Effect of Operating Cash Flow on Stock Return of Firms Listed In Nairobi Security Exchange

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ABSTRACT

The main aim of the paper was to establish the effect of operating cash flow on stock return of firms listed in NSE. The study was informed by Free Cash Flow (FCF) theory. Census survey was adapted to review financial statements for 29 listed non-financial firms at NSE that had consistent data for all the study variables. Secondary data was extracted for 12 years from 2007-2019 with the aid of a data collection sheet. Explanatory research design which is panel in nature was followed by this study. Both descriptive and inferential statistics were used in data analysis. Panel data regression was used to make inferences and test research hypothesis. Fixed and Random effects methods were used to analyze the balanced panel data using STATA statistical package and Hausman test established that Random effect model was the most ideal method to analyze data in this study. The findings indicated that operating cash flow positively and significantly influenced the stock returns for firms listed at NSE. The study concludes that operating cash flow information affects stock returns. Therefore, the study advocates for firms to increase their levels of operating cash flows through prudent utilization of cash resources since it enhances the stock returns.

Keywords: *Stock return, NSE, Firms listed, Operating cash flow, Free cash flow, Statement of cash flow, Nonfinancial firms.*
JEL Classification: *G11 Portfolio Choice; Investment Decisions.*

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Highlights of this paper

- The Free Cash Flow Theory guided this study to establish the link between operating cash flow and stock return.
- Random effect model was used to test hypothesis of the study which means variations across all nonfinancial firms listed at NSE are random and are not related with operating cash flow.
- Operating cash flow positively and significantly influence stock return of nonfinancial firms listed in NSE, Kenya.

1. INTRODUCTION

Stock return is a crucial factor considered by investors in investment decisions. Stock returns reflect the collective assessment of investors of a firms current stock return and prospects (Rahmawati & Handayani, 2017). According to Tan, Galagedera, and Maharaj (2012) and Saeedi, Abessi, Sharifi, and Meraji (2010) the only motive that attracts an investor to invest in the stock market is to get high returns. Stock market returns provide useful signals regarding the future state of the economy, including the economic and financial status (Berggren & Bergqvist, 2014). Several factors which arrive randomly to the stock market affect stock return, for example financial policy, monetary policy, foreign trade policy, financial information, risk rate, market conditions and market performance. However, from these factors, financial information specifically cash return shown in the cash flow statement is one of the main elements used by investors in making investment decisions (Anwaar, 2016; Aryanti, Mawardi, & Selvi, 2016; Gupta & Modise, 2013; Hamid, Hanif, Malook, & Wasimullah, 2014; Purnamasari, 2015; Utomo, Pamungkas, & Machmuddah, 2018). As such, this paper attempted to assess how operating cash flow affects stock returns in NSE.

In accordance with Gordon, Henry, Jorgensen, and Linthicum (2017) operating cash flow is the amount of money remitted for the procurement of merchandise, tax settlements, vendor expenses, wages and other operation spending. Operating cash flow information offer the administration with a clear picture of how much cash an institution needs to avail or has generated from its daily business operating activities. Cash inflows consist of cash obtained from the sale of merchandise and services alternatively referred to cash receipts from goods sold or services provided, cash interest and dividends earned from ventures as well as other cash receipts not explicitly related to the financing or investing cash flows (Kew, Mettler, Walker, & Watson, 2011). Operating cash flow information also consists of cash outflow which entails cash payments for procurement of goods and services for trading purposes or payment of production costs related to processing and transforming of industrial goods, cash payments to vendors and other service providers and payments of staff salaries & incentives, cash required for tax obligations and interests (Kew et al., 2011).

Numerous research studies have been carried out globally on the relationship between operating cash flow information and stock return. For instance, Utomo et al. (2018) showed that operational cash flow take positive effect on stock returns in Indonesia. A study by Khanji and Siam (2015) yielded contrary results and revealed limited effect of operational cash flow on the share market value of Jordanian commercial Banks. Utomo et al. (2018) Kariuki, Namusonge, and Orwa (2018) and Nwakaego and Kabiru (2015) results revealed that operating cash flow are positively and significantly related to stock returns in Indonesia, Kenya and Nigeria, respectively. These results were contrary to Kroes and Manikas (2014) and Chi (2014) findings that reported significant and non-significant relationship between operating cash flows and stock returns, respectively. Another study by Khanji and Siam (2015) yielded contrary results and revealed limited effect of operating cash flows on the share market value of Jordanian commercial banks. Similar results were found by MoradzadeFard, Rezapoor, and Frzani (2010) who indicated that there is no significant relationship between operating cash flow and firms' stock price. Based on the

conflicting results in previous studies on the effect of operating cash flow information on stock returns, conclusive evidence in emerging economies such as Kenya is conspicuously lacking.

In addition, despite these studies, most firms in emerging economies including Kenya have displayed declining stock returns over time which is a challenge to investors (Capital Market Authority, 2018). Thus, the main aim of the study was determine effect of operating cash flow on stock return of non- financial firms listed in NSE, Kenya.

2. THEORETICAL REVIEW

The study was informed by Free Cash Flow (FCF) theory which was first introduced by Michael Jensen in 1986. According to this theory, business free cash flows refer to the surplus cash flows that arise after netting off the necessary funds invested in projects that yield positive net present value (NPV) returns. These projects are long-term investment projects whose expected present value cash inflows are more than their cash outflows (Jensen, 1986).

According to Maham, Ali, and Javad (2008) FCF is linked with changes in shareholders wealth which is associated with stock return and is therefore an efficient measure for evaluating the performance of the firm. FCFs signifies financing cash flow (the ability of a firm to repay the debts, sale and repurchase of its stock), operating cash flow (ability to meet operational obligations) and investing cash flow (facilitation of accelerated enterprise's growth through prudent utilization of fixed assets), thus enhancing investors' confidence in the firm. These are some of the reasons that make many investors to interpret increased FCF to mean increased firm value reflected by high stock return (Jensen, 1986). Conversely, shareholders of the firm, belief that free cash flows can be considered as criteria to create value for them; because it is expected that businesses with high positive FCF invest the surplus funds in profitable new investment projects that yields positive NPV that ultimately enhance stock return.

3. EMPIRICAL REVIEW

Operating cash flows contain better information than stock return to investors (Ball, Gerakos, Linnainmaa, & Nikolaev, 2016). Operating cash flow is an indicator of day to day operations that determine whether the company can generate cash that can be used to repay loans and maintain the operating capability of the company. Several studies have linked operating cash flow and stock return. For example, Ghodrati and Abyak (2014) studied the relationship between operating cash flows and earnings including shareholder returns. The review employed data from 54 companies listed in the Tehran Stock Exchange. The findings established that there is a significant relationship between operating cash flow, increment in profitability and the economic success of investors returns.

Jaeni (2014) examined and analysed the effect of accounting earnings; operating cash flow to stock return measured using stock returns on manufacturing companies in Indonesia Stock Exchange (IDX). This study examined 54 manufacturing companies listed on the Indonesia Stock Exchange. The study sample was determined using purposive sampling technique to obtain a representative sample in accordance with the specified criteria. The independent variables of the study were accounting earnings and operating cash flow, while the dependent variable is the stock return in the manufacturing companies. The results revealed that the Profit Accounting and Operating Cash Flow has a positive and significant impact on stock returns, which means the higher the accounting earnings and operating cash flow, the greater the benefit shareholders will reap from their shares (stock returns).

Aghaei, Sepasi, and Kazempour (2014) examined the effect of operating cash flows separation and accruals on ability to predict cash flows and stock return. Based on the findings it was revealed that, normal cash flows as opposed to unusual cash flows predict stock return better than ordinary accrual agents and surpasses the illogical components in foretelling future cash flows and stock return.

Jintaviwatwong and Suntraruk (2012) examined the effect of current earnings and current operating cash flows on future operating cash flows and future stock prices of non-financial firms listed on Thailand stock exchange for the period 2001-2008 using published secondary data. The study adopted descriptive research and the results from the regression analysis demonstrated that current future earnings as well as current operating cash flows have a positive correlation with future operating cash flows and future stock prices. Furthermore, in analyzing the predictive capacity of current earnings and current operating cash flows, the study used the 2009- 2010 out-of-sample data, and the finding demonstrated that current earnings and current operating cash flows have the capacity to foretell future operating cash flows more effectively as opposed to future stock prices.

Equally, Yocelyn and Christiawan (2012) carried a research on the effect of operating cash flow on share price and the results revealed a positive and significant influence of operating cash flow to share price. A similar study was conducted by Ginting (2011) which showed that the operating cash flow also has a significant influence and positive impact on stock returns. Results of a study carried by Hariono and Sugeng (2012) affirmed that the operating cash flow is significantly and positively correlated to the company's value.

Martani and Khairurizka (2009) studied the effect of operating cash flow on stock returns and found that the higher the company's operating cash flow, the higher the investor's confidence in the value of the company, translating to higher stock returns hence concluded that operating cash flow is significantly related to stock returns.

Santoso (2018) examined the effect of operating cash flow to stock return through stock price using secondary data obtained from the financial statements of companies listed on the Indonesia Stock Exchange, Capital Market Directory (ICMD), the IDX website www.idx.co as well as from various other sources to support this research for the period 2012-2015. This research used listed manufacturing companies and purposive sampling technique was adopted. The results concluded that operating cash flow directly and indirectly has no effect on stock returns through stock prices.

4. MATERIAL AND METHODS

This study adopted the positivism research philosophy and utilized explanatory research design which is panel in nature. The study sought to establish whether there is any causal relationship between operating cash flow information and stock return. The study population were 29 non-financial firms that traded consistently in NSE for the 12-year under study (2007 – 2019) and had all the required data in their financial statements for the study variables. The study used secondary data collected from the annual reports and audited financial statements sourced from NSE or downloaded from capital markets authority website for the companies under consideration. According to International Accounting Standards (IAS) 32 and 39, firms must disclose cash flows in their financial reports. Content analysis technique was employed for collection of data using data collection sheet.

4.1. Measurement of Variables

This study measured one independent variables (operating cash flows) and one dependent variable (stock return).

4.1.1. Stock Return

The dependent variable of the study is stock return denoted as SR which contains valid information for investors and its changes are regarded as a criterion for company's performance; the study followed Habib (2011)

formula to measure stock return. Stock price at the end the year-Stock Price at the end of the previous year)/(Stock Price at the end of previous year).

4.1.2. Operating Cash Flow

Operating cash flow (OCF) variable was obtained from operating cash flow information outlined on a company's cash flow statement in a certain period minus the operating cash flow of the previous year divided by the operating cash flow of the previous year (Subramanyam, 2014).

4.2. Data Analysis And Model Specification

The collected research data was checked for any errors and omissions, coded, defined and then entered into STATA. This study used both descriptive and inferential statistics. A panel data was used to evaluate the hypotheses. This study compared the Fixed Effect Model (FEM) and the Random Effects Model (REM) using Hausman test to determine the best model for the study. The model tested the effects of operating cash flow information and stock return as follows:

$$SR_{it} = \beta_{0it} + \beta_{4it} OCF_{it} + \varepsilon_{it}$$

Where;

SR - is the measure of stock performance.

β_{0it} is change in SR that independent variables present in the model cannot explain .Note that it is the constant in the equation.

OCF Operating cash flow.

ε is error term.

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5. FINDINGS AND DISCUSSION

The study determined the central tendency measure for all the study variables including calculating for the mean, standard deviation, skewness and kurtosis of all the variables over the study period. The results of each variable in the study was presented in Table 1 and 2 to show the trend movement of each variable over the 12 years study period. Basing on the findings in Table 1, the firms under study registered the highest rate of stock returns at 121.3% in 2010 (Mean = 1.213) due to global recovery after global depression of 2008 (World Bank, 2008). In contrast, the same firms had the lowest rate of stock return in 2016 at -39.8% (Mean = - 0.398). Stock returns performed poorly in the year 2015, 2016 and 2019 at-5.5%, -39.8% and -37.8 respectively. This drop in stock returns is attributed to global economic slump and the adverse effect of drought and low credit to the private sector in East Africa which grew at 5.4% (World Bank, 2008). However, in 2017 and 2018 stock returns performance took a positive trajectory of 25.1% and 35.9% due to improved rains, better business sentiments and easing of political uncertainty in Kenya (World Bank, 2008). Nonetheless, in year 2019 stock performance recorded a decrease of -37.8%. Comparatively, nonfinancial firms listed in NSE reported positive skewness of 0.773 an indication that the data are uniformly distributed around the mean thus the data is symmetrical and are correctly distributed and was therefore considered normal. Further, the stock returns did not exhibit a significant difference over the period

ranging from 2008 to 2019 (F = 1.450, p > 0.05). This shows that the fluctuation witnessed in stock returns was statistically insignificant along the years under study.

Table-1. Stock Return.

Year	Obs	Mean	Sd	Skewness	Kurtosis
2008	29	0.067	1.704	-1.574	7.304
2009	29	0.465	2.112	2.169	7.571
2010	29	1.213	1.967	1.924	5.561
2011	29	0.350	2.601	0.942	4.891
2012	29	0.389	1.151	2.851	11.213
2013	29	0.197	2.144	0.289	7.330
2014	29	0.320	2.526	-0.273	4.061
2015	29	-0.055	2.034	0.485	8.183
2016	29	-0.398	1.698	1.165	10.739
2017	29	0.251	1.727	0.628	9.171
2018	29	0.359	0.963	1.609	4.873
2019	29	-0.378	1.210	-0.654	6.570
Total	348	0.232	1.900	0.773	7.829
Analysis of Variance					
F 1.450					
Prob > F 0.148					

Table-2. Operating cash flow.

Year	Obs	Mean	SD	Skewness	Kurtosis
2008	29	-0.113	1.782	-0.883	4.767
2009	29	0.517	2.039	1.292	4.766
2010	29	0.537	1.997	1.558	4.928
2011	29	0.553	2.572	0.440	3.778
2012	29	0.225	1.774	0.581	5.289
2013	29	0.001	2.818	0.839	4.459
2014	29	0.252	2.410	-0.352	3.622
2015	29	-0.370	2.053	0.504	6.079
2016	29	0.327	4.226	3.198	5.530
2017	29	0.042	1.842	0.306	5.430
2018	29	0.561	3.519	4.237	11.503
2019	29	0.204	3.654	3.965	9.941
Total	348	0.228	2.650	2.908	10.886
Analysis of Variance					
F	0.36				
Prob > F	0.971				

The results in Table 2 indicate that operating cash flow was at its highest in 2018 at 56.1% (mean = 0.561) meaning all the nonfinancial firms liquidity was sound and these firms were able to finance their operational activities without difficulty from internally generated funds. Conversely, these firms recorded the lowest cash flow from operations in 2015 (mean = -0.370) as a result of global economic slump which was witnessed in 2015 and 2016 and its effect were felt in Kenya (World Bank, 2008). Operating cash flow reported a mean standard deviation of 2.650 in the twelve years meaning the cash flow from operations experienced minimal fluctuations over the years. On the other hand, there was positive skewness of 2.908 indicating that the bulk of the data was asymmetrical and distributed around the mean thus correctly distributed. Operating cash flows increased from -.113 in 2008 to .553 in 2011. This infers that listed firms in NSE could not meet their operational obligations in 2008 due to poor performance attributed to global financial crisis of 2007 but subsequently in 2009 through 2011 their performance improved positively, resulting to sound financial liquidity and were therefore able to service their outstanding liabilities. On the same breath, these results also revealed a down ward dip in operating cash flows in 2012 through 2015 from 0.225 to -.0370 respectively implying most of the nonfinancial firms were not able to generate adequate

cash from their business activities due to the hard economic times experienced at the time due to low credit to the private sector (World Bank, 2008).

Nevertheless, this variation in operating cash flow for Nonfinancial firm listed in NSE from 2008-2019 was not statistically significant over all the years (F = 0.36, p > 0.05). That withstanding, kurtosis coefficient was 20.886 meaning it exceeded the threshold value of ten meaning the data distribution along the tails was heavily loaded and the peak of the curve was kurtotic (steep) as compared to the ideal normal distribution curve.

5.1. Random-Fixed Effects GLS Regression

The random effect model estimates the coefficients based on the assumption that the individual or group effects are uncorrelated with other independent variables. The regression results for the random model are as illustrated in Table 3. The random model showed that operating cash flow explained 37.6% variation of stock return. From the table, operating cash flow showed a positive and significant effect on stock return (β= 0.440, ρ<.05). Therefore, an increase in operating cash flow by 0.440 units leads to an increase in the stock returns by the same unit. Regression results for the fixed model indicated that 37.6% variation in stock return is explained by operating cash flow. From the table, operating cash flow had a positive and significant effect on stock return (β= 0.450, ρ<.05). Table 3 highlights the findings of the Hausman test. The null hypothesis states that random effect model is appropriate. The p-value was 0.387 which was more than 0.05 meaning that we failed to reject the null hypothesis. Hence the appropriate model used in the study was random effects model. Thus, the study concluded that operating cash flow has a positive and significant effect on stock return. This suggested that there was up to 0.440-unit increase in stock return for each unit increase in operating cash flow.

Table-3. Random-Fixed effects GLS regression.

	Random-effects GLS regression				Fixed-effects (within) regression			
SR	**Coef.**	**Std. Err.**	**z**	**P>z**	**Coef.**	**Std. Err.**	**t**	**P>t**
OCF	0.440	0.030	14.440	0.000	0.450	0.033	13.680	0.000
cons	0.132	0.081	1.630	0.104	0.129	0.082	1.570	0.118
R-sq:								
within	0.371				0.371			
between	0.494				0.494			
overall	0.376				0.376			
Waldchi2(1)	208.410							
Prob> chi2	0.000							
F(1,318)					187.190			
Prob > F					0.000			
sigma_u	0.000				0.341			
sigma_e	1.528				1.528			
rho	0.000				0.047			
Huasman Test								
chi2(1) = (b-B)'[(V_b-V_B)^(-1)](b-B)								
0.76								
Prob>chi2 =	0.3837							

6. DISCUSSION OF THE FINDINGS

Operating cash flow had a positive and significant effect on stock return. This was consistent with Fawzi, Kamaluddin, and Sanusi (2015) and Collins, Hribar, and Tian (2014) research findings, which showed a significant relationship between operating cash flow and stock returns. Equally, Ghodrati and Abyak (2014) argued that there was some meaningful relationship between the operating cash flow, profitability and the stock returns to stakeholders. Besides, in the context of the Indonesia Stock Exchange, Jaeni (2014) established that Profit

Accounting and operating Cash Flow has a positive and significant impact on stock returns. The implication was that the higher the accounting earnings and operating cash flow, the greater the benefits shareholders will reap from their shares (stock returns). Further, Aghaei et al. (2014) elucidated that ordinary cash flows have more ability than unusual cash flows to predict cash flows and stock return. On the contrary, Santoso (2018) concluded that operating cash flow directly and indirectly has no effect on stock returns through stock prices for listed manufacturing firms on the Indonesia Stock Exchange. The same notion was shared by Foerster, Tsagarelis, and Wang (2017) who espoused that each cash flow item has a predictive value for future cash flows though the cash flow information has not yet fully reflected in stock prices.

7. CONCLUSIONS

The study is indicative of a positive link between operating cash flow and stock returns for nonfinancial companies listed at the NSE. The implication is that the higher the operating cash flow, the greater the value of stock returns. Besides, the findings suggest that operating cash flow have been on an increase from previous years suggesting that the listed firms were in a position to meet their day to day operational obligations without the need for external financing. Therefore, the positive operating cash flow is a positive signal for investors and enhances their confidence in the firm hence positive effect reflected in the stock returns.

8. RECOMMENDATIONS

Operating cash flow had a positive influence on the stock returns of firms listed at the NSE. Consequently, the study advocates for firms to increase their levels of operating cash flows through prudent utilization of cash resources since it enhances the stock returns. Furthermore, because the market responds to information from cash flows, firms should publicize audited financial statements together with cash flow statements annually to boost their relevance to investors. The firms could also boost the stock returns through consistent earnings that can reliably predict future cash flows.

8.1. Further Research

The primary objective of the study was to establish the effect of operating cash flow information on stock return. Future studies can further investigate all the firms listed in NSE by including banking and investment firms and analyze the results sector by sector. In addition future studies should decompose components of Operating cash flow and investigate the effect of individual components on stock returns as opposed to the current study which used the aggregated sum of all the components.

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