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INFLUENCE OF LIQUIDITY ON THE FINANCIAL PERFORMANCE OF AGRICULTURAL FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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Abstract

Purpose: The purpose of this study was to establish the influence of liquidity on the financial performance of agricultural firms listed at the Nairobi Securities Exchange.

Methodology: The research design adopted was descriptive and causal (explanatory). A census approach was adopted and all the seven listed agricultural companies were taken as the population. The respondents' sample was from finance departments at all levels and 220 questionnaires were administered. Primary data was collected using questionnaires while the secondary data was collected using data collection sheets from the firms as well as from the Nairobi Securities Exchange and CMA records. The particular inferential statistic was regression and correlation analysis. Panel data methodology was employed using a multivariate regression model to test the hypotheses and link the variables

Results: The study found out that liquidity has a positive influence on return on assets (ROA). In addition, the findings revealed that liquidity has a positive influence on return on equity (ROE). Further the results indicated that liquidity has a positive influence on earnings per share (EPS). The influence of liquidity on EPS is not statistically significant

Unique contribution to theory, practice and policy: The study recommends that financial managers should ensure that there is no mismatch between the current assets and current liability. If this happens, the mismatch will affect the firm's profitability.

Keywords: Liquidity, Financial performance financial performance analysis, listed Companies.

1.0 INTRODUCTION

1.1 Background of the Study

Agriculture development is the most critical sector for most Sub-Sahara African countries owing to its significance in food security and employment creation. Agricultural performance however has since the 1990s erratically fluctuated widely, culminating in a declining trend over the period. The close relationship between the performance of agriculture and that of the economy obviously implies that agriculture must grow at a high rate for it to spur economic growth

(Nyoro, Wanjala & Awour, 2012). However, for agriculture to grow at the expected rate, quality investments need to be put in place in key areas that have potential for growth. Agricultural companies thus have the potential of enhancing economic growth by providing raw materials and market for good quality produce in large quantities and being catalysts for increased production of farm produce. Financial performance of listed agricultural firms has become an issue of common concern of the stakeholders including the shareholder, the creditor, the company staffs and the government administration. At present, as the capital market expands a great number of firms crowd into it. Although most listed firms are excellent representatives of their businesses, the working rule of the market economy, which is the competition mechanism of the superior winning and the inferior washing, leads to the different financial performances. Therefore, the financial performance of a firm usually reflects its development condition (Wang 2008).

The Nairobi Securities Exchange, formerly called Nairobi Stock Exchange, was established in 1954. The establishment of the NSE was mainly geared towards the sale of shares of public companies that are listed on the NSE and other private companies that intend to go public. Since the establishment of the NSE, it has become the major securities exchange market in East Africa with about sixty (60) companies listed, grouped into eleven (11) industries. Inclusive of the industries is the agricultural sector, which is currently comprised of seven (7) agricultural companies (NSE, 2014).

Firms are mostly concerned with their profitability, as profitability serves as the primary goal of all business ventures. Without profitability, the business will not survive in the long run. The notable measures of financial performance in companies include return on assets (ROA), return on equity (ROE) and net margin on sales. Financial performance measures serve as a basis for evaluating the performance of a corporate entity. The use of equity and debt impact the common performance measures in different ways. A given firm with relatively high use of debt will have higher interest expense and therefore lower net margin. On the other hand, a relatively lower use of equity would result in a proportionately higher return on equity. Therefore, if a corporate entity were to use relatively less debt and more equity, the opposite would be true (Liebrand, 2007).

1.2 Problem Statement

Agriculture remains critical to Kenya's economic growth and development. This sector continues to remain the largest platform upon which economic growth is based, which makes the economy largely agro-based. Therefore agriculture must grow at a high rate in order to maintain sustainable economic growth. The sector which is the mainstay of Kenya's economy, contributed 26 percent of gross domestic product (GDP), and another 25 percent indirectly. This sector contributes 65 percent of Kenya's total export and employs over 40 over percent of the total population (Government of Kenya, 2011). Despite the support from the government, Kenya has continued facing enormous challenges in the agriculture sector with many companies in the agriculture sector closing down (PDA 2010). The government has however continued supporting the agricultural organizations with efforts geared towards establishing the factors leading to the poor financial performance and collapse of the companies. KDB (2010) observed that over 50 per cent of dairy companies in the country had closed down in the period between 2003 and the year 2010 while almost all the remaining dairy based companies were operating at below

capacity. Similarly, PDA (2010) reported a similar trend with the crop based companies closing down or operating below capacity.

Studies have been conducted both internationally and locally to examine the factors affecting the performance of firms listed in the stock exchange. Wu, Li and Zhu (2010) stated that a good financial performance is the precondition for agricultural listed firms to be sustained and record healthy development. Rising profitability is the driving force of agricultural listed firms to drive agriculture from traditional agriculture to modern agriculture. Therefore, the study on factors affecting financial performance of agricultural listed firms helps firms to improve the financial performance and to maintain sustainable growth. However, Peng (2006) mentioned that a series of problems related to the transitional economic background and historical factors have led to the poorer financial performance, higher risks of the listed agricultural firms, which have consequently affected the competitiveness and sustained development of the firms. The financial performance of the listed agricultural firms can reflect their development. Therefore, the deep analysis of the factors affecting their financial performance in the background of transitional economy in China is theoretically and practically vital for one to understand the development trend of the listed agricultural firms and improving their financial performance.

Hao (2011) stated that China has a large population, but has a relatively small field land. As of 2010, China had field land area only about 300.796 million acres. The per capita field land area is 0.227 acre, which is only 40 per cent of the world average. Thus it can be seen that it is important to improve the productivity of the agricultural sector. The agricultural economy is the foundation of the national economy, and agricultural listed firms are also an important component of China's stock market. Therefore, it's very necessary to study the factors affecting financial performance of agricultural listed firms. Gao (2010) observed that agriculture is the foundation of the national economy. India is a large agricultural country as well as a developing agriculture country. Agricultural listed firms financed from capital market promote agriculture integration operation, which is a trend in the future of agriculture development. However, agricultural listed firms in India have faced a big challenge characterized by worsening financial performance is getting worse and failing diversification operations according to newspapers.

Omboi (2011) observed that the agricultural sector has not performed well over the last decade with its growth declining from a rate of 4.4 per cent in 1966 to 1.5 per cent in 1999 and to an all-time low of negative 2.4 per cent in 2000. Growth in the sector started to pick up in 2002 rising to 1.8 per cent in 2004 and a dramatic 6.7 per cent in 2005. The suboptimal performance could have been caused by many factors including, liquidity, ownership structure, company size, sales growth and operating cost efficiencies. Qin, Fu, Ma, and Li (2011) showed that listed agricultural firms are essential for the sustainable development of agriculture. The small population quantity, slow development, weak growing capacity, relatively poor rationality and unbalanced regional distribution situation of China's agricultural listed firms have seriously restricted the development of China's agricultural economy.

The highlighted studies above (Omondi & Muturi 2013; Omboi 2011; Mwangi, Makau & Kosimbei, 2014 & Wambua 2013) did not consider a moderating variable. This study used board size and interest rate as moderating variables. Further, all the studies highlighted used simple regression but this study adopted panel data methodology. Omondi and Muturi (2013) which is a closer to this study used data running from the year 2006 to 2012 while the current study used

data from the year 2003 to 2013. In addition Omondi and Muturi (2013) used only ROA as a measure of the financial performance where as the current study used ROA, ROE and EPS. This therefore justify why this study is conducted despite the fact that some of the related studies have been done.

While past studies have identified both internal and external factors as key determinants of a firm's performance, few studies have been done with regard to factors influencing the financial performance of agricultural listed companies, especially in developing economies. Such studies have produced mixed results. This study therefore sought to establish the influence of liquidity on performance of agricultural firms listed in the Nairobi Securities Exchange.

1.3 Research Objective

The objective of this study was to establish the influence of liquidity on the financial performance of agricultural firms listed at the Nairobi Securities Exchange.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Liquidity Preference Theory

According to Jhingan (2004), this theory was developed after the great depression in the 1930's by Keynes. However, Uchendu (2011) stressed that, the theory, which was contained in his book, the General Theory of Employment, Interest, and Money published in (1936), rejected the notion that households and business want to hold a constant that, the income velocity of money depends on many complex variable factors. Ankintoye (2000) also observed that, income velocity is not constant but its variability is influenced by the level of interest rates, liquidity preferences, the change in income, the scale of anticipated expenditures, availability of money substitutes and the number of non-bank financial institutions. According to Ogiriki and Andabai (2014), Keynes in 1936 outlined three motives for holding money as: (i) transaction motive- for bridging the receipt and expenditure gap; (ii) the precautionary motive-to provide a reservoir of purchasing power that can be used to finance unanticipated expenditures, and (iii) the speculative motive-to satisfy the desire to hold wealth in the most liquid form if one expects interest rates on alternative assets to rise, thereby causing capital losses. The transaction motive exist as the income and needs for money are not matched and therefore the need to balance by holding enough to meet the business needs (Gbosi, 2005; Farooque, van Zijl, Dunstan & Karim, 2007).

Money needed by financial institutions for their day to day activities in order to complete economic transactions is known as the demand for money for transactions motive and is usually dependent on the size of the income, time gap between the receipts of income and spending habits. Precautionary motive on the other hand is when financial institutions want to keep some liquid money to meet some unforeseen emergencies, contingencies and accidents while speculative motive is when the financial institutions keep cash with them to take advantage of the changes in the prices of bonds and securities (Ogiriki and Andabai, 2014)

Parker (2007) asserted that, change in the transactions balances depend on such factors as level of income, employment, prices, business turnover, and the normal periods between the receipt of income and disbursement of cash.

Jhingan (2004) agreed that, the precautionary demand for money relates to the desire of members of the public to provide for contingencies requiring sudden expenditure and to meet unforeseen opportunities of advantages purchases. Accordingly, the demand for money depends on subjective factors and interest rates. However, transactions and precautionary motives are income elastic but interest inelastic implying demand decline when interest rates increase expressed in an (L) function, where demand is (M₁) and (Y) level of income and $M_1 = L_1 Y$ (Ogiriki and Andabai, 2014). According to Andabai (2011) the demand for money is determined by the expectations in changes in bond or current market rate of interest speculatively.

Keynes (1936) further posits that, the determination of interest rates will be found in the money market and there are basically the supplies of money exogenously determined, while the demand for money depends on the three motives but the expenditures depends on the level of income. Nzotta (2014) opined that, if individuals believe that market interest rates are likely to increase in the future, they have an incentive to hold their wealth in the form of liquid assets in order to avoid the capital losses of long-term assets that would accompany the expected increase in interest rates.

Jhingan, (2004) posits that liquidity preference is exhibited by those holding money believing that its yield will exceed yields from alternative assets. Amadi and Akani (2005) express the optimism of people on continued increases in interest rates. There is an inverse relationship between liquidity preference for money and speculative demand for money and current interest rates. This represents the degree of risk aversion and expected yield from alternative assets (Andabai, 2007; Pandey, 2007; Ankintoye, 2000).

Okpara (2007) stated that, the total demand for money combines the speculative motive with the transaction and precautionary reasons Keynes called M₁ which he made a function of nominal income while the part for speculation M₂ depending on the market rate of interest. Afolabi (1993) acknowledges that the liquidity preference depends on nominal incomes and the market rate of interest, or alternately, depends on a real income and the real rate of interest if the price level is constant while demand for money is constant.

Ross (2000) describes the rate of interest as the price of acquiring credit expressed as a ratio of cost of credit against total credit obtained. The Interest rates changes are signals to borrowers, lenders, savers, and investors of (Afolabi, 1993). For instant, increase in interest rates (Deposit rate) generally will bring a greater volume of savings and loadable funds in the economy while lower rates of interest (Lending rate) attract borrowing and investment spending in the economy. According to Uchendu (2011), interest rates serves the following functions: it helps to guarantee that current savings will flow into investment that will promote economy growth, it retains the available supply of credit, generally providing loadable funds to those investment projects with the highest expected returns and it brings the supply of money into balance with the polices of demand for money. The government also uses interest rates as a tool to influence the volume of savings and investment (Akpan, 2004).

Baumol (1957), view money balances as savings that can be used for financing expenditures in his inventory model. Amadi (2005) stressed that, earning assets are considered to be an alternative to money balances as temporary repository of funds held to bridge the gap between receipts of income and its subsequent expenditure. However, Gbosi (2005) maintained that, the

result that reinforces the liquidity preference affects the higher interest rates on velocity of money supply that was early posited by Keynes (1936). According to Anyanwu (1993), the incentive to economize cash balances by holding funds interest bearing assets must be weighed against the cost incurred in transferring funds to determine the optimal allocation between money and other assets.

Thus, the optimal amount of money balances held for transaction purpose increase proportionately less than anticipated expenditure because it became practically impossible to hold a larger percentage of working-capital balances in interest-earning assisted as the scale of expenditure increase (Jhingan, 2005).

Baumol (1957) in his study concluded that; the relationship between the demand for transactions balance and income is neither linear nor proportional. Rather, change in income leads to less than a proportionate change in the transactions demand for money. Okpara (2010) concurred with Baumol on the following: individuals received money income once in a period, monthly and would opened it all at constant rate over the period, cash balances are held because income and expenditure do not take place simultaneously, it is generally expensive to hold cash balances. The idle cash balances can be invested in securities at a rate of interest. Where the interest rates are high, the lesser the balances held and vice versa.

According to Ogiriki and Andabai (2014), the theory of liquidity preference is an extension of the Tobins (1966) portfolio balance approach to money and other assets which focused on interest rates and demand for money. However, the theory does not assume that securities and other non-money assets are perfect substitutes for each other and hence it opines that, there are many different interest rates that are imperfect substitutes among earning assets (Ankintoye, 2000). Uchendu (2011) confirmed that, portfolio balance is a theory of assets choice, concerning the individuals and the community that allocate their holding among alternatives assets with the demand for each assets being measured as a proportion of total assets. Uchendu (2011) however, provides for the diversification between holding money and bonds. Pandey (2005) asserts that risk aversion explains the inverse relationship between interest rates and demand for money.

Orsota (2004); Parker (2007) and Ogwuma (2008) both posited that the Tobin's theory addressed most of the shortcomings of the Keynesian liquidity preference theory which had depended on the inelasticity of future interest rates and confirmed that demand for money is inversely related to interest rates and that individuals are risk averse and hold diversified portfolios of bonds and money.

Therefore, Imo (2002) posited that, three types of investors were articulated by him such as (i) the risk averse investors, people who prefer to avoid risk of loss associated with holding bonds (ii) the risk plungers (risk neutral), these are people who accept that risk of loss in exchange is commensurate with income on investment. Nzotta (2014) pointed out that these investors prefer diversification of their portfolio between cash and near cash assets and bonds, and (iii) risk lovers, who are investors who prefer and enjoy investing all their wealth in bonds. Uchendu (2011) however, explains that risk is acceptable up to the point where marginal returns equal to the marginal risk.

The theory is relevant to this study since it explains the link between liquidity and financial performance. Agricultural firms listed in NSE may sometimes prefer to hold cash, which entails

less risk. The more liquid an investment, the easier it is to sell quickly for its full value. Because interest rates are more volatile in the short term, the premium on short- versus medium-term securities will be greater than the premium on medium- versus long-term securities. Therefore this translates to influencing financial performance of the firms

2.2 Empirical Review

Chandran (2008) defines liquidity as current assets over current liabilities. Their study pointed out that liquidity measures the ability of managers in firms to fulfill their immediate commitments to policyholders and other creditors without having to increase profits on underwriting and investment activities and liquidate financial assets. Liquidity was statistically significant at 0.01 level in a one tail test. It found that liquidity was positively related to financial performance.

Omondi, & Muturi, (2013) conducted a study on the factors Affecting the Financial Performance of Listed Companies at the Nairobi Securities Exchange in Kenya. The study adopted an explanatory research design and 29 listed firms (excluding listed banks and insurance companies) which have consistently been operating at the Nairobi securities exchange during the period 2006-2012 were sampled. Purposive sampling technique was used. The analysis of the data collected from financial statement followed a number of basic statistical techniques. Descriptive statistics (mean and standard deviation) and inferential statistics (Pearson correlation and multiple-regression) were used to analyze data. Pearson correlation was used to ascertain the interrelationship between the variables, whereas multiple-regression was used to assess the extent of the effect of the independent variables on the dependent variable. Study findings showed that leverage had a significant negative effect on financial performance ($\beta_1 = -0.289$, $p < 0.05$). Findings also showed that liquidity had a significant positive effect on financial performance ($\beta_2 = 0.296$, $p < 0.05$). Company size had a significant positive effect on financial performance ($\beta_3 = 0.480$, $p < 0.05$). The study also revealed that company age had a significant positive effect on financial performance ($\beta_4 = 0.168$, $p < 0.05$). The study provides some precursory evidence that leverage, liquidity, company size and company age play an important role in improving company's financial performance. The study suggests that there is need to determine an optimal debt level that balances the benefits of debt against the costs of debt and developing sound techniques of managing current assets to ensure that neither insufficient nor unnecessary funds are invested in current assets as maintaining a balance between short-term assets and short-term liabilities is critical. The study also suggest that firms should expand in a controlled way with the aim of achieving an optimum size so as to enjoy economies of scale which can ultimately result in higher level of financial performance

Abeysekera and Guthrie (2005) in a study entitled "working capital management, operating cash flow and company performance" studied the relationship between working capital management, company performance and cash activation among 5802 companies from 1990 to 2004. The results indicated that managers can increase profitability and cash flow through shortening cash conversion cycle and collection period of receivable accounts and they can decrease profitability and cash flow via prolonging due date of payable accounts. Nzotta, (2014) study on the relationship between working capital management and profitability on 131 companies listed on Athens Stock Exchange from 2001 to 2004 found that there is a significant relationship between profitability (Return on Assets) and cash conversion cycle and managers can play critical role

through managing optimally components of cash conversion cycle including receivable accounts, inventory and payable accounts to create profit for companies.

According to Abubakar (2010) liquidity management takes place within an operational framework which, in itself, is set against the backdrop of the existing economic environment. For instance, the institutional features of the interbank money market need to be efficient in terms of smooth transfer of funds between lenders and borrowers. Eljelly (2004) argues that efficient liquidity management associates planning and controlling current assets and current liabilities in an efficient manner so as to eliminate the risk of non-payment of dues for short term requirements and to also avoid excessive investment in these assets. The planning and control of current assets and current liability may be mandatory in compliance with monetary authority and supervisory policy or may be an organizational strategy to ensure that adequate liquidity is maintained at all times.

3.0 RESEARCH METHODOLOGY

The research design adopted was descriptive and causal (explanatory). A census approach was adopted and all the seven listed agricultural companies were taken as the population. The respondents' sample was from finance departments at all levels and 220 questionnaires were administered. Primary data was collected using questionnaires while the secondary data was collected using data collection sheets from the firms as well as from the Nairobi Securities Exchange and CMA records. The particular inferential statistic was regression and correlation analysis. Panel data methodology was employed using a multivariate regression model to test the hypotheses and link the variables.

4.0 RESULTS AND DISCUSSIONS

4.1 General Information

4.1.1 Liquidity

This section presents the trend analysis of liquidity, log of total assets, debt ratio, sales percent, operating cost percentage, board size, and interest rates, ROA, ROE and EPS. The trend analysis is conducted so as to help establish the movement of the variables under study and therefore help in performing unit root analysis as the trend analysis graphically indicates the pattern of movement in the variables.

Figure 1 shows the liquidity trend for the seven companies from the year 2003 to 2013.

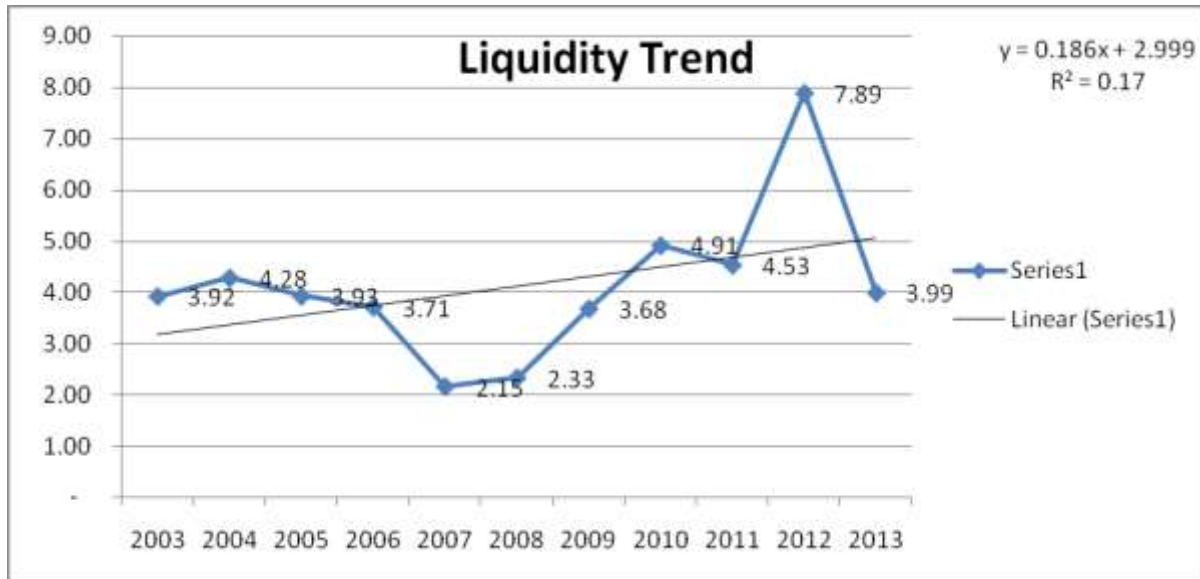


Figure 1: Trend for Liquidity Rate Analysis from 2003 to 2013

The trend line indicates that liquidity trend has been on the rise. Trend lines shows that there is a low goodness of fit (R squared) for liquidity. The implication of this is that liquidity trend has been inconsistent. This is explained by the R squared. Lack of consistency indicates unsustainability.

Table 1: Trend Analysis for Liquidity Rate

	N	Mean	Std. Deviation	Std. Error	95percent Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Liquidity	2003	7	3.9195	4.15244	1.56947	.0791 7.7598	.53	12.36
	2004	7	4.2804	4.13809	1.56405	.4533 8.1075	.64	12.75
	2005	7	3.9250	3.78096	1.42907	.4282 7.4218	.52	11.44
	2006	7	3.7103	4.20667	1.58997	-.1803 7.6008	.66	12.53
	2007	6	2.1546	1.04861	.42809	1.0541 3.2550	.78	3.95
	2008	7	2.3288	.91145	.34449	1.4859 3.1718	1.07	3.84
	2009	7	3.6775	2.55672	.96635	1.3129 6.0420	1.50	7.97
	2010	6	4.9146	6.58458	2.68814	-1.9955 11.8247	1.34	18.29
	2011	7	4.5319	3.71853	1.40547	1.0928 7.9709	2.10	12.41
	2012	6	7.8926	6.70876	2.73884	.8522 14.9330	1.90	18.76
	2013	6	3.9895	2.45936	1.00403	1.4086 6.5705	1.33	7.95
	Total	73	4.0866	3.98292	.46617	3.1573 5.0159	.52	18.76

4.2 Influence of Liquidity on the Financial Performance

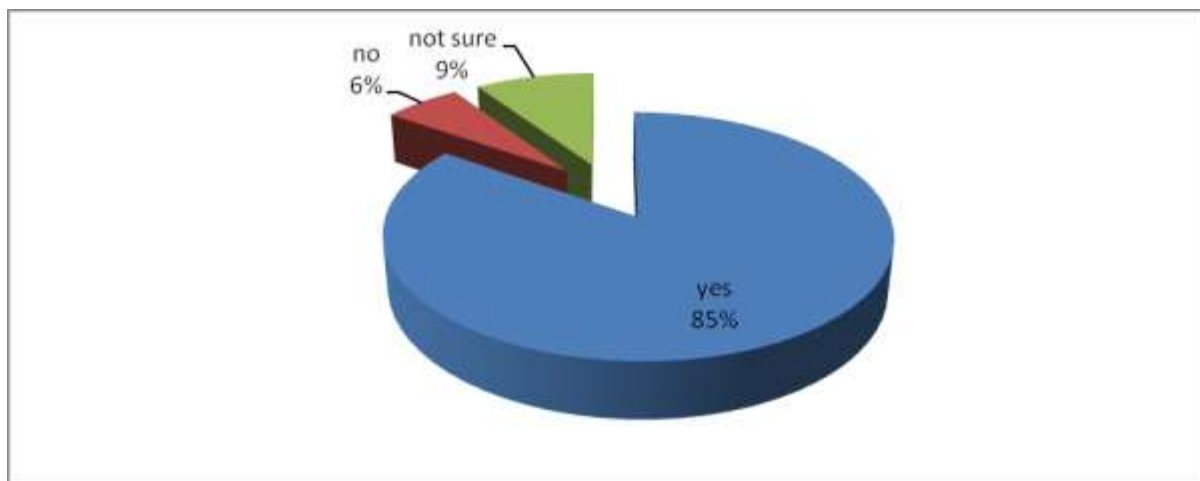


Figure 2: Influence of Liquidity on Financial Performance (Primary Data)

The respondents were requested to rank the impact of liquidity on financial performance indicators (ROA, ROE and EPS). This is presented in table 2.

Table 2: Impact of Liquidity on Financial Performance Indicators (Primary Data)

Statement	low rank	moderate rank	high rank	Mean	Std. Dev
Liquidity on ROA	2.70percent	30.70percent	66.70percent	2.64	0.534
Liquidity on ROE	4.70percent	58.00percent	37.30percent	2.33	0.562
Liquidity on EPS	41.30percent	26.70percent	32.00percent	1.91	0.854
Average				2.29	0.65

Results show that 66.7percent who were the majority indicated that liquidity has a greater impact on ROA, 58 percent indicated that liquidity has a moderate impact on ROE while 41.3 percent responded that liquidity has a low impact on EPS. The overall mean of the responses was 2.29 which indicated that majority of the respondents agreed that liquidity has a moderate influence on financial performance indicators. Additionally, the standard deviation of 0.65 indicates that the responses were varied.

The study also sought to establish the extent of the respondent's agreements or disagreements on the influence of liquidity on financial performance. The responses were rated on a likert scale and the results presented in Table 3 below.

Table 3: Influence of Liquidity on Financial Performance (Primary Data)

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
The liquidity of the company has a positive impact on the profitability of the company	10.70%	16.70%	15.30%	22.00%	35.30%	3.56	1.431
The liquidity of the company has a positive impact on the return on assets(ROA) of the company	19.30%	26.70%	30.70%	13.30%	10.00%	2.68	1.217
The liquidity of the company has a positive impact on the return on equity(ROE) of the company	16.70%	12.00%	29.30%	21.30%	20.70%	3.17	1.345
The liquidity of the company has a positive impact on the earning per share(EPS) of the company	18.70%	13.30%	19.30%	32.00	16.70%	3.15	1.363
Average						3.14	1.339

Majority of 57.3percent of the respondents agreed that the liquidity of the company has a positive impact on the profitability of the company, 46percent disagreed that the liquidity of the company has a positive impact on the return on assets (ROA) of the company, 42percent of the respondents agreed that the liquidity of the company has a positive impact on the return on equity (ROE) of the company while 48.7percent agreed that the liquidity of the company has a positive impact on the earning per share(EPS) of the company. On a five point scale, the average mean of the responses was 3.14 which means that majority of the respondents were agreeing to the statements in the questionnaire; however the answers were varied as shown by a standard deviation of 1.339.

4.2.1 Correlation Analysis for Liquidity and Financial Performance

Table 4 below presents the results of the correlation analysis between dependent and independent variables using secondary data.

Table4: Correlation Analysis Table (Secondary Data)

		ROA	ROE	EPS	Liquidity
ROA	Pearson Correlation	1.000			
	Sig. (2-tailed)				
ROE	Pearson Correlation	.992**	1.000		
	Sig. (2-tailed)	0.000			
EPS	Pearson Correlation	.253*	.263*	1.000	
	Sig. (2-tailed)	0.027	0.022		
Liquidity	Pearson Correlation	.389**	.353**	0.004	1.000
	Sig. (2-tailed)	0.001	0.002	0.974	

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

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

The results shows that ROA and liquidity is positively and significantly related ($r=0.389$, $p=0.001$). The results from correlation analysis further indicate that ROE is positively and significantly related with liquidity ($r=0.353$, $p=0.002$). In addition the results from correlation analysis indicate that EPS is positively and insignificantly related to liquidity ($r=0.004$, $p=0.974$).

Table 5 below presents the results of the correlation analysis between dependent and independent variables using primary data.

Table 5: Correlation Analysis Table (Primary data)

		Liquidity on ROA	Liquidity on ROE	Liquidity on EPS	Mean liquidity
Liquidity on_ ROA	Pearson Correlation	1.000			
	Sig. (2-tailed)				
Liquidity _on _ROE	Pearson Correlation	0.126	1.000		
	Sig. (2-tailed)	0.124			
Liquidity on EPS	Pearson Correlation	0.029	.386**	1.000	
	Sig. (2-tailed)	0.726	0.000		
Mean liquidity	Pearson Correlation	0.248**	0.134	0.114	1.000
	Sig. (2-tailed)	0.002	0.102	0.164	

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

The results shows that ROA and liquidity is positively and significantly related ($r=0.248$, $p=0.002$). The results from correlation analysis further indicate that ROE is positively and insignificantly related with liquidity ($r=0.134$, $p=0.102$). In addition the results from correlation analysis indicate that EPS is positively and insignificantly related to liquidity ($r=0.114$, $p=0.164$).

4.2.2 Relationship between Liquidity and Financial Performance

Regression analysis was conducted to empirically determine whether liquidity were a significant determinant of performance which is measured in ROA, ROE and EPS. Regression results are presented in table 6.

Results indicate the goodness of fit for the regression between liquidity and ROA is 0.151. An R squared of 0.151 indicates that 15.1percent of the variations in ROA are explained by liquidity. While 12.4 percent of ROE is explained by liquidity and 0.000percent of EPS is explained by liquidity.

The overall model significance is also presented in table 4.9. The overall model of ROA was significant with an F statistic of 13.157. The overall model of ROE was significant with an F statistic of 10.506 while for EPS was insignificant with F statistic of 0.001. The relationship between liquidity and ROA is positive and significant ($b_1=0.014$, p value, 0.001). Liquidity and ROE is positive and significant ($b_1=0.017$, p value, 0.002). Liquidity and EPS is positive and insignificant ($b_1=0.019$, p value, 0.974).

The regression equation is as follows;

$$ROA = 0.053 + 0.014Liquidity$$

$$ROE = 0.090 + 0.017 \text{ Liquidity}$$

$$EPS = 9.481 + 0.019 \text{ Liquidity}$$

Table 6: Liquidity and Financial Performance

	ROA	ROE	EPS
Parameter estimate	Coefficient(P value)	Coefficient(P value)	Coefficient(P value)
Constant	0.053(0.011)	0.090 (0.002)	9.481(0.003)
Liquidity	0.014(0.001)	0.017(0.002)	0.019(0.974)
R Squared	0.151	0.124	0.000
F statistic (ANOVA)	13.157(0.001)	10.506(0.002)	0.001(0.974)

4.2.3 Hypothesis Testing

The null hypothesis was that liquidity had no significant relationship with financial performance.

The alternative hypothesis was that liquidity had a significant relationship with financial performance.

Since two attributes had a p value of less than 0.05 (ROA had a p value of 0.001 and ROE had a p value of 0.002), the overall hypothesis was rejected and the alternative hypothesis adopted. In conclusion, liquidity had a significant and positive relationship with financial performance.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

From the study, it was concluded that liquidity has a positive and statistical significant effect on financial performance of agricultural companies listed in NSE. The liquidity of the company has a positive impact on the profitability of the company, return on assets (ROA) of the company, return on equity (ROE) of the company and earnings per share (EPS) of the company. This is supported by majority of the respondents who agreed with most of the statements in the questionnaire.

5.2 Recommendations

Conflicts arise always between liquidity of a firm and its profitability. The conflict arises because the maximization of firm's returns could seriously threaten the liquidity and on the other hand, the pursuit of liquidity has a tendency to dilute returns. The crucial part in managing a company's liquidity day-to-day operations is to ensure its smooth running and it meets its obligations. The study therefore recommends that financial managers should ensure that there is no mismatch between the current assets and current liability. If this happens, the mismatch will affect the firm's profitability.

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