The Role of Accruals Anomaly on Stock Market Return of Non-Financial Firms Listed on the Nairobi Securities Exchange

Simon Sokorte Nabosu, Dr. Esther Nkatha M'ithiria &

Dr. Joshua Matanda Wepukhulu

The Role of Accruals Anomaly on Stock Market Return of Non-Financial Firms Listed on the Nairobi Securities Exchange

*[1]Simon Sokorte Nabosu, [2]Dr. Esther Nkatha M'ithiria, CPA & [3]Dr. Joshua Matanda Wepukhulu

*[1]PhD Candidate, The Catholic University of Eastern Africa

[2,3]Lecturer, The Catholic University of Eastern Africa

Email of the corresponding author: nabosimo20@gmail.com

Abstract

The accrual anomaly arises due to the market mispricing of the total accruals and their components and the investors fail to incorporate the differential persistence of the cash flow components and accruals of firm earnings. This study sought to determine the effect of accruals anomaly on stock market return of non-financial firms listed on the Nairobi Securities Exchange. The study adopted positivism as data collection and hypothesis development and testing was achieved. The study used quantitative research design to correlate study variables using mathematical analysis methods. Correlation results indicate that accrual anomaly was negatively and significantly associated to stock market return of non-financial firms. Regression results for the static model indicate that accrual anomaly and stock market return of non-financial firms is negatively and significantly related. The results for the dynamic model indicate that accrual anomaly and stock market return is negatively and significantly related. The study concluded that accruals anomaly has a negative and significant effect on stock market return in non-financial firms on the Nairobi Securities Exchange. The analysis concluded that the accrual anomaly has implications because firms with high reported accruals exhibit lower stock market returns. High valuations of the investors are related to accruals because of the accounting distortions. The study recommends that having knowledge regarding accrual toward stock return in the future will help the investors to minimize the earning prediction error so that investors can make appropriate decision making. The study recommends for the investors to implement the investment strategy, which to short (sell) low accrual stocks and long (buy) high accrual stocks in Nairobi Securities Exchange with prediction that the stock gains higher return in the future based on the prevailing investor projections.

Keywords: *Accruals Anomaly, Stock Market Return & Non-Financial Firms Listed*

1.1 Introduction

The accrual anomaly arises due to the market mispricing of the total accruals and their components (Cupertino, Martinez, & Costa, 2012; Ozkan & Kayali, 2015; Hasanbaglou & Salteh, 2016). When investors only fixate earnings, they overprice (underprice) the firms with relatively higher (lower) levels of total accruals, normal accruals, or abnormal accruals (Ozkan & Kayali, 2015; Memba & Muturi, 2016). In addition, the accrual components of current earnings cannot be estimated as mispricing is corrected after the future earnings are realized lower (higher) than the expected and this is predicted to generate negative (positive) abnormal returns (Baloch, 2015; Machdar, Manurung, & Murwaningsari, 2017; Solomon, Memba, & Muturi, 2016; Fredrick & Muiva, 2015). The effect of accruals anomaly on stock market returns reveals contradictory findings, with some studies reporting a positive relationship while other negative relationships. Some of the studies that reported a positive relationship between accrual anomaly and stock market returns include Baloch (2015), Hasanbaglou, and Salteh (2016), and Solomon, Memba and Muturi (2016). However, Machdar, Manurung, and Murwaningsari (2017) and Fredrick and Muiva (2015) reported a negative relationship.

Accrual anomaly arises when investors fail to incorporate the differential persistence of the cash flow components and accruals of firm earnings (Fredrick & Muiva, 2015). The anomaly occurs from the inconsistency in the financial statements, the growth, and accounting distortions (Hasanbaglou & Salteh, 2016). This also occurs when investors fail to incorporate the differential persistence of cash flow components and accruals of firm revenues (Ozkan & Kayali, 2015; Machdar & Murwaningsari, 2017). Accrual anomaly is an alternative to the efficient market hypothesis that the investor is supposed to rely on in pricing accounting information (Papanastasopoulos, 2020). However, previous studies comparing accrual anomaly and stock market return continue to give varied and mixed findings (Papanastasopoulos, 2020; Hasanbaglou & Salteh, 2016; Makau & Jagongo, 2018). The measures of the accruals are total accruals based on the balance sheet approach and current accruals that use a cash flow statement-based approach.

The stock market returns are useful for policymakers, researchers, and stock market participants keen on making various forecasts, developing regulatory rules, constructing portfolio strategies, or determining implications for policy (Alajekwu, Obialor & Okoro, 2017; Hasanbaglou & Salteh, 2016; Makau & Jagongo, 2018; Nyangara & Mazviona, 2014). The stock market is a volatile environment with dramatic moves that can either give investors a positive or negative stock market return. Stock prices change every day by market forces and when more people want to buy a stock (demand) than sell it (supply), then the price moves up (Kirui, Wawire, & Onono, 2014; Sayedy & Ghazali 2017; Sichoongwe, 2016; Aroni, Namusonge, & Sakwa 2014). Conversely, if more people wanted to sell a stock than buy it, there would be more supply than demand, and the cost would fall. Therefore, stock returns are essential to the firms and are used to measure a company stock's financial performance. For instance, the monetary gain or the loss translated into a change in the value of a stock as a capital gain yield and cash dividend paid at a particular time (Sulong, Saleem, & Ahmed, 2018).

1.2 Problem statement

The share market performance among the non-financial firms listed on the NSE for the last quarter of 2017 declined considerably to Kshs. 25.39 billion from Kshs. 46.10 billion in the same quarter in 2016 (NSE, 2020). The stock market in Kenya decreased by 189 points since the beginning of 2019 and the only time Kenya stock market reached an all-time high of 6161.46 points was in

January of 2007 (NSE, 2019). Besides, some non-financial firms such as Marshall East Africa Ltd, Hutchings Biemer and Baumann were delisted while Atlas Africa Industries Ltd and Deacons were suspended from trading (CMA, 2018). Existing studies present divergent findings on the role of accrual anomaly on stock market returns. Dalika and Seetharam, 2019; 2015; Baloch, 2015; Machdar, Manurung and Murwaningsari, 2017; Ngugi, 2017; Ali, 2017; Alajekwu, Obialor and Okoro, 2017; Kamuti and Omwenga, 2017; Wanjau, 2018; Oprea and Brad, 2014) found a positive relationship between accrual anomaly on stock market returns. On the contrary, Georgios Papanastasopoulos, Andreas, Tsalas and Dimitrios Thomakos (2016), Mohammad and Javid (2015), Chowdhury and Gizelis, (2016), Cherono, Nasieku and Olweny (2017) found a negative relationship between accrual anomaly on stock market returns. Therefore, previous studies were not adequate to give inferences about the Kenyan market. Consequently, a knowledge gap exists, to fill this gap current study on the effect of accruals anomaly on the stock market return of non-financial firms listed on the Nairobi securities exchange was conducted to fill this gap.

1.3 Objectives of the Study

To examine the effect of accruals anomaly on stock market return of non-financial firms listed on the Nairobi Securities Exchange.

1.4 Research Hypotheses

H_1: Accrual anomaly has a negative and significant effect on the stock market return of non-financial firms listed on the Nairobi Securities Exchange

2.0 Literature Review

2.1 Theoretical Review: Signaling Theory

Michael Spence developed the Signaling Theory in 1978. The theory states that information disclosure in corporate annual reports is used as a signal to improve the corporate image and attract new investors and help to strengthen relationships with the stakeholders. The theory reports that inconsistency in the financial statements and accounting distortions is a factor that makes drives away the investors. The higher the financial statements' transparency, the higher the stock market returns (Connelly, Certo, Ireland & Reutzel, 2011). Investors prefer organizations that disclose all the information to the public without any form of distortions. The theory reports that pricing anomalies lower the stock market returns. The stocks' prices may be stated differently by the organization to attract investors, which may reduce the expected returns (Machdar & Murwaningsari, 2017). The theory holds that managers of firms with higher performance voluntarily disclose more information to promote a positive image. According to Spence (1978), the report's voluntary disclosure provides the right signals about a firm's expected performance. It avoids the risk that outsiders make wrong judgments based on the non-disclosure of corporate data.

The theory describes that during the publication of accounting information, information asymmetry may guide stock price reactions. According to Celanim and Singh (2011), the motivation to attract more investors and competition between companies compels managers to provide accounting data that has been altered in their favor. Furthermore, the theory establishes most of the shareholders of a company such as investors have little access to company operations and they rely on publicly available information to make investment decisions (Yuningsih, Hasna, Wajdi & Widodo, 2018). The theory's weaknesses are that the management may manipulate

accounting figures to allow the investors to appreciate the company's stock portfolios and become more attracted to invest. In addition, the Signaling theory's weaknesses are the lack of information on how perceived alternative signals might be signaled during the time of decision making.

The theory is relevant to the current study because it attests that voluntary information disclosure in corporate annual reports is used as a signal to improve the corporate image and attract new investors (Kamuti & Omwenga 2017). Therefore, investors prefer organizations that disclose all the information to the public without any form of distortions. Company stakeholders such as investors do not have full access to all company operations details, and they rely on publicly available information to make investment decisions. The disclosure of all relevant information provides right signals about a firm's expected performance and avoids the risk that outsiders make wrong judgments. Therefore, the theory is appropriate and informs the variable of accrual anomaly and stock market returns in the study.

2.2 Empirical review

In Singapore and Indonesia, Machdar, Manurung and Murwaningsari (2017) in his study focused on real earnings management in relationship to accrual anomaly and conservatism. The study adopted the panel research design and used sample size of 298 firms. The secondary data were obtained for ten years period (2004-2013). The results showed that accrual anomaly negatively affects the company's stock returns, this is contrary to a study by Baloch (2015) showing a positive relationship between accrual and stock market returns.

In Pakistan, Baloch (2015) examined the effect of accrual anomaly in predicting the future stock market return. Secondary data was obtained from the Karachi Stock Exchange (KSE) for twelve years from 2002 to 2013. The robust fixed effect method was used to achieve the objective. The study was informed by the information signaling theory. The study's results show that accruals anomaly predicted the future stock returns positively when accruals are measured through the cash flow approach. The study also noted that measuring accruals from the balance sheet approach contains estimation errors, which lead to biased results. The study concluded that the relationship between accrual anomaly and stock market return is positively significant.

Although Baloch (2015) and Machdar, Manurung and Murwaningsari (2017), focused on accrual in general, Ali (2017) specifically focused on the link between the working capital component of accruals and stock return of firms listed on the Karachi Stock Exchange in Pakistan. The study by Ali (2017) utilized a sample of 89 non-financial firms from 12 different sectors listed on the Karachi stock exchange for ten years from 2005 to 2014. The impact of working capital accruals on stock returns was measured by checking the relationship between working capital accruals and returns by formulating the portfolios through regression. Secondary data was used in the study. The finding of the study showed that working capital accruals have positive effects on stock returns. It was further reported that discretionary accruals have more impact on stock returns as compared to non-discretionary accruals. The researcher concluded that working capital accruals are positively related to stock return.

In Iran, Hasanbaglou and Salteh (2016) examined the impact of the accrual anomaly (growth and accounting distortions) on the stock market returns of companies listed on the Tehran Stock Exchange. A sample of 146 companies was selected using the systematic sampling method. Secondary data was collected for five years (2009-2013). The method of ordinary least square regression and panel data were used to test the hypotheses. The study results showed that the

accrual anomaly (growth and accounting deformities) had a negative impact on stock market returns.

Similar to the study done in Iran by Hasanbaglou and Salteh (2016), in Greece, Georgios Papanastasopoulos, Andreas, Tsalas and Dimitrios Thomakos (2016) examined the effect of accrual anomaly on stock market return in the country. The study was conducted among the firms listed on the Athens Stock Exchange. The indicators of the accrual anomaly included total accrual and current accruals. The analysis suggested that the accrual anomaly has macroeconomic implications because firms with high reported accruals exhibit lower stock market returns. The study in Greece concluded that the accrual anomaly has a negative effect on the stock market return. The higher the accrual anomaly, the lower the stock market returns and vice versa.

The study by Ali (2017) focused on working capital accruals while Mohammad and Javid (2015) focused on accruals measured using a balance sheet approach to examine the existence of accrual anomaly on the Karachi Stock Exchange and its effect on stock market returns. Both studies used sample size of 340 of non-financial firms listed on the Karachi Stock Exchange. The study found that persistence in earnings depends on the size of earnings, which are accruals and cash flows. The finding of both studies showed a negative relationship existed between accruals and stock market returns. Both studies concluded that accrual anomaly is a significant factor that negatively influenced the stock market returns.

Based on the reviewed empirical literature, there are inconsistence results. Some studies (Baloch, 2015; Machdar, Manurung & Murwaningsari, 2017; Ngugi, 2017; Ali, 2017) found that accrual anomaly was positively related to the stock market return. On the contrary, (Georgios Papanastasopoulos, Andreas, Tsalas & Dimitrios Thomakos, 2016; Hasanbaglou & Salteh, 2016; Mohammad & Javid, 2015; Sehgal, Subramaniam & Deisting, 2012) found that accrual anomaly was negatively related to the stock market return. This is an indication that the reviewed study presents a knowledge gap that needs to be examined and to test H_1 accrual anomaly has negative and significant effect on stock market return.

2.3 Conceptual Framework

The conceptual framework was developed from the literature review, and it shed light on the methodology that was used in the study. The conceptual model in Figure 1 depicts the relationship between accrual anomaly on the stock return market to non-financial firms listed in the Nairobi Securities Exchange.
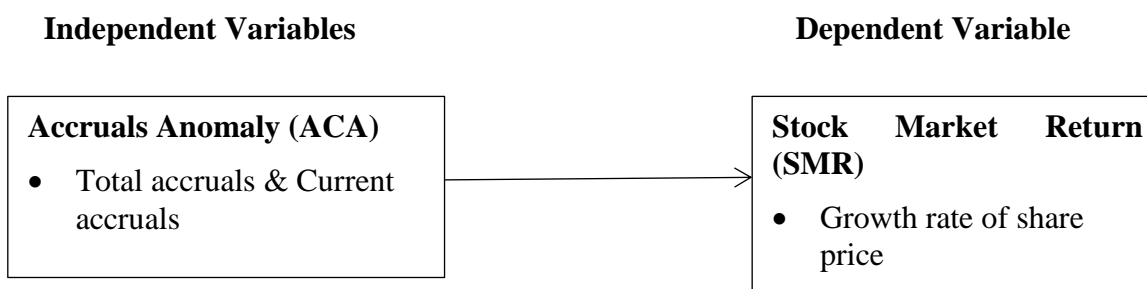
Independent Variables   **Dependent Variable**

Accruals Anomaly (ACA)
• Total accruals & Current accruals

→

Stock Market Return (SMR)
• Growth rate of share price

Figure 1: Conceptual framework

2.3.1 Stock market return

There are inconsistencies on how the stock market return is measured. Some studies use accounting-based measures such as ROE and ROA to measure stock market return (Corredor, Ferrer & Santamaria, 2015; Kirui, Wawire & Onono, 2014; Limongi Concetto, & Ravazzolo, 2019; Suciati, 2018). On the other hand, other scholars (Chowdhury & Gizelis, 2016; Machdar, Manurung & Murwaningsari, 2017; Ali, 2017; Santosa, 2020) use the growth rate of share price as a measure of stock market returns.

In the current study, the researcher used growth rate of share price to measure the stock market return. The justification of using the growth rate of the share price values is that the stock prices change every day depending on the market forces and when more investors buy a stock then the price moves up (Baloch, 2015; Rashid, Fayyaz & Karim, 2019; Cherono, 2018; Oprea & Brad, 2014). Most of the investors are more concerned with the rise or fall of the share prices to make the investment decision. Therefore, the growth rate of the share price was the best proxy to measure the stock market return as follow.

$$SMR = \frac{Pi_t - Pi_{t-1}}{Pi_{t-1}} * 100\% \qquad (1)$$

Where:

SMR: Stock Market Return

$P_{i,t}$: Average stock price in year t

$P_{i,t-1}$: Average stock price in year t-1 (previous year)

The study used growth rate of share price to measure the stock market return. According to Bintara and Tanjung (2019) return can be computed by stock price in year (^{t}) less average stock price in year $^{t-1}$ (previous year) dividing by lagged stock price. The empirical studies reviewed revealed yearly growth rate of the share price was the best proxy to measure the stock market return (Chowdhury & Gizelis, 2016; Machdar et.al, 2017; Ali, 2017; Santosa, 2020).

2.3.2 Accrual anomaly

Accrual anomaly occurs when investors fail to incorporate the differential persistence of the cash flow components and accruals of firm revenues (Khansalar 2012). It is determined by the total accruals and the current accruals. Investors are more concerned with the level of the accruals before investing in a particular company or buying the shares. The accruals are obtained from the financial statements of the institutions in which there are total accruals and currents accruals. The accrual anomaly is calculated using the average of total accrual (TA) and current accrual (CA) as follows.

$$TA_{i,t} = \Delta CA_{i,t} - \Delta Cash_{i,t} - \Delta CL_{i,t} - \Delta STD_{i,t} - DEP_{i,t}, \qquad (2)$$

Where, $TA_{i,t}$ = Total Accrual, $\Delta CA_{i,t}$ = Change in current assets in year

$\Delta Cash_{i,t}$ = Change in cash and cash equivalents in year t;

$\Delta CL_{i,t}$ = Change in current liabilities in year t;

$\Delta STD_{i,t}$ = Change in short-term debt in year t;

and $DEP_{i,t}$ = Depreciation and amortization expense in year t. i,t= (i-Firm t-time)

The current accrual was computed using cashflow approach as follow.

$$CA_{i\ t} = NI_{i,t} - CFO_{i,t}. \hspace{3cm} (3)$$

Where,

$NI_{i,\ t}$ = Net income.

$CFO_{i,\ t}$ = Cashflow from operating activity

Accrual anomaly is measured using total accrual and current accrual (Khansalar, 2012; Heirany, Moeinadin & Nazemizadeh, 2014; Araghi & Attari, 2013). Total accrual (TA) was the total difference arising from change in current assets, change in cash and cash equivalents, change in current liabilities, change in debt included in current liabilities and depreciation expense in the year. While the current accrual (CA) was the total difference from net income and Cash flows from operating activities for the year. The study measured accrual anomaly using average value of total accrual and current accrual. The study is similar to studies (Lei 2013; Baloch 2015; Hasanbaglou & Salteh 2016; Ozkan & Kayali 2015; Fredrick & Muiva 2015) which used accrual anomaly proxies.

3.1 Research Methodology

The study adopted positivism as data collection and hypothesis development and testing was achieved. Hypotheses was tested and confirmed, which can be used for further research. Further, positivism was established on quantifiable observations and accordingly, statistical analysis is obtained. The study used a deductive approach since the researcher tested the hypothesis and establish a conclusion of whether accrual anomaly affect the stock market return. The study used quantitative research design to correlate study variables using mathematical analysis methods. Descriptive is often used as a pre-cursor to more quantitative research designs with the general overview giving some valuable pointers as to what variables are worth testing quantitatively (Williams, 2007).

The target population for the study was all 43 non-financial firms listed on the Nairobi securities exchange. The unit of analysis for the study was individual non-financial firms listed in NSE. The targeted population included eight sectors namely, agricultural sector, manufacturing and allied, commercial and services sector, investment, automobiles, construction and allied sector, telecommunications and technology, energy, and petroleum. The study did not consider firms listed under the banking and insurance sectors since they are associated with tight regulations and compliance. In addition, the heterogeneity makes such sector difficult to perform hypothesis testing for the study variables (Mwangi *et al*., 2012). The researcher conducted a census. However, only thirty-one (31) non- financial companies were active over the study period and thus were used in the study. This enabled the researcher to achieve observations of 310 for panel data.

Model Specification

To test the hypothesis in current study, static and dynamic panel model were used. Static panel data analysis considers time series data and cross-sectional data simultaneously. The static panel is as presented in equation 4.

$$SMR_{it} = \beta_0 + \beta_2 ACA_{it} + \varepsilon \hspace{3cm} (4)$$

Where;

SMR = Stock Market Return

i=non-financial firms (1…31)

t= time (2010-2019)

β_0 = Constant

ACA = Accruals Anomaly

β_1 = Coefficients of the independent variables

ε = Error term is a residual variable when the model does not fully represent the actual relationship between the independent variables and the dependent variables.

On the other hand, dynamic panel data model contains at least one lagged dependent variable as independent variable. The investors rely on information of current prices or today prices to predict future returns. Dynamic panel models have ability to determine short and long run values of coefficients. Additionally, such models make it possible for researchers to choose which explanatory variables are potentially endogenous or exogenous (Harrison, 2007). The dynamic panel model before interaction as presented in equation 5.

$$SMR_{it} = \beta_0 + \beta_1 SMR_{it\_1} + \beta_3 ACA_{it} + \varepsilon \qquad (5)$$

Where;

SMR = Stock Market Return

i= Non-financial firms (1…31)

t= time (2010-2019)

β_0 = Constant

SMR_{it-1} = Lag Stock Market Returns

4.0 Results and Findings

4.1 Descriptive Statistics

The section presents the descriptive statistical analysis of the data collected for all variables for the period 2010 to 2019. The descriptive statistics encapsulate the measure of central tendency such as the mean, the measures of dispersion such as standard deviation, minimum and maximum observations as well as measures of distribution (skewedness and kurtosis) were used. Descriptive statistics were presented accrual anomaly (Kshs) and stock market return (percentage). The analysis is useful in enabling the presentation and visualization of raw data in a meaningful way. The results are presented in Table 1.

Table 1: Descriptive Statistics Outputs

Variable	Accrual Anomaly (Kshs)	Stock Market Return (%)
Panel A		
Mean	-2503617	4.5%
Min.	-71418500	-97%
Max.	49021000	42.75
Std Dev.	8267940	3.823
Skewd	0.037	0.038
Kurtosis	0.050	0.045
Panel B Annual Means		
Year		
2010	-1156080	5.00%
2011	-1129376	19.30%
2012	-1682340	1.40%
2013	-3029896	13.00%
2014	-2636292	0.80%
2015	-2367769	9.10%
2016	-2085935	-2.60%
2017	-3577027	1.80%
2018	-3452914	-2.30%
2019	-3418543	-0.60%
Panel C Equality of Means		
Anova F	2.78	4.076
Welch F	0.006	0.003

A balanced panel of 31 non-financial firms observed for 10 years, accrual anomaly is in million Kshs, stock market return variable is a percentage. Accrual anomaly had a mean value of -2,503,617 with a minimum of -71,418,500 and maximum of 49,021,000. The standard deviation was 8,267,940 and this signifies significant variation in accrual anomaly. As determined by the total accruals and the current accruals, the results reflect accrual anomaly in their financial reporting. In panel C, the results on test for equality of means indicate that accrual anomaly (F-statistic= 2.78, P-value=0.006), and stock market return (F-statistic =4.078, P-value=0.003). The Welch test also indicate that the variables had significant levels below the critical 0.05. The test for equality of means implied that the variable means are different, and it is alternative to the ANOVA and can be used even if the data violates the assumption of homogeneity of variance.

4.2 Correlation Analysis

Correlation analysis was carried out to detect the association between the explanatory variables. The mean score for each of the independent variables was calculated using Pearson's correlation. When the p-value is less than or equal to 0.05 the correlation is statistically significant. However, if the p-value is greater than 0.05 correlation is not statistically significant (Statistics Solution, 2018). Positive correlation implies that as one variable increases the other variable tends to also increase and negative correlation implies inverse.

Table 2: Correlation Analysis Outputs

	Stock Market Return	lgStock Market Return	Accrual Anomaly
Stock Market Return	1.000		
Lag Stock Market Return	0.897*	1.000	
	0.000		
Accrual Anomaly	-0.736*	-0.263	1.000
	0.000	0.000	

The results in Table 2 indicate that the lagged stock market return was positively and significantly associated to stock market return (r= 0.897*, p=0.00<0.05). This implied that there was a high association between lagged stock market return and stock market return of 82.6%. Further, the results indicate that accrual anomaly was negatively and significantly associated to stock market return of (r=-0.736*, p=0.00<0.05). This implied that there was a high association between accrual anomaly and stock market return of 73.67%. Accrual anomaly had a negative association to stock market return. This is attributed to existence of accrual anomaly and failure to incorporate differential cash flow component.

4.3 Regression Analysis

The first stage involved regressing stock market return against explanatory variables as specified under static and dynamic panel models. Static panel data analysis considers time series data and cross-sectional data simultaneously. While dynamic panel data model contains at least one lagged dependent variable as independent variable. Dynamic panel models have ability to determine short and long run values of coefficients. Additionally, such models make it possible for researchers to choose which explanatory variables are potentially endogenous or exogenous (Harrison, 2007). Regression analysis was conducted to determine whether there was a significant relationship between the independent and dependent variables. In the static model, accrual anomaly was predicted against stock market return of non-financial firms listed on the Nairobi Securities Exchange. The results are as shown in Table 3.

Table 3: Regression Outputs for Models

Static Model: Random - effects

Stock Market Return	Expected sign	Coef.	Std. Err.	z	P>|z|
Accrual Anomaly	Negative (-)	-0.365	0.039	-9.440	0.000
Constant		0.292	0.030	9.890	0.000
F-statistic		9.36			
Prob > chi^2		0.000			
Rsquared		0.562			
Number of observations		310			

Dynamic Model: Random- effects

Stock Market Return	Expected sign	Coef.	Std. Err.	z	P>|z|
lagStock Market Return	Positive (+)	0.270	0.050	5.440	0.000
Accrual Anomaly	Negative (-)	-0.324	0.038	-8.580	0.000
constant		0.283	0.032	8.710	0.000
F-statistic		10.53			
Prob > chi^2		0.000			
Rsquared		0.655			
Number of observations		310			

The results further indicate that accrual anomaly and stock market return of non-financial firms list is negatively and significantly related (β= -0.365, p=0.000). The coefficient of determination R Square is 0.562. The static model indicates that accrual anomaly explains 56.2% of the variation in stock market return. The findings further confirm the reliability of static model. Further, a dynamic panel model which has ability to determine short and long run values of coefficients was developed. The dynamic model, the dependent variable stock market return was lagged. The regression coefficients result of lagged stock market return and stock market return was positively and significantly related (β=0.270, p=0.000). The results further indicate that accrual anomaly and stock market return of non-financial firms listed is negatively and significantly related (β= -0.324, p=0.000).

The findings further confirm that the dynamic regression model of lag stock market return, accrual anomaly against stock market return was significant with a Prob= 0.000 and supported by F-statistic of 10.5. Accrual anomaly had negative effect on stock market returns. The findings implied that the accrual anomaly present significant impact on stock market performance in the long run.

The fitted static model before interaction.

$SMR_{it} = 0.292 - 0.365ACA_{it}$

The fitted dynamic model before interaction.

$SMR_{it} = 0.283 + 0.270SMR_{it\_1} - 0.324ACA_{it}$

4.4 Discussion of Findings

The objective of the study sought to examine the effect of accruals anomaly on stock market return of non-financial firms listed on the Nairobi securities exchange. Correlation results indicate that accrual anomaly was negatively and significantly associated to stock market return of non-financial firms (r=-0.736, p=0.00<0.05). Regression results for the static model indicate that accrual anomaly and stock market return of non-financial firms is negatively and significantly related (β= -0.365, p=0.000). The results for the dynamic model indicate that accrual anomaly and stock market return is negatively and significantly related (β= -0.324, p=0.000).

The p-values 0.000 were below the critical 0.05 and thus reject the null hypothesis that Accrual anomaly has no significant effect on stock market return of non-financial firms. The findings are consistent with Machdar, Manurung and Murwaningsari (2017) whose study on real earnings management in relationship to accrual anomaly and conservatism indicate that accrual anomaly negatively affects the company's stock returns. The findings are also in line with Hasanbaglou and Salteh (2016) who examined the impact of the accrual anomaly (growth and accounting distortions) on stock market returns of companies listed on the Tehran Stock Exchange and results showed that the accrual anomaly (growth and accounting deformities) had a negative impact on stock market returns. The results are in tandem with Georgios Papanastasopoulos, Andreas, Tsalas and Dimitrios Thomakos (2016) who examined the effect of accrual anomaly on stock market return in the country and established that accrual anomaly has a negative effect on the stock market return. The higher the accrual anomaly, the lower the stock market returns and vice versa. Mohammad and Javid (2015) findings showed a negative relationship existed between accruals and stock market returns. The study concluded that accrual anomaly is a significant factor that negatively influenced the stock market returns. The findings are in line with signaling theory where inconsistency in the financial statements and accounting distortions is a factor that discourage the investors. The higher the financial statements' transparency, the higher the stock market returns, and pricing anomalies lower the stock market returns. The stocks' prices may be stated differently by the organization to attract investors, which may reduce the expected returns

In contrast, the study by Ali (2017) indicated that working capital accruals have positive effects on stock returns. It was further reported that discretionary accruals have more impact on stock returns as compared to non-discretionary accruals. The researcher on this study concluded that working capital accruals is positively related to stock return. In India, the study by Sehgal, Subramaniam and Deisting (2012) study on the effect of accruals anomaly on future stock market returns found that a positive effect was found to exist between accrual anomaly and stock market returns. Studies (Baloch, 2015; Machdar, Manurung & Murwaningsari, 2017; Ngugi, 2017; Ali, 2017) found that accrual anomaly was positively related to the stock market return. These studies used short time period, applied different models and was carried in different context. This is possible causes of different outcome.

5.1 Conclusions

The study concluded that accruals anomaly has a negative and significant effect on stock market return in non-financial firms on the Nairobi Securities Exchange. The analysis concluded that the accrual anomaly has implications because firms with high reported accruals exhibit lower stock market returns. High valuations of the investors are related to accruals because of the accounting distortions.

6.1 Recommendations

The study recommends that having knowledge regarding accrual toward stock return in the future will help the investors to minimize the earning prediction error so that investors can make appropriate decision making. In addition, based on the result of this research, it's recommended for the investors to implement the investment strategy, which to short (sell) low accrual stocks and long (buy) high accrual stocks in Nairobi securities exchange with prediction that the stock gains higher return in the future based on the prevailing investor projections.

References

Alajekwu, U. B., Obialor, M. C., & Okoro, C. O. (2017). Effect of investor sentiment on future returns in the Nigerian stock market. *International Journal of Trend in Scientific Research and Development* 1(5), 141–155. https://doi.org/10.31142/ijtsrd2256

Aroni, J., Namusonge, G., & Sakwa, M. S. (2014). The effect of financial information on investment in shares - a survey of retail investors in Kenya. *International Journal of Business and Commerce*, 3(8), 58–69.

Baloch, M. S. (2015). Does the accrual anomaly exist in stock market? Evidence from Pakistan. *European Journal of Accounting, Finance & Business*, 3(3), 44–71.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39-67. https://doi.org/10.1177/0149206310388419

Cupertino, C. M., Martinez, A. L., & Costa, N. C. A. (2012). Accrual anomaly in the Brazilian capital market. *Brazilian Administration Review*, 9(4), 421–440. https://doi.org/10.1590/S1807-76922012005000005

Fredrick, O., & Muiva, N. B. (2015). Fundamental analysis of stock returns of non-financial firms listed at the Nairobi securities exchange. *Universal Journal of Accounting and Finance*, 3(3), 113–116.

Georgios A. Papanastasopoulos, Andreas I. Tsalas and Dimitrios D. Thomakos (2016). The accrual anomaly in the Greek stock market. *Journal of Investment Management and Financial Innovations*, 13(2-2), 322-333

Hasanbaglou, M., & Salteh, H. M. (2016). The effect of the accrual anomaly on the performance and future stock returns. *International Journal of Humanities and Cultural Studies,* 3(2), 758–768.

Kamuti, J. ., & Omwenga, J. (2017). Factors influencing investment decisions in Nairobi securities exchange: A Case of Dyer and Blair Investment Bank Limited. *Journal of Economics and Finance*, 2(3), 1–15.

Karungu, R. M., Memba, F. S., & Muturi, W. M. (2018). Effects of securities behavior on performance of Nairobi securities exchange indices. *International Journal of Business and Entrepreneurship* 9(2), 62-76

Kirui, E., Wawire, N. H. W., & Onono, P. O. (2014). Macroeconomic variables, volatility, and stock market returns: A case of Nairobi securities exchange, Kenya. *Journal of Economics and Finance*, 6(8), 214–228. https://doi.org/10.5539/ijef.v6n8p214

Machdar, N, & Murwaningsari, E. (2017). The effects of earnings quality, conservatism, and real earnings management on the Company's performance and information asymmetry as a moderating variable. *Journal of Economics and Financial Issues*, 7(2), 309–318.

Makau, M. M., & Jagongo, A. (2018). Systematic risk factors, investor sentiment and stock market performance in Kenya. *Journal of Management and Commerce Innovations*, 5(2), 1132–1143.

Mohammad, J., & Javid, A. Y. (2015). An analysis of accrual anomaly in case of Karachi stock exchange (No. 2015: 116). *Pakistan Institute of Development Economics.*

Nyangara, D., & Mazviona, B. W. (2014). An analysis of the impact of demutualization on stock market liquidity. *Journal of Economics & Management Sciences*, 3(1), 1–6. https://doi.org/10.4172/2162-6359.1000165

Ozkan, N., & Kayali, M. M. (2015). The accrual anomaly: Evidence from Borsa Istanbul. *Borsa Istanbul Review,* 15(2), 115–125. https://doi.org/10.1016/j.bir.2015.01.002

Papanastasopoulos, G. (2020). Percent accruals and the accrual anomaly: Evidence from the United Kingdom. *Accounting Forum*, 0(0), 1–24. https://doi.org/10.1080/01559982.2020.1736758

Sayedy, B., & Ghazali, M. Z. (2017). The impact of microeconomic variables on stock return by moderating of money supply. *Journal of Asian Social Science*, 13(12), 191–200. https://doi.org/10.5539/ass.v13n12p191

Sehgal, S., Subramaniam, S., & Deisting, F. (2012). Accruals and cash flows anomalies: Evidence from Indian stock market. *Journal of Management and Financial Innovations*, 9(4), 64-78. https://doi.org/10.2139/ssrn.2128978

Sichoongwe, K. (2016). Effects of exchange rate volatility on the stock market: The Zambian experience. *Journal of Economics and Sustainable Development*, 7(4), 114–119.

Solomon, A. Z., Memba, F. S., & Muturi, W. (2016). Earnings per share and equity share investment in Companies listed on Nigerian Stock Exchange. *Journal of Business, Economics and Accountancy*, 4(1), 68–78.

Spence, M. (1978). Job Market Signaling. *Journal of Economics*, 87(3), 355–374. https://doi.org/10.2307/1882010

Sulong, S., Saleem, Q., & Ahmed, Z. (2018). The role of stock market development in influencing the firm's performance: A study based on Pakistan stock market. *Journal of Economics and Finance*, 10(12), 104–114. https://doi.org/10.5539/ijef.v10n12p104

Yuniningsih, Y., Hasna, N. A., Wajdi, M. B. N., & Widodo, S. (2018). Financial performance measurement with signaling theory review on automotive companies listed in Indonesia stock exchange. *Journal of Entrepreneurship and Business Development*, 1(2), 167-177. https://doi.org/10.29138/ijebd.v1i2.558