement of the Problem

The ultimate objective of any firm is to maximize the profit. But preserving liquidity of the firm is an important objective too. Increasing profits at the cost of liquidity can bring serious problems to the firm. The main objective of every business is to maximize the profit of company by using all means (Biwott, 2019)

In Rwanda, cash flow management activities in manufacturing firms in have an increasing challenge to financial performance. This has been evidenced by the decrease in profits of manufacturing firms attributed by cash flows issues. This was also evidenced by the report of Sulfo Rwanda (2017), showed that revenue growth in sector of manufacturing declined from 3.4% in 2015 to 3.1% in 2017, net profit margin of Sulfo Rwanda has been increased from 2.38% in 2015 to 2.51% in 2017, Gross profit margin of Sulfo Rwanda has been increased from 19.92% in 2015 up to 22.62% in 2018, Return on assets has been increased from 4.5% in 2015 to 4.73% in 2017 while liquidity of Sulfo Rwanda has been declined from 1.33 of current ratio to 1.28 in 2017 of current ratios.

This up and down of net income, retain earning and cash flow of Bralirwa is caused by various factors: insufficient capital to invest (Mungal, 2014), low marketing and advertisement (Akanbi and Adeyeye, 2011), corruption (Gaviria, 2002), and cash management. Lobel (2013) found out that improper accounts preparation and inadequate cash management procedure were some of the major challenges facing organizations leading to close up of the enterprises. Due to time and limited finance, the main purpose of this study is to examine on how cash flow management affects the financial performance of manufacturing companies in Rwanda, a case study of SO-Rwanda Ltd

3 . Objectives of the study

The study sought to establish the effect of cash flows management activities on financial performance of manufacturing industries in Kigali Rwanda

3.1. General objective

The study sought to establish the effect of cash flows management activities on financial performance of manufacturing industries in Kigali Rwanda

3.2 Specific Objectives

The following specific objectives of the study have been used.

1) To determine the effect of Cash flow forecasting on the financial performance of Sulfo Rwanda Industries Ltd

2) To examine the effect of mobilizing & managing the cash flow on the financial performance of Sulfo Rwanda Industries Ltd

3) To find out the effect of maintaining banking relations on financial performance of Sulfo Rwanda Industries Ltd

4) To find out the effect of investing surplus cash on the financial performance of Sulfo Rwanda Industries Ltd

4. LITERATURE REVIEW

This chapter discusses literature which is associated with the study. The chapter reveals theoretical and conceptual framework

4.1. Theoretical Review

This section reviews theories related to the study. Three key theories namely; Keynesian Theory of money, Free Cash Flow Theory and agency theory. Each of these theories is briefly discussed in the following subsections.

Keynesian Theory of Money

This theory was started by Keynes in 1936. Theory of Keynesian stated three reasons for holding money in cash; one is the need of maintaining liquidity, the second is for transaction, the speculative and precautions motives. The assumption is that speculative motive is the need to hold cash to improve performance when need arise for purchase, or favorable exchange. The precautionary motive is the only need to hold cash to cater for unexpected events. The transaction motive is the need to have cash on hand to pay daily expenses (Ali, 2013).

The limitations of this theory are that it only presented motives for holding cash which cannot be relied in improving financial performance of firms. Having effective cash flows management does not mean that firms are able to improve financial performance. Thus, a firm needs to maintain its cash flows statement in order to analyze profitability which may be negatively affected cash flows (Adelegan 2017). According to Richardson (2016) argued on the theory that firms having surplus cash in ventures is translating to profitability situation, and hence cash flow management depends on resources at manager's discretion to apportion.

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 applicable in estimating annual holding cost of cash levels of managing accounts. 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.

Free Cash Flow Theory

Free cash flow theory was developed by Jensen in 1986. This theory refers to surplus of cash is available after financing profitable firms. This states that net income from capital expenditure (CAPEX), influences financial performance of firms. Schoubben (2008) described high free cash flow is the net income adding depreciation and amortization, minus capital expenditure, minus change in non-cash flows, plus borrowing. The assumption of the theory is that the management of firms with high free cash flows is likely to undertake projects that are going to decrease the value of the firm. Cash flows above what a firm requires for capital expenditure into projects had a positive effect on net present value what is termed as free cash flows. Using cash management cash flow would eliminate unnecessary cost in the company. Maximizing income is at the expense of cash control sought to expand firm. The increase in costs is under cash flow models resulting to positive growth.

Darek (2012) criticized theory that maximizing shareholders wealth is not the only drive why managers seek to grow the size of the firm. Expansion of cash flows does not imply increase of resources under the stewardship of a manager and it may result to more pay as pay is positively related to growth. The tendency for cash flow is how to invest in the firm than limited cash receipts from markets which needs cost. The relevance of the theory to cash flows is that it

focuses on maintaining of cash flows for investing activities and shows the flow of cash to be either surplus or deficit in the cash budget.

Agency Theory

Agency theory was initiated and developed by Jensen (Jensen & Meckling, 1976). Jensen (1986) argues that the motives of managers are typically not aligned with those of shareholders and if managers have plenty of cash at their disposal, they use these assets to gain personal benefits rather than raise the worth of the company. Therefore, in the model managers have an agenda of accumulating assets in order to gain discretionary control over the firm's investment decisions (Jensen & Meckling,1976). In this setting, the management of the firm decides whether cash is held by the firm or paid to its shareholders. In order for managers to pursue their own interests, cash constitutes the most suitable form of financing, as having to raise external funds usually requires that the firm provides the lender with insights into how the money is going to be used. Agency theory predicts that firms with higher free cash flow results to increase in firm's cash holdings. The explanation of agency are largely inconsistent with the changes or adjustments in cash holdings of the firm. Harford (1999) results suggest that firms that hold excessive funds are attempt to acquire of other firms. These acquisitions are likely to be diversifying, and results to declines in operational performance and destruction of shareholder value. Harford, Jarrad, Mansi, and Maxwell(2008) concluded that firms with excess cash and poor governance lead to occurring of wasteful investments. Cunha (2013) finds that valuedestroying acquisitions due to excess cash are significantly less likely when firms raise cash from financing sources such as debt issuance.

4.2. Empirical review

Nangih *et al*.((2020) studied on the cash Flow Management and Financial Performance of Quoted Oil and Gas Firms in Nigeria. Corporate financial statements are self-reports of the management intended to serve as instruments of accountability, statement of cash flows inclusive. Information about the cash flows is useful in providing users of financial statements with a basis to assess the ability of the entity to generate and utilize cash and cash equivalents. This study examined, empirically, the relationship between cash flow management and the financial performance of some selected oil and gas firms listed on the Nigerian Stock Exchange. The work was anchored on the Stakeholders' Theory. It employed the judgmental research

design. Data were obtained from the annual reports of five selected listed firms for five years (2013-2018) and analyzed with correlation and multiple regression techniques. The results obtained established that cash flows from operating and investing cash flows had negative and insignificant relationship with profitability whereas cash flow from financing activities had positive and significant influence on firm performance in the oil and gas sector. It was recommended that firms should reevaluate their cash flow management strategies in order to enable them operate more profitably as well as generate cash flows sufficient enough to meet their daily cash needs as they fall due.

Empirical review on Cash flow forecasting and financial performance of companies

Turgut *e al.*, (2021), studied the effect of Cash Flow Forecasting on Financial Sustainability of SMEs in Kericho Central Business District. The study was guided by cash conversion cycle model and cash flow forecasting models. The study employed descriptive research design inform of survey. The target population of this study comprised 102 SME operators where a representative sample of 81 respondents was drawn. Simple random sampling was used in determining the final respondents. Primary data was collected from the respondents through structured questionnaires. Reliability and validity of data collection instruments was ascertained through test-retest method. Descriptive statistics like mean and standard deviation were used to summarize data. Inferential statistics such as correlation coefficients was used to test the non-causal relationship between variables while regression analysis was used to test the research hypotheses at 5% significance level with the aid of SPSS version 25. There was agreement among respondents on whether they plan and priorities the payments of the expenses in order of importance and due dates. Further, there was agreement among the respondents on whether cash budget provides future-oriented information which facilitates monitoring and management of business performance. Conclusions can be made that SME operators are not able to project how and when cash would be received and spent. It was recommended that training be conducted to SME operators so that they are able to project how and when cash would be received and spent.

Empirical review on Mobilizing & managing the cash flow and financial performance of companies

Iradukunda (2019) conducted the study on the cash management and profitability in selected commercial, Banks in Bujumbura, Burundi. The significance of the study is to understand the current framework of the cash management in selected commercial banks in Burundi and how it affects profitability. The study adopted a descriptive cross-sectional design, with the study population comprised of 58 employees of three selected commercial banks. Data were collected using questionnaires, and the data collected was analyzed using descriptive and regression analysis to determine the effect of cash management on profitability in selected commercial banks. The study revealed cash control significantly affects profitability of commercial banks in Burundi (Adjusted R Square=0.212, p=0.00). The study further revealed that cash budgeting significantly affects profitability of commercial banks in Burundi (Adjusted R Square=0.394, p=0.00). Additionally, the study revealed that there is a positive and significant relationship between cash management and profitability among selected commercial banks in Bujumbura (r=.708**, p=0.00). The study concluded that that both cash control and cash budgeting have significant effect on profitability, while cash management have a positive relationship have a significant relationship with profitability.

Empirical review on Maintaining banking relations and financial performance of companies

Thanh and Nguyen(2018), conducted the study on the effect of Banking Relationship on Firm Performance in Vietnam. The objective of this paper is to examine how banking relationship influences on performance of public listed firms in Vietnam. With a sample of 465 companies listed in Vietnam observed in period 2007 – 2010 and using regression method, the research finds that firm performance decreases as the number of bank relationships increases. If a firm establishes strongly short-term credit financing relationship with banks, the firm's performance reduces. On the contrary, if a firm has a strongly long-term credit financing relationship with banks, its performance increases. The effectiveness of using total assets is worse as a firm has a strong overall credit financing relationship with banks. Additionally, the study also indicates that asset tangibility structure has a negative relationship with firm's ROE, while assets have negative

association with ROA. Turnover has a positive association with firm performance. Finally, firms with higher state shares have less effective than ones with lower state shares.
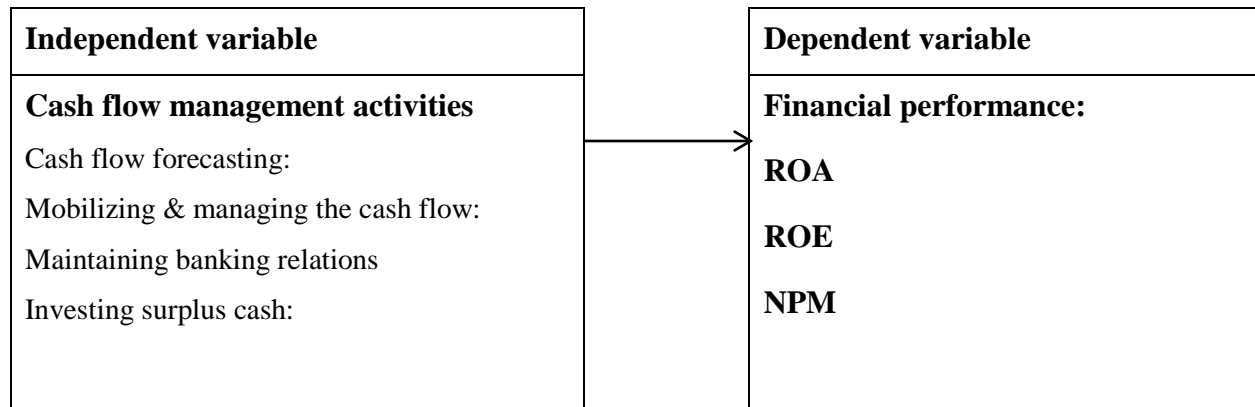
Empirical review on Investing surplus cash and financial performance of companies

Rehaman (2017) analyzed cash flow from investment activities on profitability in Pakistan firm. The study aims 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.

Manyo (2013) studied the effect of investing activities on performance of Nigerian manufacturing firms. The study objectives were examined the effect of account receivable on investing activities in Nigerian firms, relationship between cash flows from operating and profitability of a firm and to determine the effect of receivables and inventories account for a significant proportion. The study used 12 manufacturing firms listed. The study employed correlation analysis. The study found that the current asset of manufactures is more than half of the entire firm's performance. The study also recommended that the receivables and inventories account affect performance measured by total on assets of the firms. This study did fail to analyze financial performance with investing cash flows using descriptive statistics.

4.3. Conceptual framework

The study was conceptualized upon the premise that there is a direct link between the independent variable (aspects of cash flow management activities) and the dependent variable (financial performance) as described in Figure 1.

Independent variable	Dependent variable
Cash flow management activities Cash flow forecasting: Mobilizing & managing the cash flow: Maintaining banking relations Investing surplus cash:	**Financial performance:** **ROA** **ROE** **NPM**

Source: Researcher, 2022

Figure 1: Conceptual framework

2.5. Research gap

From the literature reviewed under cash flow management, researchers have discussed various cash flow management activities relating to financial performance of firms, though, they have not discussed the aspect of cash flow management activities from, operating, investing cash flows and financing activities of these firms. The studies did not examine the effect of cash flow management activities on financial performance using manufacturing firms listed at NSE which remains a gap. Wang (2010) studied the proposition that financing firm's cash flows affect sales growth. The study used variable such as net income before depreciation and tax expense by net sale. The study sampled 16 enterprises by employing Pearson correlation analysis. The study failed to analyze financing cash flows activities on financial performance in manufacturing companies in Rwanda.

5. METHODOLOGY AND MATERIALS

The research methodology in this study deals with the research design, the population of the study, the sampling design, data collection measurement of variables, reliability and validity of the measurement instruments, data processing and presentation, data analysis, limitations of the study and ethical considerations.

5.1. Research Design

The study adopted cross-sectional research design such as descriptive cross-section and correlation cross section research design. A cross-sectional research design is tool used by the researcher to gather data constituting of multiple variables at specific point in time. Cross-section studies can be done across all firms during period of time, but they are especially usefulin business and financial and accounting research to prove or disprove hypothesis about variablesunder financial data reported. The design is considered appropriate as it analyzes data from a population or representative subset at a specific point in time that is cross-sectional data of cash flow management activities on financial performance of manufacturing firms. This design also enables or enabled the researcher to describe the distribution of scores or measurements using various statistics during the period of the study.

5.2. Population of the study

According to Kothari (2011), a study population is a well-defined or specified set of people, group of things, households, firms, services, elements, or events which are being investigated. Thus, the population should fit a certain specification, which the researcher is studying, and the population should be homogenous. Based on the nature of this study, the target population is 390 employees of Sulfo-Rwanda Ltd

Table 1: Employees of RDDP project

S/N	Category	Population size
1	Junior staff	380
2	Senior Managers	3
3	HR staff	7
	Total	390

Source: Sulfo-Rwanda Ltd, 2022

5.3. Sampling design

Mugenda & Mugenda (2010) defined a sample as a smaller group or sub-group obtained from the accessible population. Yamane (1967) provided a simplified formula to calculate sample size. This formula is used to calculate the sample size from a population of 390.

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

A 95% confident level and p=0.5 were assumed for the equation where n is the sample size, N is the population size, and e is the level of precision. The sample size is calculated at 95% confidence level, an alpha level of 0.05 which is margin of error of $\pm$ 5% and 0.5 as the standard deviation which shows how much variance expected in as responses.

When applied, the formula gives us: $390 \div 1 + (390 \times 0.05 \times 0.05) = 198$

S/N	Category	Population size	Sample size
1	Junior staff	380	193
2	Senior Managers	3	2
3	HR staff	7	4
	Total	390	198

Source: Sulfo-Rwanda Ltd, 2022

The study collected data on 198 respondents who are associated with the production activities of SULFO Rwanda.

5.4. Data collection instruments

The researcher therefore compounds the use of questionnaire and documentary analysis in the process of collecting primary data.

Questionnaire

Questionnaire was used to collect primary data. These questionnaires consisted of structured and unstructured questions. Administration of the questionnaires was done by dropping and picking them at an agreed time with the researcher (Kothari, 2006). The decision to choose a survey approach was because it is an efficient and economical method to use in comparison to other methods for example observation. Questionnaires were disseminated through emails to the respondents to give them ample time to verify the accuracy and reliability of the data collected.

This was considered to be a cheaper and convenient approach for data collection in areas that was not easily accessible by the researcher. Questionnaires with 5-points Likert Scale were administered to collect data since it was easy for the respondents to use and understand. The questionnaire tool was used to collect information from 198 employees of SULFO Rwanda.

Documentation review

In this study the documents (books, journals and web site sources) was used in order to get more information.

5.5. Reliability and validity of the measurement instruments

A pilot study was conducted by the researcher by administering the questionnaires to 19 employees of Sulfo Rwanda industries Ltd. From the pilot study, it is possible to detect questions that needed editing and those with ambiguities by supervisor and the answers was submitted to a reliability analysis (with SPSS) for computation of the Cronbach's Alpha.

Validity of the measurement instrument

Validity is defined as the degree to which a test measures what it purports to measure (Collins & Hussey, 2003). Each item in the instruments was reviewed by the supervisor who noted how each of the specified study objectives and research questions was captured in the instrument.

Reliability of the measurement instrument

To test reliability of instruments the researcher administered, pre-test for consistency and logic flow of questionnaires prior actual data collection all data collection tools. For the sake of clear reliability of the questionnaire, the researcher carried out a pre-test by using questionnaires to 19 employees of Mount Meru Ltd in Kayonza District to check for the clarity of the questions asked and the time required for data collection the researcher construct research instruments and analyze the pre-test results using computer program SPSS and Cronbach's Alpha split the questions on the instrument in a possible way and computed correlation values for them all. The computer program was used for this part in the end the computer generated one number for Cronbach's Alphas.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.802	35

Source: Primary data, 2022

The computed Cronbach's Alpha for each questionnaire is greater than 0.7. This being greater than 0.7, it indicates that there is greater internal consistency of the items in the scale, and that the research instrument used was very reliable.

5.5. Data analysis method

According to Creswell (2013), the analysis of data allows the researcher to organize the data collected during the study in order to assess and evaluate the findings so as to arrive at some reasonable, valid and relevant conclusion. This study employed a descriptive statistical method and inferential statistics like correlation and regression analysis as method of data analysis

6. FINDINGS

This section helps to respond the objectives of this study which was to examine the effect of cash flow forecasting; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash as independent variable on financial performance of Sulfo Rwanda. The analysis was done by using descriptive statistics, inferential statistics such as correlation analysis and multiple regression analysis.

Table 3: Correlations analysis

		X1	X2	X3	X4	Y
X1 = Cash flow forecasting	Pearson Correlation	1				
X2= Mobilizing & managing the cash flow	Pearson Correlation	$.468^{**}$	1			
X3= Maintaining banking relations	Pearson Correlation	$.473^{**}$	$.271^{**}$	1		
X4=Investing surplus cash	Pearson Correlation	$.489^{**}$	$.234^{**}$	$.743^{**}$	1	
Y= Financial performance of Sulfo-Rwanda Ltd	Pearson Correlation	$.785^{**}$	$.545^{**}$	$.443^{**}$	$.587^{**}$	1
	Sig. (2-tailed)	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The results in Table 3 indicate that there is significant high positive correlation between Cash flow forecasting and financial performance of Sulfo-Rwanda Ltd at (r=0.785[**,] p-value=0.000<0.01). This implies that an increase of cash flow forecasting leads to the positive change to financial performance of Sulfo-Rwanda Ltd. The results are consistent with those of Okwena et al (2011), who conducted found that cash flow forecasting enhance operational and financial sustainability of firms' opinion on whether they were able to identify potential cash problems and deciding on how to adjust it to improve the organizations cash position. There was neutrality in opinion among the respondents on whether cash flow is only derived once the difference is distinguished between sales revenue and cash receipts.

The results from Table 3, indicate that there is significant moderate positive correlation between Mobilizing & managing the cash flow and financial performance of Sulfo-Rwanda Ltd at (r=0.545[**,] p-value=0.000<0.01). This implies that an increase of mobilizing & managing the cash flow leads to the positive change of financial performance of Sulfo-Rwanda Ltd.

The results from Table 3, indicate that there is significant weak positive correlation between Maintaining banking relations and financial performance of Sulfo-Rwanda Ltd at (r=0.443[**,] p-value=0.000<0.01). This implies that an increase of maintaining banking relations leads to the positive change to financial performance of Sulfo-Rwanda Ltd

The results from Table 3, indicate that there is significant moderate positive correlation between Investing surplus cash and financial performance of Sulfo-Rwanda Ltd at (r=0.587[**,] p-value=0.001<0.01). This implies that an increase of Investing surplus cash leads to the positive change to financial performance of Sulfo-Rwanda Ltd. The study findings were supported by Adelegan (2013) found that there exists a relationship between operating cash flows and dividend changes.

Multiple linear regression analysis

Regression analysis refers to the statistical tool used for investigating the effect of predicators on dependent variable. It shows the direction towards which the relationship between variables is moving. Generally, the researcher seeks to establish the underlying effect of cash flow forecasting; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash on financial Performance of Sulfo-Rwanda Ltd. Data relating to the variables of interest was assembled and regression was employed to estimate the quantitative effect of the

independent variable on the dependent variable. In addition, the study considered the degree of confidence that the estimated relationship is perceived close to the true relationship.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762[a]	.580	.571	.34798

a. Predictors: (Constant), X4=Investing surplus cash , X2= Mobilizing & managing the cash flow , X1 = Cash flow forecasting , X3= Maintaining banking relations

The results from the above Table 4, that the r-squared value was 0.571, which indicate that nearly 57.1% of the total variations of financial Performance of Sulfo-Rwanda Ltd can be attributed to the changes in the value of the independent variables (cash flow forecasting; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash) captured by the study model and at confidence level of 95%. Therefore, 42.7% of other changes in financial performance of Sulfo-Rwanda Ltd are caused other variables not covered in the study objectives.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.259	4	8.065	66.601	.000[b]
	Residual	23.371	193	.121		
	Total	55.630	197			

a. Dependent Variable: Y= Financial performance of Sulfo-Rwanda Ltd
b. Predictors: (Constant), X4=Investing surplus cash , X2= Mobilizing & managing the cash flow , X1 = Cash flow forecasting , X3= Maintaining banking relations

The findings in the table 5, indicate that the overall model was significant because calculated Statistic of 136.213 was large than the critical F (V_1=4, V_2=193) = 2.42 and also because p-value calculated =0.000 is less than critical p-value=0.05 level of significant. This finding shows that the study model is significant and can be applied for the purposes of making predictions at 5% level of significance. Therefore, this implies that the variables: cash flow forecasting; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash are good predictors of financial performance of Sulfo-Rwanda Ltd

Table 6: Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	.668	.283		2.360	.010
X1 = Cash flow forecasting	.522	.067	.466	7.846	.000
X2= Mobilizing & managing the cash flow	.170	.055	.165	3.122	.002
X3= Maintaining banking relations	.103	.035	.134	2.942	.008
X4=Investing surplus cash	.455	.078	.419	5.840	.000

a. Dependent Variable: Y= Financial performance of Sulfo-Rwanda Ltd

$$Y_1 = \beta 0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_{34} + e$$

Based on the findings above the model is represented as follows:

Financial Performance of Sulfo-Rwanda Ltd= $0.668 + 0.522 X_1 + 0.170 X_2 + 0.103\ X_3 + 0.455 X_4$

The regression equation above has established that taking all factors into account (cash flow forecasting; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash) constant at zero, financial Performance items of ROA of Sulfo-Rwanda Ltd was 0.668

The regression results revealed that cash flow forecasting has significance positive effect on on financial performance of Sulfo-Rwanda Ltd as indicated by β_1= 0.522, p-value=0.000<0.05, t=7.846. The implication is that an increase of one unit in cash flow forecasting would lead to an increase in on financial performance of Sulfo-Rwanda Ltd by 0.522 units. Therefore, the study rejected the null hypotheses that stated that there is no significant effect of cash flow forecasting on financial performance of Sulfo-Rwanda Ltd.

The regression results revealed that mobilizing & managing the cash flow has significance positive effect on financial performance of Sulfo-Rwanda Ltd as shown by β_2= 0.170, p=0.002<0.05, t=3.122. This shows that when there is an increase of one unit in mobilizing & managing the cash flow would lead to an increase in financial performance of Sulfo-Rwanda Ltd by 0.170 units. Therefore, the study rejected the null hypotheses that stated that there is no

significant effect of mobilizing & managing the cash flow on financial performance of Sulfo-Rwanda Ltd.

The regression results revealed that maintaining banking relations has significance positive effect on financial performance of Sulfo-Rwanda Ltd as indicated by β_3= 0.103, p-value=0.008<0.05, t= 2.942. The implication is that an increase of one unit in Maintaining banking relations will increase financial performance of Sulfo-Rwanda Ltd by 0.103 units. Therefore, the study rejected the null hypotheses that stated that there is no significant effect of maintaining banking relations on financial performance of Sulfo-Rwanda Ltd.

The regression results revealed that investing surplus cash has significance positive effect on financial performance of Sulfo-Rwanda Ltd as indicated by β_4= 0.455, p-value =0.000<0.05, t=5.840. The implication is that an increase of one unit in investing surplus cash would lead to an increase in financial performance of Sulfo-Rwanda Ltd by 0.455 units. Therefore, the study rejected the null hypotheses that stated that there is no significant effect of investing surplus cash on financial performance of Sulfo-Rwanda Ltd . Result for positive relationship was obtained by (Ghodrati & Abyak, 2014), the results showed that there have been positive and significant relationship between operating cash flow and are positively related to financial management. Results from Amah, Micheal and Ihendinihu (2016) showed that cash flow from operating activities had a major and positive relationship with performance. The findings are in line with the study by Habib (2011) who revealed that there was a positive relationship between operating cash flow and stock return while profitability is short-term. The results of Jintaviwatwong and Suntraruk (2012) showed that current operating cash flows are positively related to future operating cash flows and future stock prices.

7. CONCLUSION AND RECOMMENDATIONS

This section presented conclusions, and recommendations of the research.

7.1. Conclusion

The study concludes that cash flow management such as cash flow forecasting ; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash had significant positive effect on construction projects performance to a great extent and the concluded that R^2 (R-Square) of 0.57.1 which indicates that 57.1% of the total variations of financial Performance of Sulfo-Rwanda Ltd can be attributed to the changes in the value of the independent variables (cash flow forecasting ; mobilizing & managing the cash flow; maintaining banking relations and investing surplus cash) captured by the study model and at confidence level of 95%. It can be concluded that cash flow plan increases the confidence of the bankers on the systems and managements and fits the criteria for banks to evaluate and consider funding. . The study further concluded that investing suplus cash flow management activities had a positive significant effect on financial performance of of Sulfo-Rwanda Ltd. The study indicated that a change in investing cash flows cause an increase on financial performance of manufacturing firms in Rwanda. Investing cash flow activities had a positive significant effect on financial performance. There is a relationship between cash management and corporate profitability since if cash is managed well the company will earn profits and survive a long period of time, the return on investments was there, return on equity and return on assets which are all indicators of profitability

7.2. Recommendations

The following are the recommendation from this research study:

It is therefore recommended that a strong governance policy should be provided on the operations in the manufacturing sector in Rwanda.

Investors and analysts should be encouraged to use cash flow ratios in evaluating the performance of manufacturing firms before forming opinion on the firm. This will help them make good decisions with respect to their investments.

Based on the findings, we recommend that, financing cash flows should not be considered while making decision on earnings per share of manufacturing industries in Rwanda.

The management of Sulfo-Rwanda should encourage companies to set-up a result-oriented cash flow system that will encourage the investing public to avail themselves of financial risk capable of jeopardizing their investment. In addition, external auditors should be encouraged to use cash flow ratios in evaluating the performance of firms before forming an independent opinion on the financial statements. This will give detailed information on the financial performance of the company to enable investors make effective investment decisions.

This study also suggests the implementation of compulsory cash flow policies such as investment policy, divided policy etc. to restore the confidence of the Rwanda investors and creditors. These might enhance both individuals and corporate performances in the manufacturing sector in Rwanda, thereby improving the overall Rwandan economy.

'The responsive on improving maintaining a positive cash flow is essential for a business to survive. Ideally, you want more money flowing in than out. Part of the process of improving your company's cash flow situation is to develop effective accounts receivable strategies. Take some time to analyze what strategies your company is currently using and take the necessary steps to improve your accounts receivable collection methods

Optimization of cash holding reserves should also be encouraged. Efforts should be made by management to increase the value of the company through the funding policy, the provision of incentives to managers in the form of bonus shares, and improve company performance

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