VALUE RELEVANCE OF TIMELINESS OF ACCOUNTING INFORMATION IN LISTED INSURANCE FIRMS IN NIGERIA

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DECLARATION

I declare that the work in this dissertation entitled Value Relevance of Timeliness of Accounting Information in Listed Insurance Firms in Nigeria has been performed by me in the Department of Accounting. The information derived from the literature has been duly acknowledged in the text and a list of reference provided. No part of this dissertation was previously presented for another degree or diploma at this institution or any other institution.

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CERTIFICATION

This dissertation entitled VALUE RELEVANCE OF TIMELINESS OF ACCOUNTING INFORMATION IN LISTED INSURANCE FIRMS IN NIGERIA by Aliyu ABUBAKAR, meets the regulations governing the award of the degree of Master of Science (M.Sc.) in Accounting and Finance of the Ahmadu Bello University and is approved for its contribution to knowledge and literary presentation.

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ABSTRACT

The study investigated the value relevance of timeliness of accounting information in the listed insurance firms in Nigeria. The study used correlational research design. The source of the data was secondary and was collected from the published annual financial reports of the studied insurance firms in Nigeria for all the independent variables, on the other hand share prices were collected from Cash Craft Stockbroker website. The population consisted of all the 29 listed insurance firms on the floor of Nigerian stock exchange as at 31 December 2017, out of which a sample size of 17 firms was used. The study covered a period of seven years (2011-2017). The data was classified into two- firms that release their accounting information within the stipulated time by law and those that submit untimely. The models were analyzed using multiple regression analysis using STATA software. Findings from the analysis showed that on the overall both timely released accounting information and untimely released value relevanceis not of much difference. Individually, the results showed that, earnings per share, and cash flow from operation of firms that release their information timely to be more value relevant than those firms that release their information untimely. Based on the above findings, the study recommends that listed insurance firms in Nigeria should release their accounting information timely since timeliness is correlated with appreciation in share prices in the listed insurance firms in Nigeria, and SEC should ensure timely release of accounting information.

TABLE OF CONTENTS

CHAPTER FOUR: DATA INTERPRETATION AND ANALYSIS

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

List of Tables

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Value relevance as an area of research in the field of accounting and finance has drawn the attention of academics for long, as well as attracting many researches. It is understood to be the ability of financial statement information to capture and summarise the share values and is empirically tested as a statistical association between market values of shares and accounting values. Furthermore, accounting is believed to be an information system that is used by various economic units to make informed decision (Bello,2009). For accounting information to achieve that, it should be up to date, free from bias and represent a true and fair view of the state of affairs of the entity involved. Similarly, accounting information is only termed value relevant if there is an established association between it and company market.

Accounting information is any information obtained from the accounting system of a firm whether contained in a financial statement, a special report, or verbal statement. Investors in many cases are too dependent on the information provided by accountants through annual reports and accounts. Therefore, they make investment decisions with the aid of accounting information. The information can only assist them in coming up with the right investment decision that will give them higher returns on investment and minimize risks only if it is prepared in such a way that it is expected, hence the need for accounting information that presents a true and fair view of the state of affairs of business entities. Financial statements achieve this role if they possess certain characteristics as enumerated byinternational accounting standard board(IASB 2014).Theseare: reliability, relevance, timeliness, comparability and understandability.If market participants consider accounting information to

be of high quality, a positive relationship between the information and the share prices is expected, and vice versa.

Additionally, accounting information must be related to company's value and be able to give a predictive strength on the value of a firm for it to appropriately guide a decision. If there is no association between accounting information and a company's value then accounting information cannot be termed value relevant, and therefore unable to fulfil one of its primary objectives. Accounting information is mostly used for investment purposes. Investment is a commitment of funds for a period of time in order to derive a rate of return that will compensate the investor for the time during which the funds are invested, and for the uncertainty and risk involved.

The bases for all investment decisions depend on readily available information to the various stakeholders. In line with this, section 336 of the companies and allied matters act (CAMA) 1990 as amended, mandates all listed firms on the Nigerian stock-market (first-tier) to submit their semi-annually and yearly reports of their operations to the security and exchange commission within ninety days (90) after their financial year end. While those listed on the second tier are to submit only their annual reports and accounts,this regulation is to ensure accounting information is readily available and relevant for investment decisions.

However, the relevance of accounting information in the listed insurance firms in Nigeria can be said to be impaired with in recent years. This is due to the inability of the firms to release their accounting information as at when due, and its unavailability will make it difficult for investors to make informed decisions as when due. When the relevance of accounting information is lost, it reliability is also missing and this will have a detrimental effect on the share prices. Accounting information must be reliable among other qualities for it to be

considered useful to the users (Adaramola & Oyerinde, 2014). Hence, accounting information will not be relevant if it is not released to the users on time.

A publication by the Nigerian Securities and Exchange Commission(SEC, 2018)on the list of firms that submitted their reports to the commission three months after their financial year end showed that, out of the 29 listed insurance firms, 17were unable to submit their audited accounts to the commission within the stipulated period by the law. The affected firms include; mutual benefit assurance PLC, Guinea Insurance PLC, Niger insurance PLC, African alliance insurance PLC, sovereign insurance PLC among others.As a result of noncompliance,several insurance companies in Nigeria have been exposed to huge amount of fines by the SEC(Nwoji, 2018). This has been an issue of concern to the shareholders of the affected companies. Because, the fine paid to the commission had effect on their returns (earnings). According to the President, Progressive Shareholders Association of Nigeria Boniface Okezie (2018), listed insurance firms are making their accounting information not to be relevant for investment decision.

Appreciation or depreciation in share prices is associated with the forces of demand and supply and the available accounting information. Individuals and organizations embark on investment decisions for several reasons.Investors commit their resources with the expectation of return, bearing in mind a given level of risk.Listed insurance firms in Nigeria are profit oriented and therefore profit serves as their objective, their existence and operations depend on their earnings. Most investors use it as determinant of their investment, because it is from the profit that dividends and other obligations are paid.A firm that has not earned expected profit may not be able to meet up with its obligations, other investors consider value of the firm and how the firm gains wide acceptability from within and outside the country regardless of whether or not the firm pays dividend constantly. Investors of this preference

prefer long run benefits that accrue to them and therefore look at the firm's book value in their investment decision.

On the other hand, to some investors profit is not enough for them to either invest or increase their investment in an entity, they go further to find out from the totalprofit generated by a firm how much is in cash and how much is in credit?Because too much earnings on credit signifies danger as a result of the risk associated with the collection of credit sales. As a result of individual differences and divergence of information need by the investors.Listed insurance firms in Nigeria should find out the value relevant accounting information to investors, so that they can improve it in other to attract more investors which will consequently improve their share prices.

This study is motivated by the sharp decline in the share pricesof listed insurance firms on the floor of Nigeria Stock Exchange (NSE),an event that happened in March 2018(Guardian, 2018)and up to December, 2019 the prices have not recovered and this has been an issue of concern to the regulatory bodies (SEC and NAICOM). This can be attributed to the inability of the firms to release their accounting information as at when due which has impaired the relevancy and reliability of such information and ultimately led to investors' lamentation. This is what necessitates research to find out the value relevance of timeliness of accounting information in the listed insurance firms on the floor of Nigerian stock market.

1.2 Statement of the Problem

In any given economy a rise or fall in market value of a firm depends largely on market forces. Share prices tend to rise or remain stable when companies and the economy in general show signs of stability and growth. The movement of a firm's market valuecan be determined by the available accounting information. Listed insurance firms in Nigeria are making their accounting information not to be relevant, because it is lacking timeliness one of the features

of accounting information enumerated by IASB (2014).This is because of the delay they cause in releasing information to the users. Therefore, if accounting information is not made available to users on time, the relevance of such information will be affected and its reliability will be assumed to be compromised. Accounting information must contain two qualitative characteristics: relevance and reliability for it to be considered useful to the users (Adaramola&Oyerinde, 2014).

The delay in the release of accounting informationby the listed insurance firms in Nigeria has impaired the relevance of such information for decision making due to the absence of timeliness. The share prices of listed insurance firms have crashed in March 2018,since then share prices of Wapic Insurance PLC, Standard Insurance PLC, Mutual Benefit PLC among others have been trading below fifty kobo and others are trading slightly above fifty kobo(Guardian, 2018).As for the forgoing, the investors in the sector lamented and the president independent shareholders association in NigeriaSir Sunny Nwosu (2018)even called for examination of books of accounts. Moreover, delay in the release of the accounting information may create suspicion of unethical practices by the managers of reporting entities to report what does not reflect the true and fair view of the state of affairs of such firms, through window dressing, creative accounting, and income smoothening among others.

The study of Edwards and Bell (1961) and Ball and Brown (1968) are believed to be the pioneer studies conducted to determine the usefulness of accounting information in determining market value of companies (Global Asset management, 2014), Further to these works, several studies follow.However, they concentrated on earnings and book value despite other accounting information released by firms, this calls for investigation on the value relevance of insurance firms accounting information to include other accounting information besides the aforementioned ones. Mamuda (2015) suggested the empirical testing of cash flow from operationagainst share prices. As a result, this study will test the variable.

Studies of value relevance in Nigeria and other emerging economies have reported mixed findings.Forinstance,Bello (2009),Mamuda (2015),Altahtamouni and Alslehat (2014),Shehzad and Ismail (2014) reported that accounting information such as earnings and book value significantly affect market value of shares, whileAbubakar (2011), and Amir and Lev (2008) reported that accounting information has no value relevance. The inconsistency in the findings may be as a result of methodological issues such assmall sample size anddifferences in the sectors of studies. Some studies were affected by the passage of time such asAmir and Lev (1996),Bello (2009) and Abubakar (2011). The findings of studies conducted in developed world like Dung (2009),Sabri and Mohd-Saleh (2010) andMuller (2011) among otherscannot be applied in developing countries such as Nigeria, because of the socio-cultural differences and the level of market efficiency between the developed and developing economies.Hence,the needs to replicate similar study using Nigeria data taking into account the shortcomings of previous studies.

Insurance sectoras one of the sectors in the Nigerian capital market,however little is known about the ability of accounting information to explain changes to the share prices of firms listed in this sectorbecause most of thestudies of value relevance gave attention to other sectors. For instance, Altahtamouni and Alslehat (2014) and Ernest and Oscar (2014) have studied value relevance of accounting information in the banking sector but their findings cannot be applied in the insurance sector, this is as a result of differences in the sectors'regulatory bodies, and nature of operations- banking sector is regulated by BOFIA and CBN prudential guidelines.While insurance is regulated by NAICOM and Nigerian insurance act. Moreover, such studies used only earnings and book value per share as independent variables against share prices. Hence there is need for study to be conducted in the Nigerian insurance sector using cash flow from operation as suggested by Mamuda (2014).

In summary, this study examined whether timeliness of accounting information– earnings per share, book value per share, and cash flow has significant impact in the decision making of prospective investors to invest in insurance firms in Nigeria and the existing investors to retain or increase their investment in the firms.

1.3 Research Questions

In view of the above identified problems,the study seeks to answer the following questions:

i. Does earning per share timeliness have value relevance among the listed insurance firms in Nigeria?
ii. Does book value per share timeliness have value relevance among the listed insurance firms in Nigeria?
iii. Does cash flow from operation timeliness have value relevance among the listed insurance firms in Nigeria?
iv. Does accounting information timeliness have value relevance among the listed insurance firms in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to examine the value relevance of timeliness of accounting information among the listed insurance firms in Nigeria. However, the specific objectives are stated below:

i. To ascertain the value relevance of earnings per share timeliness among the listed insurance firms in Nigeria.
ii. To determine the value relevance of book value per share timeliness among the listed insurance firms in Nigeria.
iii. To ascertain the value relevance of cash flow from operation timeliness among the

listed insurance firms in Nigeria.

iv. To determine the value relevance of accounting information timeliness among the listed insurance firms in Nigeria.

1.5 Hypotheses of the Study

On the basis of the above objectives the following null hypotheses have been formulated.

$H_{01:}$ Earnings per share timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria.

$H_{02:}$ Book value per share timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria.

$H_{03:}$ Cash flow from operation timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria.

$H_{04:}$ Accounting information timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria.

1.6 Scope of the Study

The domain of the study is the listed insurance firms in Nigeria and the period covered by the study isseven (7) years (2011 and 2017); the choice of this period has been influenced by the availability of data of the firms, and the fall in the value of share prices of the firms in the sector as reported byguardian (2018).for accounting information, the study will cover earnings per share, book value per share and cash flow from operation.

1.7 Significance of the study

This study aims at providing empirical evidence on the value relevance of timeliness of accounting information in the listed insurance firms under the Nigerian condition. Thestudy will enlightenindividuals and corporate investors (existing and potential) as well as financial analysts to know between insurance firms that release their information timely and those that release lately which firm to invest or divest their investment from.

The study will also be beneficial to regulators such as NAICOM and SECas it will enable them know the most value relevant accounting information between information released lately and timely in order to take the appropriate actions against the listed insurance firms.

Additionally, the study May also help SEC, NAICOM and NFRC in the formulation of future policies as it will serve as an empirical answers and suggestions to them. Besides, the NFRC will find the study vital as it will serve as a feedback channel to the council on which accounting information is the most value relevant accounting information for equity valuation in Nigeria. Furthermore, the study has filled the gap in the existing literature by investigating the value relevance of timeliness of accounting data in the Nigerian listed insurance firms.

Finally, to future researchers, it has increased to the available literature in the area of value relevance and serves as a guide to further studies.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviewed related and relevant literature in the area of value relevance;the chapter is categorized under the following sub headings: introduction, conceptualization, conceptual frame work, review of empirical studies, theoretical frame work, model development and finally the summary of the chapter.

2.2 Conceptualization

In this section, thestudy captured relevant concepts as defined by various scholars and finally selects the most suitable one for the study.

2.2.1 Value Relevance of Accounting Information

Value relevance revolves around usefulness of information in equity valuation, Theil (1968) was one of the first value relevance researchers and defined information as a change of expectations in the outcome of an event. Within the context of his study, he claimed that a firm's financial statement is value relevant if it leads to a change in investors assessments of the probability distribution of future returns. Moreover, Beisland (2009)defined value relevance as the ability of financial statement information to capture and summarize firm value. Value relevance is measured as the statistical association between financial statement information and stock market values (Abubakar, 2011); earnings and book value are regarded as the basis for firm valuation. Bello (2009) defined Value relevance of accounting information as the ability of any information contained in the financial statement to enable the financial statement users determine the value and performance of the company. On the other handNilson(2003)defined value relevance as the usefulness of financial statement information in equity valuation, it is regardedas the ability of accounting information to summarize business transactions and other events.

Francis Shipper (1999)viewed value relevance as the association between accounting information and market value, the main objective is to measure whether investors actually use accounting information in their investment decisions. Ball and Brown (1968) defined value relevance research as the use of price or return data to identify value drivers that effect prices or returns on the market value of stocks.

Value relevance is seen as evidence of the quality and usefulness of accounting numbers and as such, it can be interpreted as the usefulness of accounting data for decision making process of investors and its existence is usually by a positive correlation between market values and book values (Takacs, 2012)

Within the context of this study, value relevance is the statistical relationship between accounting information and stock market values as defined by (Abubakar, 2011).

2.2.2 Timeliness of Accounting Information

The timeliness of accounting information refers to the provision of correct and accurate information to the users as quick as possible for them to take decision (Accountingtools.com, 2018).In other words, timeliness of accounting information means the need for accounting information to be presented to the stakeholders to make informed decision at the right time.

Whereas timely presentation of accounting information is highly desirable, it may conflict with the objective to present reliable information. This is because producing reliable and accurate information may take more time but the delay in provision of accounting information may make it less relevant to users. Therefore, it is necessary that an appropriate balance is achieved between the timeliness and reliability of accounting information.Information presented timely is generally more relevant to users conversely; delay in release of information renders it less relevant to decision making needs of the users(Durand 2018).Similarly,with regards to timeliness, the Nigerian Securities and

Exchange Commission (SEC) requires all listed firms to submit their auditedannual reports within ninety days from a firm's financial year end, any firm who fails to submit within the period means the firm submitted late. Similarly, the national insurance commission (NAICOM) requires all insurance firms to submit their audited books of accounts within six months from the date of their financial year end.

2.2.3 Share Prices

This is the prevailing market price that a share is selling on the floor of the stock exchange (Olowe, 2011). it is the prevailing market price that a buyer is willing to buy a share or a seller is willing to sell his share, it is the highest amount someone is willing to pay for a share, or the lowest amount that it can be bought for (Wikipedia, 2017).

It is the price of a single share of a number of saleable stocks of a company, derivative or other financial asset. In simple terms, the stock price is the highest amount someone is willing to pay for the stock, or the lowest amount that it can be bought for

2.2.4 Earnings perShare

Bhatt and Sumangla (2012) viewed earnings as vital variable affecting the value of equity, it is a parameter that investors look and reflect on while deciding the market value of the equity share.According toKurfi (2003), earnings per share is the ratio that is used to determine the return accruing to each share, it is the measure that determines profit after tax before extra-ordinary items accruing to a share. To Olowe (2011) Earnings per share is the profit attributable to each equity share, based on the profit for the period under consideration after taking care of taxes divided by the number of ordinary shares in issue and ranking for dividend.According to Vladiator (2016) Earnings are the net benefits of a corporations operation, it is the amount on which corporate tax is charged.

Earning is a measure that investors look and reflect on while deciding the market value of the equity share (Bhatt &Summangla, 2012). In precise, they note that when the ratio of earnings/book value is high, earnings is the more important determinant of equity value. This is because under such a scenario, the firm is likely to continue in its current approach to using resources. When earnings/book value is low, book value becomes the more important determinant of equity value.

From the above definitions of earnings, the one given by Olowe (2011) is chosen as the working definition because it is the most comprehensive and the one that suits this study.

2.2.5 Book Value per Share

Equity book value is the shareholders fund or the total assets less the preference stock and other liabilities as being reported in the company financial position. When the company experiences financial distress, then the information value of equity book becomes more relevant compares to income information in assessing the company.

Bhatt and Summangla (2012) defined book value of a company as an assessment of the value of net asset of a company, in other words it is the net worth of a business, which is the total assets less total liabilitiesthat give the shareholders fund. Book value as defined by Financial dictionary (2017), is the net asset or owners' equity. It is the total assets minus total liabilities or the share capital plus the reserves.Similarly according to Qfinance (2018)Book value represents firm's net worth to its stockholders based on the difference between assets and liabilities. Typically book value of a firm is significantly different from the market value especially in highly technological firms with a greater part of their asset as intangible and some are not on the balance sheet.

Book value per share is the value of one share of a stock according to the company itself, it is established as relationship between net assets and the latest outstanding number of shares

(Qfinance, 2018).From the above definitions of book value, the definition given by Qfinance (2018) is chosen as the working definition because it is the one that gives the complete and true meaning of the concept.

2.2.6 Cash Flow from Operation

Keynes (1936) an economist identified three motives for holding cash, namely transactionary, precautionary and speculative motives.

Transactionary motive; according to Keynesfirms are in existence to create products and/or provide services. Provision of services and production of goods result in the need for cash inflow and outflow,therefore firms hold cash in order to satisfy that need.

Precautionary motives; this is the holding of money for emergency reasons. if expected cash inflow are not received as expected or expected cash out flows exceeded inflows then cash held on precautionary basis could be used to satisfy short term obligations.

Speculative motive; this is a reason for holding cash by a firm to take advantage of investment opportunities. They are investment in liquid or cash to take advantage of bargains in the form of low price bonds or real assets.

Cash from Operating activities are the main sources of cash for a business venture, it relates to the cash generated from the provision of its offerings to the market. It is the company's source of cash from core business operations such as: manufacturing, distributing, marketing and selling a product or rendering a service. Operating activities should largely determine whether a company is profitable or otherwise Investopedia (2017).

Cash flow from operation explains the sources and uses of cash from ongoing regular business activities in a given period. This typically includes net income from the income statement, adjustments to net income, and changes in working capital. The cash flow

statement reconciles net income to net cash flows by adding back non-cash expenses such as depreciation and amortization. Similar adjustments are made for non-cash expenses or income such as share-based compensation or unrealized gains from foreign currency translation.

The cash flows from the operating activities section also reflect changes in working capital. A positive change in assets from one period to the next is recorded as a cash outflow, while a positive change in liabilities is recorded as a cash inflow. Inventories, accounts receivable, tax assets, accrued revenue, and deferred revenue are common examples of assets for which a change in value will be reflected in cash flow from operating activities. Accounts payable, tax liabilities, and accrued expenses are common examples of liabilities for which a change in value is reflected in cash flow from operations.

From the above definitions, the one given by Keynes (Precautionary motive and transactionary motive) and the one given by investopedia are chosen to be our working definition.

2.3 Value Relevance Approaches

The value relevance studies come in different perspectives. There are four approaches in studying the value relevance of accounting information as identified by Francis and Schipper (1999). These approaches are: the fundamental analysis view of value relevance, the prediction view of value relevance, the information view of value relevance, and the measurement view of value relevance.

2.3.1 The Fundamental Analysis View of Value Relevance

The fundamental analysis approach to value relevance focuses on the importance of accounting information in equity valuation andfinancial statement information is assumed to be relevant for market valuation. If based on this information portfolioare associated with

abnormal returns,then there is the possibility of earning abnormal returns simply by using accounting information and therefore market is not efficient.

2.3.2 The Prediction View of Value Relevance

This interpretation of value relevance is also related to fundamental analysis research. Here accounting information is assumed to be value relevant if it can be used to predict future earnings, dividends, or future cash flows. Most researchers adopting this view of value relevance studied the usefulness of accounting information for earnings prediction.

2.3.3 The Information View of Value Relevance

Accounting figures are assumed to have information content if the release of new information modifies investors' beliefs about future cash flows and thus causes price revisions. Information content studies use statistical association models to examine how the stock market reacts to the disclosure of new accounting information. Hence, accounting numbers are the natural market determinant in such studies.

Ball and brown (1968) arebelieved to be the originators of empirical association studies using statistical models in the field of value relevance of accounting information. The motivation for their work was the assertion that accounting information, as a measure of company performance, should be reflected in stock prices and thus useful for investors. Their conclusion was that financial statements must have some worth to shareholders since they cost money to be produced.

According to(Global Asset management, 2014), the work of Ball and Brown (1968) led to the large body of literature that examines the value relevance of accounting information. They argued that numerous researchers have used the research methodology established by these pioneers in studying the market reaction to announcements of accounting information. They

stated that majority of these studies examine the relationship between the earnings together with its components and stock prices.

2.3.4 The Measurement View of Value Relevance

Under this view, the value relevance of financial statement information is measured by its ability to capture or summarize information that affects stock value (Francis & Schipper, 1999). This interpretation is in line with measurement perspective in accounting. But this approach assumes that investors are not actually using the information under examination. Measurementperspective is based on the theoretical framework of equity valuation modelof Ohlson (1995). Early studies focused mainly on usefulness of accounting information which can be measured by the degree of volume of price change following release of information. The work of Ohlson (1995) showed that the value of a firm can be expressed as a linear function of book value and earnings. But recent studies have extended the model to incorporate other accounting information.

In conclusion, of all the above four views of value relevance as identified by Francis and Schipper (1999). The information view has dominated financial accounting literature. Researches based on this view are numerous, among which are the famous works of Ball and Brown (1968), where they documented that a share price of a firm statistically response to reported net income, and therefore this study is based on this view.

2.5 Review of Empirical Studies

Mixed findings, conclusion and recommendations have been reported in the studies of value relevance. This is as a result of discrepancy in the countries, domains, techniques of analysis and the variables involved. Here related and relevant empirical studies were reviewed under the following headings; earnings per share and share prices, book value per share and share prices and cash flow from operation and share prices.

2.5.1 EarningsperShare and Share Prices

Amir and Lev(1996) examined value relevance of accounting information in the wireless communication industry in the USA. The study collected quarterly data of the 14 independent listed cellular companies between 1984-1993 using OLS technique of data analysis and found that accounting information: earnings have no value relevance. However, nonfinancial indicators such as: POPS (population in the licensed square area) which is a growth prospect proxy and Market Penetration (an operating performance measure), are highly value-relevant. But combined with nonfinancial information, earnings do contribute to the explanation of share prices. However, the period covered by this study is not current.

Similarly, Dung (2009) examined value relevance of accounting information in Vietnam between the year 2003-2007 using a sample of 306 listed companies. The study used OLS as technique of data analysis and found earnings to be positively related to share prices. However, considering adjusted R^2 the relationship is somewhat weaker than in other developed and emerging markets. In addition, there is a sign that earnings are reflected in stock prices and it is higher during stock market boom periods. However, as applicable to the study of Amir and Lev (1996) it is lacking as the data used for the study is old, which may not reflect the current reality and may affect its reliability.

Additionally, Bello (2009) examined value relevance of accounting information in the Nigerian listed cement firms using the whole population as the sample of the study. Using Ohlson model, the study used a time frame of ten years between 1996 and 2005 using OLS technique of data analysis. In his comparative analysis of earnings under historical cost and inflation adjusted earnings; he found both the information to be of value relevant. However, inflation adjusted Earning was found to be more value relevant. Considering time factor a new study is needed with a current data.

Navdal (2010) also conducted a study in Norway with the aim of understanding the value relevance in the Norwegian stock market. The emphasis of the study was to examine the effect of 2008 financial crisis on value relevance.The sample of the study consist of firms listed on the Oslo Stock Exchange Benchmark Index (OSEBX) in the period 2005-2008 using OLS technique of analysis, it was found that earnings per share was value relevant throughout the period of the study despite the financial crisis of 2008. The period covered by this study is only three years.

Muller (2011)also studied value relevance of consolidated versus parent company financial statements in the three largest European capital markets (London, Paris and Frankfurt).The study used a sample of 98 firms and it is arrived at as follows; 35 from Frankfurt 32 from london31 from Paris. The time frame covered by the study is between 2003 and 2008. Having analysed the data, the study found earnings per share of both the parent and consolidated firms to be positive and significantly related to share prices. However, the earnings of consolidated firms are more value relevant as compared to the parent companies. However, the finding of the study may not be reliable for current decision making as the data used for the study stops at 2008.

Abubakar (2011)in a similar manner examined value relevance in the new economy firms (i.e. telecommunication, media and technology firms (TMT) in Nigeria for a period of four years (2005-2008), using OLS method of data analysis and a sample of four firms out of the total population of eighteen firms and the results showed that earnings per share has no significant value relevance. Despite the effort put on the work the number of the sample is small considering the population. Additionally, the study used (TMT) firms whose assets are largely intangible and are not included in the financial statements.

Another study by the same author revealed that earnings per share among other variables are significant in determining share price of some selected listed Nigerian banks. The result was obtained from an experiment conducted to determine the extent of value relevance of Salisu Human Resources valuation model (popularly known as Salisu HRV Model). The experiment showed that the overall significance of the accounting information is stronger when Human Resources value is included compared to where it is not included in the financial statements of the selected banks (Abubakar, 2011).

Bhatt and Jk (2012)also examined impact of earnings per share on the market value per share on listed companies in the Indian capital market for a period of six years between 2006 and 2010. The study sampled the data of 50 most valuable companies as per the period of the study, it also employed OLS technique of data analysis and based on the findings the study documented that earnings per share is positively and significantly associated with market value of equity.Nevertheless, the period of the study necessitates replication of a similar study.

Sabri and Mohd-saleh (2010) also examined value relevance of Financial Instruments Disclosure in Malaysian Firms Listed in the Main Board of Bursa Malaysia, using a population of 812 firms and a sample size of 484. The study did a comparative analysis before and after financial instrument disclosure and presentation (MASB 24) compulsory adoption. The year 1999 and 2000 were used for pre while; 2002 and 2003 for the post implementation, using OLS technique of data analysis. The study found financial instrument disclosure to be less value relevant in the period when the standard becomes mandatory. Specifically, earning was found to be positive and statistically related to share prices at both pre and post adoption of the standard. However, as applicable to Bello (2009), a new study of this nature is needed because, the data of the study ended in 2003.

Kargin (2013)as well conducted a comparative study of value relevance of accounting information in the listed firms in turkey using Ohlson model (1995), taking into consideration pre and post IFRS adoption. The study covered a period between 1998 and 2011. 1998-2004 for pre adoption while: 2005-2011 for post adoption, OLS tool of analysis was used and it was documented that earning is more value relevant in the pre adoption period than the post adoption period. However, the study used only two regressors.

Bilgic and Ibis (2013) also carried out a comparative value relevance analysis of pre and post-IFRS adoption in the listed firms in turkey. The time frame is between 1997 and 20011; 1997-2004 was the period for pre adoption and 2005-2011 for post adoption, using OLS tool of data analysis. After filtering, the study used a sample of 113 firms. The results revealed that: earning is positively and significantly value relevant. By and large, after IFRS adoption, there is an insignificant increase in the value relevance of earnings. The study used two variables, but this study will introduce some variables variable. Additionally, the study was on all listed firms which make the findings to be inapplicable to a particular sector.

Adaramola and Oyerinde (2014) examined value relevance of accounting information of quoted companies in Nigeria using trend analysis between 1990 and 2009. Secondary data from the Nigerian Stock Exchange Fact Book was used and a sample of Sixty-six (66) quoted companies,using OLStechnique of analysis the study found earnings per share among other variables to be positively and significantly related to share pricesamong the quoted companies in Nigeria. However, the study reveals further that the value relevance of accounting information does not follow a particular trend within the period under study. While the value relevance was weak in the periods of political crisis caused by military dictatorship (1992-1998) and global economic crisis (2005-2009), it was high in theother periods. However, the period covered by the study is not current.

Besides, Altahtamouni and Alslehat (2014) also conducted a study of value relevance of accounting information among all the Jordan listed banks between 2002 and 2011. The study employed OLS tool of data analysisand Ohlson model (1995), it was finally found that earning per share among other regressors is positively and statistically correlated with share prices.However, the study didn't state the theory that underpins the study.

Ernest and Oscar (2014)as well examined value relevance of accounting information in the listed banking and oil &gas firms in Nigeria between 2007 and 2011, using OLS tool of data analysis. The study randomly selected 10 firms from each of the industries as samples. Finally, considering earnings accounting information of listed banking firms is more value relevant to that of the oil and gas firms.Nevertheless, taking into consideration of adjusted $R^2$the comparative results revealed that accounting information revealed by the listed oil & gas firms to be of more value relevant to the one revealed by the listed banking firms. The study used only two explanatory variables and the data stopped at 2011.

Besides, Shehzad and Ismail (2014) examined value relevance in the listed banks in Pakistan.Using a time frame of 5 years between 2008 and 2012, the study used OLS technique of analysis and a sample of nineteen banks. The results revealed that earnings per share to be statistically value relevant. However, the research focused on banking industry not insurance sector.

Camodeca, Almici and Brivio (2014)studied value relevance; the research is aimed at studying the value relevance of accounting information with reference to two different stock markets: the UK and the Italian. Between 2011 and 2013, a sample of 100 firms were drawn from the two markets and OLS technique of analysis was used and it was found that accounting information is more value relevant in the Italian stock exchange than in the UK as

showed by the R^2. Individual results showed that earningsis more value relevant in London than in Italy.

So also,Blibok (2014) also investigated the impact of IFRS adoption in the listed banks on the floor of Warsaw (Poland) stock market. Using a sample of 17 banks between 1998 and 2012, period 1998- 2004 was used for pre IFRS adoption while 2005- 2012 for post IFRS.The results showed that earnings have positive and significant relationship with share prices and the relationship increased slightly after IFRS adoption. The study used only two explanatory variables.

Bagudo, Bin Abdul manaf and Ishak (2015) investigated value relevance with emphasis on relative and incremental relevance of IFRS adoption in the listed financial service firms on the floor of Nigerian stock exchange. The study covered a period of four years between 2010 and 2013- period 2010 - 2011 was used for pre IFRS adoption while 2012- 2013 for post IFRS. The results showed that earnings have positive and significant relationship with share prices and the relationship increased after IFRS adoption. The study used only two explanatory variables.

Mulenga(2015)also studied Value Relevance of Accounting Information of Listed Banks in Bombay Stock Exchange with the aim of providing empirical evidences on the determinant of share prices. The study covered a period between 2007 and 2012. Using Ohlson model and a sample of 20 banks, the study utilised multiple panel regression technique of data analysis and documented that earnings per share to be positively and significantly related with share prices.The study is fall short as attempt by this study could not ascertain the theory that underpinned the study

Using Ohlson model (1995) Mamuda (2015) also examined value relevance in the listed industrial good firms in Nigeria, between the year 2007 and 2013, with a sample size of

sixteen firms out of the twenty five firms listed in the sector, using OLS technique of data analysis it was found that earnings per share, among other variables to be statistically and significantly correlated with market value. However, the study's data stopped at 2013.

So also, Omokhudu and Ibadin (2015) examined value relevance between the year 1994 and 2013. The study used OLS technique of analysis and a sample size of 47 firms out of the listed firms in the Nigeria stock market. Analysis found that earnings among other variables to be statistically and significantly associated with market value. However, the empirical study studied all listed firms and therefore the findings cannot be applicable to a particular sector as the firms are not homogeneous.

Terzungwe and Rabiu (2015)also studied association between accounting information and share prices in the listed food and beverages firms in Nigeria. The study used a sample of 9 food and beverages firms using OLS technique of analysis and the time frame of the study is between 2001 and 2010. In addition, the study used Ohlson model (1995)and documented that earnings per share is positively and significantly associated with share prices in the industry. Nevertheless, a study with a current data will serve as a contribution to the body of knowledge.

Alfraih and Alanezi (2015) also conducted a study aimed at exploring the association between compliance with International Financial Reporting Standards (IFRS) mandatory disclosures and the value relevance of accounting information. This association is examined in the context of listed companies in Kuwait, the value relevance of financial statement information, specifically earnings was examined empirically using Ohlson's (1995) valuation model that captures the level of compliance with IFRS amongthe listed firms. The study used a sample of 119 listed firms and OLS technique of analysis; the results show a significant association between the level of compliance with IFRS and the value relevance of earnings to

KuwaitStock Exchange investors.However, the study used cross sectional data, but this improved on it and used panel data.

The next study was conducted by Sullubawa (2015) with an objective of investigating the value relevance of accounting information among listed companies in Nigeria. Additionally, the study also examined the impact of IFRS on the value relevance of accounting information of Nigerian listed companies. Samples of 68 listed companies on the floor of NSE were used and the study covered a period of 6 years (2009-2014). It investigated the pre-IFRS period between 2009 and 2011 and post-IFRS period from 2012-2014. The study used pooled OLS to analyse the data extracted from Thompson Reuters online data stream.

Furthermore, the study found that accounting information of listed companies in Nigeria as value relevant using the Ohlson model.Earnings was found to be positively and significantly related to market value of equity. So also, the study established that value relevanceof earnings to have increased in the post-IFRS period. The study is deficient because, the data used for analysis is gotten from an online data source not hand collected by the researcher from the firms' financial statements or regulatory bodies. Hence, the question of reliability of the data arises.

Uwuigbe et al. (2016) alsoconducted a study with the aim of investigating the value relevance of accounting information among the listed banks in Nigeria between 2010 and 2014. The study maintained OLS technique of analysis and a sample of 15 banks.The study found earnings per share to be positively and statistically related to share prices.

In a similar manner, Rodosthenous (2017)examined value relevance of accounting information in the early years of financial crisis in Greece between 2010 and 2012. The study employed Ohlson model (1995) and a sample of 150 firms among the listed firms in Greece. The study documented that earnings per share is positively and statistically related to share

prices in the period of crisis. The empirical study studied all listed firms; as a result of the heterogeneity of the firms the findings cannot be applicable to a particular sector.

2.5.2 Book Value perShare and Share Prices

Amir and Lev (1996) examined value relevance of accounting information in the wireless communication industry in the USA. The study collected quarterly data of the 14 independent listed cellular companies between 1984-1993 using OLS technique of data analysis and found accounting information (book value) to be positively but insignificantly value relevant. However, nonfinancial indicators such as: POPS and Market Penetration to be highly value-relevant. But when financial information was combined with nonfinancial, book valuedo contribute to the explanation of share prices. However, the period covered by this study is not current.

Similarly, Dung (2009) examined value relevance of accounting information in Vietnam stock exchange between the year 2003-2007 using a sample of 306 listed companies. The study used OLS as technique of data analysis and found book value to be positively associated with share prices. However, considering adjusted R^2 the relationship is somewhat weaker than in other developed and emerging markets. In addition, there is a sign that earnings and book value are reflected in stock prices and it is higher during stock market boom periods. However, the study is lacking as the data used in the study is old, which may not reflect the current reality. Additionally, the study used all listed firms which make the study not to be applicable to a specific sector.

Bello (2009)also, examined value relevance of accounting information among the listed cement firms on the floor of Nigerian stock exchange using the population as the sample of the study. Using Ohlson model (1995), the study used a time frame of ten years between 1996 and 2005 using OLS technique of data analysis. In his comparative analysis of book

value under historical cost and inflation adjusted book value; he found both the information to be of value relevant. However, the latter was found to be more value relevant. However, the data used by the study is not current.

Navdal (2010) also conducted a study on value relevance of accounting information withthe emphasis of examining the effect of 2008 financial crisis on value relevance.Samples consist of firms listed on the Oslo Stock Exchange Benchmark Index (OSEBX) in the period 2005-2008 using OLS technique of analysis, it was found that earnings per share was value relevant throughout the period of the study despite the financial crisis of 2008.

Besides, Sabri and Mohd-saleh (2010)also researched value relevance of Financial Instruments Disclosure in Malaysian Firms Listed in the Main Board of Bursa Malaysia, using a population of 812 firms and a sample size of 484. Using Ohlson model (1995), the study did a comparative analysis before and after financial instrument disclosure and presentation (MASB 24) compulsory adoption. The year 1999 and 2000 were used for pre while; 2002 and 2003 for the post implementation, using OLS technique of data analysis. The study found financial instrument disclosure to be less value relevant in the period when the standard becomes mandatory.Specifically, book value was found to be positive but statistically insignificant related to share prices for both pre and post adoption of the standard. However, as applicable to Bello (2009), a new study is needed because, the data of the study ended in 2003.

Abubakar (2011) examined value relevance in the new economy firms (i.e. telecommunication, media and technology firms (TMT) in Nigeria for a period of four years (2005-2008), using OLS method of data analysis and a sample of four firms out of the total population of eighteen firms and the results showed that book value per share has no significant value relevance. Despite the effort put on the work the number of the sample is

small considering the population. Additionally, the study used (TMT) firms whose assets are largely intangible and are not included in the financial statements.

Another study by the same author revealed that book value per share among other variables is significant in determining share price of some selected listed Nigerian banks. The result was obtained from an experiment conducted to determine the extent of value relevance of Salisu Human Resources valuation model (popularly known as Salisu HRV Model). The experiment showed that the overall significance of the accounting information is stronger when Human Resources value is included compared to where it is not included in the financial statements of the selected banks (Abubakar, 2011).

Muller (2011) also studied value relevance of consolidated versus parent company financial statements in the three largest European capital markets (London, Paris and Frankfurt). The study used a sample of 98 firms and it is arrived at as follows; 35 from Frankfurt, 32 from London and 31 from Paris. The time frame covered by the study is between 2003 and 2008. Having analysed the data the study found book value per share of both the parent and consolidated firms to be positive and significantly related to share prices. However, the book value per share of consolidated firms is more value relevant as compared to the parent companies. However, the study did countries comparative analysis which make the study un applicable to a single country.Furthermore, the finding of the study may not be reliable for current decision making as the data used for the study stops in 2008. Additionally, considering country differences a new study is needed in a developing country like Nigeria.

So also, Clarkson, Hanna, Richardson and Thompson (2011) also investigated value relevance of IFRS adoption in Europe and Australia on the value relevance of book value for equity valuation. Using a sample of 3,488 firms that initially adopted International Financial Reporting Standards (IFRS) in 2005, the study compared the figures reported in 2004 to the

IFRS figures that were reported in 2005, the results showed that book value have negative significant relationship with share prices and the relationship increased after IFRS adoption.However, the study may beinapplicable to a single country as itdid countries comparative analysis.

In another direction, Bhatt & Jk (2012) examined impact of equity per share on the market value per share of listed oil and gas firms in the Indian capital market for a period of six years between 2006 and 2011. The study used a sample of six firms, using OLS technique of data analysis and it found equity per share to be positively and significantly associated with market value of equity. The study is having a limitation as it studied only one independent variable.

Bilgic and Ibis (2013) also carried out a comparative value relevance analysis of pre and post-IFRS adoption in the listed firms in turkey. The time frame utilised for the purpose of analysis is between 1997 and 20011; 1997-2004 was the period for pre adoption and 2005-2011 for post adoption, using OLS tool of data analysis. After filtering, the study used a sample of 113 firms. The results revealed that: book value is positively and significantly value relevant. By and large, after IFRS adoption, there is significant increase in the value relevance. The study used two variables, but this study will introduce another variable.

In the same being, Kargin (2013) conducted a comparative study of value relevance of accounting information in the listed firms in turkey, taking into consideration pre and post IFRS adoption. The study covered a period between 1998 and 2011. 1998-2004 for pre adoption while: 2005-2011 for post adoption, OLS tool of analysis was used and it was documented that post-IFRS book value is more value relevant to pre-IFRS adoption one. The study used only three variables, two independent and one dependent variable

In a similar manner, Blibok (2014) also investigated the impact of IFRS adoption in the listed banks on the floor of Warsaw (Poland) stock market. Using a sample of 17 banks between 1998 and 2012, period 1998- 2004 was used for pre IFRS adoption while 2005 and 2012 for post IFRS. The results showed that book value has positive and significant relationship with share prices and the relationship increased slightly after IFRS adoption. Considering period covered by the study a new study is needed.

Ernest and Oscar (2014) examined value relevance of accounting information in the listed banking and oil &gas firms in Nigeria between 2007 and 2011, using OLS tool of data analysis. The study randomly selected 10 firms from each of the industries as samples. Finally considering book value, accounting information of listed banking firms is more value relevant to that of the oil and gas firms. Nevertheless, taking into consideration of adjusted R^2 the comparative results revealed that accounting information revealed by the listed oil & gas firms to be of more value relevant to the one revealed by the listed banking firms. The study utilised oil &gas sector and banking sector not insurance sector.

Besides, Altahtamouni and Alslehat (2014) also conducted a study of value relevance of all the Jordan listed banks between 2002 and 2011 using OLS tool of data analysis and found that book per share is positively and statistically significant with share prices. The study researched banking industry not insurance industry which this study intends to study, and also the study was conducted using foreign data.

As well, Shehzad and Ismail (2014) examined value relevance in the listed banks in Pakistan using a time frame of 5 years between 2008 and 2012, the study used OLS tool of analysis to analysed the 19 sample banks and the results revealed that book value to be statistically but negatively related to share prices. However, the study did not report robustness tests.

Adaramola and Oyerinde (2014) examined value relevance of accounting information of quoted companies in Nigeria using trend analysis. Secondary data from the Nigerian Stock Exchange Fact Book was used and a sample of Sixty-six (66) quoted companies was maintained between 1990 and 2009, using OLS technique of analysis the study found book value per share among other variables to be positively and significantly related to share prices among the quoted companies in Nigeria. However, the study revealed further that the value relevance of accounting information does not follow a particular trend within the period under study. While the value relevance was weak in the periods of political crisis caused by military dictatorship (1992-1998) and global economic crisis (2005-2009), it was high in the other periods. However, the period covered by the study is not current.

Joseph (2015) studied Value Relevance of Accounting Information of Listed Banks in Bombay Stock Exchange with the aim of providing empirical evidences on the determinant of share prices. The study covered a period between 2007 and 2012. Using Ohlson model and a sample of 20 banks,the study utilised OLS technique of data analysis and documented that book value per share to be negative butinsignificantly related with share prices. The study failed to state the theory that underpinned the study.

Bagudo, Bin Abdul manaf and Ishak (2015) investigated value relevance with emphasis on relative and incremental relevance of IFRS adoption in the listed financial service firms on the floor of Nigerian stock exchange. The study covered a period of four years between 2010 and 2013, period 2010- 2011 was used for pre IFRS adoption while 2012- 2013 for post IFRS. The results showed that book value per share have positive and significant relationship with share prices and the relationship increased after IFRS adoption. The study used only two explanatory variables.

Additionally, Mamuda (2015) also examined value relevance in the listed industrial good firms in Nigeria, between the year 2007 and 2013, with a sample size of sixteen firms out of the twenty five listed firms in the sector, using OLS technique of data analysis, the study found book value per share among other variables to be statistically and significantly correlated with share prices.

So also, Omokhudu and Ibadin (2015)using Ohlson model examined value relevance between the year 1994 and 2013. The study used OLS technique of analysis and a sample size of 47 firms out of the listed firms in the Nigeria stock market and found that. But book value among other regressors was related but not statistically significant. However, the empirical paper studied all listed firms in Nigeria and therefore its findings cannot be applicable to a particular sector as the firms are not heterogeneous.

Terzungwe and Nasiru (2015) also studied association between accounting information and share prices in the listed food and beverages firms in Nigeria. The study used a sample of 9 food and beverages firms using OLS technique of analysis and the time frame of the study is between 2001 and 2010. In addition, the study used Ohlson model (1995) and documented that book value per share is positively and significantly associated with share prices in the industry. This study is lacking as it used only two IVS and it studied food and beverages which limits its findings to the studied sector.

Furthermore, Mulenga (2015) conducted an empirical study of value relevance in the Bombay listed banks, between 2007 and 2012 using a sample of 20 banks and the study adopted OLS as tool of analysis, the result shows that book value was negatively but insignificantly related to share prices.However, the study did not report post estimation tests.

The next study was conducted by Sullubawa (2015) with an objective of investigating the value relevance of accounting information among listed companies in Nigeria. Additionally,

the study also examined the impact of IFRS on the value relevance of accounting information in Nigerian. Samples of 68 listed companies on the floor of NSE were used and the study covered a period of 6 years (2009-2014). Pre-IFRS period between 2009 and 2011 and post-IFRS period from 2012-2014 was studied. The study used pooled OLS to analyse the data extracted from Thompson Reuters online data stream.

Furthermore, the study found that accounting information of listed companies in Nigeria as value relevant using the Ohlson model. Earnings was found to be positively and significantly related to market value of equity. So also, the study established that value relevance of earnings to have increased in the post-IFRS period. However, the data used by the study was not collected by the researcher himself making it vulnerable to data collection unreliability.

Alfraih and Alanezi (2015) also conducted a study aimed at exploring the association between the compliance with International Financial Reporting Standards (IFRS) mandatory disclosures and the value relevance of accounting information. This association is examined in the context of listed companies in Kuwait, the value relevance of financial statement information, specifically earnings was examined empirically using Ohlson's (1995) valuation model that captures the level of compliance with IFRS among the listed firms. The study used a sample of 119 listed firms and OLS technique of analysis; the results show a significant association between the level of compliance with IFRS and the value relevance of book value to Kuwait Stock Exchange investors. However, the study used cross sectional data.

Uwuigbe et al. (2016) also conducted a study with the aim of investigating the value relevance of accounting information among the listed banks in Nigeria between 2010 and 2014. The study maintained OLS technique of analysis and a sample of 15 banks. the study found book value per share to be statistically butnegatively related to share prices.

In addition, Solomon, Memba and Muturi (2016)studied value relevance of accounting information in the listed firms on the floor of Nigerian stock exchange between 2004 and 2014. The study used a sample of 58 firms, after analysing data using OLS tool of analysis, it was documented that book value is positively but insignificantly correlated with share prices. However, the study used only one independent variable.

Rodosthenous (2017) examined value relevance of accounting information in the early years of financial crisis in Greece between 2010 and 2012. The study employed Ohlson model (1995) and a sample of 150 firms among the listed firms in Greece. The study documented that book value per share to be negatively and insignificantly related to share prices in the period of crisis. The study cannot be applied to a single industry because it used the total listed firms as its domain without controlling for heterogeneity.

2.5.3 Cash from Operation and Share Prices

Camodeca, Almici and Brivio (2014)studied value relevance of accounting information among the listed firms on the Milan and London stock exchange markets, a sample of 100 firms were drawn from the two markets between 2011 and 2013and OLS technique of analysis was used, it was found that accounting information is more value relevant in the Italian stock exchange than in the UK as showed by the R^2. Individual results showed that cash flow is more value relevant in London in London than in Italy.

Adaramola and Oyerinde (2014) examined value relevance of accounting information of quoted companies in Nigeria using trend analysis. Secondary data from the Nigerian Stock Exchange Fact Book was used and a sample of Sixty-six (66) quoted companies was maintained between 1990 and 2009, using OLS technique of analysis the study found cash flow from operation among other variables to be value relevant among the quoted companies in Nigeria. However, the study revealed further that the value relevance of accounting

information does not follow a particular trend within the period under study. While the value relevance was weak in the periods of political crisis caused by military dictatorship (1992-1998) and global economic crisis (2005-2009), it was high in the other periods. However, the period covered by the study is not current.

Additionally, Omokhudu and Ibadin (2015) examined value relevance between the year 1994 and 2013. The study used OLS technique of analysis and a sample size of 47 firms out of the listed firms in the Nigeria stock market and found cash flow among other independent variables to be statistically and significantly associated with market value.However, the study didn't conduct post estimation test.

2.6 Theoretical Framework

A number of theories are being used in the literature to underpin a study of this nature and they include;

2.6.1 Clean Surplus Theory

Clean surplus accounting theory popularly known as residual income model developed by the classical work of Edwards and bell (1961), the theory states that value of a firm is a function of book value and change in excess future earnings. In other words, book value and change in excess earnings are the determinants of market value.

The clean surplus accounting provides elements of anestimating model that yields price as a function of earnings, expected returns and change in book value,the theory's primary use is to estimate the value of a company's shares instead of discounted dividend/cash flow approaches (Ohlson and Feltham, 1995). Clean surplus means the changes in the shareholder equity which is not the consequence of transaction with shareholders such as share repurchase, dividendsamong others they are shown in the income statement. The clean

surplus accounting method offers elements of a forecasting model which gives price as a function of change in book value, earnings and expected returns.

2.6.2 Efficient Market Hypotheses

Another theory that is being used to underpina study of this typeis the efficient market hypotheses (EMH) theory developed by Eugene fama in 1960s. The EMH states that in an efficient market there islarge number of rational, profit maximisers competing with one another trying to predict future market values of securities. in this sort of market important information is almost freely available to all participants making it impossible to consistently beat up the market, competition among the many rational participants leads to a situation where, at any point in time, actual prices ofindividual securities already reflect the available information based on events that have already occurred and on events that have not occurred but expected to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value. Fama identified three distinct levels at which a market might be efficient.

In its strongest form, the EMH states that a market is efficient if all information relevant to the value of a share, whether or not generally available to existing or potential investors, is quickly and accurately reflected in the market price. For example, if the current market price is lower than the value justified by some piece of privately held information, the holders of that information will exploit the pricing anomaly by buying the shares. They will continue doing so until this excess demand for the shares has driven the price up to the level supported by their private information.

In a slightly less rigorous form, the EMH says a market is efficient if all relevant publicly available information is quickly reflected in the market price. This is called the semi- strong form of the EMH. It says that the market quickly digests the publication of relevant new

information by moving the price to a new equilibrium level that reflects the change in supply and demand caused by the emergence of that information.

This is the least rigorous form; this one limits itself to past information about the share price. The argument is that; the price assumes the characteristics of the random walk. In other words, the future price cannot be predicted from a study of historic prices,it is called technical or chart analysis, because it is based on the study of past price patterns without regard to any further background information.

Each of the three forms of EMH has different consequences in the context of the search for excess returns of what is justified by the risks incurred in holding particular investments. If a market is weak-form efficient, there is no correlation between successive prices, so that excess returns cannot consistently be achieved through the study of past price movements.

Moreover, if a market is semi-strong efficient, the current market price is the best available unbiased predictor of a fair price, having regard to all publicly available information about the risk and return of an investment. The study of any public information (and not just past prices) cannot yield consistent excess returns. This is a somewhat more controversial than the weak-form of EMH, because it means that fundamental analysis – the systematic study of companies, sectors and the economy at large – cannot produce consistently higher returns than are justified by the risks involved.

If a market is strong-form efficient, the current market price is the best available unbiased predictor of a fair price, having regard to all relevant information, whether the information is in the public domain or not. As we have seen, this implies that excess returns cannot consistently be achieved even by trading on inside information. This does prompt an interesting observation that someone must be the first to trade on the inside information and

hence make an excess return. Attractive as this line of reasoning may be in theory, it is unfortunately nearly impossible to test it in practice.

In the context of this study, semi-strong-form of efficient market hypothesis best suits the Nigerian capital market and therefore the study deems it the suitable theory to underpin it, as this study will introduce new variables other than book value and earnings that have been predominantly used by previous studies, the study selects EMH because it is more encompassing as it takes care of all information besides book value and earnings.

2.7 Model Development

This subheading provides explanations on the model development. The model was initially developed by Ohlson. It is also referred to in the literature as the Edwards – Bell – Ohlson (EBO) model (1995). The model documented that firm value is a linear function of book value and future earnings.

According to the model, Share Price is a function of Earnings and Book Value of Equity.

Model 1

$SHP_{it} = f (EPS_{it}, BPS_{it},)$ …….....……..…….....……..... (1)

Where:

SHP = share price

EPS = earnings per share

BPS = book value per share

i = individual firm

t = time dimension

The above model is based on Ohlson (1995) valuation framework. But this relationship is not realistic because Ohlson model is not developed on the basis of income itself but residual income. In order to make the relationship in equation (1) above to be consistent with

Ohlson'svaluation model, earnings should be regarded as a proxy for residual income. Moreover, past empirical studies such as Navdal (2010), Bilgic and Ibis (2013), Mamuda (2013), Mulenga (2015)Terzungwe and Rabiu (2015) among others have shown that current earnings have an association with firm value which confirms the model's functionality.

Equations (1) can be expressed as follows:

$SHPit = \beta_0 + \beta_1 EPS_{it} + \beta_2 BPS_{it} + \varepsilon_{it}$..... (2)

Where:

SHP_{it} = share price of firm i in year t

EPS_{it}= earnings per share of firm i in year t

BPS_{it}= book value per share of firm i in year t.

β_0 = constant or intercept

β_1 and β_2 = coefficients of explanatory variables

ε_{it} = error term.

However, earnings and book value are not the only accounting information that determines share prices therefore this study modified the model to incorporate additional accounting information. Mamuda (2015) suggested the empirical testing of cash flow from operation on share prices.This study tested the variable in its model.

When the above variableis captured into the model then, share price will be a function of earnings, book value and cash flow from operation as follows:

Model 2: $SHP_{it} = f (EPS_{it}, BPS_{it}, CF_{it})$ …….....…… (3)

Equation three can also be explicitly stated as follows

$SHP_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BPS_{it} + \beta_3 CF_{it} + \varepsilon_{it}$..... (4)

Where;

SHP_{it} = share price of firm i in year t

EPS_{it}= earnings per share of firm i in year t

BPS_{it}= book value per share of firm i in year t.

CF = cash flow from operation of firm i in year t.

β_0 = constant or intercept

β_1 -β_3 = coefficients of explanatory variables

ε_{it} = error term.

Nevertheless, separation is needed to take care of firms that release their information timely and those that release untimely.

For firms that release their information timely the model will be as stated below:$SHP_{it} = \beta_0 + \beta_1 EPS^{tim}_{it} + \beta_2 BPS^{tim}_{it} + \beta_3 CF^{tim}_{it} + \varepsilon_{it}$.....(5)

For firms that release their information untimely the model will be as stated thus:

$SHP_{it} = \beta_0 + \beta_1 EPS^{lat}_{it} + \beta_2 BPS^{lat}_{it} + \beta_3 CF^{lat}_{it} + \varepsilon_{it}$..... (6)

Where;

SHP_{it} = share price of firm i in year t

EPS_{it}= earnings per share of firm i in year t

BPS_{it}= book value per share of firm i in year t.

CF = cash flow from operation of firm i in year t.

β_0 = constant or intercept

Lat= when firm did not submit its financial statement within 90 days after the financial year.

Tim= when firm submits its financial statement within 90 days after the financial year end

$\beta_1 - \beta_3$ = coefficients of explanatory variables

i = insurance firm

t = year

ε= error term.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methods the study used which include; the research design, population, sampling technique, method of data collection, so also it presents the technique of data analysis employedas well as justification for the technique, model Specification as well as variables measurement is also given.

3.2 Research Design

This study is a quantitativein nature because it used measurable variables. On the basis of this,correlational research design was adopted to describe the statistical association between the dependent variable and the independent variables. It is therefore, most appropriate for this study,as it allows for testing of expected relationships between the dependent variable and the independent variables.

3.3 Population and Sample of the Study

The population of the study consists of all the twenty-nine quoted insurance firms on the floor of Nigerian stock exchange as at 31st December, 2017.The study employed census strategy which includes all the listed insurance firms as at the date mentioned. However, for a firm to be included in the sample it must satisfy the following criteria:

1. A firm should not have been delisted within the period under consideration.
2. A company's data must be available throughout the period of the study (2011-2017).

Having applied the above filters a sample of 17 firms was arrived at.

3.4 Sources and Method of Data Collection

The data for this study was hand collected from secondary sources of data collection; it utilized the published and audited annual reports of listed insurance firms in Nigeria available

on the websites of the Nigerian stock exchange and the selected firms. This is applicable to all the independent variables while; for the dependent variable (share prices) was collected from Cash Craft Asset Management's website 90 days after the accounting period, this is to enable the share prices absorb available information.

3.5 Techniques of Data Analysis

The technique of data analysis used is multiple panel regression with the aid of STATA 13 statistical software. Panel data was used which possesses both time series and cross sectional attributes, therefore panel regression is the suitable technique to be employed, and it minimizes the bias that may exist as a result of aggregating individual units into one aggregate, this is as a result of the fact that data are made available for several units in a panel data setting.

Several studies such as: Francis and Schipper (1999); Collins, Maydew and Weiss (1997) and Lev and Zarowin (1999)concluded that the R^2 is the explanatory power of value relevance. Therefore, this study used it as the basis for concludingwhether accounting information is value relevant or otherwise.Estimation results were evaluated based on overall statistical significance test and individual statistical significance test. According to Crammer (1987) and Vuong(1989)in other to test for significant differences between two adjusted R^2 in two linear regression models crammer Z test is conducted. If the test is significant we assume difference between the two adjusted $R^{2,}$ otherwise we assume no difference between the two. Additionally, according toChow (1960) andFisher (1970)to know whether there are significant differences between two coefficients in two linear regressions a test popularly known as chow test is to be conducted, significance of the test portends differences in the coefficients which will guide analysis to know between two coefficients which is one is more value relevant than the other. On the other hand, if the test is insignificant it shows lack of differences in the coefficients hence the results of the pooled data is to be interpreted. By and

large, descriptive statistics and correlation analysis was conducted to appropriately describe the features of the data.

3.6 Model Specification

The study adopted modified Ohlson (1995) model developed in the previous chapter and it is specified below:Equation fivetakes care of firms that release their accounting information timely and equation sixtook care of firms that release their information untimely.

$$SHP_{it} = \beta_0 + \beta_1 EPS^{tim}_{it} + \beta_2 BPS^{tim}_{it} + \beta_3 CF^{tim}_{it} + \varepsilon_{it} \quad (5)$$

$$SHP_{it} = \beta_0 + \beta_1 EPS^{lat}_{it} + \beta_2 BPS^{lat}_{it} + \beta_3 CF^{lat}_{it} + \varepsilon_{it} \quad (6)$$

Where;

SHP= share price

EPS = earnings per share

BPS= book value per share

CF = cash flow from operation

β_0 = constant or intercept

$\beta_1 - \beta_3$ = coefficients of explanatory variables

i= insurance firm

t = year

ε= error term.

Lat = when firm did not submit its financial statement within 90 days after the financial year.

Tim= when firm did not submit its financial statement within 90 days after the financial year end.

3.7 Variable Measurement

The variables of the study were measured as follows:

Variable Name	Variable Description	Variable Measurement	Source
Share price (SHP)	Dependent variable	This is the market price per share as obtained from the cash craft Stock Broker website three months after the accounting period.	Abubakar (2011)
Earnings per Share (EPS)	Independent variable	This is computed as the net profit after tax on ordinary activities divided by the outstanding number of shares at the end of the accounting year.	Abubakar (2011)
Book value per Share (BPS)	Independent variable	This is measured as the book value of equity divided by the outstanding number of shares at the end of the accounting period.	Bello (2009)
Cash from Operation (CF)	Independent variable	This is obtained by dividing the total cash from operation by the outstanding number of shares at the end of the accounting period.	Omokhudu and Ibadin (2015)

Source: compiled by the author (2019)

3.8 Robustness tests

In other to improve the reliability and validity of its findings, the study conducted some robustness tests such as: normality test, Heteroscedasticity test, specification test and Multicollinearity test.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents and analyses the statistical results obtained from the data. The chapter starts with descriptive statistics and correlation analysis of the variables. This was followed by the presentation and discussion of the regression results for the purpose of estimating the model used in the study. The chapter ended with discussion of findings of the study and policy implications of the results.

4.2 Descriptive Statistics

The summary of the descriptive statistics of the variables are presented below in table 4.1A and 4.1B. The full result is contained in appendix ii and iii. The below table provides the results of the minimum, maximum, mean, standard deviations and Shapiro wilk test for normality. We have 119 observations from the 17 companies sampled for the study.

Table 4.1A Summary of Descriptive Statistics for firms that release information timely

Variables	Obs	Mean	Minimum	Maximum	Standard Deviation	Swilk Test
SHP	**70**	**0.90**	**0.28**	**2.95**	**0.57**	**0.0000**
EPS	**70**	**0.08**	**-0.34**	**0.52**	**0.13**	**0.00176**
BPS	**70**	**1.36**	**0.24**	**2.73**	**0.45**	**0.00023**
CFO	**70**	**0.11**	**-0.13**	**0.73**	**0.16**	**0.0001**

Source: Descriptive Statistics Results from STATA 13 outputs.

From Table 4.1Aabove, the mean value of share prices (SHP) is 0.90 and the standard deviation is 0.57. The minimum is 0.28 while the maximum is 2.95. The mean of 0.90 signifies the average share prices of the listed insurance firms in Nigeria that submit their financial information timely. The standard deviation of approximately 0.57 indicates the

variability of the data from the mean. The minimum SHP of 0.28 shown in the table implies that from period 2011-2017 among the listed insurance firms that submit their information timely, there was a firm with a share price of 0.28. However, the maximum SHP of 2.95 implies that, out of the sampled firms, there was a firm that had a share price of 2.95.The mean value of EPS is 0.08, minimum is -0.34, maximum is 0.52 and standard deviation is 0.127. This shows that among the listed insurance firms that release their information timely, the minimum EPS is -0.34 and maximum is 0.52. The average EPS stand at 0.08and standard deviation at 0.127 indicatesthat EPS in the listed insurance firms in Nigeria that release their information timely are above average.

Coming to book value per share the mean of 1.36 shows that on average book value among the firms is 1.36; while minimum is 0.24 and maximum is 2.73 signifies minimum book value per share and maximum book value per share among the listed insurance firms that release their information timely respectively. The standard deviation of 0.45 shows most of the firms to have book value above average within the period of the study.For CFO, the mean of 0.11 shows the average cash flow generation from operation among the firms, min of-0.135show that within the period covered by the study among the firms that submit their information timely there was a firm with a negative cash flow from operation of -0.14 and maximum value of 0.728 signifies maximumcash flow among the listed insurance firms that release their information timely.The standard deviationof 0.16 shows the variability of the data from the mean.

The Shapiro wilk test probabilities values for SHP, EPS, BPS and CFO stand at 0.0000, 0.00176, 0.00023 and 0.00001 respectively, all significant meaning the data is not normally distributed. This is not surprising because some of the firms are big while others are small.

Table 4.1B Summary of Descriptive Statistics for firms that release information lately

Variables	Obs	Mean	Minimum	Maximum	Standard Deviation	Swilk Test
SHP	**49**	**0.70**	**0.30**	**2.00**	**0.35**	**0.00000**
EPS	**49**	**0.12**	**-0.18**	**1.40**	**0.23**	**0.00000**
BPS	**49**	**1.13**	**0.16**	**2.73**	**0.71**	**0.00294**
CF	**49**	**0.20**	**-0.31**	**2.43**	**0.54**	**0.00000**

Source: Descriptive Statistics Results from STATA 13 Outputs.

From Table 4.1B above, the mean value of share prices (SHP) is 0.70 and the standard deviation is 0.35. The minimum of SHP is 0.30 while the maximum is 2. The mean value of 0.70 signifies the average share prices of the listed insurance firms in Nigeria that submit their financial information untimely. The standard deviation of approximately 0.35 indicates variability of the data from the mean. The minimum SHP of 0.3 shown in the table implies that from period 2011-2017 among the listed insurance firms that submit their information untimely, there was a firm with a share price of 0.3. Yet, the maximum SHP of 2 implies that, out of the sampled firms, there was a firm that had a share price of 2. The mean value of EPS which indicates average earnings per share among the listed firms stand at 0.12, minimum value is -0.18, maximum is 1.4 and standard deviation is approximately 0.23. This shows that among the listed insurance firms that release their information lately, there was a firm that recorded a loss of 0.18per share within the period of the study, and maximum value of 1.4 shows that within the period of the study the maximum EPS is 1.4. And standard deviation of approximately 0.23 indicates high variability of EPS among the firms that release information lately and most share prices under this category are above average.

The mean value of 1.13 shows that on average book value among the firms that release information untimely is 1.13, min of 0.16signifies the minimum book value per share and

max of 2.73 signifies minimum book value per share among the listed insurance firms that release their information lately, the standard deviation of 0.71 shows that most of the firms are having book value above average.For CFO, the mean of approximately 0.11 shows the average cash flow generation from operation among the firms, min of -0.31 and max of 2.43 signifies minimum and maximum cash flow generation among the listed insurance firms that release their information untimely respectively. The standard deviation of 0.54 shows the variability of the data from the meanamong the listed insurance firms in Nigeria that submit their information untimely.

The Shapiro wilk test for normality probabilities values for SHP, EPS, BPS and CFO stand at 0.0000, 0.00000, 0.00294 and 0.00000 respectively, all significant which indicates the data not to be normally distributed, hence the presence of outliers in the data.

4.3 Correlation Analysis

TheFollowing descriptive statistics is the correlation analysis, and it is based on Pearson correlation coefficient. The matrix shows the relationship between the dependent and the explained variables and also the relationship among all pairs of independent variables themselves. It is pertinent in knowing the degree of relationship among all independent variables and high correlation could lead to Multicollinearity, which may consequently lead to misleading findings and conclusions. However, from the correlation matrix one cannot draw statistical inference, but it is relevant in deducing the direction of the relationship between the variables it is presented and discussed below.

Table 4.2A Correlation Matrix for firms that release their information timely.

	SHP	EPS	BPS	CF
SHP	1.0000			
EPS	0.4344	1.0000		
BPS	0.1853	0.4243	1.0000	
CF	0.3297	0.1976	0.1417	1.0000

Source: STATA 13 output

The correlation matrix table 4.2A above shows there is no presence of possible Multicollinearity among the independent variables. This is because the highest relationship among the independent variables is approximately 42%, and this goes below the bench mark of 80% according to Gujarati (2004).

Table 4.2B Correlation Matrix for firms that release their information untimely.

	SHP	EPS	BPS	CF
SHP	1.0000			
EPS	0.3057	1.0000		
BPS	0.3152	0.3005	1.0000	
CF	0.4299	0.1977	0.0539	1.0000

Source: STATA 13 output

Like the above table, the correlation matrix table 4.2B above shows there is no presence of possible Multicollinearity among the independent variables. This is because the highest relationship among the independent variables is between EPS and BPS which is approximately 30%, and this goes below the bench mark of Gujarati (2004) of 80%.

4.4 Robustness Tests

In order to improve the reliability and validity of the study robustness tests have been conducted- Multicollinearity test, Heteroscedasticity tests and Hausman specification test.

4.4.1 Multicollinearity Test

It is a significant assumption of the classical linear regression model that data is non Multicollinearity that is to say among the IVs no any two are having equal variation with each other. To test for Multicollinearity, variance inflation factor was used and the result is as stated thus:

Table 4.3: Multicollinearity Test

	Timely		Untimely	
Variable	VIF	1/VIF	VIF	1/VIF
EPS	1.25	0.800663	1.14	0.876670
BPS	1.22	0.816459	1.10	0.909666
CASH	1.05	0.956862	1.04	0.960896

Source: STATA 13 output

To check for Multicollinearity, the rule of thumb is if a tolerance value is greater than 0.1 and less than 1, so also if VIF is greater than 1 but less than 10; there is no Multicollinearity among the independent variables (Gujarati, 2004). From the table above, the tolerance value (1/VIF) of all the individual variables are greater than 10% and less than 1. So also, all the values of VIFs are greater than 1 and less than 10 for all the categories of the data (timely and lately) which confirms absence of Multicollinearity among the variables.

4.4.2Heteroscedasticity test:

To test for Heteroscedasticity, the study employed Wald het test, and the result is as stated below.

Table 4.4:Wald Het Test Result.

	Timely	Lately
Chi2 (1)	7.37	2.02
Prob chi2	0.0066	0.1551

Source: STATA 13 output.

Another important assumption of the classical linear regression model is that data is homoscedastic; this assumption states that the disturbances ε appearing in the population regression function is not heteroskedastic.According toGujarati(2004)(Gujarati, 2004) if the probability of chi2 of Heteroskedasticity test is significant at either 1%, 5% or 10% level of significance, it portends the data to be heteroskedastic, otherwise the data is homoscedastic.Table 4.2 above showed chi2 (1) of 7.37 and 2.02 for timely and untimely data respectively, for the timely data the probability is 0.0066, significant at 1% level of significance indicating the data to be heteroskedastic, to tackle this problem we run and reported robust OLS. Whilethe probability value for untimely data stand at 0.1551insignificant indicating the absence of Heteroskedasticity,

4.4.3 Hausman Specification Test

The study conducted Hausman specification test for the two models after fixed and random effect tests were carried out. Hausman specification test was conducted to know the preferred model between the fixed and random effect models. The results of these are attached in appendixes i and ii. Hausman specification test for timely data produced chi square value of 0.55 and a p-value of 0.9074 which is insignificant. This implies that the variation across entities is assumed to be random and uncorrelated with the independent variables included in the model. As for the foregoing the random effect model was considered suitable for analysis. However, Breusch and Pagan Lagrangian multiplier test for random effect was conducted so

as to determine whether to interpret the pool OLS or random effect model. The result produced a chiof 95.02 and the P-value of 0.0000 which is significant at 1%. This implies that the random effect should be used. However, to tackle the problem of heteroskedasticity of the timely data we run and reported robust OLS.

Additionally, Hausman specification test for untimely data revealed chi square value of 3.04 and a p-value of 0.3861 which is insignificant. This signifies that the variation across entities is assumed to be random and uncorrelated with the independent variables included in the model. With this the random effect model was considered suitable for analysis. However, Breusch and Pagan Lagrangian multiplier test for random effect was conducted so as to determine whether to interpret the random effect model or the pooled OLS. The result produced a chiof 1.77 and the P-value of 0.0919 which is significant at 10%. This implies that the random effect model should be interpreted.

4.5 Presentation and Interpretation of Regression Results

The robust regression result for timely data is presented in table 4.5A below.

Table 4.5A Robust Regression Result

Variables	Coefficient	T- value	P>(Z)
EPS	1.759971	2.71	0.009
BPS	- 0.0212254	-0.19	0.847
CASH	0.9315155	1.75	0.085
Constant	0.6853939	4.80	0.0
R Squared:	0.2508		
f-Statistics:	4.69		
Prob.: 0.0050			

Source: output of regression results from STATA 13.

In table 4.45A above it can be observed that the R^2 is 0.2508 meaning that 25.08% of variation in share prices of listed insurance firms that submit their information timely in Nigeria is explained jointly by the independent variables captured in the model. The wald-chi^2 of 4.69 and a p-value of 0.0050 significant at 1%Indicates that the model is fit.

Individual results show that the coefficient of earnings per share is 1.75 and a probability of 0.009 indicates a significant positive relationship between earnings per share and share prices among the listed insurance firms that release their accounting information timely in Nigeria at 1% level of significance. This is in line with the findings of dung (1970), Altahtamouni and Alslelat (2014), Ernest and Oscar (2014), Mulenga (2015), Mamuda (2015) and Omokhudu and Ibadin (2015). This reveals that a 1 naira increase in earnings will result to 1.75 naira increase in the share prices. Additionally, the coefficient of book value per share is -0.02 with its probability of 0.85, indicatesnegative relationship between book value per share and share prices in the listed insurance firms that release their accounting information timely in Nigeria. However, it is not significant. This is contrary to the findings of Ernest and Oscar (2014), Altahtamouni and Alslelat (2014) and Mamuda (2015). This pointed out that book value is not a significant determinant of share prices in the listed insurance firms that release their information timely in Nigeria.

Moreover, the results of cash flow from operation shows a coefficient value of 0.93 and probability value of 0.085 this indicates a positive and significant relationship between cash flow from operation and share prices among the listed insurance firms that release their information timely in Nigeria. It further indicates that ₦1 increase in cash from operation results to increase in share price by 0.93; this is in line with the findings of Omokhudu and Ibadin (2015).

The random effect regression result for untimely data is presented in table 4.5B below.

Table 4.5B Random Effect Regression Result

Variables	Coefficient	Z- value	P>(Z)
EPS	0.2201195	1.12	0.264
BPS	0.0410077	0.50	0.619
CFO	0.2619941	3.34	0.001
Constant	0.5724054	4.78	0.000
R Squared:	0.2642		
f-Statistics:	13.53		
Prob.: 0.0036			

Source: output of regression results from STATA 13.

In table 4.5B above it can be observed that the R^2 is 0.2642 and the probability value of 0.0036 means that 26.42% of variation in share prices of listed insurance firms that submit their information untimely in Nigeria is explained jointly by the independent variables captured in model. The wald-chi^2 of 13.53 and a p-value of 0.0036 significant at 1% level indicates that the model is fit.

Individually, the results show that the coefficient of earnings per share is 0.22 with the probability of 0.264indicates an insignificant positive relationship between earnings per share and share prices among the listed insurance firms that release their accounting information lately in Nigeria. However, it contradicts the findings of Dung (1970), Mulenga (2015) and Omokhudu and Ibadin (2015).

Additionally, the coefficient of book value per share of 0.041 and probability value of 0.619 indicates a positive butinsignificant relationship between book value per share and share

prices oflisted insurance firms that release their accounting information untimely in Nigeria. However, this contradicts the findings of Mamuda (2015), Ernest and Oscar (2014) and Altahtamouni and Alslelat (2014). This pointed out that book value is aninsignificant determinant of share prices among listed insurance firms that release their information late in Nigeria.

The results of cash flow from operation shows a coefficient value of 0.26 and probability value of 0.001 means a positive and significant relationship between cash flow from operation and share prices among the listed insurance firms that release their information untimely in Nigeria. It further reveals that, a one-naira increase in cash flow from operation results to 0.26 increases in share pricesamongthe listed insurance firms in Nigeria that release their accounting information untimely between 2011 and 2017.

Chow Test and Crammer Test

Chow test for differences between coefficients in two regression models produced a calculated value of 5.06 and a table value of 2.85 which is significant at 5% level of significance. Hence, there is difference between the coefficients in the models but only the values of the coefficients and the p. values will tell which is better than the other. Moreover, Crammer test for comparing adjusted R^2 produced a calculated value of -0.40 and a table value of 0.34 which signifies no differences between the overall value relevance between firms that release their information timely and those that release untimely, hence we cannot say which is more value relevant than the other.

4.6 Hypotheses testing

This heading tests the hypotheses of the study and the basis for either rejecting or failing to reject a hypothesis is guided by the chow test, the Z crammer test and the regression results; the hypotheses are tested as can be seen below;

Earnings per share of firms that release their information timely is value relevant whereas for firms that release their information untimely is not, with this we reject the first null hypotheses that says ‘‘$H_{01:}$ Earnings per share timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria’’. This may not be unconnected with the fact that investors value timeliness of information as its value impairs with passage of time.

Moreover, the book value per share of firms that release their information timely was found to be negatively but insignificantly related with share prices while that of the firms that release their information untimely was found to be positively but also insignificantly related with share prices. We therefore failed to reject the null hypothesis that states ‘‘$H_{02:}$ Book value per share timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria’’.

The regression results further documented that cash flow from operation of both the firms that released their information timely and lately to be value relevant among the listed insurances firms in Nigeria, however the rate of change of the former was found to be greater than the latter, as a result we reject the third null hypothesis that says‘‘$H_{03:}$ Cash flow from operation timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria’’.

Moreover, the regression results revealed that on the overall both timely released accounting information and untimely one are value relevant. However, we cannot say which one is more value relevant than the other this is because theCrammer test conducted is not significant. With this we fail to reject the null hypothesis which states ‘‘$H_{04:}$ Accounting information timeliness has no significant effect on the value relevance of accounting information among the listed insurance firms in Nigeria’’.

4.7 Policy Implication of Findings

The findings of this study give more hindsight on the value relevance of timeliness of accounting information among the listed insurance firms in Nigeria. Policy implications emanated from the findings of the study.

The regression analysis showed that both timely released accounting information and untimely one are value relevant in the listed insurance firms in Nigeria, as such both can be used for investment decisions by investors or financial analysts. Moreover, the coefficients of EPS and CFO of firms that release their information timely are value relevant whereas for firms that release their information untimely is not. This implies that the timelier information is released the better the share prices, with this the SEC and NAICOM should intensify effort that will ensure timely release of accounting information by the listed insurance firms in Nigeria.

Finally, from the findings of this study, SEC and NAICOM in partnership with FRC should improve on its efforts so that credible and timely accounting information in available to the investors both existing and potential, researchers, and financial analyst for the development of Nigerian stock exchange in particular and the economy in general.

CHAPTER FIVE
SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The purpose of financial reports is to provide the information that can be useful for business decisions. The most significant accounting item prepared and presented isfinancial reports which are used by investors to make informed decisions. Additionally, regulatory agencies use the information to protect investors' rights by ensuring fair practices by the firms. Specifically, all the publicly listed companies in Nigeria are required to submit their books of account with the securities and exchange commission within 90 days after the financial year end, however, many listed insurance firms in Nigeria are not complying with this coupled with the fall in the share prices.

As for the foregoing, it became imperative for regulators and practitioners to gain more insight on the value relevance of timeliness of accounting information in the listed insurance firms in Nigeria. In this study, an attempt was made to examine that. The study is based on the sample of 17 listed insurance firms in Nigeria that has consistently published their audited annual financial report between 2011 and 2017. The dependent variable is share prices of the sampled firms collected 90 days after the financial year end. For independent variables, the study used earnings per share, book value per share and cash flow from operation, for the purpose of analysis the data was classified into two- firms that release their information within the stipulated time by the law and those that submit untimely. The multiple panel regression data was analyzed using STATA statistical software.

The Findings from the analysis showed that on the overall timely released accounting information anduntimely one were value relevant. Individually the results showed that, earnings per share, and cash flow from operation of firms that release their information timely to be value relevant also. As well, the cash flow from operation of firms that release

their information untimely. Thefindings of this research are relevant to researchers, investors, regulators andpractitioners as they give insight on the value relevance of timeliness of accounting information in the listed insurance firms in Nigeria.

5.2 Conclusions

This study was conducted in order to investigate the value relevance of timeliness of accounting information in the quoted insurance companies in Nigeria; from the findings of the study the following conclusions have been drawn.

It was concluded that Earnings per share of listed insurance firms that release their information timely is value relevant whereas the earnings per share of the firms that release their information untimely was not value relevant. Secondly, from the results of the regression it was found that book value per share of timely released` accounting information anduntimely released one are not determinants of share prices among the listed insurance firms in Nigeria.

Additionally, it was also concluded that cash flow whether released timely or not it determines share prices, which means both can be used for investment decisions. On the overall from the findings of this study it was concluded that boththimely released accounting information and untimely released one are value relevant among the listed insurance firms in Nigeria.

5.3 Recommendation

Based on the findings and conclusions of this study, the following recommendations were Made:

I. Itrecommends that Earnings per share of insurance firms that release their information timely should be used by investors and financial analyst for share prices valuation in the listed insurance firms in Nigeria on the contrary the

untimely one should not be used.

II. Additionally, it is recommended that book value per share of timely release accounting information and lately release one should not be used by the investors or financial analysts for share prices valuation among the listed insurance firms in Nigeria.

III. It is also recommended that both timely released accounting information and lately released one in terms of cash flow from operation in the listed insurance firms in Nigeria be used for investment decision by investors.

IV. Finally, itis recommended that both timely released accounting information and the untimely one can be used for investment decisions by investors and financial analysts. As such the Nigerian Securities and Exchange Commission should intensify effort that will ensure timely release of accounting information by the listed insurance firms in Nigeria.

4.4 Limitations of the Study

Caution must be made in utilizing the results of this work as a basis for generalization due tothe following limitations:

i. The study focused on only selected listedinsurance companies in Nigeria.

ii. Furthermore, the study is limited as it covered a period of only seven years.

iii. Additionally, despite the numerous accounting information the researcherstudied only three regressors against the dependent variable.

4.5 Areas for Further Research

The findingsof this study provide evidence on the effects of timeliness on the value relevance of accounting information in the quoted insurance companies in Nigeria. However, there are several areas that are not explored by this research. These areas among others are suggested for further research and they are:

i. Further research should explore other sectors in Nigeria, asthis will assist in documenting the value relevance of accounting information of all quoted companies in Nigeria.

ii. Further studies should research other accounting information such as leverage and working capital. This will assist in documenting the value relevance of timeliness of other accounting information of quoted companies in Nigeria besides the ones covered by this study.

iii. Further research should also be carried out to examine the value relevance of accounting information among different West African countries which share common characteristic with Nigeria.

iv. Further studies should be embarked to cover a larger time frame.

References

Abubakar, S. (2011). Value Relevance of Accounting Information of Listed New Economy Firms in Nigeria: An Empirical Investigation using Ohlson Model. *Nigerian Journal of Accounting Research*, *6*.

Accountingtools.com. (2018). *timeliness of acounting information*.

Adaramola, A., & Oyerinde, A. (2014). value relevance of financial accounting information of quoted companies in nigeria: A trend analysis. *Research Journal of Finance and Accounting*, *5*(8).

Alfraih, M., & Alanezi, F. (2015). The Value Relevance of Mandatory Corporate Disclosures: Evidence from Kuwait. *The International Journal of Business and Finance Research*, *9*(3).

Alslehat, Z. A. (2014). *The Impact of Accounting Indicators and Growth on the Market Value*. *4*(2), 9–18. https://doi.org/10.6007/IJARAFMS/v4-i2/725

Bagudo, M. M., bin Abdul manaf, kamarul bahrain, & Ishak, R. B. (2015). Relative and Incremental Value Relevance of Equity and Earnings in the Nigerian Financial Industry After Mandatory Adoption of International Financial Reporting Standard (IFRS). *American Scientific Publishers*, *21*(6), 1927–1930. https://doi.org/10.1166/asl.2015.6162

Ball, R., & Brown, P. (1968). an empirical evaluation of accounting income numbers. *Journal of Accounting Research, Autum,159–179*, 159–179.

Beisland, L. A. (2009). *The Value Relevance Across Industries: What Happened to the New Economy?*

Bello, A. (2009). the marginal value relevance of inflation accounting adjustments in nigeria. *Nigerian Journal of Accounting Research*, *5*, 1–15.

Bhatt, P., & Jk, S. (2012). impact of earnings per share on market value of an equity share: an empirical study in andian capital market. *Journal of Finance, Accounting and Management*, *3*(July), 1–14.

Bilgic, F. A., & Ibis, C. (2013). Effects of New Financial Reporting Standards on Value

Relevance-A Study about Turkish Stock Markets. *International Journal of Economics and Finance*, *5*(10), 126–140. https://doi.org/10.5539/ijef.v5n10p126

Bolibok, P. (2014). the impact of ifrs on the value relevance of accounting data of banks listed on the warsaw stock exchange. *Copernican Journal of Finance & Accounting*, *3*(1), 33–43. https://doi.org/dx.doi.org/10.12775/CJFA.2014.003

companies and allied matters act 1990, (2016).

Camodeca, R., Almici, A., & Brivio, A. R. (2014). The value relevance of accounting information in the Italian and UK stock markets. *Problems and Perspectives in Management*, *12*(4).

Chow, G. (1960). Tests of equality between sets of coefficients in two linear regressions. In *The econometric society* (Vol. 28, Issue 3).

Clarkson, P., Hanna, J. D., Richardson, G. D., & Thompson, R. (2011). The Impact of IFRS Adoption on the Value Relevance of Book Value and Earnings The Impact of IFRS Adoption on the Value Relevance of Book Value and Earnings. *Journal of Contemporary Accounting & Economics*, *7*(1), 1–17. https://doi.org/10.1016/j.jcae.2011.03.001

Collins, D. W., Maydew, E. L., & Weiss, I. (1997). Changes in the Value Relevance Over the Past Forty Years. *Journal of Accounting and Economics*, *2*(4), 1–24.

crammer, salomon. (1987). mean and variance of R2 in small and moderate sample. *Journal of Econometrics*, *35*(2). https://doi.org/10.1016/0304-4076(87)90027-3

Dung, N. V. (1970). Value-Relevance of Financial Statement Information : A Flexible Application of Modern Theories to the Vietnamese Stock Market I . Theoretical Foundations – Ohlson Model (1995) and Proposition of. *Quality*, 488–500.

Durand, R. B. (2018). *timeliness of accounting information*.

Edwards, E., & Bell, P. (1961). *The theory and measurement of business income.* university of california press.

Financialdictionary. (2017). *book value*.

Fisher, F. (1970). Tests of equality between sets of coefficients in two linear regressions: an expository note. *The Econometric Society*.

Francis, J., & Shipper, K. (1999). Have financial statements lost their relevance? *Journal of Accounting Research*, *37*(2), 319–352.

Global, & Assetmanagement. (2014). *Ball and Brown (1968): The seed that made a difference* (Vol. 6, Issue January).

Guardian. (2018, April). 2017 challenging year for insurance sector. *Nwoji Ebere*.

Gujarati, damodar n. (2004). *basic econometrics* (fourth). MCGraw-hill companies.

IASB. (2014). *Accounting and reporting concepts* (F. I. Ogunjuboun, M. Odejayi, S. O.-Adeleke, S. A. Bammeke, J. A. Ekungba, U. I. Erobu, D. O. O. Obisesan, & T. Popoola (eds.); second). ICAN publishers.

investopedia. (2017). *Operating Activities*. http://www.investopedia.com/terms/o/operating-activities.asp

Kargin, S. (2013). The Impact of IFRS on the Value Relevance of Accounting Information: Evidence from Turkish Firms. *International Journal of Economics and Finance*, *5*(4), 71–80. https://doi.org/10.5539/ijef.v5n4p71

Kurfi, aminu kado. (2003). *principles of financial management* (1st editio). bench mark publishers limited.

Lev, B., & Zarowin, P. (1999). The Boundaries of Financial Reporting and How to Extend Them. *Journal of Accounting Research*, *37*(2), 353–386.

Mamuda, musa usman. (2015). *value relevance of accounting information of listed industrial goods in nigeria*. ahmadu bello university zaria.

Mulenga, M. J. (2015). Value Relevance of Accounting Information of Listed Public Sector Banks in Bombay Stock Exchange . *Research Journal of Finance and Accounting*, *6*(8), 222–232.

Muller, V. (2011). Value Relevance Of Consolidated Versus Parent Company Financial Statements: Evidence from the Largest Three European Capital Markets. *Accounting*

and Management Information Systems, *10*(3), 326–350.

Navdal, R. (2010). *Master Thesis " Value Relevance of Accounting Information : Emphasis on the Financial Crisis in Norway*. agder kristiansand.

Nilson, H. (2003). *Essays on the value relevance of financial statement information*. umea school of business and economics.

Nwoji, E. (2018, August). *NSE and NAICOM fine 17 insurance firms N62.3m on delay results*.

Nwosu, sir sunny. (2018, April). *2017 challenging year for insurance sector*.

Of, J. (1996). *Accounting & Economics*. *22*.

Olowe, A. (2011). *financial management: concepts, financial system and business finance* (third edit). brierly jones nigeria limited.

Omokhudu, O. O., & Ibadin, P. O. (2015). *The Value Relevance of Accounting Information : Evidence from Nigeria*. *4*(3), 20–30. https://doi.org/10.5430/afr.v4n3p20

Publisher, R. I., Shehzad, K., & Ismail, A. (2014). *Value relevance of Accounting Information and its Impact on Stock Prices : Case Study of Listed Banks at Karachi Stock Exchange*. *3*(1), 40–48.

Qfinance. (2018). *book value per share*.

Quarterly, B. S. (2014). *THE COMPARATIVE STUDY OF VALUE RELEVANCE OF FINANCIAL INFORMATION IN THE NIGERIA BANKING AND PETROLEUM SECTORS Oshodin Ernest and Mgbame Chijoke Oscar Accounting Department, Faculty of Management Sciences, University of Benin, Nigeria*. *6*(1).

Rodosthenous, M. (2017). Value relevance of accounting information in the early years of crisis in Greece. *Jarr b Economics, Business, Social Sciences and Education*, *16*(1), 40–47.

Sabri, M., & Mohd-saleh, N. (2010). *The Value Relevance of Financial Instruments Disclosure in Malaysian Firms Listed in the Main Board of Bursa Malaysia*. *4*(2), 243–270.

SEC. (2018). *2017 AUDITED ACCOUNTS*.

Solomon, A. Z., Memba, F. S., & Muturi, W. (2016). Earnings per share and equity share investment in companies listed on nigerian stock exchange. *European Journal of Business, Economics and Accountancy*, *4*(1), 68–78.

Sullubawa, nabila kabir. (2015). *The Impact Of International Financial Reporting Standard (Ifrs) On Value Relevance Of Accounting Information: Evidence From Nigeria* (Issue November). universiti utara malaysia.

Terzungwe, N., & Rabiu, N. (2015). *Association between Accounting Numbers and Value of Food and Beverages Firms in Nigeria*. *7*(12), 245–252. https://doi.org/10.5539/ijef.v7n12p245

Theil, H. (1968). *Economics and Information Theory*. Rand McNally and North Holland Publishing Company.

Uwuigbe, O. R., Uwuigbe, U., Jafaru, J., Igbinoba, E. E., Oladipo, O. A., Uwuigbe, O. R., Uwuigbe, U., Jafaru, J., Igbinoba, E. E., & Oladipo, O. A. (2016). Value relevance of financial statements and share price : a study of listed banks in Nigeria. *Banks and Bank Systems*, *11*(4). https://doi.org/10.21511/bbs.11(4-1).2016.04

Vladiator. (2016). earnings. In *wikipedia*.

Vuong, Q. (1989). Selecting the best linear regression model: A classical approach. *Journal of Econometrics*, *57*(2). https://doi.org/10.2307/1912557

Wlkipedia. (2017). *share prices*.

APPENDIX i

Listed insurance firms on the floor of Nigerian stock exchange as at 31st December, 2017

S/N	**COMPANY NAME**	**REMARKS**
1	African Alliance insurance PLC	Not selected
2	Aiico insurance PLC	Selected
3	Axa mansard insurance PLC	Selected
4	Cornerstone insurance PLC	Selected
5	Consolidated hallmark insurance PLC	Selected
6	Continental reinsurance PLC	Selected
7	Crusader Nigeria PLC	Not selected
8	Custodian insurance PLC	Not selected
9	Equity assurance PLC	Selected
10	Gold link insurance PLC	Not selected
11	Great Nigeria insurance PLC	Selected
12	Guarantee trust insurance PLC	Not selected
13	Guinea insurance PLC	Not selected
14	International energy insurance PLC	Not selected
15	Lasaco assurance PLC	Not selected
16	Law union and rock insurance PLC	Selected
17	Linkage assurance PLC	Selected
18	Mutual benefit assurance PLC	Selected
19	Nem insurance PLC	Selected
20	Niger insurance PLC	Selected
21	Oasis insurance PLC	Not selected
22	Prestige assurance PLC	Selected
23	Regency assurance PLC	Selected
24	Sovereign Trust insurance PLC	Not selected
25	Staco insurance PLC	Not Selected
26	Standard alliance insurance PLC	Selected
27	United capital insurance PLC	Selected
28	Universal insurance PLC	Not selected
29	Wapic Insurance PLC	Selected

Source: Nigerian stock exchange website 2018

APPENDIX ii

Untimely data

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   13.0   Copyright 1985-2013 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     MP - Parallel Edition            College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

3-user 8-core Stata network perpetual license:
       Serial number:  501306208483
         Licensed to:  Aliyu Abubakar
                       aliyunbuba

Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

Checking for updates...
(contacting http://www.stata.com)
host not found
http://www.stata.com did not respond or is not a valid update site
unable to check for update; verify Internet settings are correct.

. *(6 variables, 49 observations pasted into data editor)

. summarize share eps bps cash

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       share |        49    .6971429    .3457058         .3          2
         eps |        49    .1202041    .2251526       -.18        1.4
         bps |        49    1.131837    .7088185        .16       2.73
        cash |        49    .1979592    .5440128       -.31       2.43
```

```
. pwcorr share eps bps cash, sig star (0.05)
```

	share	eps	bps	cash
share	1.0000			
eps	0.3057*	1.0000		
	0.0327			
bps	0.3152*	0.3005*	1.0000	
	0.0274	0.0359		
cash	0.4299*	0.1977	0.0539	1.0000
	0.0021	0.1734	0.7131	

```
. reg share eps bps cash
```

Source	SS	df	MS	Number of obs =	49
				F(3, 45) =	6.17
Model	1.67153903	3	.557179675	Prob > F =	0.0013
Residual	4.06506108	45	.090334691	R-squared =	0.2914
				Adj R-squared =	0.2441
Total	5.7366001	48	.119512502	Root MSE =	.30056

share	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
eps	.2378861	.205784	1.16	0.254	-.1765842	.6523563
bps	.1208981	.0641698	1.88	0.066	-.0083465	.2501426
cash	.2452206	.0813503	3.01	0.004	.0813726	.4090686
_cons	.4831675	.0823885	5.86	0.000	.3172284	.6491065

```
. swilk share eps bps cash
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
share	49	0.77999	10.184	4.943	0.00000
eps	49	0.65149	16.132	5.923	0.00000
bps	49	0.92127	3.644	2.755	0.00294
cash	49	0.51922	22.254	6.609	0.00000

```
. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2011 to 2017
                delta:  1 year

.
. xtreg share eps bps cash, fe

Fixed-effects (within) regression               Number of obs      =         49
Group variable: id                              Number of groups   =          7

R-sq:  within  = 0.2369                         Obs per group: min =          7
       between = 0.0040                                        avg =        7.0
       overall = 0.1256                                        max =          7

                                                F(3,39)            =       4.04
corr(u_i, Xb)  = -0.1696                        Prob > F           =     0.0136

------------------------------------------------------------------------------
       share |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         eps |   .1774169   .2047468     0.87   0.392    -.2367226    .5915565
         bps |  -.0781806   .1096155    -0.71   0.480     -.299899    .1435378
        cash |   .2636304   .0811128     3.25   0.002     .0995642    .4276965
       _cons |   .7121163   .1335242     5.33   0.000     .4420381    .9821944
-------------+----------------------------------------------------------------
     sigma_u |  .23051417
     sigma_e |  .27024873
         rho |  .42114841   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(6, 39) =     2.78                 Prob > F = 0.0241

. estimate store fe

. xtreg share eps bps cash, re

Random-effects GLS regression                   Number of obs      =         49
Group variable: id                              Number of groups   =          7

R-sq:  within  = 0.2131                         Obs per group: min =          7
       between = 0.3731                                        avg =        7.0
       overall = 0.2642                                        max =          7

                                                Wald chi2(3)       =      13.53
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =     0.0036

------------------------------------------------------------------------------
       share |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         eps |   .2201195   .1970906     1.12   0.264     -.166171    .6064101
         bps |   .0410077   .0823805     0.50   0.619    -.1204551    .2024706
        cash |   .2619941   .0784103     3.34   0.001     .1083127    .4156755
       _cons |   .5724054   .1197185     4.78   0.000     .3377615    .8070493
-------------+----------------------------------------------------------------
     sigma_u |  .16730776
     sigma_e |  .27024873
         rho |  .27707534   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. estimate store re
```

```
. hausman fe re
```

	Coefficients			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
eps	.1774169	.2201195	-.0427026	.0554667
bps	-.0781806	.0410077	-.1191883	.072312
cash	.2636304	.2619941	.0016363	.0207632

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 3.04
Prob>chi2 = 0.3861

```
. xttest0
```

Breusch and Pagan Lagrangian multiplier test for random effects

share[id,t] = Xb + u[id] + e[id,t]

Estimated results:

	Var	sd = sqrt(Var)
share	.1195125	.3457058
e	.0730344	.2702487
u	.0279919	.1673078

Test: Var(u) = 0
chibar2(01) = 1.77
Prob > chibar2 = 0.0919

```
. vif
```

Variable	VIF	1/VIF
eps	1.14	0.876670
bps	1.10	0.909666
cash	1.04	0.960896
Mean VIF	1.09	

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of shp

chi2(1) = 2.02
Prob > chi2 = 0.1551

APPENDIX iii

Timely data

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   13.0   Copyright 1985-2013 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     MP - Parallel Edition            College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

3-user 8-core Stata network perpetual license:
       Serial number:  501306208483
         Licensed to:  Aliyu Abubakar
                       aliyunbuba

Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

Checking for updates...
(contacting http://www.stata.com)
host not found
http://www.stata.com did not respond or is not a valid update site
unable to check for update; verify Internet settings are correct.

. *(6 variables, 70 observations pasted into data editor)

. summarize share eps bps cash
```

Variable	Obs	Mean	Std. Dev.	Min	Max
share	70	.9034286	.5704915	.28	2.95
eps	70	.0835714	.1267776	-.34	.52
bps	70	1.360286	.4498082	.24	2.73
cash	70	.1071629	.1560384	-.1345153	.7282729

```
. pwcorr share eps bps cash, sig star (0.05)
```

	share	eps	bps	cash
share	1.0000			
eps	0.4344*	1.0000		
	0.0002			
bps	0.1853	0.4243*	1.0000	
	0.1245	0.0003		
cash	0.3297*	0.1976	0.1417	1.0000
	0.0053	0.1011	0.2418	

```
. swilk share eps bps cash

                    Shapiro-Wilk W test for normal data

    Variable |   Obs        W           V         z       Prob>z
-------------+--------------------------------------------------
       share |    70    0.77022     14.144     5.761     0.00000
         eps |    70    0.93784      3.826     2.918     0.00176
         bps |    70    0.91886      4.995     3.498     0.00023
        cash |    70    0.88305      7.198     4.292     0.00001

. reg share eps bps cash

      Source |       SS       df       MS              Number of obs =      70
-------------+------------------------------           F(  3,    66) =    7.36
       Model |  5.63175426     3  1.87725142           Prob > F      =  0.0002
    Residual |  16.8250229    66   .25492459           R-squared     =  0.2508
-------------+------------------------------           Adj R-squared =  0.2167
       Total |  22.4567772    69  .325460539           Root MSE      =   .5049

------------------------------------------------------------------------------
       share |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         eps |    1.759971   .5358138     3.28   0.002     .6901844    2.829758
         bps |   -.0212254   .1495501    -0.14   0.888    -.3198118    .2773611
        cash |    .9315155    .398222     2.34   0.022     .1364396    1.726591
       _cons |    .6853939   .1992307     3.44   0.001     .2876169    1.083171
------------------------------------------------------------------------------

. vif

    Variable |       VIF       1/VIF
-------------+----------------------
         eps |      1.25    0.800663
         bps |      1.22    0.816459
        cash |      1.05    0.956862
-------------+----------------------
    Mean VIF |      1.17

. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2011 to 2017
                delta:  1 year
```

```
. xtreg share eps bps cash, fe

Fixed-effects (within) regression               Number of obs      =        70
Group variable: id                              Number of groups   =        10

R-sq:  within  = 0.3693                         Obs per group: min =         7
       between = 0.1589                                        avg =       7.0
       overall = 0.2221                                        max =         7

                                                F(3,57)            =     11.12
corr(u_i, Xb)  = -0.0441                        Prob > F           =    0.0000

------------------------------------------------------------------------------
       share |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         eps |   1.779524   .3543256     5.02   0.000     1.069999    2.489048
         bps |   .1550477   .1259138     1.23   0.223    -.0970903    .4071857
        cash |   .4828747   .2486162     1.94   0.057    -.0149707    .9807202
       _cons |   .4920558   .1729368     2.85   0.006     .1457559    .8383557
-------------+----------------------------------------------------------------
     sigma_u |  .45745556
     sigma_e |  .27503914
         rho |  .73449172   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(9, 57) =    18.38                 Prob > F = 0.0000

. estimate store fe

. xtreg share eps bps cash, re

Random-effects GLS regression                   Number of obs      =        70
Group variable: id                              Number of groups   =        10

R-sq:  within  = 0.3689                         Obs per group: min =         7
       between = 0.1642                                        avg =       7.0
       overall = 0.2260                                        max =         7

                                                Wald chi2(3)       =     35.58
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
       share |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         eps |   1.779519    .346106     5.14   0.000     1.101164    2.457874
         bps |   .1372993   .1204749     1.14   0.254    -.0988272    .3734257
        cash |   .5049846   .2437657     2.07   0.038     .0272126    .9827565
       _cons |   .5138298   .2244669     2.29   0.022     .0738827    .9537768
-------------+----------------------------------------------------------------
     sigma_u |  .48698013
     sigma_e |  .27503914
         rho |  .75816032   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. estimate store re
```

```
. hausman fe re
```

	Coefficients			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
eps	1.779524	1.779519	4.65e-06	.0758769
bps	.1550477	.1372993	.0177484	.0366071
cash	.4828747	.5049846	-.0221098	.0488706

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 0.55
Prob>chi2 = 0.9074

```
. xttest0
```

Breusch and Pagan Lagrangian multiplier test for random effects

share[id,t] = Xb + u[id] + e[id,t]

Estimated results:

	Var	sd = sqrt(Var)
share	.3254605	.5704915
e	.0756465	.2750391
u	.2371497	.4869801

Test: Var(u) = 0
chibar2(01) = 95.02
Prob > chibar2 = 0.0000

```
. reg share eps bps cash, robust
```

Linear regression — Number of obs = 70
F(3, 66) = 4.69
Prob > F = 0.0050
R-squared = 0.2508
Root MSE = .5049

share	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
eps	1.759971	.6490922	2.71	0.009	.4640168	3.055926
bps	-.0212254	.1094596	-0.19	0.847	-.2397685	.1973178
cash	.9315155	.5327479	1.75	0.085	-.1321499	1.995181
_cons	.6853939	.1428487	4.80	0.000	.4001872	.9706006

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of share

         chi2(1)      =     7.37
         Prob > chi2  =   0.0066
```

APPENDIX iV

Pooled data

```
  /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   13.0   Copyright 1985-2013 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     MP - Parallel Edition            College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

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                       aliyunbuba

Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

Checking for updates...
(contacting http://www.stata.com)
connection timed out -- see help r(2) for troubleshooting
http://www.stata.com did not respond or is not a valid update site
unable to check for update; verify Internet settings are correct.

. *(7 variables, 119 observations pasted into data editor)


. summarize share eps bps cash

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       share |       119    .787479    .4921506        .28       2.95
         eps |       119   .0868067    .1757065      -.39        1.4
         bps |       119   1.221345     .526715       .16       2.73
        cash |       119   .1397479    .3672515      -.31       2.43


. pwcorr share eps bps cash

             |   share      eps      bps     cash
-------------+------------------------------------
       share |  1.0000
         eps |  0.2728   1.0000
         bps |  0.2247   0.2694   1.0000
        cash |  0.2426   0.1996   0.0632   1.0000
```

```
. reg share eps bps cash
```

Source	SS	df	MS	Number of obs =	119
				F(3, 115) =	6.00
Model	3.86827858	3	1.28942619	Prob > F =	0.0008
Residual	24.7127652	115	.21489361	R-squared =	0.1353
				Adj R-squared =	0.1128
Total	28.5810438	118	.242212235	Root MSE =	.46357

share	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
eps	.5338365	.2568725	2.08	0.040	.0250215	1.042652
bps	.1504871	.0841343	1.79	0.076	-.0161668	.317141
cash	.2605338	.1185918	2.20	0.030	.0256264	.4954413
_cons	.5209327	.1084394	4.80	0.000	.3061352	.7357303

```
. xtreg share eps bps cash, fe

Fixed-effects (within) regression               Number of obs      =       119
Group variable: id                              Number of groups   =        17

R-sq:  within  = 0.1775                         Obs per group: min =         7
       between = 0.1116                                        avg =       7.0
       overall = 0.1347                                        max =         7

                                                F(3,99)            =      7.12
corr(u_i, Xb)  = 0.0214                         Prob > F           =    0.0002
```

share	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
eps	.5369758	.1811143	2.96	0.004	.1776057	.8963459
bps	.1214787	.0948218	1.28	0.203	-.0666682	.3096257
cash	.2606851	.0833976	3.13	0.002	.0952062	.426164
_cons	.5560683	.1184255	4.70	0.000	.3210863	.7910502
sigma_u	.38281255					
sigma_e	.29001413					
rho	.6353485	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(16, 99) =    12.18                 Prob > F = 0.0000

. estimate store fe
```

```
. xtreg share eps bps cash, re

Random-effects GLS regression                   Number of obs      =       119
Group variable: id                              Number of groups   =        17

R-sq:  within  = 0.1775                         Obs per group: min =         7
       between = 0.1119                                        avg =       7.0
       overall = 0.1349                                        max =         7

                                                Wald chi2(3)       =     23.61
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
```

share	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
eps	.5371611	.176874	3.04	0.002	.1904943	.8838278
bps	.1271424	.0869899	1.46	0.144	-.0433547	.2976395
cash	.2607925	.081472	3.20	0.001	.1011104	.4204746
_cons	.5491199	.1464996	3.75	0.000	.2619859	.8362539
sigma_u	.40978394					
sigma_e	.29001413					
rho	.66627847	(fraction of variance due to u_i)				

```
. estimate store re

. hausman fe re
```

	Coefficients (b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
eps	.5369758	.5371611	-.0001852	.0389612
bps	.1214787	.1271424	-.0056637	.037735
cash	.2606851	.2607925	-.0001074	.0178179

```
                b = consistent under Ho and Ha; obtained from xtreg
     B = inconsistent under Ha, efficient under Ho; obtained from xtreg

  Test:  Ho:  difference in coefficients not systematic

              chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                      =        0.02
            Prob>chi2 =      0.9991
```

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        share[id,t] = Xb + u[id] + e[id,t]

        Estimated results:
                     |       Var     sd = sqrt(Var)
             ---------+------------------------------
                share |    .2422122       .4921506
                    e |    .0841082       .2900141
                    u |    .1679229       .4097839

        Test:   Var(u) = 0
                            chibar2(01) =   131.33
                          Prob > chibar2 =   0.0000
```