

**FINANCIAL INDICATORS AND STOCK MARKET PERFORMANCE OF LISTED
NON-FINANCIAL COMPANIES IN KENYA**

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Abstract

This study sought to determine whether firm financial indicators have an effect on market performance of stocks of listed non-financial companies in Kenya. The specific objectives of the study were to determine the effect of liquidity and cash flow on market performance of stocks of listed non-financial companies in Kenya. The study was carried out in non-financial companies listed in the NSE from 2016 to 2021. The study was a census study of 30 listed non-financial companies. The study used panel secondary data which was collected from the company annual audited financial reports and Nairobi stock exchange (NSE). A fixed effects panel regression model was used to determine the relationship between the study independent and dependent variables. The study findings were that liquidity and cash flow have a significant and positive effect on market performance of stocks of listed non-financial companies in Kenya. The study recommends that investor who want to invest in stocks with high return and high liquidity they should consider liquidity and cash flow in their investment decisions.

Keywords: *Liquidity, Cashflow, Stock Return, Stock Liquidity*

INTRODUCTION

Investment in stock markets requires sufficient knowledge and understanding of financial reports. When people want to invest, they should obtain the financial information of the firm, analyse and interpret the information for a better decision making on investment. One of the main criteria for investing in the stock market is the stock return and stock liquidity. Stockholders and investor are required to identify the major factors that determine the stock liquidity and stock return. Sufficient knowledge and attainment of an appropriate model can improve the investment decisions. Investors are in need of a model to determine the expected stock return. The identification of determining factors of stock return and providing an appropriate model help the investors in optimal allocation of resource in the micro and macro levels (Ghasempour & Ghasempour,2013). While the movement of stock market has been investigated and studied within the academic area the subject area holds considerable interest to investors given that they stand to both loose and gain financially from speculating on stock markets. The increasing volatility associated with stock markets has resulted in investors seeking more novel and precise ways of explaining stock returns. Financial markets also continue to gain interest from other parties such as financial regulators, policy makers, government and stock market regulators (Ping-fu & Kwai-ye, 2016).

Liquidity is the management of current assets and current liabilities of a company. It plays key role in defining whether a firm is able to effectively manage its short-term obligations, firm should be able to maintain reasonable amount of current assets in order to meet their short-term obligations. For effectiveness and profitability of a firm a balanced liquidity level is necessary (Khan & Ali, 2016). Current ratio is the most comprehensive liquidity ratio representing relationship of total current assets and total current liabilities. It's a broad indicator of a firm short term financial position: a ratio of more than one indicates current asset have a surplus over current liabilities (Ježovita, 2015). Currently many entities are not successful in staying above a current ratio of 2, this could be an indication of decline of liquidity of many firms or indicate a better control of receivables or inventory (Gibson, 2009).

Entities are required to prepare a cash flow statement by financial reporting standards in the manner set out by financial reporting standards; it's an addition to the profit and loss account and balance sheet in their portrayal of financial position, performance and financial adaptability. Cash flows are increases or decreases in amounts of cash, and cash is cash in hand and deposits repayable on demand at any qualifying institution less overdrafts from any qualifying institution repayable on demand. Cash flow statements provide information about cash inflows and outflows of an entity during a period. It also provides information that assist in the assessment of solvency, liquidity and financial adaptability of a firm (Accounting Standards Board [ASB], 1996).

Cash flow from operation is an important indicator of a firm health. After statement of cash flow became part of the full set of financial statement user of financial information have cash flow information but questions still remain whether cash flow information is incrementally informative when compared to accrual earnings for assessing a firm current and future performance (Mostafa&Dixon,2013). In the absence of clear theoretical order of preference, the question of whether cash flow or accruals are the most important in driving equity returns is better addressed through empirical research (Clatworthy, Pong &Wong, 2012).

The have been increased attention to cash flow reporting partly because earning measure have certain limitations in that can be manipulated by managers and the accrual components of earnings can be affected by arbitrary allocation, since accruals can be manipulated, the accrual component is less reliable indicator of firm performance than cash flow component (Charitou & Panagiotides,1999). Under the quality of earning explanations market price are expected to react more to a given amount of cash flows than the same amount of accrual because accruals represent only very indirect link to future cash flows (Bernard & Stober,1989 as cited by Charitou & Panagiotides,1999). A better understanding of earnings by analyst can be gotten from Cash flow from operations. The ability of the firm to survive is portrayed by the cash flow from operation; it's also not subject to managerial manipulations (Bepari, Rahman &Mollik, 2013).

Superiority of either cash flow or earning in explaining security returns can be done through relative information content studies. Since the market value of the firm is defined as the present value of expected future earnings, determining the association between accounting information such as earnings or cash flow and market value of the firm can demonstrate the degree to which cash flow or earnings can convey new information about the amount, timing and uncertainty of future cash flows (Mostafa, 2014).With the requirement to prepare a statement of cash flow as part of financial reporting a need has a risen to generate useful cash flow ratio for decision making (Jooste, 2004). A conclusion on the liquidity of the company based only on traditional ratios could lead to incorrect decision, analysis based on traditional

ratios should be compared with cash flow ratio before reaching any conclusion regarding financial liquidity position (Atieh, 2014).

Study Objectives

- i. To examine the effect of liquidity on stock market performance of listed non-financial companies in Kenya.
- ii. To find out the effect of cash flow on stock market performance of listed non-financial companies in Kenya.

Research Hypothesis

The null hypotheses of the study were:

H₀₁: Liquidity has no significant effect on stock market performance of listed non-financial companies in Kenya.

H₀₂: Cash flow has no significant effect on stock market performance of stocks of listed non-financial companies in Kenya.

Literature Review

Theoretical Framework

Random Walk Theory

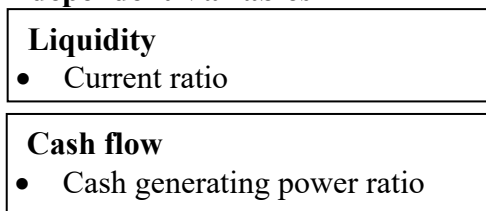
The Random walk concept was first introduced by French economist Jules Augustin Frederic Regnault (1863), it was later conceded by Louis Bachelier, a French mathematician (1900). The random walk theory posits that successive prices are independent, identically distributed random variables. Prices changes have no memory and the past cannot be used to predict the future (Fama, 1965). A random walk implies that excess returns are not attainable using information contained in the past movement of prices (Borges, 2010). According to the hypothesis the past liquidity and cash flow do not have any relationship with future stock prices and therefore will not have any influence on future market performance of stocks. An investor cannot use past financial indicators to predict future stock prices since past prices contain no useful information to predict their future price behavior. The theory implies that at moment in time the actual market price of stock represents the market best estimate of the intrinsic value of that stock based upon all available information(VanHorne & Parker, 1967).

Signalling Accounting Theory

Firm can use financial information to send signals to the market due to the existence of information asymmetry (Ross, 1977). Signalling accounting theory is concerned with understanding why certain signals are reliable and others not and why they are not reliable. According to the theory financial signal can be used to signal quality of a company. The underlying assumption of signalling is that when there is a change in a company financial indicator the market value might change (Ross, 1977).According to the theory positive signal of cash flow and profitability are going to have a positive effect on market performance of stocks. Signal of increasing leverage are also going to have a positive effect on market performance of stocks.

Conceptual Frame work

Independent Variables



Dependent variable

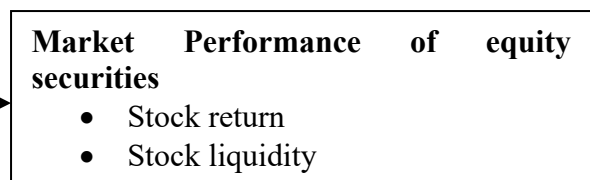


Figure 1: Conceptual Framework

Empirical Literature

TrejoPech, Noguera and White (2015) carried out a study which examined financial ratios used by equity analysts and the relationship between financial ratios and stock return in Mexico. The study period was from 1995-2011. The finding of the study was that liquidity ratio has a predictive power on 1-year future stock returns but no evidence of predictive power on 2-year stock returns. Heryanto (2016) carried out a study to examine the effect of profitability and liquidity on stock return of banks listed in Indonesia stock exchange for the period 2009 to 2010 for a sample of 29 banks. The objective of the study was to examine the impact of liquidity on stock return. The study findings revealed that liquidity has significant impact on market performance as measured by stock return.

Ghasempour and Ghasempour (2013) carried a study which sought to determine the relationship between liquidity ratio and firm market performance for firm listed in the Tehran stock exchange for the period 2000 to 2008. The result of the study was there was no any relationship between liquidity and abnormal stock returns. Gharaibeh (2014) carried out a study which examined the influence of non-profit indicator on firm market performance for industrial firms listed in the Amman stock exchange in Jordan for the period 2009-2012. The sample for the study was 15 companies. The finding of the study was there is a significant and weak relationship between liquidity and stock return. Martani, Mulyono and Khairurizka (2009) carried out a study to examine the effect of financial ratios, firm size and cash flow from operating activities in the interim report to the stock return of manufacturing companies listed in the Indonesia stock market for the period 2003-2006. The study used secondary data; the study employed regression analysis. The result of the study was that liquidity has no impact on stock return.

Rezaei and Aliahmadi (2015) carried out a study which looked at the relationship between asset liquidity and stock liquidity and the effect of investment policies and financing decisions based on this relationship in firms listed in Tehran stock exchange in Iran from 2006 to 2013. The finding of the study was that there is a significant and direct relationship between asset liquidity and stock liquidity moreover the relationship between asset liquidity and stock liquidity is less in firms with higher growth opportunities and the relationship between asset liquidity and stock liquidity is more in firms with higher financing limitation.

Cakici, Chan and Topyan (2015) analyzed predictability of stock returns for stocks listed in both the Shanghai and Shenzhen stock exchange in China from January 1994 to March 2011. The study objective was to examine cross-sectional stock returns. The study employed secondary data, the study used both portfolio and cross-sectional regression methods. The result was that cash-flow to price ratio has a strong predictive power on stock returns.

Khan, Naz, Khan, Khan and Ahmad (2013) carried out a study which examined the impact of financial performance on stock returns in the Pakistan textile industry for the period 2003-2009 for 189 firms. The study used ordinary least square model. The finding of the study was that cash flow ratio positively affects stock return. Ayed and Abaoub (2006) carried out a study to examine the value relevance of accounting earnings and components in for firm listed in the Tunisia stock exchange using a sample of 262 firm from 1997 to 2004. The finding of the study was that cash flow from operations and accruals are not value relevant. Alnaif (2014) investigated and examined the factors affecting stock liquidity for firm listed in the Amman stock exchange (ASE) Index from 2011 to 2013 for 100 firms. The result was that stock dividend has a non-significant effect on stock liquidity. Ngunjiri (2012) examined the relationship between firm financial performance and stock return for firms listed in the NSE in Kenya for the period 2011 to 2015. The study used ordinary least square regression

method and multivariate correlation analysis. Secondary data was used. The study population was 67 firms. The study found out dividend pay-out ratio had an insignificant positive relation with stock return.

Research Methodology

The population for this study consisted of non-financial companies listed in Kenya within the period 2016 to 2021. The study was a census study. The study utilized secondary data. Secondary data was collected from audited annual financial report of the listed non-financial companies in Kenya. The financial statements were extracted from the company’s website. Information about company securities was obtained from the NSE.

The study used panel data regression model to draw inferences from the secondary data. In panel regression the three difference types models that may be used are pooled data Ordinary Least Square (OLS), fixed effects panel model and the random effects model.

The fixed effects panel regression model that was employed in this study was:

$$SR_{it} = \alpha_i + \beta_1 L_{it} + \beta_2 CF_{it} + \epsilon_{it} \dots \dots \dots (1a)$$

$$SL_{it} = \alpha_i + \beta_1 L_{it} + \beta_2 CF_{it} + \epsilon_{it} \dots \dots \dots (1b)$$

Where:

- SR_{it} = Stock return
- SL_{it} = Stock liquidity
- α_i = Intercept
- β₁₋₂ = Coefficient of the independent variables
- LP_i = Liquidity firm i in time t
- CF_i = Cash flow firm i in time t
- ε_{it} = Error term in model for given variables

FINDINGS AND DISCUSSION

Descriptive Statistics

Table 1: Descriptive statistics of variables

	N	Min	Max	Mean	Std. Dev	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Liquidity	180	0.149	13.530	0.808	1.398	1.229	0.181	1.327	0.360
Cash flow	180	-19.236	1.405	0.235	1.941	-1.381	0.181	1.009	0.360
Stock return	180	-0.483	1.093	-0.027	0.192	1.707	0.181	0.184	0.360
Stock liquidity	180	0.000	0.110	0.011	0.015	2.140	0.181	1.604	0.360

Table 1 show the mean for liquidity of listed non-financial companies in Kenya was 0.808. The standard deviation was 1.389 while the skewness was 1.229. Cash flow had an average of 0.235, standard deviation of 1.941 and skewness of -1.381. Stock return had a mean of -0.027, standard deviation of 0.192 and skewness of 1.707. Stock liquidity had a mean of 0.011, standard deviation of 0.015 and skewness of 2.140.

Correlation Analysis

Table 2: Correlation analysis between financial performance and stock return

	stockreturn	liquidity	cashflow
stockreturn	1.0000 180		
liquidity	0.2059 0.0056 180	1.0000	
cashflow	0.3915 0.0000 180	0.2261 0.1623 180	1.0000 180

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

The findings in Table 4.2 showed liquidity had a significant and positive relationship with stock return ($p=0.0056$, $r=0.2059$) and cash flow had a significant and positive relationship with stock return ($p=0.0000$, $r=0.3915$).

Table 3: Correlation analysis between financial performance and stock liquidity

	stockliquidity	liquidity	cashflow
stockliquidity	1.0000 180		
liquidity	0.2860 0.0035 180	1.0000	
cashflow	0.2116 0.0043 180	0.2261 0.1623 180	1.0000 180

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

The findings in Table 4.3 showed liquidity had a significant and positive relationship with stock liquidity ($p=0.0035$, $r=0.0286$,) and cash flow had a significant and positive relationship with stock liquidity ($p=0.0043$, $r=0.2116$).

Bivariate results

Bivariate Effect of Liquidity on Stock return

The study conducted a panel data regression to assess the relationship between liquidity and stock return.

Table 4: Panel model results for the relationship between liquidity and stock return

Fixed-effects (within) regression	Number of obs	=	180
Group variable: panels	Number of groups	=	30
R-sq: within = 0.1564	Obs per group: min	=	6
between = 0.0067	avg	=	6.0
overall = 0.0424	max	=	6
corr(u_i, Xb) = -0.5702	F(1,149)	=	27.62
	Prob > F	=	0.0000

stockreturn	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
liquidity	.020448	.0038905	5.26	0.000	.0127604	.0281356
_cons	-.0253598	.0088489	-2.87	0.005	-.0428453	-.0078743

sigma_u	.03883992
sigma_e	.05664298
rho	.31981139 (fraction of variance due to u_i)

Table 4 reveal an R square value of 0.0424 which implies that 4.24% of variation in stock return of stocks of listed non-financial companies in Kenya is explained by liquidity. The beta coefficient with reference to the effect of liquidity on stock return of stocks of listed non-financial companies in Kenyan was 0.020448. This implies that a unit change in liquidity will

cause an increase of 0.020448 in stock return of stocks of listed non-financial companies in Kenya.

Table 4 further reveals a *t* value of 5.26 with a *p* value of .000 which is less than the significance level of .05. A *p* value which is less than the significance level of .05 implies that the null hypothesis should be rejected. The null hypothesis was; H_{01} : liquidity has no significant effect on market performance of stocks of listed non-financial companies in Kenya. Thus, we reject the null hypothesis. This suggests that liquidity has a significant effect on market performance of stocks of listed non-financial companies in Kenya as measured by stock return.

Bivariate effect of Liquidity on Stock liquidity

The study conducted a panel data regression to assess the relationship between liquidity and stock liquidity.

Table 5: Panel model results for the relationship between liquidity and stock liquidity

Fixed-effects (within) regression		Number of obs	=	180
Group variable: panels		Number of groups	=	30
R-sq: within	= 0.0464	Obs per group: min	=	6
between	= 0.1111	avg	=	6.0
overall	= 0.0008	max	=	6
corr(u_i, Xb)	= -0.4604	F(1,149)	=	7.25
		Prob > F	=	0.0079

stockliquidity	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
liquidity	.0095887	.0035624	2.69	0.008	.0025494	.016628
_cons	.0197548	.0081027	2.44	0.016	.0037438	.0357658
sigma_u	.0393879					
sigma_e	.0518662					
rho	.36576768 (fraction of variance due to u_i)					

Table 5 reveal an R square value of 0.0008 which implies that 0.08% of variation in stock liquidity of stocks of listed non-financial companies in Kenya is explained by liquidity. The beta coefficient with reference to the effect of liquidity on stock liquidity of stocks of listed non-financial companies in Kenya was 0.0095887. This implies that a unit change in liquidity will cause an increase of 0.0095887 in stock liquidity of stocks of listed non-financial companies in Kenya.

Table 5 further reveals a *t* value of 2.69 with a *p* value of .008 which is less than the significance level of .05. A *p* value which is less than .05 implies that the null hypothesis should be rejected. The null hypothesis was; H_{01} : Liquidity has no significant effect on market performance of stocks of listed non-financial companies in Kenya. Thus, we reject the null hypothesis. This suggests that liquidity has a significant effect on market performance of stocks of listed non-financial companies in Kenya as measured by stock liquidity.

Bivariate Effect of Cash flow on Stock return

The study conducted a panel data regression to assess the relationship between cash flow and stock return.

Table 6: Panel model results for the relationship between cash flow and stock return

Fixed-effects (within) regression		Number of obs	=	180
Group variable: panels		Number of groups	=	30
R-sq: within	= 0.1765	Obs per group: min	=	6
between	= 0.0748	avg	=	6.0
overall	= 0.1533	max	=	6
corr(u_i, Xb) = -0.0971		F(1,149)	=	31.94
		rob > F	=	0.0000

stockreturn	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
cashflow	.0420878	.0074468	5.65	0.000	.0273728	.0568028
_cons	-.0108725	.0062607	-1.74	0.085	-.0232438	.0014987
sigma_u	.02556878					
sigma_e	.05596302					
rho	.17269612 (fraction of variance due to u_i)					

Table 6 reveal an R square value of 0.1533 which implies that 15.33% of variation in stock return of stocks of listed non-financial companies in Kenya is explained by cash flow. The beta coefficient with reference to the effect of cash flow on stock return of stocks of listed non-financial companies in Kenya was 0.0420878. This implies that a unit change in cash flow will cause an increase of 0.0420878 in stock return of stocks of listed non-financial companies in Kenya.

Table 6 further reveals a t value of 5.65 with a p value of .000 which is less than the significance level of .05. A p value which is less than the significance level of .05 implies that the null hypothesis should be rejected. The null hypothesis was; H₀₂: Cash flow has no significant effect on market performance of stocks of listed non-financial companies in Kenya. Thus, we reject the null hypothesis. This suggests that cash flow has a significant effect on market performance of stocks of listed non-financial companies in Kenya as measured by stock return.

Bivariate Effect of Cash flow on Stock liquidity

The study conducted a panel data regression to assess the relationship between cash flow and stock liquidity.

Table 7: Panel model results for the relationship between cash flow and stock liquidity

Fixed-effects (within) regression		Number of obs	=	180
Group variable: panels		Number of groups	=	30
R-sq: within	= 0.0426	Obs per group: min	=	6
between	= 0.0539	avg	=	6.0
overall	= 0.0448	max	=	6
corr(u_i, Xb) = 0.0350		F(1,149)	=	6.62
		Prob > F	=	0.0110

stockliquidity	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
cashflow	.0177982	.0069154	2.57	0.011	.0041333	.0314631
_cons	.0277635	.005814	4.78	0.000	.016275	.0392519
sigma_u	.03254984					
sigma_e	.05196959					
rho	.28175507 (fraction of variance due to u_i)					

Table 7 reveal an R square value of 0.0448 which implies that 4.48% of variation in stock liquidity of stocks of listed non-financial companies in Kenya is explained by cash flow. The beta coefficient with reference to the effect of cash flow on stock liquidity of stocks of listed non-financial companies in Kenya was 0.0177982. This implies that a unit change in cash flow will cause an increase of 0.0177982 in stock liquidity of stocks of listed non-financial companies in Kenya.

Table 7 further reveals a t value of 2.57 with a p value of .011 which is less than the significance level of .05. A p value which is less than the significance level of .05 implies that the null hypothesis should be rejected. The null hypothesis was; H_{02} : Cash flow has no significant effect on market performance of stocks of listed non-financial companies in Kenya. Thus, we reject the null hypothesis. This suggests that cash flow has a significant effect on market performance of stocks of listed non-financial companies in Kenya as measured by stock liquidity.

Discussion of Findings

Correlation analysis showed liquidity had a positive and significant relationship with stock return ($r=0.2059$, $p=0.0056$), t value was positive 5.26. The findings are consistent with Gharaibeh (2014) who found there is a weak and significant relationship between liquidity and stock return for industrial firms listed in the Amman stock exchange in Jordan. The findings are consistent with Heryanto (2016) who found that liquidity has significant impact on market performance as measured by stock return of banks listed in Indonesia stock exchange. The findings contradicted with Ndruru (2023) who found out that liquidity has no effect on stock returns for manufacturing companies in Indonesia stock exchange. TrejoPech, *et al.* (2015) finding was that liquidity ratio has a predictive power on 1-year future stock returns but no evidence of predictive power on 2-year stock returns in Mexico.

Correlation analysis showed liquidity had a positive and significant relationship with stock liquidity ($r=0.286$, $p=0.0035$), t value was positive 2.69. The findings concur with Rezaei and Aliahmadi (2015) who found there is a significant and direct relationship between asset liquidity and stock liquidity for firms listed in Tehran stock exchange in Iran.

Correlation analysis showed cash flow had a positive and significant relationship with stock return ($r=0.3915$, $p=0.0000$), t value was positive 5.65. The findings are consistent with Cakici *et al.* (2015) who found that cash-flow to price ratio has a strong predictive power on stock returns for stocks listed in the Shanghai and Shenzhen stock exchange. The findings contradict Martani *et al.* (2009) who found that cash flow does not have any impact on stock returns for companies listed in the Indonesia stock market. Allan and Peta (2000) findings were that there is a nonlinear relationship between stocks return and cash flows for Australian firms. Ayed and Abaoub (2006) findings showed that cash flow from operations and accruals are not value relevant in explaining return.

Correlation analysis showed cash flow had a positive and significant relationship with stock liquidity ($r=0.2116$, $p=0.0043$), t value was positive 2.57. The findings concurs with Omokhudu and Ibadin (2015) who found out that cash flow have a positive and significant relationship with share prices for companies listed in the Nigerian stock exchange.

Conclusion and Study recommendations

The study findings revealed that liquidity has significant and positive effect on market performance of stocks of listed non-financial companies in Kenya. Thus, investors who wish to invest in securities with high stock liquidity and stock returns should consider firms with high liquidity. The study further recommends that the listed non-financial companies should seek to increase their liquidity.

The study findings revealed that cash flow has significant and positive effect on market performance of stocks of listed non-financial companies in Kenya. Thus, investors who wish to invest in securities with high stock liquidity and stock returns should consider firms with high cash flow. The listed firms should improve on their cash flow for better stock returns and stock liquidity.

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