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Investigating into Earnings Management and the Performance of Selected Listed Firms in Ghana

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Abstract:

Earnings management is crucial for the growth and survival of a firm. Most firms indulge in earnings management in order to report certain targeted earnings, but the practices of earnings management have led to the collapse of lot of firms such as Royal A-hold, Worldcom in the U.S.A and lot more across the world.

The extent of earnings management among listed firms in Ghana was still not well studied and therefore there was the need for a detailed research on earnings management. This thesis investigated the existence of earnings management among some selected listed firms in Ghana and their performances from the period of 2008 to 2013. Discretionary accruals which were used as a measure for earnings management were derived from the modified Jones model and return on assets (ROA) were also used as firm performance indicator. The thesis also determined the impact of earnings management on performance. The results showed that firms in Ghana indulged in earnings management. Also the results indicated that earnings management had a negative impact on performance.

The study recommends that prospective investors must analyse financial statements of firms critically in order to avoid throwing their monies into firms that suffer from going concern problems. Also the study proposes that corporate governance practices and regulations should be wholly enforced in firms in order to protect the interest of shareholders.

Keywords: *Earnings management, Discretionary accruals, Non-discretionary accruals, Working capital accruals*

1. Introduction

Davidson et al (1985) define earnings management as the process of taking a carefully thought out steps, within the rules of generally accepted accounting practice (GAAP), in order to achieve a planned level of earnings. Managers take opportunity in the flexibility of the Generally Accepted Accounting Principles (GAAP) to employ techniques to manipulate or massage the accounting figures of their firms. Management also take opportunity of the insider knowledge to manipulate earnings, since investors do not have any idea of what is truly going on in the affairs of their firms. This is because not all investors are part of the people who manage the day to day activities of the firm.

For an investor to have confidence in a particular firm the firm must maintain clean and transparent financial statements. For a firm to maintain a clean and a transparent financial statement means a lot to bunch of stakeholders. For an investor it can mean improved returns, for an auditor it can mean avoiding being sued, for an analyst it can mean maintaining his reputation, and for a regulator it can lead to improved investor protection and less investment failures, Marinakis (2011).

The introduction of International Financial Reporting Standards (IFRS) in various part of the world has seen a drastic reduction of earnings management in countries which prepare their financial statement in accordance with International Financial Reporting Standards (IFRS). For example, Cai et al (2008) conducted a study on effect of IFRS and its enforcement on earnings management, the study was done across 32 countries and they found that earnings management in IFRS adoption countries has been reducing in current years.

This research investigates whether some selected firms in Ghana indulge in earnings management or not. The research also goes on to examine the effect of earnings management on the performance of these selected firms

1.1. Statement of the Problem

According to Healy and Wahlen (1999), earnings management comes about when managers of an entity use judgement in communicating financial information and in organizing transactions to falsify financial reports to either misguide some stakeholders about the performance of the entity or to influence contractual outcome. Since 1970 there has been an increase in multidisciplinary empirical research on earnings management in the developed countries (e.g., Dechow et al 1995; DeGeorge et al 1999; Healy and Wahlen 1999; DeAngelo et al 1994).

In the developed countries like U.S.A companies such as Enron in 2001, Worldcom in 2002 and Royal A-hold in 2003 used earnings management to achieve certain targeted earnings.

In the Ghanaian context little research has been conducted regarding earnings management. For example, Agyekum et al (2014) did a study on corporate governance and its relation with earnings management and they found that there was an increasing trend for earnings management for listed firms. However, the extent of earnings management among firms is still not well studied and therefore there is the need for a detailed research on earnings management in order to deepen the current understanding of earnings management.

1.2. Objectives of the study

To find out whether listed firms in Ghana manage their earnings

To assess the performance of the listed firms

To evaluate the effect of earnings management on firms' performance

1.3. Research Questions

Do reported earnings show a sign of earnings management?

What is the level of performance of the listed firms?

Does earnings management have a positive or a negative impact on firms' performance?

1.4. Hypothesis Development

The study sought to validate or otherwise the following hypotheses:

H₀: Listed firms in Ghana are not involved in Earnings management

H₁: Listed firms in Ghana indulge in Earnings Management

H₀: Earnings management positively impact on firm's performance

H₁: Earnings management negatively impact on firm's performance.

2. Knowledge of Literature Review

2.0 The Ghana Stock Exchange

The Ghana Stock Exchange was established in 1989. It started trading in 1990, currently there are about 38 equities listed on the Ghana Stock Exchange. It is a company limited by guarantee. According to Agyeman (2010) a stock exchange is defined as a regulated financial market where securities are bought and sold at prices which is set and controlled by the forces of demand and supply. He went on to say that stock exchange serves as a primary market where firms and governments raise capital to finance their business. Firms listed on the Ghana Stock Exchange are regulated by the Companies Code 1963, Act 179, Securities and Exchange Commission Regulations 2003, LI 1728 and Ghana Stock Exchange Membership Regulations 1991, LI 1510 as amended.

| S/N | Name of company | S/N | Name of company | S/N | Name of company |
|-----|-----------------------------|-----|---------------------------|-----|------------------------------------|
| 1 | African Champion industries | 13 | Cocoa processing Company | 25 | Ayrton Drug Manufacturing |
| 2 | AngloGold Ashanti | 14 | Ghana Commercial Bank | 26 | Unilever Ghana |
| 3 | Aluworks | 15 | Ghana Oil Company | 27 | Golden Star Resources |
| 4 | Fan Milk | 16 | Benso Oil Palm Plantation | 28 | Ecobank Transnational Incorporated |
| 5 | Golden Web | 17 | Guinness Ghana Breweries | 29 | Produce Buying Company(PBC) |
| 6 | Cal Bank | 18 | HFC Bank(Ghana) | 30 | Mechanical Llyod Company |
| 7 | Clydestone (Ghana) | 19 | Mega African Capital | 31 | Pioneer Kitchenware |
| 8 | Camelot Ghana | 20 | Standard Chartered Bank | 32 | Societe Generale Ghana |
| 9 | PZ Cussons Ghana | 21 | SIC Insurance Company | 33 | Transaction Solution (Ghana) |
| 10 | Ecobank Ghana | 22 | Starwin Products | 34 | Tullow Oil Ghana |
| 11 | Enterprise Group | 23 | Total Petroleum Ghana | 35 | UT Bank |
| 12 | Sam Woode | 24 | Trust Bank | 36 | |

Table 1: List of firms currently listed on the Ghana Stock Exchange

Source: Ghana Stock Exchange Website

2.1. Stakeholder Theory

Freeman and Reed (1983) described stakeholders as those groups of people or institutions who have interest in the action of the firm. From the definition of Freeman and Reed (1983) stakeholders includes a wide range of individuals and institutions that have contractual relationships in connection with the firm's specific assets Loy (2015). Freeman (1994) looks at the stakeholder theory in two perspectives. The first one talks about the purpose of the firm that is, is the firm able to deliver and achieve the main reason why it is in business? Are managers working hard enough? Are they working towards the achievement of firms specific goals or they are just working to achieve individual interest instead of the firm's interest?

The second one talks about the responsibility that management have towards stakeholders. It is the responsibility of firm managers to bring smiles to the faces of their stakeholders. For instance, shareholders expect managers to give them value for their investments.

Shareholders expect to see a stable and profitable business. The government also expects the various firms to pay their statutory payables without manipulating the figures to cheat the system. The community at large expects to see more employment opportunities, infrastructure and other things from these firms. Now the big question is, are firms delivering or giving back to the society that they find themselves? Or they are using earnings management techniques to escape from these responsibilities.

2.2. Agency Theory

Agency theory predicts that, both the principal and the agent will aim to maximize their own utility and therefore agents do not always act in the best interest of the principal, Gelderen (2013). We assume that instead of managers to fulfil the expectations of the shareholders they rather fulfil their own expectations. The separation of control and ownership and the conflicts of interest lie at the bases of the agency theory, Salah (2010).

According to Holthausen et al (1995) managers manipulate earnings downwards when their bonus is at uppermost. To Roman (2009), Earnings management occurs when an organizations management has the chance to take decisions that alter reported income and exploit those chances. The main aim of the shareholder would be to receive the maximum returns on investment.

However, there is an assumption that the agent will act in an opportunistic manner to maximize his utility or rewards. Hence, the interests of shareholders are in conflict with the interests of the agents. Due to the insider knowledge of the agent, information asymmetry may exist between the agent and the shareholder which will give opportunity to the agent to manage earnings.

According to ICAEW (2005) as a result of information asymmetries and self-interest, shareholders' lack reasons to trust their agents and will seek to resolve these concerns by putting in place mechanisms to align the interests of agents with principals and to reduce the scope for information asymmetries and opportunistic behaviours of their managers. The idea behind agency theory is that the shareholder is too busy or lacks the knowledge to do his work and so hires the manager but the shareholder being too busy also means he cannot monitor the activities of his manager very well. Therefore, he employs other means of monitoring and this brings about the agency cost which is borne by the shareholder.

2.3. Positive Accounting Theory

Positive Accounting Theory (PAT) was developed by Watts and Zimmerman (1986). This theory is interested in explaining and predicting actual accounting practices.

A Positive Accounting Theory tries to predict and describe economic accounting behaviour. Normative Theory is the opposite of PAT and it is the judgments about in which way companies should or should not act. The Positive Accounting Theory focuses on the choices of accounting methods and the implications of these choices.

Three hypotheses have mostly been formulated and tested by Positive Accounting Researchers. These are the Bonus plan hypotheses, Debt/Equity hypotheses and the Political cost hypotheses. According to Watts and Zimmerman (1990) Bonus plan is used because it can be observed. Also managers with bonus plans are likely to select accounting choices that will increase reported income. They later argued that bonus plans do not always give managers the motivation to increase earnings. Healy (1985) also tested the bonus plan hypothesis; he found that managers with bonus plans manipulate earnings in order to maximize reported earnings.

Watts and Zimmerman (1990) stated that with the Debt/Equity hypothesis the higher the firm's debt/equity ratio the more likely that managers will choose accounting methods that will inflate reported earnings because such firms are closer to violating the debt covenant. Dichev and Skinner (2002) tested Debt/Equity hypotheses; they found that managers work harder to avoid breaking the first debt covenant by selecting accounting policies that will maintain the debt covenant ratios.

Finally, the Political cost hypotheses predicts that bigger firms are likely to choose the accounting methods that reduces reported earnings Watts and Zimmerman (1990). Jones (1991) tested the Political cost hypotheses and found that firms deliberately choose accounting policies that are consistent with improving their case of import protection.

2.4. Earnings Management

The term earnings management encompasses a lot of strategies used by management to achieve certain targeted earnings. These strategies or techniques used by management would be dealt with later in this chapter. Earnings management is likely to occur where there are no proper monitoring systems in place. Also some managers take opportunity of the flexibility of the accounting standards. The accounting standards have given managements the chance to use their own judgement in applying the standards, for instance the estimation of depreciation percentages or changing depreciation methods and a lot more others. Management can apply discretion in forming estimations required by certain accounting standards, in order to manage earnings towards a favoured direction Marinakis (2011). That is Firms manipulate earnings through accrual estimation, Timing of transaction and others. We will only look at these two mentioned above.

Earnings management has been defined by lot of researchers therefore there is not just one acceptable definition.

To Levit (1998), "Earnings Management is a grey area where accounting is being perverted, where managers are cutting corners; and, where earnings reports reflect the desires of management rather than the underlying financial performance of the company".

According to the definition above management prefer to report what they desire rather than the true performance of the company. It is assumed that managements have certain motives to achieve and it is on these motives that they report such earnings. For instance, if management's incentive is tied to earnings then management will prefer to report higher earnings in order to earn higher incentives, Watts and Zimmerman (1990).

To Dechow and Skinner (2000) Earnings Management is “the intentional, deliberate, misstatement or omission of material facts, or accounting data, which is misleading and, when considered with all the information made available, would cause the reader to change or alter his or her judgment or decision”.

According to the definition above management will deliberately cause an error in the accounting data, and it is based on this data that stakeholders of the entity would take their decisions. In larger firms that have high political cost, management would love to manipulate earnings in order to reduce profit. High earnings because of political cost would attract the interest of stakeholders of those firms, Watts and Zimmerman (1990).

Hall et al (2013) defines earnings management as the use of accounting discretion, intentional accounting misstatement, or use of real transactions to alter the numbers reported in the financial statements to influence outcomes that depend on reported accounting numbers. They went on to explain that improper revenue recognition to meet targeted goals is an example of using deliberate misstatement. Also regularly changing methods used in calculating depreciation to maintain ratios used in debt contracts is an example of using accounting discretion to influence an outcome that depends on reported numbers.

2.5. Motivations for Earnings Management

Managers who indulge in earnings management are pushed by a certain cause. They do not manipulate earnings just for its sake but they manipulate earnings for various reasons which are important to them. Some of the things managers hope to achieve are to look good on paper and still keep their reputation, to meet analyst expectation or even cover up financial fraud. The following are some of the motivating factors that researchers have provided evidence on, bonus plan motivation, political cost motivation, capital market motivation, regulatory motivation, leverage (debt) motivation.

2.6. Techniques for Earnings Management

Earnings of a firm are managed in different ways. The ones which come about due to the flexibility of the standards are legal. The following are some of the techniques used by managers to manipulate and smooth earnings of a particular period; Cookie jar reserve technique, Big bet on the future technique, Big bath technique, Throw out a problem child and Flushing in the investment portfolio.

2.7. Advantages and Disadvantages of Earnings Management

Earnings management is seen as a double edge sword, it can make a firm look good on paper and also cause a going concern issues in the firm if care is not taken. Even though some firms have successfully used earnings management and have got good result for it but it didn't actually work out well for others. Most people believe earnings management is unethical and strict rules should be put in place to check firms who manage their earnings.

2.7.1. Advantages of Earnings Management

Earnings management gives firms opportunity to improve their performance on paper when some methods of operating are changed for a different one with the intention of achieving a target. Example is adopting new depreciation method because it will boost the profit of the firm.

When income smoothing methods are applied by the firm, it helps the firm to maintain a stable level of profits for many years, which sends a signal to shareholders that their investment is in good condition.

When a firm is made up of more debt capital and less equity capital they are often bound by a covenant. Managers are able to work around these covenants to achieve their targeted earnings with the help of earnings management

2.7.2. Disadvantages of Earnings Management

Earnings management will not physically increase a firm earnings, a good financial performance may be reported when in actual fact the firm is on the verge of collapsing. Earnings management can destroy the hopes of shareholders.

Earnings management also sends a wrong picture to the firm's stakeholders. Investors, lenders, analyst and employees will take their decisions based on the earnings reported by the firm. So if firms reported earnings were manipulated then it may lead stakeholders into taking decisions which may be wrong too.

Investors lose interest in firms which have been reported managing earnings. To some stakeholder's earnings management is unethical so they try their best to avoid doing business with firms which have been caught managing earnings.

2.8. Indicator of Firm Performance

Return on assets (ROA) is the performance indicator used in this work to determine the performance of selected firms.

Return on Assets is considered a useful and practical tool in financial analysis. It is mostly defined as net income over total assets. ROA is a productivity ratio that shows in percentage wise the relationship between the earnings of a firm to its total assets. Even though ROA is not a perfect measure of firm's performance it is most effective measure available to assess a firm's performance. The formula is stated as follows:

$$ROA_{it} = \text{net income}_{it} / \text{total assets}_{it}$$

3. Research Methodology

3.0 Research Design

This study used the quantitative research design to investigate whether listed firms in Ghana indulge in earnings management. Secondary data were collected and processed to generate the figures for earnings management. According to Verschuren and Doorewaard (2007) examination based research is often used for empirical investigations. They continue to elaborate that this kind of research is quantitative because particular numerical relations are being investigated.

This means that, to begin with, expectations should be expressed in one or more hypotheses. These hypotheses are based on related theory and previous (empirical) literature Baarda and de Goede (2001).

During the research, the hypotheses are tested with empirical data. The aim is to investigate whether the hypothesis is true or false. Based on the comparison of the hypothesis with empirical data conclusions were drawn.

3.1. Model Specification

The model specification is in three parts. The first three models were used in detecting earnings management. The fourth model was used in calculating for the performance level of the various firms and the fifth model was used to find the impact of earnings management on firm's performance.

$$TAC_{it}/A_{i,t-1} = \alpha_1[1/A_{i,t-1}] + \alpha_2[REV-\Delta REC_{it}/A_{i,t-1}] + \alpha_3[PPE_{it}/A_{i,t-1}] + \varepsilon_{it}$$

$$NDA_{it} = \hat{\alpha}_1[1/A_{i,t-1}] + \hat{\alpha}_2[\Delta REV-\Delta REC_{it}/A_{i,t-1}] + \hat{\alpha}_3[PPE_{it}/A_{i,t-1}]$$

$$DA = TAC_{it}/A_{i,t-1} - NDA_{it}$$

Where:

TAC_{it} is total accruals at time t

ΔREV_{it} is change in revenue in firm i in year t

ΔREC_{it} is change in receivables in firm i in year t

PPE_{it} is gross property, plant and equipment in firm i in year t

$A_{i,t-1}$ is total assets in firm i in year $t-1$

$\alpha_1, \alpha_2, \alpha_3$ is firm specific parameters

ε_{it} is the measurement error in firm i in year t ,

NDA_{it} is estimated non-discretionary accruals at time t

$\hat{\alpha}_1, \hat{\alpha}_2, \hat{\alpha}_3$ is the ordinary least squares of the firm's specific parameters

DA is the discretionary accruals

The second part of the model specification looks at measuring the performance of the selected listed firms. Many studies have used Methods such as ROA, ROE, ROI and ETA to measure firm performance.

This thesis used return on assets (ROA) as a firm performance measure, as calculated by Palmer (2012). The study used ROA which is defined as net income of a firm divided by its total assets to measure firm performance. Return on Assets measures a firm's profitability and its effectiveness. We calculated the ratio of ROA for all firms' years. The formula below was used in calculating return on assets for the firms.

$$ROA_{it} = NI_{it} / A_{it}$$

Where:

ROA_{it} is return on assets for firm i at year t

NI_{it} is net income for firm i at year t

A_{it} total assets for firm i at year t

The third part of the model specification looks at the model used in testing the impact of discretionary accruals on return on assets.

The averages of both variables were used in this model. The model is as stated below

$$AROA = \beta_0 + \beta_1 ADAC + e$$

Where:

$AROA$ is Average return on assets

$ADAC$ is Average discretionary accruals

β_0 is Y intercept

β_1 coefficient of $ADAC$

e is the error term

3.2. Types and Sources of Data

The study used secondary data as its type of data. The study used annual financial reports of the following firms: Fan Milk Limited, Starwin Products Limited, Guinness Ghana Breweries Limited, Unilever Ghana Limited, PZ Cussons Ghana Limited, Golden Star Resources Limited, Artyon Drug Manufacturing Limited, AngloGold, Total Petroleum Ghana Limited and Ghana Oil Company Limited from the period of 2007 to 2013.

Total assets, net income, cash flow from operations, revenue, receivables and gross property, plant and equipment were the variables collected from the various firms' annual financial report to calculate for earnings management. Also to calculate for ROA net income

and total assets were collected and used. These annual reports were sourced from the Ghana stock exchange website and also www.annualreportsghana.com.

3.3. Population of the Study

The population of this study considers all the firms whose characteristics are relevant to this study. The population consists of all firms listed on the Ghana stock exchange. Thirty-five (35) listed firms were investigated in this study. Refer to chapter two for the list of the listed firms on the Ghana stock exchange.

3.4. Sample size and Sampling Procedure

The study used a sample size of 10 listed firms. A purposive sampling method was used in selecting the sample for the study. The purpose of the study was to exclude financial and insurance firms, also firms without adequate yearly data was excluded from the study. Firms which do not fall within the selected industry were also excluded. We also required that data needed had the observations required to calculate for discretionary accrual which is a proxy for earnings management in this study. The final sample contains 60 firm year observations.

3.5. Variable Description

This section describes the dependent variables and the independent variables used in this study.

3.5.1. Dependent Variables

This section presents the description of the dependent variables

3.5.1.1. Total Accruals (TAC)

The study used four different dependent variables to match the four models (models 1- 4). The first dependent variable used was total accruals scaled by total assets (TAC/A). Healy (1996) used total accrual as a measure for earnings management. Total accruals were calculated by deducting operating cash flow from net income. Total accruals were then scaled by total assets (TAC/A) before being used as a dependent variable.

3.5.1.2. Non-Discretionary Accruals (NDA)

Non discretionary accrual (NDA) was also used as a dependent variable in equation (2) to determine the level of total accruals which managers did not manipulate. Studies such as Dechow et al (1995) and Nurdiniah and Herlina (2015) used non-discretionary accruals as a dependent variable in determining the level of discretionary accruals.

3.5.1.3. Discretionary Accruals (DAC)

Discretionary accrual (DA) was the third dependent variable used in this study. Discretionary accrual is the part of total accruals which managers exercised their discretion over. Jones (1991) and Dechow et al (1995) used discretionary accrual as a measure for earnings management. Earnings management is present when discretionary accrual is greater than zero ($DA > 0$). This thesis anticipates finding discretionary accruals to be greater than zero for all firm years.

3.5.1.4. Return on Assets (ROA)

Palmer (2012) used return on assets to measure for firm's performance. In determining the performance of firms using return on assets, Palmer (2012) used net income (NI) scaled by total assets (A) to arrive at the ROA figures. This study also used the same idea in measuring the performance of firms in all firms.

3.5.1.5. Average Return on Assets (AROA)

Average return on assets was used as the dependent variable for a simple linear equation. The average return on assets represents the mean for all the firms summed up.

3.5.2. Independent Variables

The independent variables are the variables that can influence the dependent variable. This section presents the description of the independent variables.

3.5.2.1. (REV-REC/A_{t-1})

The first independent variable to be explained is change in revenue less change in receivables scaled by total assets (REV-REC/A). Dechow et al (1995) modified the original Jones model by deducting change in receivables from change in revenue. They assume that receivables are attributable to earnings management. Similar to Jaaffar et al (2002) the researcher expects a positive effect of change in revenue less change in receivables scaled by total assets on total accruals which is the dependent variable in all firms because increase in revenue leads to increase working capital accruals.

3.5.2.2. (PPE/A_{t-1})

The next variable to be explained is property, plant and equipment scaled by total assets (PPE/A), Jones (1991) used PPE scaled by total assets to control for changes in non-discretionary accruals that emerges from charging of depreciation. The researcher also used the same idea from her study. In Witteveen (2013) study, PPE consistently had a negative effect on the dependent variable (total accruals). The current study expects a negative effect of property, plant and equipment (PPE) on the dependent variable in all firms because an increase in PPE leads to an increase in depreciation. A high depreciation has a negative effect on accruals.

3.5.2.3. (1/A_{t-1})

The variable one scaled by assets (1/A_{t-1}) was also used by both Jones (1991) and Dechow et al (1995). The researcher used the variable as the variable was used by Dechow et al (1995).

3.5.2.4. (ADAC)

Average discretionary accrual is the mean for the discretionary accruals for all the selected firms. The study expects a negative effect on the dependent variable AROA.

3.6. Data Collection Instrument

The instrument used in collecting data for this study was archival records. In this quantitative type of study, archival online records are analyzed to ascertain earnings management among listed firms in Ghana. Data for this study were collected in April 2015 by visiting the Ghana stock exchange website and also www.annualreportsghana.com.

3.7. Estimation Technique

In the determination of the level of earnings management in the selected listed firms the thesis went through three stages. During the first stage Total accruals (TA) were determined by deducting the cash flow from operations from the net income of the various firm years. During the second stage α_1 , α_2 and α_3 from equation (2) were determined by running a panel data regression in the statistical software (Stata) and the resulting coefficients together with each firm data were processed to generate non discretionary accruals (NDA) for the year, scaled by end year total assets. During the third stage non-discretionary accruals were subtracted from total accruals to arrive at the estimated discretionary accruals.

3.8. Data Analysis

We examined our hypothesis based on the following variables, total assets (TA), Property, plant and equipment (PPE) and revenue less receivables to measure discretionary accruals (DA). We also measured firm performance using return on assets (ROA). Data collected was coded into an excel work sheet. It was then exported into a Stata work sheet, panel data regression was run and the coefficients for the ten firms collected. Individual firm performance was also calculated using excel. Results obtained from running the regression was inserted into equation (3) to calculate for non-discretionary accruals (NDA). The results from equation (3) were then deducted from total accruals which have already been scaled by total assets using equation (1) to arrive at discretionary accruals (Earnings management). A mean for both the discretionary accruals (ADAC) and return on assets (ADROA) was calculated. A simple linear regression was run using SPSS statistical tool to determine the impact of ADAC on AROA.

4. Empirical Findings and Discussions

4.1. Analysis of Total Accruals Results

This section presents the analysis for total accruals results for all the ten selected firms. One significant thing is that all the variables for all the firms were found to be insignificant. This might be explained by the fact that the number of observation years for each firm was short, the number of variables used in the model were also few. This may be due to the reason that the entire period used to conduct the study was very short.

However, the researcher is only interested in the direction of the variables that is whether they have a positive or a negative impact on the dependent variable. The following tables give the total accruals regression results for all ten selected firms.

4.1.1. Analysis of Result for Unilever Ghana Limited

This section presents the analysis of total accruals results for Unilever Ghana Limited.

| Regressors | Coefficient | Standard Error | T-Ratio |
|------------|-------------|----------------|---------|
| 1/At-1 | -6.103507 | 4.59e+07 | -0.13 |
| REV-REC/A | 0.4164438 | 0.5585806 | 0.75 |
| GPPE/A | -0.7177879 | 1.41262 | -0.51 |
| Constant | 0.1455042 | 0.7589737 | 0.19 |

Table 2: Results for total accruals for Unilever Ghana Limited
F Statistic = 0.8620 *R*-squared = 0.2670
 Dependent variable: TAC/A_{t-1}

From Table 2, the results indicated a negative relationship between the variables TAC/A_{t-1} and $1/A_{t-1}$. Also the table portrays a positive coefficient of the variable $(REV-REC/A_{t-1})$ which was consistent with our expectation and the result of prior studies, example Jaaffar et al (2002). This implies an increase in revenue influences both accrual decreasing and accrual increasing accounts. The coefficient for the variable PPE/A_{t-1} is negative which is also consistent with our expectations and the result of other studies, example Witteveen (2013). This is explained by the fact that an increase in PPE will lead to an increase in depreciation which has a negative effect on accruals.

From Table 2 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:
 $NDA = 0.1455042 - 6.103507 \cdot 1/A_{t-1} + 0.4164438 \cdot REV-REC/A_{t-1} - 0.7177879 \cdot PPE/A_{t-1}$

4.1.2. Analysis of Results for PZ Cussons Ghana

This section presents the analysis of total accruals for PZ Cussons Ghana

| Regressors | Coefficient | Standard Error | T-Ratio |
|-------------|-------------|----------------|---------|
| $1/A_{t-1}$ | -2.52e+08 | 4.00e+08 | -0.63 |
| REV-REC/A | 1.517794 | 1.504984 | 1.01 |
| GPPE/A | 26.1068 | 40.38248 | 0.65 |
| Constant | -0.2251732 | 0.2861066 | -0.79 |

Table 3: Results for total accruals for PZ cussons Ghana
F Statistic = 0.6364 *R*-squared = 0.509
 Dependent variable: TAC/A_{t-1}

The coefficient of the variable $1/A_{t-1}$ from Table 3 was negative. This implies that $1/A_{t-1}$ has a negative influence on the variable TAC/A_{t-1} . Which implies a unit decrease in variable $(1/A_{t-1})$ will cause further decrease in TAC/A_{t-1} . The coefficient of the variable $(REV-REC/A_{t-1})$ was positive as expected and consistent with the study of Jaaffar et al (2002). The variable $PPE/At-1$ had positive coefficient which was different from the expected sign of negative coefficient and this therefore suggest that depreciation will not have a negative effect on accruals.

From Table 3 non-discretionary accruals (NDA) in PZ Cussons can therefore be expressed as:
 $NDA = -0.2251732 - 2.52e+08 (1/A_{t-1}) + 1.517794 (REV-REC/A_{t-1}) - 26.1068 (PPE/A_{t-1})$

4.1.3. Analysis of results for Starwin Product

This section presents the analysis of total accruals for Starwin Products

| Regressors | Coefficient | Standard Error | T |
|-------------|-------------|----------------|-------|
| $1/A_{t-1}$ | 4.8089e+06 | 3.466e+06 | 1.39 |
| REV-REC/A | -0.1839468 | 0.2288916 | -0.80 |
| GPPE/A | -2.237539 | 1.296167 | -1.73 |
| Constant | -0.2704459 | 0.4391734 | -0.62 |

Table 4: Results for total accruals for Starwin Product
F Statistic = 0.4602 *R*-squared = 0.6629
 Dependent variable: TAC/A_{t-1}

From Table 4 the coefficient of the variable $1/At-1$ was positive. Table 4 although exhibit a negative relationship between $TAC/At-1$ and $REV-REC/At-1$ however, the results was not consistent with our expectation. The researcher expected the effect of the coefficient of this variable to be positive but Table 4 portrays a negative coefficient and this suggests a reduction in the working capital accruals. Also the variable $PPE/At-1$ had a negative coefficient which is consistent with the expectation of the study. This is explained by the fact that an increase in PPE will lead to an increase in depreciation which has a negative effect on accruals

From Table non-discretionary accruals (NDA) in Starwin Product Ltd can therefore be expressed as:
 $NDA = -0.2704459 + 4.8089e+06 (1/A_{t-1}) - 0.1839468 (REV-REC/A_{t-1}) - 2.237539 (PPE/A_{t-1})$

4.1.4. Analysis of results for Aryton Drugs Manufacturing

This section presents the analysis for total accruals for Aryton Drugs Manufacturing

| Regressors | Coefficient | Standard Error | T |
|-------------|-------------|----------------|-------|
| $1/A_{t-1}$ | 1.055e+06 | 2.094e+06 | 0.50 |
| REV-REC/A | 0.2622621 | 0.289774 | 0.91 |
| GPPE/A | 1.074493 | 2.395769 | 0.45 |
| Constant | -0.3564574 | 0.6534502 | -0.55 |

Table 5: Results for total accruals for Aryton Drugs Manufacturing
F Statistic = 0.6331 *R*-squared = 0.5125
 Dependent variable: TAC/A_{t-1}

Table 5 showed the coefficient of the variable $1/A_{t-1}$ to be positive. This means the variable had a positive impact on the dependent variable. The coefficient of the variable $REV-REC/A_{t-1}$ was also positive which was in line with the expectations of the study and was also consistent with the study of Jaaffar et al (2002). This results implies an increase in the variable suggest an increase in working capital accruals. Table 5 also indicate a positive coefficient for the variable PPE/A_{t-1} which contradicts our expectations and also contradicts the study of Witteveen (2013) and suggest that even when depreciation increase it will not have a negative effect on accruals.

From Table 5 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:

$$NDA = -0.3564574 + 1.055e+06(1/A_{t-1}) + 0.2622621 (REV-REC/A_{t-1}) + 1.074493 (PPE/A_{t-1})$$

4.1.5. Analysis of results for Fan Milk Limited

This section presents the analysis of total accruals for Fan Milk Limited

| Regressors | Coefficient | Standard Error | T |
|-------------|-------------|----------------|-------|
| $1/A_{t-1}$ | -4646201 | 1765676 | -2.63 |
| REV-REC/A | 0.0092781 | 0.0657348 | 0.14 |
| GPPE/A | -0.1907013 | 0.3043589 | -0.63 |
| Constant | 0.0968469 | 0.1990956 | 0.49 |

Table 6: Results of total accruals for Fan Milk limited
F Statistic = 0.1642 *R*-squared = 0.8873
 Dependent variable: TAC/A_{t-1}

Table 6 portrayed a negative coefficient for the variable $1/A_{t-1}$. The variable $REV-REC/A_{t-1}$ had a positive coefficient which is consistent with the expectation of the study and also consistent with the study of Jaaffar et al (2002). The results also showed the variable PPE/A_{t-1} to have had a negative coefficient as expected which is consistent with the study of Witteveen (2013). This is explained by the fact that an increase in PPE will lead to an increase in depreciation which has a negative effect on accruals.

From Table 6 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:

$$NDA = 0.0968469 - 4646201 (1/A_{t-1}) + 0.0092781 (REV-REC/A_{t-1}) - 0.1907013 (PPE/A_{t-1})$$

4.1.6. Analysis of results for Guinness Ghana Breweries

This section presents the analysis of total accruals for Guinness Ghana

| Regressors | Coefficient | Standard Error | T |
|-------------|-------------|----------------|-------|
| $1/A_{t-1}$ | -8372373 | 8.83e+07 | -0.09 |
| REV-REC/A | -0.7221768 | 1.227161 | -0.59 |
| GPPE/A | -0.753246 | 0.7468254 | -1.01 |
| Constant | 0.6801665 | 0.6553091 | 1.04 |

Table 7: Results for total accruals for Guinness Ghana Breweries
F Statistic = 0.5890 *R*-squared = 0.5528
 Dependent variable: TAC/A_{t-1}

Table 7 portrayed a negative coefficient for the variable $1/A_{t-1}$. This implies the variable $1/A_{t-1}$ had a negative impact on the variable TAC/A_{t-1} . The table also portrayed a negative coefficient for the variable $REV-REC/A_{t-1}$ which is different from the expectation of the study. This implies a decrease in the working capital accruals. The coefficient for the variable PPE/A_{t-1} was also negative, which was the same as the expectation of the study and also consistent Witteveen (2013) and this, confirms that a high depreciation has a negative effect on accruals.

From Table 7 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:

$$NDA = 0.6801665 - 8372373 (1/A_{t-1}) - 0.7221768 (REV-REC/A_{t-1}) - 0.753246 (PPE/A_{t-1})$$

4.1.7. Analysis of results for AngloGold Ashanti

This section presents the analysis total accruals for AngloGold Ashanti

| Regressors | Coefficient | Standard Error | T |
|-------------|-------------|----------------|--------|
| $1/A_{t-1}$ | -345157848 | 5133924900 | -0.067 |
| REV-REC/A | 0.850 | 0.661 | 1.287 |
| GPPE/A | 0.142 | 0.490 | 0.290 |
| Constant | -0.178 | 0.430 | -0.413 |

Table 8: Results for total accruals for AngloGold Ashanti
F Statistic = 0.961 *R*-squared = 0.590
 Dependent variable: TAC/A_{t-1}

Table 8 showed a negative coefficient of the variable $1/A_{t-1}$. The variable $REV-REC/A_{t-1}$ had a positive coefficient which was in line with the study's expectation and also consistent with the study of Jaaffar et al (2013). This suggests an increase in working capital accruals PPE/A_{t-1} also had a positive coefficient which was different from the expectation of the study.

From Table 8 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:

$$NDA = -0.178 - 345157848 (1/A_{t-1}) + 0.850 (REV-REC/A_{t-1}) + 0.142 (PPE/A_{t-1})$$

4.1.8. Analysis of results for Gold Star Resources

This section presents the analysis of total accruals for Gold Star Resources

| Regressors | Coefficient | Standard Error | T |
|-------------|-------------|----------------|--------|
| $1/A_{t-1}$ | -8.230e+07 | 6.887e+08 | -0.120 |
| REV-REC/A | -0.040 | 0.968 | -0.041 |
| GPPE/A | -2.099 | 1.121 | -1.872 |
| Constant | 0.673 | 1.131 | 0.595 |

Table 9: Results for total accruals for Gold Star Resources

F Statistic = 10.391

R-squared = 0.940

Dependent variable: TAC/A_{t-1}

The result from Table 9 indicates a negative relationship between $TAC/At-1$ and $1/At-1$. The table also indicated a negative coefficient for the variable $REV-REC/At-1$ which was contrary to the expectation of a positive coefficient. The variable $PPE/At-1$ also exhibited a negative coefficient which was consistent with the expectation of the study and also consistent with the study of Witteveen (2013).

From Table 9 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:

$$NDA = 0.673 - 8.230e+07 (1/A_{t-1}) - 0.040 (REV-REC/A_{t-1}) - 2.099 (PPE/A_{t-1})$$

4.1.9. Analysis of results for Ghana Oil Company

This section presents the analysis of total accruals for Ghana Oil Company

| Regressors | Coefficient | Standard Error | T |
|------------|-------------|----------------|-------|
| $1/At-1$ | -2.37e+07 | 7.96e+07 | 0.30 |
| REV-REC/A | 0.094929 | 0.164738 | 0.58 |
| GPPE/A | -1.351976 | 2.451457 | -0.55 |
| Constant | 0.4312208 | 1.383138 | 0.31 |

Table 10: Results for total accruals for Ghana Oil Company

F Statistic = 0.8107

R-squared = 0.3297

Dependent variable: TAC/A_{t-1}

The results from Table 10 showed a negative coefficient for the variable $1/At-1$. The variable $REV-REC/At-1$ recorded a positive coefficient which was in line with the study's expectation. This also suggests an increase in working capital accruals. The coefficient of the variable $PPE/At-1$ was negative and also consistent with the study's expectation. This is explained by the fact that an increase in PPE will lead to an increase in depreciation which has a negative effect on accruals.

From Table 10 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:

$$NDA = 0.4312208 - 2.37e+07 (1/A_{t-1}) + 0.094929 (REV-REC/A_{t-1}) - 1.351976 (PPE/A_{t-1})$$

4.1.10. Analysis of results for Total Petroleum Ghana

This section presents the analysis of total accruals for Total Petroleum Ghana.

| Regressors | Coefficient | Standard Error | T |
|-------------|-------------|----------------|-------|
| $1/A_{t-1}$ | -1.02e+07 | 3.07e+07 | -0.33 |
| REV-REC/A | 0.1053696 | .0918821 | 1.15 |
| GPPE/A | -1.267321 | 1.446955 | -0.88 |
| Constant | 0.3414513 | 0.4751885 | 0.72 |

Table 11: Results for total accruals for Total Petroleum Ghana

F Statistic = 0.7266

R-squared = 0.4212

Dependent variable: TAC/A_{t-1}

From Table 11 the variable $1/At-1$ showed a negative coefficient. This implies it has a negative impact on the dependent variable. The coefficient of the variable $REV-REC/At-1$ was positive which is in line with the expectation of the study. Finally, $PPE/At-1$ which is the last variable in the model recorded a negative coefficient which was consistent with our expectation. This implies an increase in depreciation will have a negative effect on accruals.

From Table 11 the amount of non-discretionary accruals (NDA) can be expressed in the following formula:

$$NDA = 0.3414513 - 1.02e+07 (1/A_{t-1}) + 0.1053696 (REV-REC/A_{t-1}) - 1.267321 (PPE/A_{t-1})$$

4.1.11. Analysis of Discretionary accruals (Earning Management) results

This section presents the analysis of the discretionary accrual results for all the ten selected firms, from the year 2008 to 2013.

| Firms/Years | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------------------|----------|----------|-----------|----------|----------|----------|
| Unilever Ghana | -0.07047 | -0.15848 | 0.033427 | 0.028911 | -0.25174 | 0.053671 |
| PZ Cussons Ghana | -0.02007 | -0.04892 | 0.078928 | 0.108537 | -0.1417 | 0.082582 |
| Starwin Products | -0.0187 | 0.040386 | -0.04372 | 0.028299 | -0.02209 | 0.015935 |
| Aryton Drugs M. | -0.00357 | -0.02599 | 0.02415 | 0.021948 | 0.087483 | -0.10396 |
| Fan Milk Ltd | -0.00769 | 0.008269 | 0.0022768 | -0.02359 | -0.01808 | 0.018322 |
| Guinness Ghana | 0.034337 | 0.00055 | 0.020341 | -0.19194 | 0.071618 | 0.06509 |
| AngloGold Ashanti | 0.031632 | -0.00771 | 0.098029 | -0.1267 | 0.04427 | -0.03904 |
| Golden Star Resources | -0.13896 | -0.11792 | -0.18127 | -0.04329 | -0.07174 | -0.10512 |
| Ghana Oil Company | -0.04763 | -0.01133 | 0.01628 | 0.007610 | 0.111653 | -0.07855 |
| Total Petroleum Gh. | 0.048789 | -0.04486 | 0.025006 | -0.01816 | -0.0934 | 0.081239 |

Table 12: Results for discretionary accruals (Earnings management) for all the ten selected firms.

Table 12 present all the ten selected firms with the amount of discretionary accruals (DAC) or earnings management for the period of six years. The negative sign attached to some of the discretionary accrual figures does not make them lesser than the positive ones. The negative sign attached to the figures only indicate that the firms manipulated accruals downwards (income decreasing accruals) and a positive discretionary accruals indicate that the firms manipulated accruals upwards (income increasing accruals).

Table 12 indicate that all the firms indulged in earnings management. In 2008 it was only Aryton Drugs Manufacturing that recorded a zero percent earnings management. The rest recorded a significant amount of earnings management that approximately ranges from 1% of their total accruals to 7%. Unilever Ghana, PZ cussons Ghana, Starwin Products, Golden Star Resources and Ghana Oil Company recorded an income decreasing discretionary accruals and these results confirms the findings of Watts and Zimmerman (1990) where they found that managers also manipulate earnings downwards in order to enjoy huge bonuses in the future. However, Guinness Ghana, AngloGold and Total Petroleum Ghana recorded an income increasing discretionary accruals and this finding was also in line with the findings of Healy (1985), where he tested the bonus plan hypothesis and found that managers manipulate earnings upwards in order to maximize their earnings.

Table 12 also indicate that in 2009 Guinness Ghana Breweries also recorded a zero percent earnings management. The rest of the firms recorded an amount of earnings management that approximately ranges from 1% to 15% of their total accruals. Apart from Starwin Products, Fan Milk Limited and Guinness Ghana Breweries which recorded an income increasing discretionary accruals, the rest recorded income decreasing discretionary accruals. The results are in support of studies such as (Holthausen et al 1995; Gaver et al 1995; Watts et al 1990).

Table 12 shows that, in 2010 Fan Milk Limited was the only firm that recorded approximately a zero percent of discretionary accruals. The study found that Starwin Products and Golden Star Resources are the only firms which recorded an income decreasing earnings management which is consistent with the study Watts and Zimmerman (1990). The rest recorded an income increasing earnings management which also supports the study of Healy (1985). The discretionary accruals for these firms for the year 2010 approximately range from 2% to 18% of their total accruals.

In 2011, Table 12 indicates that by approximation none of the firms recorded a zero percent earnings management. Ghana Oil Company recorded the lowest amount of earnings management which is approximately 1% of its total accrual. The table also showed that Guinness Ghana to have recorded the highest amount of earnings management which is 19% of its total accruals by approximation. From Table 12, AngloGold Ashanti, Total Petroleum Ghana, Fan Milk Limited, Guinness Ghana and Gold Star Resources to have recorded negative discretionary accruals. This indicates that the firms manipulated their earnings downwards as found by Watts and Zimmerman (1990). However, Starwin Products, Ghana Oil Company, Aryton Drugs Manufacturing, PZ Cussons Ghana and Unilever Ghana were found to have recorded a positive earnings management. This implies the firms manipulated earnings upwards as found by Healy (1985) and Gaver et al (1995).

Table 12 indicate that, in 2012 no firm recorded a zero percent earnings management. Firms such as Unilever Ghana, Starwin Products, PZ cussons Ghana, Fan Milk Limited, Golden Star Resources and Total petroleum recorded an income decreasing discretionary accruals which support the study of Watts and Zimmerman (1990) whiles firms such as AngloGold Ashanti, Guinness Ghana, Aryton Drugs Manufacturing and Ghana Oil Company recorded an income increasing discretionary accruals and this also supports the study of Healy (1985) and Gaver et al (1995).

Finally, in the year 2012, Table 12 shows no zero earnings management among the selected listed firms. The selected firms recorded an amount of earnings management that range from 2% to 11% approximately. Firms such as Starwin Products and Fan Milk had the lowest amount of earnings management and Golden Star Resources recorded the highest amount of earnings management in the year 2013. Aryton Drugs, Ghana Oil Company, Gold Star Resources and AngloGold Ashanti were the firms that recorded income decreasing discretionary accruals which support the findings of Watts and Zimmerman (1990). The rest of the firms were found to

have recorded an income increasing discretionary accruals which also supports the findings of studies such as (Gaver et al 1995; Holthausen et al 1995; Healy 1985).

Based on the above results, the study can therefore reject the null hypothesis and accept the alternative hypothesis because all the selected firms were found to have indulged in earnings management. This study supports the study of Agyekum et al (2014) where they found existence of earnings management in Ghana.

4.1.12. Analysis of ROA results

The table below relates to the results of return on assets (ROA) calculated for all the firms from the year 2008 to 2013.

| Firms/Years | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------------------|----------|----------|----------|----------|----------|----------|
| Unilever Ghana | 0.263515 | -0.00316 | 0.17688 | 0.237227 | 0.104624 | 0.07325 |
| PZ Cussons Ghana | 0.091453 | 0.021785 | 0.091119 | 0.110881 | 0.012261 | 0.107825 |
| Starwin Products | -0.03957 | -0.04132 | 0.022199 | 0.127918 | 0.067259 | 0.099274 |
| Aryton Drugs M. | 0.169808 | 0.223763 | 0.133836 | 0.14741 | 0.114459 | 0.014602 |
| Fan Milk Ltd | 0.214681 | 0.296514 | 0.283224 | 0.226514 | 0.28169 | 0.214545 |
| Guinness Ghana | 0.088113 | 0.053857 | -0.02454 | 0.00261 | 0.074875 | 0.083912 |
| AngloGold Ashanti | -0.1433 | -0.02738 | 0.013533 | 0.147936 | 0.066877 | -0.22741 |
| Golden Star Resources | -0.17247 | -0.01181 | -0.01822 | -0.00344 | 0.013366 | 0.91641 |
| Ghana Oil Company | 0.042671 | 0.052828 | 0.061034 | 0.064911 | 0.0574 | 0.06201 |
| Total Petroleum Ghana | 0.041984 | 0.091535 | 0.120327 | 0.100176 | 0.106992 | 0.105204 |

Table 13: Results for ROA for all the ten selected firms.

Table 13 shows that in the year 2008, firms like Golden Star Resources, AngloGold Ashanti and Starwin Products recorded a negative return on assets. This indicates that these firms are investing high amount of capital into their production whiles they keep making little income. When a firm records a high level of debt the effect of a negative return on assets is high. The rest of the firms were found to have recorded positive returns on their assets. For instance, Unilever in 2008 recorded 26% return on assets and this implies for every one Ghana cedi invested in assets by Unilever, they made a return of 26 Ghana pesewas. In general, the lowest return on assets ratio was -17% which was recorded by Golden Star Resources whiles the highest return on assets was 26% recorded by Unilever Ghana.

Also, in 2009, Table 13 identifies Unilever Ghana, Starwin Product, AngloGold and Golden Star Resources to have recorded negative returns on their respective assets whereas Fan Milk, Guinness Ghana, PZ Cussons Ghana, Ghana Oil Company, Total Petroleum Ghana, and Aryton Drugs Manufacturing earned positive returns on their assets. From the results, there was all indication that four companies from the ten selected firms had invested heavily their capital into production of which they made little or no returns on their relative assets. However, Fan Milk Limited made the highest returns (29%) on its assets as compared to Starwin Products which had worst returns on its assets. Thus, it is obvious that for every one Ghana cedi invested in assets, Fan Milk Limited made a return of 29 Ghana Pesewas.

Again, in the period of 2010, it was recorded in Table 13 that only Guinness Ghana and Golden Star Resources recorded a negative return on their assets. The rest of the other firms displayed positive returns on their respective assets. Consistently, Fan Milk limited occupied the first position with 28% as returns on its assets, followed by Unilever Ghana with approximately 18% returns on its assets, followed by Aryton Drugs Manufacturing with 13% return on assets, Total Petroleum being the next with 12% returns on assets. The rest of the firms recorded return on assets less than 10%. The highest return on assets (28%) was recorded by Fan Milk Limited, which implies that for every one Ghana cedi invested in assets there is a return of 28 Ghana pesewas and the lowest return on assets (-2%) was also recorded by Guinness Ghana Breweries.

The year 2011 recorded only one negative return on assets. Golden Star Resources recorded the lowest and the only negative return on assets. Return on assets for this year ranges from 0% to 24% approximately. Unilever Ghana recorded the highest return on assets which was 24% and this implies for every one Ghana cedi invested in assets there is a return of 24 Ghana pesewas.

From Table 13, the year 2012 did not record any negative return on assets and this implies all the firms generated a certain amount of returns on their assets. The lowest amount of return on assets generated was 1% and it was generated by PZ cussons Limited. Fan Milk Limited recorded the highest amount of return on assets (28%) and this implies for every one Ghana cedi invested in assets there is a return of 28 pesewas.

Finally, Table 13 showed that the year 2013 saw only one negative return on assets and that was recorded by AngloGold Ashanti (-22%). The rest of the firms recorded positive returns on their assets. The lowest among them obviously was AngloGold Ashanti and the firm which recorded the highest return on assets was Golden Star Resources. They had 91% returns on their assets and this implies that for every one Ghana cedi invested in asset they made returns of 91 Ghana pesewas.

4.1.13. Relationship between Average Discretionary Accruals and Average Return on Assets

Table 14 below relates to the results of the impact of discretionary accruals (Earnings management) on ROA (Performance)

| Model | Coefficient | Std. Error | T-ratio |
|--------------------------------|-------------|---------------------|-----------|
| Const | 0.0856422 | 0.0270879 | 3.162 |
| Average Discretionary accruals | -0.466150 | 0.680831 | -0.6847 |
| R-squared: | 0.055354 | Adjusted R-squared: | -0.062726 |
| F(1, 8): | 0.468783 | | |

Table 14 Result for the impact of Discretionary accruals (Earnings management) on firm's performance (ROA)

Dependent variable: Average return on assets

From the regression results in Table 14, it was shown that the coefficient of the variable average discretionary accruals was negatively related to the dependent variable (average return on assets). The negative sign attached to the coefficient was consistent with our expectations. These results suggest that a 1% increase in average discretionary accruals reduces the average return on assets by 46.6%. The study can thus reject the null hypothesis and accept the alternative hypothesis.

The following equation can be obtained from the regression table above.

$$AROA = 0.0856422 - 0.466150 ADAC$$

| Hypothesis | Findings |
|--|---|
| Listed firms in Ghana are not involved in Earnings management | The null hypothesis was rejected since all the selected firms recorded discretionary accruals greater than zero in most of the years. The study found that all selected listed firms are involved in earnings management. |
| Listed firms in Ghana indulge in Earnings Management | The alternative hypothesis was accepted since all the selected firms recorded discretionary accruals greater than zero in most of the years. The researcher found that all selected listed firms are involved in earnings management. Since the researcher found the sign attached to the coefficient of the variable ADAC to be negative, the null hypothesis was rejected |
| Earnings management positively impact on firm's performance Earnings management negatively impact on firm's performance | The researcher found that earnings management had a negative impact on firms performance Since the researcher found the sign attached to the coefficient of the variable ADAC to be negative, the alternative hypothesis was accepted The researcher found earnings management to have a negative impact on firm's performance |

Table 15: Hypothesis and Findings

5. Conclusion

The study was set out to investigate the existence of earnings management among some selected listed firms in Ghana and also to test the impact of earnings management on firm performance. Agency theory as treated in the literature review explains why managers decide to indulge in earnings management. The theory assumes that managers will act in an opportunistic manner to satisfy their utility instead of satisfying shareholders. Positive accounting theory (PAT) also provides explanations into why managers manipulate earnings.

Based on the review of the literature and also propel by the gaps in the literature, four hypotheses were tested in this study. The first hypothesis was used to test whether listed firms in Ghana do not indulged in earnings management. The second hypothesis was used to test whether listed firms in Ghana indulge in earnings management. The third hypothesis considers test whether earnings management positively impact on firm performance. The final hypothesis was also used to test whether earnings management negatively impact on firm's performance.

All the null hypotheses were rejected in the study; however, the alternative hypotheses were all accepted. Which means the study found the presence of earnings management among listed firms in Ghana. The study also found the impact of earnings management on firm performance to be negatively related.

6. Recommendations

Based on the major findings the following recommendations have been made.

This study recommends that when further studies are being conducted to determine the level of earnings management among firms in Ghana using the modified Jones model, additional independent variables should be added to the model to improve it. Also longer firm year observations should be used. Also the study recommends additional performance measure such as ROE to be added to ROA to improve the performance measure test.

The study also recommends that the various regulatory bodies could introduce a system that can regulate the amount of discretion that can be exercised by managers or firms in order to reduce the amount of earnings management through manager's discretion.

The study proposes that prospective investors must analyse the financial statement of firms they intend to invest in, in order to determine the financial activities and performance of these firms before investing.

Even though this thesis has revealed that firms in Ghana manipulate earnings through accruals and therefore there is an evidence of accrual earnings management among listed firms in Ghana, however this thesis does not cover real earnings management. In order to

gain a complete overview and know the trend of earnings management among listed firms in Ghana these firms should be tested for real earnings management activities.

Finally, the study recommends that shareholders of firms should request periodic report from Board members on weekly activities and any changes affecting the firm. Corporate governance activities and regulations should be wholly enforced in firms in order to protect the interest of shareholders.

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