African Journal of Emerging Issues
Peer reviewed | Double blind | Interdisciplinary

African Journal of Emerging Issues (AJOEI)
Online ISSN: 2663 - 9335
Available at: https://ajoeijournals.org

FINANCE

LIQUIDITY AND PERFORMANCE OF SELECTED FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE, KENYA

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ABSTRACT

Purpose of the Study: The study sought to determine the effect of Liquidity on financial performance of selected firms listed at Nairobi Securities Exchange. Managers strive to achieve strategic objectives of firms, which include maximum returns on equity and assets. However, unanticipated macro and micro environmental factors may cause a firm to fall into financial distress which may negatively influence its financial performance. Manufacturing, Construction and Allied sectors play an important role in the implementation of vision 2030 and contribute immensely to the country's economic growth.

Statement of the Problem: Declining returns and repeated losses reported by firms under these sectors have resulted in a slow growth by individual sectors as well as overall national economic growth. Poor performance has been attributed to cycles of financial distress problems affecting firms under manufacturing and construction sectors in the recent past. Identified knowledge gaps prompted the study to mainly determine the effect of financial distress measured in terms of liqduity on financial performance of selected firms listed at NSE.

Research Menthodology: Panel research design was employed by the study and census adopted due to the small population size. Secondary panel data collected from published financial statements of the entire 4 financially distressed firms listed under manufacturing, construction and allied sectors covering 10 years (2009-2018) were utilized. Descriptive and inferential statistics was used to analyze panel data with the aid of statistical software (STATA, version14). Panel regression analysis approach was used to test the hypotheses at 95% confidence level and diagnostic tests was performed before conclusions were drawn.

Result: Findings were presented in table format and supported by narrations. The study found that liquidity has a significant positive effect on the financial performance (return on assets and return on equity) in the selected firms listed at Nairobi Securities Exchange.

Conclusion: The study concludes that liquidity has a positive and significant effect on the financial performance (return on assets and return on equity) in the selected firms listed at Nairobi Securities Exchange.

Recommendation: The study recommends that listed firms at NSE should increase their liquidity to enhance their working capital thereby improving their performance and making the businesses sustainable. Liquidity can be increased by reducing the duration of time given to their customers to pay for goods sold to them as well as developing credit policies to define and reduce the credit period given to their customers (number of days given to debtors) to clear their balances.

Keywords: *Financial Distress, Liquidity, Financial Performance, Nairobi Securities Exchange*

1.1 INTRODUCTION

Companies keen on their financial health and prudent financial management have financial distress being one of the salient topics. Financial distress is a situation where an organization is unable to generate adequate revenue to cover its long term and short term financial obligations upon maturity or they are met with a lot of difficulties (Schmuck, 2013). It is a universal phenomenon encountered by developed and developing economies, happening both in an economic downturn and upturn. Contrary to a boom period, financial distress during a recession is more adverse to a firm and may lead to bankruptcy. Many companies worldwide have succumbed to financial distress regardless of their size, to face corporate failure, bankruptcy or even liquidation (Hotchkiss & Altman, 2010).

Financial distress plays an integral part in the overall performance of an organization and it happens gradually with major signs being constant cash shortage, falling margins and poor profits, revenue decline, extended payment days and non-compliance to legal and contractual terms (Hotchkiss & Altman, 2010). Financial distress prediction is of essence and aid in the development of appropriate mitigation measures and rescue of a firm before a destructive encounter. The assessment of losses expected to occur as a result of financial distress is emphasized, as opposed to the focus on the probability of bankruptcy occurrence (Beaver, Correia & McNichols, 2011). Financial distress express financial unfavourable circumstances to identify failure, default and bankruptcy (Pozzoli & Paolone, 2017). Platt (2014) argued that financial distress as no explicit definition, he believes that firms are financially distressed if they exhibit the following features in two consecutive years; negative earnings before interest, tax, depreciation and amortization (EBITDA) and negative net income before special items.

One of the measures of financial distress is liquidity Quick ratio, current ratio and capital ratio measures liquidity levels of a firm. The rule of thumb requires a firm to have at least current assets to current liabilities ratio of 2:1 to promptly pay its current financial obligations as they mature using funds raised from current assets (Kyule, 2015). Adequacy of cash flow guarantees smooth and continued operations of an entity (Clayman, Fridson & Troughton, 2012). Irungu (2019) supports the fact that firms enhance performance when a suitable level of asset liquidity is attained and maintained. Liquid assets consist of actual cash and all assets convertible to cash within a short

period through ordinary business operations. This study used current ratio to measure liquidity, calculated by dividing total current assets by total current liabilities.

1.2 THE STATEMENT OF THE PROBLEM

Positive financial health and sustainability are strategic objectives that ensure firms to promptly meet their financial obligations and enhance loyalty among stakeholders (Wesa & Otinga, 2018; Altman & Hortchkiss, 2010). However, financial distress in tems of liquidity hinders the achievement of such goals to portray an overall poor performance of a firm (Bender, 2013). NSE annual bulletin (2016) reports of Kenyan listed corporations that have been subjected to either statutory management, financial restructuring or delisted from NSE due to financial distress since the establishment of NSE. KNBS Economic survey (2019) confirms a declining trend on the market capitalization of firms listed at NSE.

Manufacturing and construction sectors are largely relied upon by the government of Kenya in the realization of Vision 2030. The industries are core enablers that will ensure Kenya becomes an industrialized country with the muscle to compete globally. However, slow industrial growth and poor performance registered in the recent past by firms under construction and manufacturing sectors may derail the attainment of this goal. In the year 2017 alone, ARM and E.ACables losses after tax rose by 134% and 14% respectively. Additionally, Eveready East Africa and Mumias sugar Company losses hit the highest increase in the year 2018 at 144% and 375% respectively.

Kibuchi (2018) evaluated the effect of three financial distress factors on financial performance of Kenyan insurance firms and concluded that leverage and productivity has a negative relationship with performance while firm size possess a positive relationship with performance. The study adopted descriptive research design and was supported by entropy theory, cash management theory and credit risk theory. These bring out methodological and theoretical gaps to be addressed by this study. Sporta (2019) investigated the relationship between financial distress factors and financial performance of commercial banks in Kenya adopting panel regression models and model specification tests and concluded that operational efficiency liquidity, capital adequacy, asset quality and leverage were critical in explaining changes in financial output of firms. Firm size and inventory conversion period were however not featured by the study.

Local studies have been conducetd on the relationship between liquidity and financial performance of firms in Kenya. Waswa, Mukras and Oima (2018) examined the effectt of liquidity on the financial performance of the Sugar Industry in Kenya; Irungu (2019) studied the relationship between liquidity and financial performance of the 64 firms listed at NSE; and Sporta (2018) conducted a stduy on the effect of financial distress measured in terms of liquidity on the financial performance of commercial banks regulated by the Central Bank of Kenya. The reviewed empirical studies have diverse findings based on the scope, theories, variables and methodology, hence, their results could not be generalized and considered to represent the current study's context because of the distinctiveness of each study. The study sought to fill the research gaps identified and determine the effect of financial distress measured in terms of liquidty on the financial performance of selected firms listed at NSE.

1.3 RESEARCH HYPOTHESIS

H_0: Liquidity has no effect on financial performance of selected firms listed at Nairobi Securities Exchange.

2.1 Theoretical Framework Review

The study was anchored on the Cash flow Theory. William Beaver's developed cash flow theory in 1966 and was further elaborated by Taffler (1983). The theory recognizes a firm as a reservoir of liquid assets that has an inlet (cash inflows) that bring in liquid assets and an outlet (cash outflows) that drain the existing resources out of the company. The reservoir act as a buffer against flow variation. The duo linked the theory to five propositions, first, firm's failure is reduced when in possession of a larger reservoir of liquid assets. Secondly, a high proportion of debt held by a firm increases its chances of failure. Thirdly, the probability of failure is greatly reduced when a firm has a larger net liquid asset flow from business operations. The fourth proposition explains that the larger the amount of funds used for recurrent operations the higher the likelihood for a firm to fail. The fifth proposition added by Taffler (1983) states that high variability between inflows, outflows and claims in a firm, magnifies the likehood of failure. Financial distress and corporate failure is considered to emanate from the depletion of liquid assets from the firm's reservoir. The theory assumes that it is inevitable for a firm with less current year's profit as compared to debt obligations to be declared bankrupt.

Scott (1981) argued that the creditworthiness of a firm is rated high when it has a positive cash flow. this grants the privilege of accessing borrowed capital from the capital market as such reducing the risk of default. The empirical evidence on a study by Maripuu & Männasoo (2014) confirmed the conceptual propositions postulated by Beaver (1966); Taffler (1983) and acknowledge that profitability, leverage and liquidity are a set of financial distress factors to be relied on to predict distress of a firm as measured by its ratios.

The cash flow theory underpins the current study on financial distress and financial performance of selected firms listed at NSE. The theory explains how the levels of liquid asset determine; if a firm has adequate funds cover financial obligations arising from long and short term financial engaments, the risk of a highly leveraged firm and its prevalence to failure and management of recurrent expenses that include handling of inventory and capitalizing on economies of scale. All these are geared towards the management of factors that possess a distressing effect on a firm that if unchecked may lead to corporate failure and event liquidation.

2.2 Empirical Review

2.2.1 Liquidity and Financial Performance

A study was conducted by Ong'era *et al*. (2017), in regards to the effects of liquidity as a financial antecedent of financial distress among listed companies at NSE. Logistic regression analysis and Pearson's correlation analysis was used to analyze secondary data obtained from a target population of 65 companies listed NSE. Findings indicated a positive significant correlation between liquidity and financial performance. The study argued further that observation of appropriate liquidity levels allows a company to offset its short term obligation without difficulties. The researcher recommended the development of adequate policies by the regulator to facilitate proper working capital management practices of firms listed at the NSE. The study was important in explaining liquidity as a factor that precedes financial distress but fails to examine its effect on financial performance of the firm.

Salim and Bilal (2016) looked at the effect of liquidity management on financial performance of commercial banks in Omani. Secondary data for 5 years running from 2010 to 2014 was retrieved from the bank's annual reports and analyzed using a multiple regression model. Findings indicated

that positive significant relationship existed between financial performance and liquidity position as proxied by illiquid assets to liquid liabilities, liquid asset to deposits, loans to total assets ratio and liquid asset to short term liabilities. The study found the tolerance to high demand for short term liquidity, percentage of assets related to illiquid loans and liquidity in the case of inability to borrow from other banks to have no relation with financial performance of banks in Oman. The study concentrated on banks in Sultanate of Oman and not Kenya which the focus of the current study.

A negative correlation between liquidity and financial performance was found by Waswa, Mukras and Oima (2018) as they examined the effect of liquidity on the financial performance of the Sugar Industry in Kenya. The results portrayed a high percentage of debt in the capital structure and low or negative cash flows of the reviewed firms to indicate severe financial distress. The authors used Pearson correlation, multiple regression and random effect empirical model to analyze secondary data for 5 sugar companies purposively sampled. The study based on the period between 2005 and 2016, employed a cross-sectional retrospective research design. Authors recommended firms to consider inclusion of a minimum level of operating cash flows, equity-based financing and implementation of appropriate capital structure. The study failed to bring out the distressing effect of liquidity on financial performance to be addressed by the current study.

In his study, Irungu (2019) established the existence of a significant positive correlation between liquidity and financial performance of the 64 firms listed at NSE. The author portrayed liquidity as a robust tool to monitor and predict financial performance and further insisted that the adequacy of liquidity policy guarantee positive financial health. A cross-sectional research design was employed and the relationship between variables tested using ANOVA and a dynamic panel data regression model. Irungu (2019) linked liquidity to financial performance bu failed to consider the influence of liquidity as a financial distress factor to the financial performance.

Sporta (2018) analyzed the effect of financial distress measured in terms of liquidity on the financial performance of commercial banks regulated by the Central Bank of Kenya. The analysis found liquidity to possess a positive significant influence on financial performance. The study concluded that poorly managed liquidity has a distressing effect on financial performance of banks. Secondary data for 43 commercial banks identified through census was analyzed and the scope of analysis was 11 years, 2005-2015. The financial distress factors examined in the study revolved around liquidity, asset quality, leverage, operational efficiency and capital adequacy. This created room for financial distress factors such as firm size and inventory conversion period to be tested in this study.

2.2.2 Financial Performance

Otieno, Namusonge and Mugambi (2018) conducted a study to identify the effects of strategic planning process on the financial performance of professional service SMEs in Kenya. Cross-sectional research design was adopted. The researcher utilized both secondary and primary data which was subjected through descriptive and inferential statistical analysis. Krejcie and Morgan table aid in sampling 381 respondents from a target population of 51287. The study found strategic planning practices to significantly affect financial performance. Otieno *et al.* (2018) supported the idea of SMEs development and implementation of strategic planning practices that include; strategy evaluations, strategy implementation, strategy formulation and environmental scanning to improve its performance financially. Financial performance was however measured using annual profit and sales.

A study on the effect of intellectual capital on financial performance of banks based in Saudi Arabia was carried out by Al-Musali & Ku Ismail (2014). Added intellectual coefficient (VAIC) was used to measure intellectual capital while ROA and ROE were used to measure financial performance. Results identified Human capital efficiency to greatly influence the financial performance of commercial banks in Saudi Arabia. The study suggested that banking sector being a service sector that relies heavily on human capital should capitalize on the empowerment of its key employees to improve their competence and service delivery and in return increase their output to boost profitability. The study was however limited to intellectual capital construct but not financial distress to be addressed by the current study.

Kangogo(2019) did a study to examine the effect of enterprise resource planning (ERP) on financial performance of financial institutions in Kenya. The Unit of analysis was 56 licensed financial institutions using ERP within the study period between 2013-2017. Descriptive research design was adopted to analyze secondary and Primary data collected. Independent variables; firm size, management efficiency, enterprise resource planning and capital adequacy were found to possess a positive influence on performance. The research is important in highlighting the role of ERP on the performance of financial institutions but through investment in software but not the management of factors of financial distress that is the focus of this study.

2.3 CONCEPTUAL FRAMEWORK

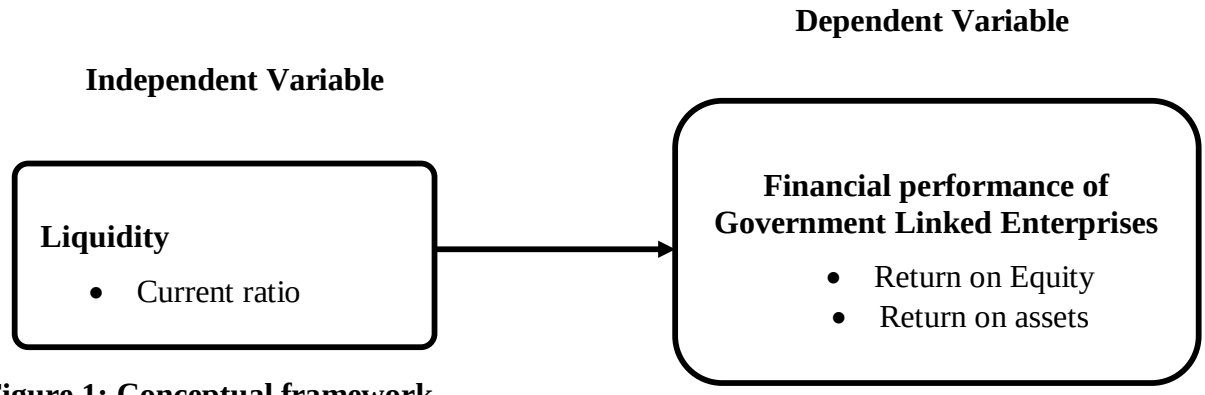

Figure 1: Conceptual framework

3.0 RESEARCH METHODOLOGY

Panel research design was adopted in the present study to explore whether liquidty affects financial performance of the selected financially distressed firms under Manufacturing, Construction and Allied sectors listed at NSE. The target population of this study was all four financially distressed firms under manufacturing, construction and allied sectors quoted at NSE, operating within the study period of 10 years (2009- 2018). These included Athi River Mining and East Africa Cables, Eveready East Africa and Mumias Sugar company. The researcher utilized quantitative secondary data, which cover panel data for selected firms to be sourced from audited annual financial reports posted on firm's official websites, NSE handbook and submitted to CMA. Quantitative secondary data collection template guide was utilized to retrieve data.

Data analysis was conducted using descriptive statistics tools (mean, standard deviation, minimum and maximum) and inferential statistics (multiple panel regression analysis), analysis of variance

(ANOVA) and correlation analysis). Analysis of Variance (ANOVA) and F-test aided in the determination of the significance of the regression which were conducted at 95% level of confidence while correlation analysis determined the strength and direction of the relationship between variables. STATA (version 14) Statistics software was used to perform data analysis within the multiple panel regression model framework. The study used tables and narrations to present the outcome of the data analyzed.

Multiple Panel data regression models were utilized to analyze the data. The financial performance of the selected firms proxy by return on assets and return on equity were expressed as a mathematical function of liquidity, leverage, firm size and inventory conversion period as stated in the model below:

Where

$$\mathbf{Y_{1it} = \beta_0 + \beta X_{it} + \varepsilon} \text{..... (1)}$$

$$\mathbf{Y_{2it} = \beta_0 + \beta X_{it} + \varepsilon} \text{.....(2)}$$

Whereby: Y_{1it} is-Return on Assets; Y_{2it} is Return on Equity; X_{it} is Liquidity; β_0 – Constant; β is Regression coefficients; ε is Error term; i refers to the firm; and t is the time. The study employed multicollinearity test, normality test, stationarity test, heteroscedasticity test, hausman test and autocorrelation test to realize the research objectives. The study applied variance inflation factor (VIF) to test multicollinearity level between independent variables before running multiple linear regression model. Normal distribution of the data was tested with the use of Shapiro-Wilk test. The study used Breusch-Pagan Test to detect the presence of heteroscedasticity. Hausman test was performed to determine the suitability of the regression model (fixed effect/random effects) adopted by the study. The study employed Durbin-Watson test to detect the existence of serial correlation on the panel data.

4.0 RESEARCH FINDINGS AND DISCUSSIONS

The target population of this study consisted of all four financially distressed firms under manufacturing, construction and allied sectors quoted at NSE, operating within the study period of 10 years (2009- 2018). These included Athi River Mining and East Africa Cables, Eveready East Africa and Mumias Sugar Company. Data was obtained from the annual reports of each of the 4 companies covering a period of 10 years (2009 to 2018).

4.1 Descriptive Statistics

Descriptive statistics are category of statistics that primarily describe the features and characteristics of a data set. The main aim of descriptive statistics is to provide summaries of a population as well as its measures.

Mean, Standard Deviation, Minimum and Maximum

In this study, descriptive statistics entailed calculation of standard deviation, mean, maximum and minimum of dependent variable (financial performance) and the independent variable, liquidity. This sub-section entailed presentation of standard deviation(s), minimum(s), mean (s) and maximum values of the variables. The results were as depicted in Table 1.

Table 1: Mean, Standard Deviation, Minimum and Maximum

Variable	Obs	Mean	Std. Dev.	Min	Max
CR	40	1.0075	.6425637	.029	2.701
ROA	40	-.062315	.2653913	-1.4158	.3443
ROE	40	-.179661	.5969614	-3.1348	.4842

From the results, as shown in Table 1, the average current ratio for the four companies for the period between 2009 and 2018 was 1.00075 and the standard deviation was 0.6425637. The minimum current ratio during the study period was 0.029 and the maximum was 2.701. The financial performance of the four companies was expressed in terms of return on assets and return on equity. The average return on assets for the period between 2009 and 2018 was -0.062315 and the standard deviation was 0.2653913. The minimum return on assets was -1.4158 and the maximum was 0.3443. In addition, the average return on equity for the period between 2009 and 2018 was -0.179661 and the standard deviation was 0.5969614. The minimum return on equity among the four companies during the study period was -3.1348 and the standard deviation was 0.4842.

Trend Analysis

This section shows the trend of return on assets, return on equity, and liquidity (current ratio). Figure 2 shows the trend of return on assets in the four selected firms listed at Nairobi Securities Exchange for the period between 2009 and 2018.

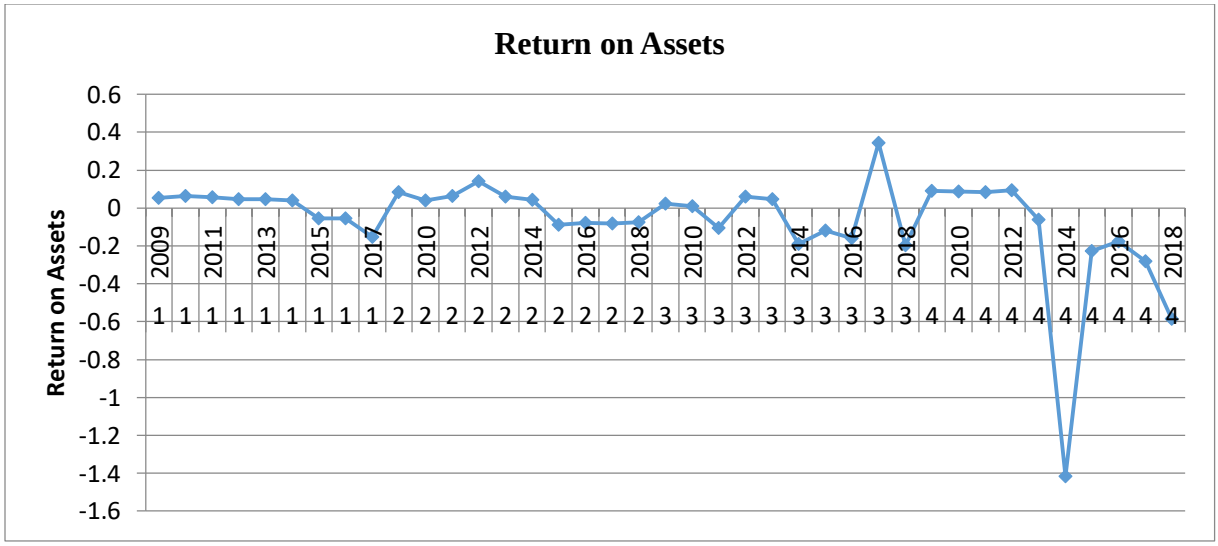

Figure 2: Trend of Return on Assets (2009-2018)

As shown in Figure 2, the return on assets in the four companies has been fluctuating between the year 2009 and 2018. Between the year 2009 and 2017, the return on assets in Athi River Mining (Company 1) were fluctuating between -0.1536 and 0649. In addition, return on assets in East African Cables (Company 2) ranged between -0.0804 and 0.1405. Further, return on assets in Eveready East Africa (Company 3) ranged from -0.1951 and 0.0609. Also, return on assets in Mumias Sugar (Company 4) was ranging from -1.458 and 0.0931.

Figure 3 shows the trend of return on assets in the four selected firms listed at Nairobi Securities Exchange for the period between 2009 and 2018.

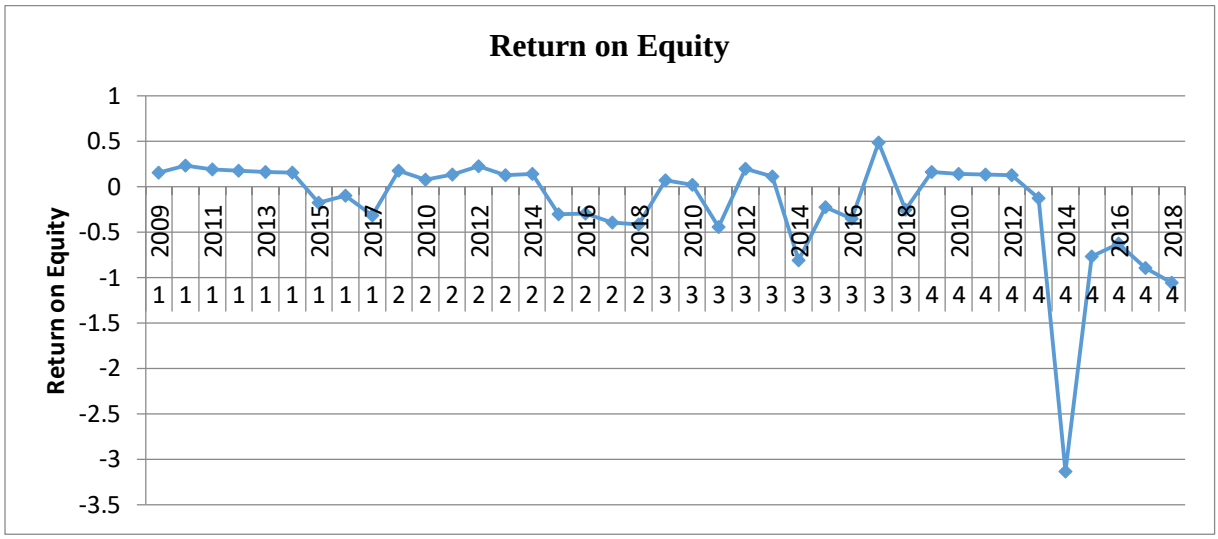

Figure 3: Trend of Return on Equity (2009-2018)

From the results, as shown in Figure 3, return on equity in the four selected companies had been fluctuating for the period between 2009 and 2018. In Athi River mining, return on equity ranged from -0.3154 and 0.2306. In addition, return on equity in East African Cables increased from 0.1782 in 2009 to 0.2248 in 2012, then it steadily decreased to -0.4129. In Eveready East Africa, the highest return on equity was 0.2248 in 2012 and the minimum was -0.4129 in 2018. Among the four companies, Mumias Sugar Company had the lowest return on Equity as -3.1348 in 2014. The highest return on equity in Mumias Sugar Company was 0.1604 in 2009. Figure 4 shows the trend of current ratio in the four selected firms listed at Nairobi Securities Exchange for the period between 2009 and 2018.

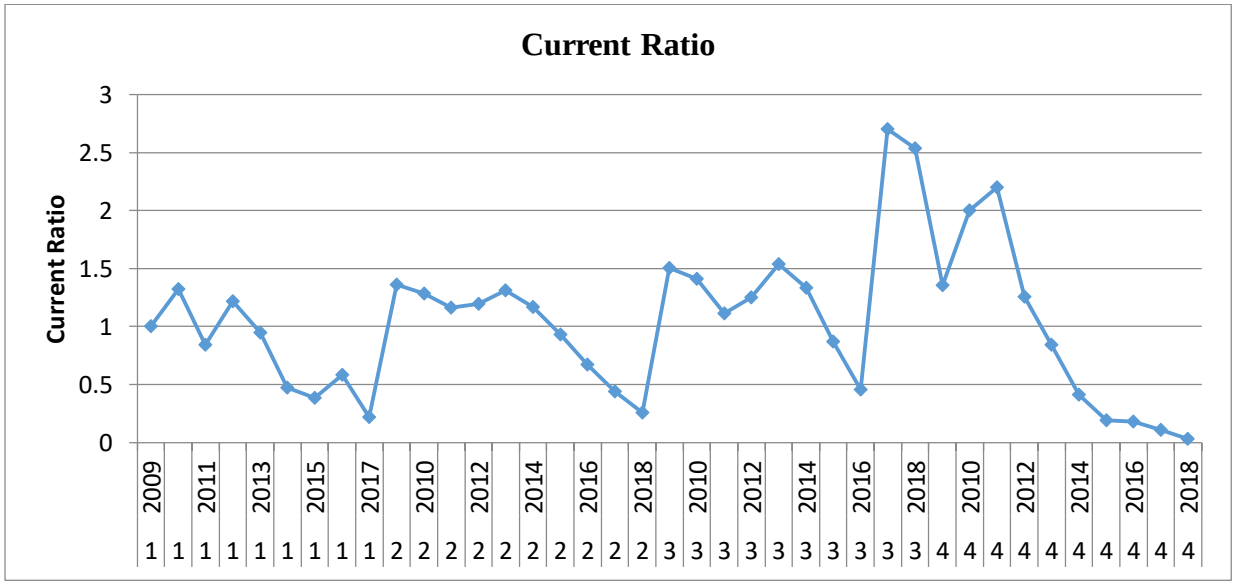

Figure 4: Trend of Current Ratio (2009-2018)

From the results as shown in Figure 4, current ration in the four selected firms listed at Nairobi Securities Exchange for the period between 2009 and 2018 was decreasing over the years. In Athi River Mining, current ratio decreased from 1.322 in 2010 to 0.217 in 2017. In East African Cables, current ratio slightly decreased from 1.363 in 2009 to 1.309 in 2013, and then steadily decreased to 0.258 in 2018. In Eveready East Africa, current ration decreased steadily from 1.411 in 2009 to 0.87 in 2014, which later increased steadily to 2.535 in 2018. In Mumias Sugar Company, current ration increased from 1.356 in 2009 to 2.199 in 2011, which later decreased drastically to 0.029 in 2018.

4.2 Inferential Statistics

This section covers model diagnostic tests as well as correlation and regression analysis used in testing the hypothesis of the study.

Correlation Analysis

Correlation coefficient is considered to be measure used in measuring the relationship between two variables, which can be both independent variable or an independent variable and dependent variable. The correlation coefficients in a data set can range from positive one and negative one. The results were as presented in Table 2.

Table 2: Correlation Coefficients

	ROA	ROE	CR
ROA	1.0000		
ROE	0.9749*	1.0000	
	0.0000		
CR	0.4731*	0.4881*	1.0000
	0.0024	0.0016	

From the findings, as shown in Table 2, liquidity (current ratio) had a positive and significant effect with return on assets (r=0.4731, p-value=0.0024). The results also show that liquidity (current ratio) had a positive and significant effect on return on equity (r=0.4881, p-value=0.0016). These findings agree with Salim and Bilal (2016) oargument that liquidity has a positive effect on financial performance of commercial banks in Omani.

Regression Analysis

The main aim of regression analysis is to show how and the extent to which each variable separately influences the dependent variable. Simply, regression analysis is used in estimating the weight of the influence of the independent variables on the dependent variable. The study used two regression models to cover the effect of the two measures of financial performance (return on assets and return on equity) and the independent variable, liquidity (current ratio).

Return on Assets

The study sought to examine the effect of liquidity on financial performance selected firms listed at Nairobi Securities Exchange measured in terms of return on assets. The regression model was as follows;

$$Y_{1it} = \beta_0 + \beta X_{it} + \varepsilon$$

Where, Y_{1it} is Return on Assets; X_{it} is Liquidity; B_0 – Constant; β is Regression coefficients; i refers to the firm; t is the time; and ε is the Error term.

The main statistics that are explained in regression analysis results include r-squared, F-statistics, T-statistics and regression coefficients. The results of the regression analysis, including r-squared, F-statistics and regression coefficients are shown in Table 3.

Table 3: Financial Distress and Return on Assets

```
Random-effects GLS regression                   Number of obs      =        39
Group variable: Company                         Number of groups   =         4

R-sq:  within  = 0.2704                         Obs per group: min =         9
       between = 0.0500                                        avg =       9.8
       overall = 0.2239                                        max =        10

                                                Wald chi2(1)       =     12.72
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0004
```

ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
CR	.2153244	.0603819	3.57	0.000	.0969782	.3336707
_cons	-.2835557	.0933922	-3.04	0.002	-.466601	-.1005103
sigma_u	.1222018					
sigma_e	.22314736					
rho	.2307081	(fraction of variance due to u_i)				

The R-squared in a regression analysis shows the proportion of the dependent variable that can be explained by the independent variables. From the findings, the overall R-squared for the regression model for the relationship between the dependent variable (ROA) and the independent variables (liquidity (current ratio) was 0.2153244, which shows that the independent variable explain 22.39% of the dependent variable (return on assets).

The analysis of variance is utilized in the determination of whether the model is a good fit for the data. The ANOVA presents the F-test statistics. According to the findings, the F-statistic's p-value was 0.0004. This implies that the regression model is a good fit for the data. This means that the regression model is appropriate in predicting the effect of liquidity (current ratio) on return on assets in the selected firms listed at Nairobi Securities Exchange.

The results show that holding the independent variable constant, return on assets in the selected firms listed at Nairobi Securities Exchange will be at 0.2153244. In addition, the results show that

liquidity (current ratio) had a positive significant effect on return on assets in the selected firms listed at Nairobi Securities Exchange as shown by a regression coefficient of 0.2153244 (p-value=0.000). This implies that a unit increase in liquidity across time and panels (firms) would lead to a 0.2153244 increase in return on assets in the selected firms listed at Nairobi Securities Exchange. Since the p-value (0.004) was less than the alpha value (0.05), the effect was considered significant. The findings are contrary to Mukras & Oima (2018) findings that liquidity has anegative effect on the financial performance of the Sugar Industry in Kenya.

Return on Equity

The study sought to examine the effect of liquidity on financial performance selected firms listed at Nairobi Securities Exchange measured in terms of return on assets. The regression model was as follows;

$$\mathbf{Y_{2it} = \beta_0 + \beta X_{it} + \varepsilon}$$

Where, Y_{2it} is Return on Equity; X_{it} is Liquidity; B_0 – Constant; β is a regression coefficients; i refers to the firm; t is the time; and ε is the Error term.

Table 4: Financial Distress and Return on Equity

```
Random-effects GLS regression                   Number of obs      =        39
Group variable: Company                         Number of groups   =         4

R-sq:  within  = 0.3174                         Obs per group: min =         9
       between = 0.0156                                        avg =       9.8
       overall = 0.2382                                        max =        10

                                                Wald chi2(1)       =     15.73
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0001
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ROE	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
CR	.5168533	.1303256	3.97	0.000	.2614198	.7722869
_cons	-.7093067	.2202628	-3.22	0.001	-1.141014	-.2775996
sigma_u	.31907145					
sigma_e	.47731594					
rho	.30884446	(fraction of variance due to u_i)				

As shown in Table 4, the overall R-squared for the regression model for the relationship between the independent variable (liquidity) and the dependent variable (return on equity) was 0.4112, which shows that the independent variable explain 23.82% of the dependent variable (return on equity).

In addition, the F-statistic's p-value was 0.0001. This implies that the regression model is a good fit for the data. This means that the regression model is appropriate in predicting the effect of liquidity on return on equity in the selected firms listed at Nairobi Securities Exchange.

The results show that holding the independent variable constant, return on equity in the selected firms listed at Nairobi Securities Exchange will be at 0.5168533. In addition, the results show that

liquidity (current ratio) had a positive significant effect on return on equity in the selected firms listed at Nairobi Securities Exchange as shown by a regression coefficient of 0.5168533 (p-value=0.000). This implies that a unit increase in liquidity across time and panels (firms) would lead to a 0.5168533 increase in return on equity in the selected firms listed at Nairobi Securities Exchange. Since the p-value (0.000) was less than the alpha value (0.05), the effect was considered significant. These findings agree with Sporta (2018) findings that liquidity as explained by the analysis was found to possess a positive significant effect on financial performance.

5.0 CONCLUSION

The study concludes that liquidity has a positive and significant effect on the financial performance (return on assets and return on equity) in the selected firms listed at Nairobi Securities Exchange. This implies that an increase in liquidity would lead to an increase in the financial performance in the selected firms listed at Nairobi Securities Exchange, in terms of both return on assets and return on equity.

6.0 RECOMMENDATIONS

The study found that liquidity has a statistically significant effect on the financial performance of selected firms listed at Nairobi Securities Exchange. The study, therefore, recommends that listed firms at NSE should increase their liquidity to enhance their working capital thereby improving their performance and making the businesses sustainable. Liquidity in these firms can also be increased by reducing the duration of time given to their customers to pay for goods sold to them as well as developing credit policies to define and reduce the credit period given to their customers (number of days given to debtors) to clear their balances.

Suggestion for Further Research

This study was conducted to determine the effect of financial distress on financial performance selected firms listed at Nairobi Securities Exchange. However, it was limited to only four firms in financial distress listed at Nairobi Securities Exchange. Therefore, further studies should be conducted on how liquidity, leverage, firm size and inventory conversion period affect the financial performance of other firms listed at Nairobi Securities Exchange. In addition, the four independent variables used only explained 35.12% of return on assets and 41.12% of return on equity. As such further, studies should be conducted on other factors affecting the financial performance firms listed at Nairobi Securities Exchange.

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