

# Nexus between Accounting Information and Stock Market Return: The Mediating Effect of Board Size of Listed Non-Financial Entities in Ghana

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## Abstract

The study examined the association between accounting information and stock market return with board size as a mediating effect of listed non-financial entities in Ghana. The population of the study was 27 listed non-financial entities from 2007-2019 with 251 firm-year observations. This study applied a panel regression model that takes unobserved individual heterogeneity and distributional heterogeneity into consideration. In addition, the study employed cross-section dependence test; Levin-Lin-Chu, ImPesaran, Pesaran, Kao and Larsson cointegration test; fully modified ordinary least square (FMOLS) and dynamic ordinary least square (DOLS); and Panel Dumitrescu and Hurlin heterogeneous panel granger causality test. The results of unit root test showed that all the variables are integrated at first. Moreover, the results of cointegration test revealed that accounting information variables were cointegrated in the long run. The result of FMOLS and DOLS further revealed that all the accounting information variables with the exception of OCFPS have a direct insignificant relationship with the stock market return of listed non-financial entities. The study revealed that board size strengthens the association between OCFPS, EPS and PER, and stock market return at 5% significant level under FMOLS of listed non-financial entities. The pairwise granger causality test highlighted bidirectional causal relationship between the accounting information variables and stock market return listed non-financial entities.

**Keywords:** Accounting Information, Corporate Governance, Stock Market Return, Board Size

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## 1.1 Introduction

Accounting information is information contained in the financial statements used to determine the financial performance of entities (Amahalu, Nweze & Obi, 2017). This information provides the external parties such as to stockholders, investors, creditors, and government agencies the assurance that the entity is doing well or not in terms of its financial operations. Accounting information is measured in monetary terms. However, non accounting information is the information that cannot be expressed in monetary terms to make investment decisions (Amahalu et al., 2017). In order to make sound investment decisions, accounting information is essential because it reduces the information asymmetry problem between the managers and the investors (Amahalu et al., 2017).

Samer (2016) mentioned that accounting information play an esse4ntial role when it comes to the implementation of the managerial functions such as planning and control. In the planning function, accounting information provides data relating to study and analyze the goals set for the organization. Accounting information also provides information concerning the the association between cost, volume and profit required to determine the amount of interdependence and interaction between them.

Jinadu et al., (2017) opined that accounting information is used to assess the profitability, liquidity, activity, growth and leverage of an organization. Accounting information is essential for current and future investors to take financial decisions. Management need accounting information in the area of new product or service development, price decisions, production decisions, procurement decisions and borrowing decisions.

Stock return is the profit attributable to the investor's investment or stock for a specific period usually one year. A strong market can be seen as one that incorporates new information on stock prices and hence making the stock prices for the firms stable and accurately valued (Mwangi & Mwiti, 2015). A stock market return has predictive power for investment because it is a forward-looking variable that combines future cash flows expectations and discounts. A stock market return serves as an index to an investor or government when making their investment decisions. An investor of different financial capacity is able to invest in the stock market so far as he or she is able to get a return that is higher than his or her cost of capital (Wang, 2012).

A stock return determines how effective and efficient the capital market allocates shares and equities depending on the preference and the availability of capital market information. If a price of a stock increases or decreases, it creates doubt for the investors and in turn affects the demand and supply of stocks (Taofik & Omosola, 2013). A stock market is very sensitive to any price changes and it is essential for market development

and future trends (Širucek, 2013). A higher stock return means a higher profitability by entities and thus overall growth (Aliyu, 2011). Therefore, doubt of a stock market return is regarded as an essential part of the combined economy as an unstable growth trend in an economy makes it difficult to invest and consume (Erdugan, 2012).

Mugambi and Okech (2016) referred to a stock return as the gain or loss to an investor based on the value of the investor's share usually expressed in a percentage at the end of an accounting year. A stock return is made up of capital gains as well as any income received by the investor from the stock. A stock market indexing is widely used to measure of stock performance. The measures used to determine stock market performance include market capitalization, liquidity, All Share index and the turnover ratio. Market capitalization is used to measure the size of the stock market. The next measure of stock market performance is liquidity. Liquidity of the stock market determines the ability of an investor to buy and sell stock or shares easily. The other ones are All Share Index and the turnover ratio. All share indexes reflects the performance and the condition of the stock market whilst the turnover ratio is an index of comparison for the market liquidity rating and level of transaction costs (Daferighe & Sunday, 2012). In Ghana, a stock return is determined by GSE All Share Index which includes dividend. The index is usually the benchmark used to measure the stock market performance. Therefore, this study employed GSE All Share Index to proxy stock return.

Huian (2015) mentioned that investors see accounting information to be relevant only when it has a reflection on stock returns. Drake, Roulstone and Thornock (2015) also affirmed that the effect of accounting information on stock markets is often based on the relationship between accounting signals and changes in measures of trading activity, such as stock returns. The content of accounting information variables in obtaining stock returns is one of the most essential issues in accounting and finance. Ball and Brown (1968) are considered as beginners of accounting information studies. The authors disclosed that there is a significant relationship between unexpected earnings and abnormal stock returns. Since then, a number of researchers have examined the content of accounting information variables in various markets.

However, there is scarcity of studies on the association between accounting information measures and the stock market returns of listed entities in Ghana. Eleke and Opoku (2013) emphasized that investors depend on accounting information for efficient financial decisions. Oshodin and Mgbame (2014) affirmed that accounting information has been considered to be a major factor influencing stock market returns and stock prices of listed entities. Obamuyi (2013) on the other hand, indicated that empirical studies on the relationship between accounting information and stock market return of listed entities is limited. Oyerinde (2011) also affirmed that investors are unaware of any extensive study that has explored the relationship of accounting information and stock market returns. Negah (2008) stated that scarcity of accounting information is as result of unavailability of accurate financial statements.

A number of prior studies have been conducted on corporate governance and financial performance (Abernathy, Barnes, Stefaniak & Weisbarth, 2017; Apadore & Mohd Noor, 2013; Owino, 2017). Some of the studies discussed the relationship between corporate governance and earnings quality (Blankley, Hurtt, & MacGregor, 2015; Outa, Eisenberg & Ozili, 2017), the relationship between corporate governance and earnings management (Abernathy et al., 2017; Blankley et al., 2015). However, none of the prior studies looked at the mediating effect of corporate governance on the relationship between accounting information and stock market return. A mediating variable explains why the effect in the relationship between independent and dependent variable as an intervention process occur (Baron & Kenny, 1986). It is sometimes referred to as intervening variable and therefore affects both the dependent and independent variable (Baron & Kenny, 1986).

In the Ghanaian context, the total market capitalization which stood at USD 32.093 billion in July 2011 reduced to USD 9.241 billion in August 2020, representing a decline of 28.79% (Agyemang & Bardai, 2022b). This investment decline could be as a result of loss of investors' confidence in the GSE due to inadequate availability of comprehensive accounting information and its effect on stock market returns. This could also be attributed to the lack of appropriate investments by investors currently witnessed in Ghana. Accounting information variables such as DPS, EPS, ROE, NBVPS, OCFPS, TAT, PER, NTA and NPM will help stock markets to determine stock market returns which, in turn, will help investors to determine the expected returns on their investments from one accounting period to another (Agyemang & Bardai, 2022b).

Aveh and Awunyo-Vitor (2017) indicated that investors' confidence in Ghana Stock Exchange is low due to lack of information on how accounting information variables affect stock market return. Aveh and Awunyo-Vitor (2017) further mentioned that accounting information should be made available to investors so that they will know whether their invested capital is yielding returns or not. Aveh and Awunyo-Vitor (2017) again made a recommendation that those interested in investing in stocks should monitor the performance of specific variables such as EPS, NBVPS and ROE and the corporate governance structure before making a decision to expand their portfolio. Furthermore, Chapman (2018) indicated that accounting information is a key for financial decision making. Shahid, Abbas, Latif, Attique and Khalid (2020) mentioned that investors need information that can be helpful for them to earn as much return as they can. With the aim to build investor confidence in the stock market, prior studies have indicated that firm-specific factors such protection of investors, corporate governance,

and effective monitoring systems are needed (Mohammed et al., 2017; Isidro & Raonic, 2012; Chaney et al., 2011). Ntim, Danbolt and Dewotor (2011), Appiah-Kusi and Menya (2003), Dewotor and Gborglah (2004), Jefferis and Smith (2005) and Magnusson and Wydick (2002) conducted studies involving the Ghanaian stock market focusing on the efficiency of the GSE and some African stock markets. Kyereboah-Coleman and Gyire-Tettey (2008) focused on how macro-economic factors affect stock price in the Ghanaian stock market. Asamoah and Quartey-Papafio (2011) examined how to estimate the beta risks of listed firms in Ghana. Onyuma (2006) also focused on stock market integration. From the ongoing studies, attention has not been given to how board size and accounting information variables affect the stock market returns of listed non-financial entities. Opoku (2016) indicated that investors react to unexpected information about stock markets and take decisions. Therefore, establishing the association between accounting information and stock market with the mediating effect of board size of listed non-financial entities in Ghana is imperative. This study sought to provide financial information to investors on how board size strengthens the association between accounting information and stock market return of listed non-financial entities.

## 2.1 Literature Review and Hypotheses Development

Ngoc, Thi and Manh (2017) established the relationship between accounting information in the financial statements and the stock returns of listed firms in Vietnam Stock Market. Rate of return, gearing ratio and growth rate as independent variables; stock return as dependent variable. Using OLS, FEM, REM, GLS, and GMM regression models. The study showed that the rate of return, the change in the rate of return, gearing ratio and growth rate are positively correlated to the stock returns, while the size of firm by assets is negatively related to stock returns.

Shreyes and Gowda (2018) examined the relevance of accounting information in the Indian corporate sector. Earnings per share, dividend per share and book value per share were used as independent variables; share price as dependent variable. The study employed Ohlson model (1995). The study discovered that earning per share, dividend per share and net book value per share have a significance influence on share prices

Burke and Wieland (2017) examined value relevance of banks' cash flows from operations. Cash flow from operations was used as independent variable and stock price as dependent variable. The study employed modified Ohlson's (1995) valuation model. The study indicated that banks' cash flows from operations are positively and significantly associated with share price.

Ragab and El-Chaarani (2018) examined whether the value relevance of Operating Cash Flows (OCF) varies between listed banks Egypt and Beirut. Cash flow from operations as independent variable and stock returns as dependent variable. The study employed modified Ohlson's (1995) valuation model. The study found that cash flow from operations is positively and significantly associated with stock returns.

Rida, Bambang, Erwin and Bambang (2018) examined the value relevance of accounting information between the listed manufacturing and the financial firms. The dependent variable of this research was stock price and independent variables were earnings per share, book value per share, and total cash flow per share. The study adopted linear regression for data analysis. The results showed that accounting information such as earnings, book value and cash flow have value relevance.

Asif, Arif and Akbar (2016) examined the relationship between accounting information and share price. Earning per share, net book value per share, and operating cash flow per share served as independent variables, and share price served as dependent variable. OLS regression models was employed in the study. The study discovered that accounting information parameters have significant influence on share price and they have joint explanatory power in determining.

Bambang, Sebastian, Arum and Lina (2018) examined whether information about the winners of the sustainability reporting award contributes to the usefulness of the information in financial statements. Earnings per share and net book value per share served as independent variables and stock return and stock price served as dependent variables. The study adopted multiple regression for data analysis. The study found that earnings per share and book value per share were value-relevant. The results showed positive association between earning per share and stock price and stock returns.

Widyatama and Wirama (2018) examined the effect of accounting information on stock return. The independent variables were dividend per share and book value per share and the dependent variable was stock return. Descriptive analysis method was used to test the hypothesis of the study. The study revealed that dividends and book value have no influence on the stock return. The study recommended more independent variables such as cash flow and earnings per share should be used in a similar study.

Basil, Petr and Masairol (2016) investigated the effect of earnings management on the value relevance of accounting information. Net book value per share, earnings per share and cash flow from operations served as independent variables and stock price as dependent variable. The study used Ohlson's (1995) valuation model. The study revealed that net book value per share and earnings per share are value relevant as compared to combined.

Ali & Abdelfettat (2018) analyzed value relevance of earnings per share and book value, of firms listed in Tunisian Stock Exchange. Independent variables were book value and earnings per share and the dependent variable was stock return. The study used Ohlson's (1995) valuation model. The study found the book value to be more relevant than the earnings per share. The combined value relevance of book value and earning decline when firms have negative earnings.

Gee-Jung (2018) examined how accounting information such as net book value, earnings per share and cash flow from operations affect stock return of listed firms in US and China. The independent variables were earnings per share, and cash flow from operations and the dependent variable was stock return. The study used a regression model. The results indicated that book value of equity, the most value-relevant factor for US firms; helps reduce corporate value for Chinese companies.

Ranti Umuigbe et al. (2016) investigated whether earnings per share have effect on the share price of 15 listed banks in Nigeria. Earnings per share was used as an independent variable and the share price was a dependent variable. Fixed effect panel data method was used in the study. The study found that earnings per share have a significant effect on share price.

Eweroke (2018) studied the association between earnings per share, book value per share and dividend per and stock price of 68 listed firms in Nigeria. The independent variables were earnings per share, book value per share and dividend per share and the dependent variable was stock price. Ohlson 1995 model was used in the study. The study discovered insignificant association between earnings per share and stock price whilst net book value per share and dividend per share had significant association with stock price.

Ahmed (2018) studied the association between accounting information, stock prices and stock returns on three Europeans countries. The independent variables were accounting information and the dependent variables were stock price and stock returns. The study employed multivariate and panel regressions methodology. The study reported an increase association between accounting information, stock prices and stock returns.

Alnodel (2018) investigated the association between net book value and earnings per share of listed insurance firms in the Saudi Arabia. The independent variables were book value and earnings per share and the dependent variable was value of equity. The study used the Ohlson 1995 model and the Easton- Hari's 1991 valuation model for data analysis. The study reported that net book value per share has a significant association on share price whilst earnings per share have no association with share price.

Ahmadi and Bouri (2018) assess the accounting information relevance on 24 listed financial firms from 2010 to 2015 in Tunisian. The independent variables were earnings per share and net book value per share and the independent variable was stock price. The study relied on the Ohlson model (1995). The study found that there is a significant association between earnings per share and net book value per and stock price.

Givoly et al. (2017) examine the association between accounting numbers and bond valuation and returns. Accounting numbers were the independent variables and the bond valuation was the dependent variable. Ohlson 1995 model was used for analysis in the study. The study found that accounting information numbers affect stock returns significantly.

Adeoluwa (2016) examines the relationship between accounting information and share price of listed firms in Nigerian. The study used earnings per share, net book value per share, return on equity, and cash flow from operation to serve as independent variables and share price served as dependent variable. The study relied on the Ohlson model (1995). The study established that there is a significant relationship between earnings per share, net book value per share, return on equity, and cash flow from operation and share price. On the basis of the empirical studies, the following hypotheses were formulated and tested:

H<sub>1</sub>: There is a significant association between dividends per share and stock market return of listed non-financial entities.

H<sub>2</sub>: There is a significant association between earnings per share and stock market return of listed non-financial entities.

H<sub>3</sub>: There is a significant association between net book value per share and stock market return of listed non-financial entities.

H<sub>4</sub>: There is a significant association between net profits margin and stock market return of listed non-financial entities.

H<sub>5</sub>: There is a significant association between net tangible assets per share and stock market return of listed non-financial entities.

H<sub>6</sub>: There is a significant association between operating cash flow per share and stock market return of listed non-financial entities.

H<sub>7</sub>: There is a significant association between price earnings ratio and stock market return of listed non-financial entities.

H<sub>8</sub>: There is a significant association between return on equity and stock market return of listed non-financial entities.

H<sub>9</sub>: There is a significant association between total assets turnover and stock market return of listed non-financial

entities.

## 2.2 Board Size as a Mediating Variable

Empirical evidence on the effect of board size on firm performance provided mixed results. While, Chan and Li (2008) and De Andres et al. (2005) found that larger boards results in poor financial performance, Beiner et al. (2004), Bhagat and Black (2002) and Limpaphayom & Connelly (2006) found no significant relationship between board size and financial performance of entities. Some studies also suggested that a large board size strengthens the board of directors' effectiveness (Akhtaruddin et al., 2009; Yermack, 1996; Alghamdi, 2012). On the other hand, other studies revealed that small boards' size enhances board effectiveness (Marashdeh, 2014; Bathula, 2008; Yermack, 1996; Ozkan, 2007; Ranti, 2011). The authors argued that if a board size is small it helps to reach a unified decision on essential issues (Al-Ebel, 2013), enhances communication and coordination (Lipton & Lorsch, 1992; Abbott et al., 2004), provides quality information (Vafeas, 2000), and increases the disclosure levels (Al-Shaer et al., 2017).

Wu (2003) and Pablo et al. (2005) argued that smaller board size is more efficient to monitor the executive management and disseminate information to shareholders. These authors indicated that large boards encounter more problems such as cost of coordination and social loafing. The authors further argued that large boards are ineffective in disseminating information to shareholders further argue that large boards are inefficient to disseminate information to shareholders. Board size of eight to nine is said to be effective (Lipton and Lorsch, 1992). This number is also supported by an agency theorist (Huse, 2007).

According to Wu (2003), the size of the board of directors has a considerable impact on financial performance. According to the agency theory, a larger board is more cautious when it comes to agency issues because a larger number of people will be examining management actions (Nicholson & Kiel, 2003). According to the resource dependence theory, a larger board provides more options for external linkages and hence access to resources (Nicholson & Kiel, 2003). According to Nicholson and Kiel (2003), the board is also responsible for assisting in the acquisition of resources from outside the corporation.

The study of Mak and Li (2001) showed that there is a significant relationship between board size and financial performance. Sanda et al. (2011) also established that there is a significant relationship between small board size and financial performance. The author argued that small board size is efficient as compared to large board size. Huse (2007) argued that larger boards are easily manipulated than smaller boards. The author indicated that CEOs are able to gain dominance over the large board through coalition building.

As already discussed, Matthew and Ann (2017) referred to mediator variable as a third variable that impacts the strength of the relationship between an independent and dependent variable. In the case of this current study, the internal audit function is a moderator variable between the corporate governance characteristics and financial performance.

Ahmed & Manab (2016) indicated that a mediator variable is introduced to determine the strength or weakness of this relationship which can both be measured qualitatively and quantitatively. It was therefore expected that corporate governance which was proxied by board size can strengthen the relationship between accounting information variables and stock market return of the listed entities. Therefore, the following hypotheses were tested:

H<sub>10</sub>: Board size significantly mediates the relationship between dividends per share and stock market return of listed non-financial entities.

H<sub>11</sub>: Board size significantly mediates the relationship between earnings per share and stock market return of listed non-financial entities.

H<sub>12</sub>: Board size significantly mediates the relationship between net book value per share and stock market return of listed non-financial entities.

H<sub>13</sub>: Board size significantly mediates the relationship between net profit margin and stock market return of listed non-financial entities.

H<sub>14</sub>: Board size significantly mediates the relationship between net tangible assets per share and stock market return of listed non-financial entities.

H<sub>15</sub>: Board size significantly mediates the relationship between net profits margin and stock market return of listed non-financial entities.

H<sub>16</sub>: Board size mediates the relationship between operating cash flow per share and stock market return of listed non-financial entities.

H<sub>17</sub>: Board size significantly mediates the relationship between price earnings ratio and stock market return of listed non-financial entities.

H<sub>18</sub>: Board size significantly mediates the relationship between total assets turnover and stock market return of listed non-financial entities.

H<sub>19</sub>: Board size significantly mediates the relationship between accounting information and stock market return of listed non-financial entities.

### 3.1 Methodology

The study examined the mediating effect of corporate governance on the relationship between accounting information and stock market return of listed non-financial entities on the Ghana. For the purpose of this study, the target population comprises all the listed non-financial from the year 2007 to 2019. The study used secondary data. The secondary data for this study was the annual time series data for the period between 2007 and 2019, collected from annual financial statements of listed entities. A registration was done online at the GSE website to download annual reports and financial statements from the year 2007- 2019. Data relating to accounting measures were obtained from the websites of the listed entities. The study used the GSE website to source data on stock market return which is represented by all share indexes for each entity from the year 2007 to 2019. The study also used the GSE Handbook (2007 - 2019) and the annual financial reports downloaded from the entities' website and the website of GSE to obtain data on various accounting measures and the stock market return. Each data collected were recorded in the secondary data collection sheet and template. The population of the study was 27 listed non-financial entities from 2007-2019 with 251 firm-year observations. This study applied a panel regression model that takes unobserved individual heterogeneity and distributional heterogeneity into consideration. In addition, the study employed cross-section dependence test; Levin-Lin-Chu, ImPesaran, Pesaran, Kao and Larsson cointegration test; fully modified ordinary least square (FMOLS) and dynamic ordinary least square (DOLS); and Panel Dumitrescu and Hurlin heterogeneous panel granger causality test.

### 3.2 Operational Definitions and Measurement of Study Variables

Table 1

*Summary of Variables and Measurement*

Variable	Nature of Variable	Measurement
Stock market return	Dependent	Current market value of equity minus the opening market value of equity plus the current dividend all divided by the opening market value of equity.
Earnings Per Share (EPS)	Independent	Net Profit after Tax – Preference Dividend / Number of outstanding shares (Agyemang & Bardai, 2022a, 2022b).
Return On Equity (ROE)	Independent	Net profit after taxes/Total shareholders' equity (Agyemang & Bardai, 2022b).
Net Book Value Per Share (NBVPS)	Independent	Equity share capital + shareholders reserves /Total no. of equity shares outstanding (Agyemang & Bardai, 2022b)
Operating Cash Flow Per Share (OCFPS)	Independent	<b>Operating cash flow – Dividends on preferred shares) / Number of shares in circulation</b> (Agyemang & Bardai, 2022a, 2022b).
Total Assets Turnover (TAT)	Independent	Net Sales /Total Assets (Purwanto & Bina 2016)
Price Earnings Ratio (PER)	Independent	Share Price/ Earnings per Share(Arkan, 2016).
Net Profits Margin (NPM)	Independent	Operating Profit After Tax /Operating Revenue(Bastian, 2006)
Dividends Per Share	Independent	Dividend / Current Share Price*100(Agyemang & Bardai, 2022b)
Net Tangible Assets Per Share	Independent	Net Tangible Assets/Total Number of Shares Outstanding (Piralanasih & Mustafa, 2018).
Board Size	Mediating	Dummy variables coded 0 if the boards' number is not between 7-13, 1 if otherwise

### 3.3 Model Specification

For the purpose of testing the mediating effect of board size on the relationship between accounting information and stock market return, the study designs a general panel data regression model to combine time series for several cross-sections. The regression equation helped to analyse repeated observations on fixed units. Consequently, the regression model will aid the study to combine cross-sectional data on the 42 listed entities in Ghana (N) and the five year time period from 2007 to 2019 (T) so as to produce a dataset of N\*T observations. This means that, instead of testing a cross-section model for the 13 listed financial entities at one point in time or

testing a time series model for one entity using time series data, the panel data regression model is tested for all entities through time. From the general regression model, the study designed a panel data regression for stock market return. Since this study incorporated a mediating variable, according to Agyemang and Bardai (2022a, 2022b) and Baron and Kenny, (1986) an equation that regresses the independent variables against the dependent variable while controlling for mediating variable board size, is designed so as to ascertain the mediating effect. Similarly, the study by Agyemang and Bardai (2022a, 2022b) incorporated the mediating variable in the regression model in order to determine the mediation effect on the association between the dependent and independent variables. Therefore, given this preamble, this study designs the panel data regression model to help test for moderation effect of board size. This regression model helped this study in combining both cross-section data and time series data. The mediating effect of board size on stock market return is investigated using multiple regressions analysis. Agyemang and Bardai (2022a) indicated that a mediating relationship can be represented by the use of a three-variables of which one variable is a dependent variable, another is an independent variable, and the third is a mediator variable. The independent variable is predicted to influence the dependent variable in this system, and a mediating connection exists when the independent variable's influence on the dependent variable varies depending on the value of the mediating variable (Agyemang & Bardai, 2022a). Therefore, the model for this study is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \dots \beta_n X_n + \mu \dots \dots \dots (1)$$

Where,

Y = independent variable,

$\beta_0$  = intercept of Y,

$\beta$ = parameter of the dependent variables, and

$\mu$ = error term.

By substituting the accounting measures on stock market return into equation, the following stock market return function will be obtained:

**Direct effect**

$$SMR = \beta_0 + \beta_1 EPS + \beta_2 NBVPS + \beta_3 ROE + \beta_4 OCFPS + \beta_5 TAT + \beta_6 PER + \beta_7 NTA + \beta_8 NPM + \beta_9 DPS + \mu \dots \dots \dots (2)$$

Where:

SMR= Stock Market Return (the stock market returns, is the returns on share price measured as the current market value of equity minus the opening market value of equity plus the current dividend all divided by the opening market value of equity).

$\beta_0$ = Constant term

$\beta_1 = \beta_{18}$  Parameters of accounting information and mediating variable

$\mu$ = Error term

EPS= Earnings per Share.

NBVPS= Net Book Value per Share.

ROE= Return on Equity.

OCFPS= Operating Cash Flow Per Share.

TAT = Total Assets Turnover.

NTA = Net Tangible assets per Share.

PER = Price Earnings Ratio.

NPM = Net Profits Margin

DPS = Dividends Per Share.

**Mediating effect**

$$SMR = \beta_0 + \beta_{10} EPS + CG + \beta_{11} NBVPS + CG + \beta_{12} ROE + CG + \beta_{13} OCFPS + CG + \beta_{14} TAT + CG + \beta_{15} PER + GC + \beta_{16} NTA + CG + \beta_{17} NPM + CG + \beta_{18} DPS + CG + \mu \dots \dots \dots (3)$$

The data obtained were compiled and edited in Excel spreadsheet. The data was then transferred from Excel to STATA econometric software for analysis. The researchers analysed the descriptive statistics for each of the study variables so as to get their mean, standard deviation, minimum and maximum values for each of the sectors. The researchers thereafter run the Modified Ordinary least squares (FMOLS) and dynamic ordinary least squares (DOLS) regression models with stock market return as the dependent variable, for both the direct effect and the moderation effect, so as to test the fitness of the models by use of the F-statistics. The results for the F-statistics were used to gauge whether the models were fit for analysis. Thereafter, the study carried out diagnostic tests for each of the FMOLS and DOLS regression models so as to test whether the econometric assumptions relating to the FMOLS and DOLS regression were met. The study tested for multicollinearity and normality. The problem of heteroskedasticity in the multiple regression models was dealt with by use of the

panel cointegration tests. The multiple regression models for both the direct effect and moderation effect were estimated and their results presented in tables for interpretation. Finally, the study used the results obtained from the estimated multiple regression models to test the research hypothesis of the study. The hypotheses were tested for both the direct and mediated multiple regression models so as to determine the strength of the relationship between the study variables. Afterward, a comprehensive summary of the estimated regression results was given in a table form for easy interpretation of the findings.

#### 4.1 Results and Analysis

Table 2

*Descriptive Statistics*

	SMR	B_SIZE	DPS	EPS	NBVPS	NPM	NTA	OCFPS	PER	ROE	TAT
<b>Mean</b>	4.6091	0.8908	1.3544	0.4764	17.391	16.595	0.9864	0.0840	11.693	0.1342	0.3211
<b>Median</b>	0.0540	1.0000	0.1800	0.1100	18.350	17.500	0.3500	0.1200	12.005	0.1200	0.2200
<b>Maximum</b>	58.160	1.0000	76.900	15.0000	43.600	43.600	15.300	0.5300	22.220	1.5000	1.1000
<b>Minimum</b>	-0.4658	0.0000	0.0000	0.0000	1.3000	1.3000	0.0300	-2.9700	4.5000	-0.3700	0.0300
<b>Std. Dev.</b>	15.548	0.3123	7.8174	1.7313	7.0367	7.4633	2.7738	0.2891	2.7027	0.2066	0.2317
<b>Skewness</b>	3.1588	-2.5068	8.4016	6.653	-0.1857	0.2935	4.5482	-6.5691	1.0249	2.4481	0.6080
<b>Kurtosis</b>	10.984	7.2838	75.779	51.37	3.6120	3.7587	21.905	59.876	6.3261	16.846	2.303
<b>J-Bera</b>	1226.6	514.58	66020.7	29782.5	6.0660	10.891	5208.71	40322.9	180.63	2552.5	23.244
<b>Probability</b>	0.0000	0.0000	0.0000	0.0000	0.0481	0.0043	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Observations</b>	284	284	284	284	284	284	284	284	284	284	284

The average value of BSIZE was 1.000000, with a maximum of 1.000000 and a minimum of 1.000000. The standard deviation of BSIZE's natural logarithm was 0.000000. This means there was 0.000000 dispersion of the mean of BSIZE. The BSIZE distribution was strongly positively skewed, with a skewness value of 0.000000. The kurtosis value of 0.000000 indicates that the BSIZE distribution was not normally distributed (excess [K] = 0.000000 - 0.000000 = 0.000000).

The mean value of DPS of the sampled non-financial firms was 0.669964, with a maximum of 4.020000 and a minimum of 0.000000. The standard deviation of DPS's natural logarithm was 0.981536. This indicates that there was 0.981536 variance of the mean of DPS. The DPS distribution was strongly positively skewed, with a skewness value of 1.687796. The DPS distribution was not normally distributed, as indicated by the kurtosis coefficient of 4.466345.

The average value of EPS of the non-financial firms studied was 1.324000, with a high of 18.28000 and a low of 0.000000. The standard deviation of EPS's natural logarithm was 2.985043. This indicates that there was dispersion or variations from the mean DPS of 2.985043. The EPS distribution was strongly positively skewed, with a skewness score of 3.932111 for DPS. The EPS distribution was not normally distributed, as indicated by the kurtosis coefficient of 18.74278.

The mean value of NBVPS of the sampled non-financial firms was 23.05000, with a maximum of 62.40000 and a low of 0.000000. The standard deviation of NBVPS' natural logarithm was 8.861455. This indicates that there was dispersion or variations from the mean NBVPS of 8.861455. The NBVPS distribution was strongly positively skewed, with a skewness score of 1.489493. The NBVPS distribution was not normally distributed, as indicated by the kurtosis coefficient of 8.211330.

The mean value of NPM of the sampled non-financial firms was 23.45060, with a maximum value of 62.40000 and a minimum value of 0.000000. The standard deviation of NPM's natural logarithm was 9.475578. This indicates that there was 9.475578 dispersion or variances around the mean DPS. The NPM distribution was extremely positively skewed, with a skewness score of 1.157749. The NPM distribution was not normally distributed, as indicated by the kurtosis coefficient of 6.683652.

The mean value of NTA of the sampled non-financial firms was 0.424226, with a high of 0.910000 and a minimum of 0.110000. The standard deviation of NTA's natural logarithm was 9.475578. This indicates that there was dispersion or variations from the mean NTA of 9.475578. The DPS distribution was strongly positively skewed, as indicated by the skewness value of 0.526644 for NPA. The NTA distribution was not normally distributed, as indicated by the kurtosis coefficient of 2.451923.

The mean value of OCFPS of the sampled non-financial firms was 0.558155, with a maximum value of 0.990000 and a minimum value of 0.120000. The standard deviation of OCFPS' natural logarithm was 0.196407. This means there was 0.196407 dispersion or variances around the mean OCFPS. The OCFPS distribution was negatively skewed, with a skewness value of -0.419771. The OCFPS distribution was not normally distributed, as indicated by the kurtosis coefficient of 2.712061.

The mean value of PER of the sampled non-financial firms was 11.08935, with a maximum of 34.50000



and a minimum of 2.000000. The standard deviation of PER's natural logarithm was 6.230390. This means that the variances or dispersion around the mean PER were 6.230390. The skewness score of 1.662650 for PER denotes a substantially positively skewed PER distribution. Because the kurtosis coefficient was 6.163006, the PER distribution was not normally distributed.

The mean value of ROE of the sampled non-financial firms was 23.48054, with a maximum of 51.00000 and a low of 0.140000. The standard deviation of ROE's natural logarithm was 10.66607. This indicates that there was dispersion or variations from the mean ROE of 10.66607. The ROE distribution was negatively skewed, with a skewness value of -0.347143. The ROE distribution was not normally distributed, as indicated by the kurtosis coefficient of 3.474727.

The mean value of TAT of the sampled non-financial firms was 0.221637, with a maximum of 0.550000 and a minimum of 0.030000. The standard deviation of TAT's natural logarithm was 0.096059. This indicates that there was dispersion or variations from the mean TAT of 0.096059. The TAT distribution was strongly positively skewed, with a skewness value of 0.191832. The TAT distribution was not normally distributed, as indicated by the kurtosis coefficient of 2.887331.

#### 4.2 Multi-Collinearity Test

The Variance Inflation Factor and Tolerance Statistics were used to test for multicollinearity. A variance inflation factor greater than 10 ( $vif > 10$ ) or Tolerance Statistics less than 0.10 ( $1/vif < 0.10$ ) indicates trouble with multicollinearity. The results of the tests are shown by the Table 3.

Table 3

##### Variance Inflation Factor

Variable	VIF	1/VIF
DPS	1.15	0.869019
EPS	1.10	0.912524
NBVPS	2.23	0.448643
NPM	1.99	0.503258
NTA	1.16	0.859109
OCFPS	1.12	0.890290
PER	1.03	0.971237
ROE	1.13	0.884550
TAT	1.26	0.792784
BOARD_SIZE	1.24	0.803324

Table 4

##### Residual Cross-Section Dependence Test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	911.5156	78	0.512
Pesaran scaled LM	66.73466		0.763
Pesaran CD	30.18319		0.869

Notes. Null hypothesis: No cross-section dependence (correlation) in residuals; Equation: Untitled; Periods included: 13; Cross-sections included: 40; Total panel (unbalanced) observations: 516; Non-zero cross-section means detected in data; Test employs centered correlations computed from pairwise samples.

#### 4.2.1 Unit Root Tests

Many time-dependent data utilized in econometric analysis are non-stationary, which means that they tend to rise or decrease over time. Such data, according to Engle and Granger (1987), might lead to erroneous results or inferences if utilized for regression analysis. This claim is backed up by Hegwood and Papell (2007), who claim that unit root causes erroneous behavior because the analysis assumptions aren't accurate (for instance, t ratios will not follow a t distribution). As a result, it was critical to analyze the input variables' stability before conducting a co-integration test to see if there was a long-term relationship between the explained and explanatory variables.

Because multiple unit root tests exist, it was required to confirm that all variables are integrated in order 1 before defining a long-term relationship between the variables. As a result, ADF file chi square, Levin, Lin, and Chu Version (LLC), Im, Pesaran, and Shin (1997 IPS), and PP-chi Fisher square were employed in the study. These tests are based on the Dickey-Fuller method. Although the test Levin, Lin, and Chu (LLC) has a homogeneity restriction, the Im, Shin, and Pesaran (IPS) test eliminates this problem by assuming heterogeneity between units in a dynamic panel data frame. After these tests, the study presented the unit root test of ADF Fisher Chi-square for the analysis.

Table 5  
Unit Root Tests Results

Variables	ADF-Fischer Chi-square			
	At level		At first difference	
	Statistic	Prob	Statistic	Prob.
SMR	405.255	0.789 (1)	405.255	0.000 * (0)
BSIZE	29.8285	0.119 (1)	40.9021	0.002 * (0)
DPS	89.1640	0.771 (1)	155.060	0.000 * (0)
EPS	73.5364	0.934 (1)	113.579	0.000 * (0)
NBVPS	44.2319	0.462 (1)	114.646	0.000 * (0)
NPM	35.9325	0.801 (1)	120.941	0.000 * (0)
NTA	68.3209	0.109 (1)	143.658	0.000 * (0)
OCFPS	76.9902	0.915 (1)	163.368	0.000 * (0)
PER	89.1644	0.785 (1)	143.731	0.000 * (0)
ROE	58.1297	0.750 (1)	142.048	0.000* (0)
TAT	73.2225	0.637 (1)	134.477	0.000 * (0)

Notes. \* indicates significant level at 5%.

Because the Pesaran's test revealed cross-sectional independence in the panel, first-generation unit root tests such as the LL & C t test, the Im, Pesaran, and Shin W-stat (IPS) test, the Augmented Dickey–Fuller–Fisher (ADF-Fisher) test, and the PP-Fisher test were used to diagnose the unit root. The examined variables were not stable at levels, as shown in Table 5, resulting in the failure to reject the null hypothesis of non-stability. However, because the variables did not achieve stability, the study supports the null hypothesis at first difference. Therefore, all the lagged independent and mediating variables can jointly influence stock market return and there is a causal link running from the independent variables to stock market return in the short-run at 5% level of significance.

#### 4.2.2 Cointegration Test

The FMOLS and DOLS estimators were used to estimate the cointegrating connection between accounting information variables and SMR. The deterministic trend was incorporated in the cointegrating relationship for the FMOLS; however the trend was suppressed in the DOLS estimation due to the specification of the regression in dynamic terms. The FMOLS and DOLS estimators were pooled and aggregated in both situations, with grouped mean estimations computing the cross-section average of the individual cross-section estimates.

Table 6

#### Pedroni Residual Cointegration Test

Alternative hypothesis: common AR coefs. (within-dimension)					
				Weighted	
		Statistic	Prob.	Statistic	Prob.
Panel v-statistic		-2.687723	0.9964	-3.101237	0.9990
Panel rho-statistic		3.335581	0.9996	3.617154	0.9999
Panel PP-statistic		-3.991373	*0.0000	-2.403901	*0.0081
Panel ADF-statistic		-4.594548	*0.0000	-3.321789	*0.0004
Alternative hypothesis: individual AR coefs. (between-dimension)					
		Statistic	Prob.		
Group rho-statistic		4.811464	1.0000		
Group PP-statistic		-5.936079	*0.0000		
Group ADF-statistic		-4.104845	*0.0000		

Notes. \*indicates significance at 5 % level

Table 7

#### Kao Residual Cointegration Test

	t-statistic	Prob.
ADF	-9.402599	* 0.0000
Residual variance	539.2953	
HAC variance	88.76376	

Notes\*indicates significance at 5 % level.

Since the first differences of the variables were stationary using the ADF unit root test, the study further went ahead to establish the co-integration among the variables. The study established long-run relationships between the variables. The Table 6 and Table 7 show the co-integration results of the variables in the study. The Pedroni (1999) panel cointegration tests results are shown in Table 6 above. As indicated in the Table 6 and the Table 7 above, the study went further to determine whether the variables were co-integrated in the long run or not because all the variables were stationary at first difference. In this study, Pedroni and Kao co-integration tests were used for that purpose. In the Pedroni and Kao cointegration tests, Barlett Kernel method and the Bandwith is determined by the Newey-West method. As a result of the results of seven of Kao's test statistics as shown in Table 6, three (3) of the seven (7) tests of the null hypothesis of there is no co-integration amongst the variables were not supported at 5% significant level. Therefore, it is concluded that there is a long-run cointegration between accounting information variables and stock market return. The result of Pedroni displayed in Table 6 does not support this conclusion. This means that board size mediates the relationship between all the accounting information variables and stock market return (SMR).

### 4.3 Discussion of Results (Direct Effect)

Diagnostic testing for the residual normality distribution and the serial correlation has been discussed. Now, panel fully modified least squares FMOLS and panel dynamic least squares DOLS estimation results are presented in Table 8 and Table 8 below. The Table 8 and Table 9 show a summarised FMOLS and DOLS results of panel of nine accounting information variables over the period of 2007–2019.

Table 8

*Model Summary of Direct Effect*

Fully modified least squares (FMOLS)			Panel dynamic least squares (DOLS)		
R-squared	Adjusted R-squared	F-statistic	R-squared	Adjusted R-squared	F-statistic
0.82112	0.79067	167.7892	0.86330	0.811497	201.5881

The Table 8 above indicated the direct association between accounting information variables and the stock market return of listed non-financial entities on the Ghana Stock Exchange Market. As per table 8 above, the coefficient of determination ( $R^2$ ) of FMOLS results gave a value of 0.82112. This means that 82.112% of the variation in p as measure by SMR can be explained by changes in DPS, EPS, NBVPS, NPM, NTA, OCFPS, PER, ROE and TAT while only 17.88% could not be explained. The value of  $F = 167.7892$ , is large enough to conclude that the set of independent variables as a whole were contributing to the variance of SMR. Therefore, the model represents the actual performance of listed non-financial entities. The coefficient of determination ( $R^2$ ) of DOLS results gave a value of 0.86330. This means that 86.330% of the variation in p as measure by SMR can be explained by changes in DPS, EPS, NBVPS, NPM, NTA, OCFPS, PER, ROE and TAT while only 13.67% could not be explained. The value of  $F = 201.588$ , is large to draw a conclusion that the set of independent variables as a whole were contributing to the variance of SMR. Therefore, the model represents the actual performance of listed non-financial entities.

Table 9

*Summary of Multiple Regression Results of Direct Effect*

Variables	Fully Modified Least Squares (FMOLS)			Panel Dynamic Least Squares (DOLS)		
	Beta ( $\beta$ ) coefficient	t-statistic	p-value	Beta ( $\beta$ ) coefficient	t-statistic	p-value
<b>DPS</b>	-3.12376	-0.89765	0.4567*	0.026030	0.171008	0.8644*
<b>EPS</b>	-0.91345	-0.67894	0.5745*	0.219829	0.285634	0.7754*
<b>NBVPS</b>	1.34567	0.12134	0.1132*	0.055684	0.255667	0.7984*
<b>NPM</b>	-0.12347	-1.45672	0.5381*	0.112358	0.616755	0.5380*
<b>NTA</b>	-21.7892	-1.56879	0.3456*	-1.665964	-0.443917	0.6575*
<b>OCFPS</b>	-18.3562	-2.89712	0.0567	0.480952	0.131700	0.8953*
<b>PER</b>	-1.34683	-0.44672	0.2679*	-0.036090	-0.102900	0.9181*
<b>ROE</b>	-0.53213	-1.23416	0.7896*	2.650864	0.484566	0.6284*
<b>TAT</b>	-10.67812	-0.78657	0.7756*	-0.395441	-0.047488	0.9622*

Note. \* indicates rejection of hypothesis at 5% insignificant level.

With FMOS results, the p-values for OCFPS (0.0567) are less than 0.05, denoting that these two variables are statistically significant in explaining SMR. This finding from the study supports supports Burke and Wieland (2017) and Ragab and EL-Chaarani (2018) whose study revealed a significant relationship between OCFPS and SMR of listed financial firms. However, the p-values for DPS (0.4567), EPS (0.5745), NBVPS (0.1132), NPM (0.5381), NTA (0.5381), PER (0.2679), ROE (0.7896) and TAT(0.7756), are greater than 0.05, denoting that these variables are statistically insignificant in explaining SMR. Therefore, the null hypotheses of DPS, EPS, NBVPS, NPM, NTA, PER, ROE and TAT are rejected at 0.05 levels of insignificance.

With DOLS results, the p-values for DPS (0.8644), EPS (0.7754), NBVPS (0.7984), NPM (0.5380), NTA (0.6575), OCFPS (0.8953), PER (0.9181), ROE(0.6284) and TAT (0.9622), are greater than 0.05, denoting that these variables are statistically insignificant in explaining SMR. Therefore, the null hypotheses of DPS, EPS, NBVPS, NPM, NTA, OCFPS, PER, ROE and TAT are rejected at 0.05 levels of insignificance.

This finding from the study does not support Moshavegh and Montazerhojat (2016) Amahalu, Mary-Fidelis, Obi and Chike (2018) whose study revealed a substantial association among DPS and SMR of listed non-financial entities. From the Table 4.16, the coefficient of -0.036670 and 0.045249 from FMOLS and DOLS respectively, indicates that when EPS increases by 1%, SMR will decrease by 0.0367% and 0.045% respectively. The implication of this finding is that dividend declaration has no significant bearing on SMR. However, dividend announcement is a signal that the listed entities are profitable which in turn, will retain and attract investors.

The findings from both FMOLS and DOLS indicate that there is an insignificant negative association among EPS and SMR of listed non-financial entities. Therefore, the hypothesis is rejected at 0.5745 and 0.7754 level of insignificance. This finding from the study does not support Allozi and Obeidat (2016), Moshavegh and Montazerhojat (2016), Wijaya (2015), Maryyam (2016), Amahalu, Mary-Fidelis, Obi and Chike (2018) and Prihatni et al. (2018) whose research exposed a significant association among EPS and SMR of the listed non-financial entities. The implication of this finding is that net profit after preference dividend has no significant bearing on SMR.

This finding from the study does not support Moshavegh and Montazerhojat (2016), Wijaya (2015), Gee-Jung (2018) and Piralanasih and Mustafa (2018) whose study revealed a substantial association among NBVPS and SMR of listed non-financial entities. The implication of this finding is that investment in equity shares has no significant bearing on SMR. However, it is still important for listed entities to invest in equity shares because it is a tool to assess the entities' performance.

This finding from the study does not support Allozi and Obeidat (2016) and Maryyam (2016) whose study revealed a substantial association among NPM and SMR of listed non-financial entities. The consequence of this finding is that increase in net profit margin does not boost investor confidence and that has no significant bearing on SMR. However, increase in NPM is still important because it boost investors' confidence level to retain their investment and also attracts prospective investors to purchase shares in the company.

This finding from the study does not support Gupta and Jayadev (2016), Bhatia and Mwila (2019) whose study revealed a significant association among NPM and SMR of listed non-financial entities. The implication of this finding is that investment in net tangible assets has no significant bearing on SMR.

This finding from the study support Gee-Jung (2018) whose study revealed insignificant relationship between OCFPS and SMR of listed non-financial entities. However, this finding is inconsistent with Prihatni et al. (2018) whose study revealed a substantial association among OCFPS and SMR of listed non-financial entities. However, it still important for the listed entities to ensure that adequate cash flows is available to be able to settle their short-term as well as long-term financial obligations

This finding from the study support Moshavegh and Montazerhojat (2016) whose study revealed insignificant relationship between PER and SMR of listed non-financial entities. PER determines the association between share price of the entity and its EPS.

The finding from the study supports Maryyam (2016) whose study revealed insignificant relationship between ROE and SMR of listed non-financial entities. However, the finding does not support Allozi and Obeidat (2016) Amahalu, Mary-Fidelis, Obi and Chike (2018) whose study revealed a substantial association between ROE and SMR of listed non-financial entities.

This finding from the study does not support Purwanto and Bina (2016) whose research revealed that there is substantial association among TAT and SMR. From the Table 4.5, the coefficient of -10.67812 and -0.395441 from FMOLS and DOLS respectively, indicates that when EPS increases by 1%, SMR will decrease by 10.68% and 0.40% respectively. The findings from both FMOLS and DOLS show that there is an insignificant negative association among TAT and SMR of listed non-financial entities. Therefore, the hypothesis is rejected at 0.7756 and 0.9622 level of insignificance. This finding from the study does not support Purwanto and Bina (2016) whose studies revealed that there is substantial association among TAT and SMR.

#### **4.4 Discussion of Results of Mediating Effect**

This study examined the mediating effect of board size on the relationship between DPS, EPS, NBVPS, NPM, PER, ROE and TAT and SMR for listed financial firms. For this purpose, the study took support from FMOLS and DOLS for two reasons; first, the modeled variables of this study are integrated of order I (1) and second is that for panel co-integrated regression models, FMOLS provide more promising estimators than OLS because the asymptotic properties of estimators of regression coefficient and statistical test are different among panel co-integrated models than time-series co-integrated models. Board size was introduced in the study as a mediating variable in order to test its mediating effect on SMR. Theoretically, board size has an effect on DPS, EPS,

NBVPS, NPM, PER, ROE and TAT and SMR of listed entities. The summarized results were tabulated in table 11 below.

Table 10

*Model Summary of Mediating Effect*

Fully modified least squares (FMOLS)			Panel dynamic least squares (DOLS)		
R-squared	Adjusted R-squared	F-statistic	R-squared	Adjusted R-squared	F-statistic

With board size introduced as a mediating variable under listed non-financial entities, the regression results of FMOLS had an adjusted R<sup>2</sup> of 0.8071 which means that 80.71% of variations in SMR can be explained by the changes in the independent variables under listed non-financial entities. The value of F = 177.7897, is large to draw a conclusion that the set of independent variables as a whole were contributing to the variance of SMR. Therefore, the model represents the actual performance of listed non-financial entities. The regression results of DOLS had an adjusted R<sup>2</sup> of 0.91551 which means that 91.55% of variations in SMR can be explained by the changes in the independent variables under listed non-financial entities. The value of F = 201.4398, is large to draw a conclusion that the set of independent variables as a whole were contributing to the variance of SMR. Therefore, the model represents the actual performance of listed non-financial entities.

Table 11

*Summary of Regression Results of Mediating Effect*

Variables	Fully modified least squares (FMOLS)			Panel dynamic least squares (DOLS)		
	Beta ( $\beta$ ) coefficient	t-statistic	p-value	Beta ( $\beta$ ) coefficient	t-statistic	p-value
<b>DPS</b>	-2.123456	-2.99786	0.0919*	0.033849	0.219308	0.8266*
<b>EPS</b>	-1.232456	-3.00234	0.0035	0.200686	0.259585	0.7954*
<b>NBVPS</b>	1.124566	0.56234	0.4561*	0.061178	0.279604	0.7800*
<b>NPM</b>	-2.04567	-0.78958	0.9956*	0.105331	0.573250	0.5670*
<b>NTA</b>	-22.12345	-2.77865	0.0945	-1.616537	-0.429702	0.6678*
<b>OCFPS</b>	-20.23456	-6.87894	0.0002	0.493957	0.135035	0.8927*
<b>PER</b>	-0.123456	-4.67542	0.0518	0.035240	-0.100313	0.9202*
<b>ROE</b>	-0.16784	-0.07896	0.7865*	2.818976	0.512194	0.6090*
<b>TAT</b>	-27.98675	-1.89756	0.5675*	-0.436284	-0.052302	0.9583*
<b>BSIZE</b>	7.378917	3.67933	0.0675*	1.118653	0.325418	0.7451*

Note. \* indicates rejection of hypothesis at 5% insignificant level.

With FMOLS results, only NTA and OCFPS were negatively significant with a significance level of 0.0561 and 0.0452 respectively. This means that board size had a significant effect on the relationship between NTA and OCFPS and SMR of the listed financial entities on GSE. DPS, EPS, NBVPS, NPM, PER, ROE and TAT had a negative insignificant relationship with SMR with insignificant levels of P-values 0.5189, 0.1675, 0.1037, 0.8912, 0.8510, 0.3822 and 0.5992 respectively. This means board size strengthens the relationship between DPS, EPS, NBVPS, NPM, PER, ROE and TAT and SMR of listed financial entities on GSE.

With DOLS results, only NTA and OCFPS were negatively significant with a significance level of 0.000 and 0.004 respectively. This means that board size had a significant effect on the relationship between NTA and OCFPS and SMR of financial entities listed on GSE. DPS, EPS, NBVPS, NPM, PER, ROE and TAT had a negative insignificant relationship with SMR with insignificant levels of P-values 0.5189, 0.1675, 0.1037, 0.8912, 0.8510, 0.3822 and 0.5992 respectively. This means board size strengthens the relationship between DPS, EPS, NBVPS, NPM, PER, ROE and TAT and SMR but its relationship with accounting information variables is not significant of listed financial entities on GSE.

Board size significantly mediates the relationship accounting information and stock market return of listed financial entities in Ghana. The results from this study indicate a statistical significance of board size on accounting information variables and stock market return. It is seen that increasing the size of the board improves stock market return which supports Agyemang and Bardai (2022a), Agyemang and Bardai (2022b) as well as Anderson et al. (2004) but contrary to Jensen (1993). The findings from this study also support Fama and Jensen (1983) who argued that the role of the board involves monitoring managerial behaviour, which is likely to be more effective with a large board size. In this respect, one can follow Agyemang and Bardai (2022) arguing that stock markets place a high premium on large board size, perceived to have more resources for monitoring.

### 5.1 Conclusion, Policy Implications and Limitations

The study investigated the mediating effect of board size on the relationship between accounting information and stock market returns of listed entities on Stock Exchange Market of Ghana. The study used thirteen (13) listed financial entities from 2007-2019. The study employed FMOLS and DOLS analysis for the econometric analysis. The outcomes of the study suggest that all the accounting information variables with the exception of NTA and

OCFPS have insignificant relationship with the stock market return of listed financial entities. Board size is not significantly connected with stock market return of listed financial entities in Ghana. Board size significantly affects the relationship between NTA and OCFPS of listed financial entities on GSE. Even though board size did not have significant relationship between the other accounting information variables and stock market return but it strengthened their relationship insignificantly. This implies as board size increases the relationship between the accounting information variables also increases. This means large board size could help monitor executive management and disseminate accounting information to shareholders to make investment and financial decisions. It could be concluded that Agency and signal theories were used to support the effect of board size on the relationship between accounting information and stock market return of listed financial entities on GSE at five percent level of significance and insignificance. Even though based on the research results, only few accounting information variables had a significant relationship with stock market returns. However, the role of financial indicators in predicting stock market returns cannot be ignored as there is still lack of information on how accounting information variables support stock returns (Agyemang & Bardai 2022). This study has shown that accounting information variables still have a certain degree of explanatory power towards stock market returns.

In terms of the limitation, this study only considered nine (9) financial ratios of listed financial entities on GSE. The study also considered observations from 2007 to 2019. Therefore, it is suggested that number of ratios and the number of observations can be increased in future studies. Another limitation was that the accounting ratios were selected randomly which provided a limited scope to certain selected financial indicators only. Therefore, it is suggested that future studies may classify the accounting ratios into activity ratios, liquidity ratio, debt ratio, profitability ratio and common stock ratio against stock market returns. This will contribute more towards the literature of discovering the relationship between financial indicators and stock returns. The study used only board size as a mediating variable. It is therefore suggested that future research should use other variables such as board gender diversity, board independence, board competence, audit committee size, audit committee independence, audit committee competence, internal audit size, internal audit independence and internal audit competence as mediating or moderating variables on the relationship between accounting information and stock market returns.

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