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Abstract

The study was informed by the continuous decline in financial performance of the agricultural firms listed at the Nairobi Securities Exchange, Kenya. The study emanates from the Doctoral dissertation of the first author in which the co-authors served as supervisors. A census approach was adopted where secondary data from audited annual financial reports of all the six Agricultural firms listed at the Nairobi Securities exchange, Kenya was used, covering the period 2015 to 2022. Descriptive analysis and panel regression analysis were applied. Based on the outcome of the panel regression analysis, the study established that cash ratio has significant effect on financial performance of the Agricultural firms listed at the Nairobi Securities Exchange, Kenya. The study recommends that agricultural firms listed at the Nairobi Securities Exchange need to improve on their cash and cash equivalents holdings so as to easily address current liabilities when due. This will in turn sustain the financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. Additional research can be done using a different method of analysis to further investigate the relationship between cash ratio and financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya.

Keywords: *Agricultural Firms, Cash Ratio, Financial Performance, Liquidity Preference Theory and Stewardship Theory*

1.0 Introduction

A firm that is illiquid or bankrupt (requiring liquidation) indicates poor relationship with its supplies and creditors (Vickery, 2018). Such a firm is considered to be facing a liquidity risk. In this context, Omondi and Muturi (2013) defined liquidity as available cash for the near future; after taking into account the current period obligations. Liargovas and Skandalis (2008) point-out that a firm can use liquid assets to finance its activities and investments when external finances are not obtainable or expensive.

Alternatively, high liquidity allows a firm to deal with its emergency (unexpected) needs, apart from its usual obligations; during a period of low earnings. A firm that exhibits poor liquidity levels has high likelihood of collapsing. On the other hand, excessive liquidity indicates an accumulation of cash or assets that do not earn profit for the firm (Maroa & Kioko, 2016). From this scenario, it can be concluded that the liquidity of a firm stands-out as one of the variables or measures that has a significant effect on its performance. It is also evident that, liquidity is closely tied to the day-to-day operations of any firm or business.

According to Food and Agriculture Organization of United Nations (FAO) sources of finance (2020), in these days and age of tight liquidity, many organizations and firms are challenged to look for short term capital to cater for their immediate needs for capital assets that include new machinery or construction of new buildings or depots; using their internal or external financing. This has lured most of most of the firms into excessive borrowing. For instance, up to 75% of firms in the USA had borrowed in excess causing their financial risk to increase (The Wall Street Journal, 2016); which is a liquidity challenge. This study was triggered by such observation that is now evident globally and locally and manifested by various firms undergoing receivership or statutory management and some closing-down or laying-off some of its personnel or resorting to operations that are below their capacities (Odaló, Achoki & Njuguna, 2016).

Lack of effectively maintaining optimum levels of liquidity has resulted in firms experiencing illiquidity issues (cash shortage). This is evidenced by their inability to settle their obligations when they are due; resulting into poor creditors and suppliers' relationships. In addition, financial crisis like that of 2007– 2009, that is more than a decade ago, that generate waves of defaults and other financial effects that “dock” at every country's shoreline. All this contribute to illiquidity and gives more importance to liquidity factor of financial performance. As such, with more on-going financial crises and more expected to emerge, globally, and locally, liquidity will remain a significant factor in sound management of listed firms, and any other businesses (Ellmers, 2019; Liargovas, & Skandalis, 2008; Njoroge, 2015); and in the related future financial performance studies, due to its close relationship with day-to-day business operations.

Regarding observed research gaps, the determinants of financial performance used in the few available related past studies included, among others, the following: managerial competence, capitalization and ownership structure, financial risk (liquidity) and other components of working capital, age of the firm and cash flow holdings (Omondi & Muturi, 2013; Iyakaremye, 2015; Banafa, 2016; Odalo & Achoki, 2016). Omar (2013) suggested the need for the financial performance studies to include private firms, in order to cover a broader Agricultural industry. All this will enable concerned investors and managers to mitigate the effects of such factors; enhance improve their financial performance (Barnor, 2014). But still, financial performance past studies concur on the fact that liquidity plays a pivotal role in enabling any business or firm to thrive.

2.1 Theoretical Literature Review

2.1.1 Liquidity Preference Theory

Liquidity Preference Theory was introduced by Keynes (1936). Considering the value of money market instruments being relatively certain and that instruments such as Treasury Bills are usually extremely liquid; there is no real need of a firm holding large amounts of cash for precautionary motive (Njoroge, 2015). Transaction motive has to do with the income and needs for money not matching and they are therefore balanced by holding enough to meet its daily business needs (Odaló *et al.*, 2016). That is, it has to do with a firm's need for money to meet its day-to-day activities.

In the country and firm contexts, the theory explains the rationale behind their accumulation of external reserves. Coupled with this, is the need for a firm or a country to finance foreign trade that gives rise to demand for liquid reserves which are readily accessible and convertible for this trade obligations. Hence, this Keynesian theory provides an essential link between liquidity and financial performance, as well as, the firm, its shareholders and its securities market and its players. The theory is therefore relevant to this study, as it remains useful to the related players, and firm managers, in optimizing their business decisions, respectively, in a bid to achieve favorable financial performance.

2.1.2 Stewardship Theory

Davis, Schoolman and Donaldson (1997) in their publication of "Toward a stewardship theory of management" they stated that a steward protects and maximizes shareholder's wealth by optimizing financial performance. Stewards consist of: managers, executives, and board of directors. This theory supports this study by providing guidance on of the roles of stewards in satisfying the share-holders need for higher profit, as well as, optimal financial performance that is linked to optimal liquidity levels. Besides, it tends to imply that commendable financial performances are linked to a majority of directors being inside directors, as opposed to external directors. This is supported by the fact that an inside director has a better understanding of the business and is better placed to govern than the counterpart. Hence, can make optimum financial decisions that lead to higher financial performance. Note that, as mentioned earlier, most of the listed Agricultural firms have not lived to their share-holders' expectation, as this theory stipulates. This may be due the stewards being mostly the "politically imposed" outside stewards.

2.2 Empirical Literature Review

Mwaura (2015) studied the effect of liquidity on financial performance of construction and allied companies listed at NSE, using secondary data and multi-regression analysis, and it was revealed that operation cash flow ratio had a positive effect on ROA. He also recommended for the firms to increase their operation cash flow ratio by reducing their credit payment period, so as, to positively affect their financial performance.

Mustafa, Sethar, Pitafi and Kamran (2019) examined the impact of liquidity ratio on profitability of automobile industry firms listed in Pakistan securities exchange (PSE). Fixed and random effect models were estimated and Hausman test was used in choosing the most appropriate model. The study revealed that cash ratio had a negative relationship with ROA. Omar, Abdul, Syed and Nour (2016) in their exploration of the relationship between liquidity ratio and indicators of financial performance of food industries listed in Amman Bursa, where 8 of the

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firms were investigated using statistical analysis; it was observed that Cash R, among other measures, had positive effect on ROA.

Eyisi and Okpe (2014) assessed the impact of cash flow ratio on corporate performance, where performance was measured using liquidity ratios and asset management ratio that were computed based on accrued and cash basis accounting, had one of their findings showing that liquidity ratios computed on cash basis showed negative liquidity position. It was recommended that the cash ratio may be preferred as a better instrument of assessing financial performance, because it gives a better insight on viability and liquidity position of a listed firm. It also serves as a good tool for predicting firm's failure (closure).

Thevaruban (2016) studied the impact of cash management on financial performance of Sri Lanka manufacturing companies by using a sample of 20 members of the sub-sector for the period of 2010/11 to 2014/15, sampled from a target population of 39 firms. Selection was made based on availability of full data set for the given period. Independent variables of the study included cash ratio and cash turn-over ratios and the dependent variable was financial performance measured using ROA and ROE. In data analysis, secondary data and research design consisting of descriptive statistics and relationship analysis package of SPSS version 23 were used. Among the findings of the study was that cash ratio had a negative impact on ROE and ROA. Notably, cash turnover ratio was insignificant.

Affandi, Sunarko and Yunanto (2019) determined the impact of cash ratio, debt to equity ratio, receivable turnover net profit margin, return on equity and institutional ownership to dividend payout ratio of manufacturing companies listed in Indonesia securities exchange in the period 2011 to 2016, revealed that cash ratio, among the others, did not significantly affect the dividend payout ratio of the sub-sector. The study used purposive sampling to select 19 firms that were used and data analysis consisted of classical test, multi regression, F-test, adjusted R squared, and t-test.

On the other hand, Musah and Kong (2019) analyzed the relationship between liquidity and financial performance of non-financial firms listed on the Ghana securities exchange (GSE) found cash ratio (Cash R) in form of cash flow ratio had a significant relationship with firms' RAO. Tenthly, Sanghani (2014) in his study of effect of liquidity on non-financial companies listed at NSE, using secondary data from NSE and multiple regression analysis revealed that Cash flow ratio (Cash FR) had a positive impact on ROA. He recommended that firms in the subsector should increase their operation cash flow ratio by reducing their credit repayment period so as to improve on their financial performance.

Mugetha (2019) studied the effect of liquidity on financial performance of firms listed in NSE, by using panel research design that is non-experimental in nature. The study targeted all the 64 listed firms on NSE. The obtained secondary data was analyzed using a dynamic panel data regression model and tested using ANOVA across the sub sector. Hypothesis testing was done at a confidence level of 95%. The study findings revealed that there was a positive relationship between liquidity and ROA of financial and non-financial firms listed in NSE. Firms listed in NSE were advised to focus on liquidity so as to attain significant improvement in their financial performances.

3.0 Research Methodology

Research Design

Explanatory research design was used in the study. Both descriptive data analysis and panel data analysis were used. The descriptive quantitative analysis provided descriptive, correlation and regression (or causal relationships) statistics of the variables involved; while the inferential analysis provided related predictions and estimates (parameters), as well as, the required hypothesis tests (diagnostic analysis).

Target population

Target population is any group of individuals that have one or more characteristics in common that are of interest to the researcher is referred to as a population (Best & Kahn, 2004). This study targeted the six (6) agricultural firms listed at the NSE, Kenya. The target period was 2015-2022.

Sampling Design

As indicated by Smith and Albaum (2012) a sampling is all the population entities that are used for data collection. Cooper and Schindler (2008) adds that they are population elements that may be accessible at the time of data collection. Census approach was utilized where all the six targeted firms were included.

Data Analysis and Presentation

After successfully completing the data collection process, analysis of data was carried out. Mean, standard deviation, maximum and minimum values were established for the study variables, based on the descriptive analysis. Panel regression analysis was applied in the study. The hypothesis testing was guided by a threshold of 0.05 significance level. A p-value below 0.05 implies a significant effect and a p-value above 0.05 meant an insignificant effect. In the empirical, cash ratio was expressed as a function of financial performance:

$$FNP = \beta_0 + \beta_1 CSR_{it} + \varepsilon$$

Where:

FNP= Financial Performance

CSR = Cash Ratio

i = Firm (1 to 6)

t = Time period (2015 -2022)

4.0 Findings and Discussions

Data was analyzed based on descriptive analysis and panel regression analysis. The mean, standard deviation, total observations, minimum value and maximum value for each variable were capture in the descriptive analysis. The panel regression analysis provided the basis upon which the conclusion of the study was made.

4.1 Descriptive Analysis

In order to document the basic features of the research data, the descriptive analysis was conducted. Through this, descriptive statistics cutting across mean, total observations, standard deviation, minimum and maximum values were recorded as captured in Table 1.

Table 1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Financial Performance	48	.249186	.4568764	-.52312	1.635935
Cash Ratio	48	1.418517	1.84611	0	7.1663

Source: Study Data (2023)

Based on the descriptive summary of the variables in Table 1, the average financial performance of the firms in the study was 0.249186%, with a standard deviation of 0.4568764. This means that the financial performance of the firms varied by 0.4568764 on average. The range of financial performance values was -0.52312 to 1.635935. The average cash ratio of the firms in the study was 1.418517, with a standard deviation of 1.84611. This means that the cash ratio of the firms varied from each other by 1.84611 on average. The range of cash ratio values was 0 to 7.1663.

4.2 Panel Regression Analysis

The panel regression analysis was carried out in line with the objective of the study, hence it was utilized as a basis for the hypothesis testing as guided by the threshold of 0.05 significance level. The findings of the panel regression analysis are contained in Table 2.

Table 2: Panel Regression Results

Financial Performance	Coef.	Robust Err.	Std. Z	P>z	[95% Conf. Interval]
Cash Ratio	.0990725	.0370433	2.67	0.007	.0264689 .1716761
_cons	.0598644	.0741373	0.81	0.419	-.085442 .2051708
R ²	0.2284				
Wald Chi2 (4)	27.18				
Prob>Chi2	0.0000				

Source: Study Data (2023)

F-value of 27.18 and p-value of 0.0000 in the results in Table 2 indicate that the model is significant in explaining financial performance. The R-square, which was indicated by 0.2284, indicated the model's goodness of fit. This suggested that 22.84 of the variations in the firms' financial performance could be attributed to all of the explanatory factors. Therefore, a robust estimation was carried out because of the low R-square in the outcome. The results of the showed a positive intercept because the value of 0.0598644 is insignificant at the 0.005 threshold.

H₀: Cash ratio has no significant effect on the financial performance of Agricultural firms listed at the Nairobi Securities Exchange, Kenya.

The study sought to determine the effect of cash ratio on financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. In line with the underlying objective, a

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corresponding hypothesis stating that cash ratio has no significant effect on financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya was formulated and tested. A p-value value of 0.007 and coefficient of .0990725 were established in Table 2 which imply significance and positive relationship between cash ratio and financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. The study therefore found that cash ratio has significant effect on financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. The positive coefficient further indicates that a unit increase in cash ratio results in a corresponding increase of 0.10 in the financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. Cash ratio being a key liquidity ratio focuses on short-term assets and liabilities while providing assessment aimed at minimizing uncertainty, hence significantly predicting financial performance of firms.

The research findings collaborate with those of previous empirical studies. Musah and Kong (2019) in their study of the relationship between liquidity and financial performance of non-financial firms listed on the Ghana securities exchange (GSE) found cash ratio (Cash R) in form of cash flow ratio had a significant relationship with firms' ROA. Also, Mugetha (2019) studied the effect of liquidity on financial performance of firms listed in NSE, by using panel research design that is non-experimental in nature. It was found that positive relationship between liquidity and ROA exists.

On the contrary, Thevaruban (2016) studied the impact of cash management on financial performance of Sri Lanka manufacturing companies. It was reported that cash ratio had a negative impact on ROE and ROA. Affandi, Sunarko, and Yunanto (2019) in their study of the impact of cash ratio dividend payout ratio of manufacturing companies listed in Indonesia securities exchange, reported insignificant relation between the two variables. Furthermore, Mustafa *et al.* (2019) studied the impact of liquidity ratio on profitability of a firm for automobile industry of Pakistan listed on PSE. It was established that cash ratio had a negative effect on return on assets.

5.0 Conclusion and Recommendations

The study established that cash ratio registered a significant effect on financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. Consequently, the study concluded that cash ratio is important in the predicting of the financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. The composition of cash as well as cash equivalents of listed agricultural firms determines their financial performance. The study recommends that agricultural firms listed at the Nairobi Securities Exchange need to improve on their cash and cash equivalents holdings so as to easily address current liabilities when due. This will in turn sustain the financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya. Additional research can be done using a different method of analysis to further investigate the relationship between cash ratio and financial performance of agricultural firms listed at the Nairobi Securities Exchange, Kenya.

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