INTERNATIONAL FINANCIAL REPORTING STANDARDS AND STOCK MARKET BEHAVIOUR: AN EMERGING MARKET EXPERIENCE

Olubukola Ranti Uwuigbe*, Olayinka Adedayo Erin*, Uwalomwa Uwuigbe*, Daramola Sunday Peter**, Olugbenga Jinadu*

*Department of Accounting, Covenant University, Nigeria
**Department of Accounting, Osun State University, Nigeria

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Abstract

This paper examined the impact of IFRS on stock market behaviour in the financial and consumer goods sector of the Nigerian economy. The study addresses the research questions by using a sample of 52 selected listed companies (30-financial sector and 22-consumer goods sector) on the Nigeria Stock Exchange. Secondary data source was used to investigate the impact of IFRS adoption on stock market behaviour. The methods used in analysing the impact of IFRS on stock market behaviour were General Linear Model (GLM) and Fixed Effects Model (FEM). Findings from the study show that IFRS adoption has improved the trading volume activities of listed firms in Nigeria. It equally observes that there is no significant relationship between IFRS adoption and stock price informativeness. This study recommends that regulatory bodies in the country should ensure that the companies listed on the Stock Exchange comply strictly with the IFRS implementation because this will help the investors of those companies have relevant information regarding stock market indices. Also, there is a need for the stock market to be efficient so that there will be easy access to information on the stock market on a timely basis so that investors can take a timely and prompt decision.

Keywords: IFRS, Stock Market Behaviour, Stock Price Informativeness, Investors, Nigerian Stock Market

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1. INTRODUCTION

Recent trend shows that most countries of the world today, including Nigeria, are moving towards International Financial Reporting Standards (IFRS) direction (Nassar, Uwuigbe, Uwuigbe, & Abuwa (2014). Most European countries (Germany, Italy, and Switzerland) have already adopted IFRS years back, which is a good signal for emerging economies like Nigeria in order to ensure the emergence of new and better financial reporting. The increasing growth in the cross-border financial transaction, international market investment, and international trade which compulsorily involves the preparation of financial reports that is useful across various countries has brought about the adoption of IFRS by both developed and developing countries (Armstrong, Barth, Jagolinzer, & Riedl, 2010). The endorsement of IFRS by most countries of the world is a major achievement towards the establishment of a common stock market for all market participants. The behaviour of market participants to the adoption IFRS is not uniform across continents (Armstrong et al., 2010). IFRS adoption worldwide is a significant economic and market transformation and it has given rise to major areas of research in accounting.

Vishnani and Shah (2008) opined that prior studies on stock market behaviour in respect to IFRS adoption has been motivated by the fact that companies use accounting information as a source of communication with stock market participants and the public at large. Financial statements are primary means by which companies interact and communicate with stock markets' stakeholders, including creditors, investors, regulators and the

public (Onipe., Onyabe, & Usman, 2015). Firms quoted on the Nigerian Stock market have the regulatory mandate to submit their quarterly, semi-annual and annual financial reports to the Stock Market in order to communicate their financial information to the public (Osaze, 2007). Stock market worldwide in 2008 had a major crisis which brought the integrity of the stock market and the relevance of accounting information under severe criticism. Nigerian Stock Exchange will not perform effectively without a sound and high-quality accounting standard guiding the preparation of financial statement (Uwalomwa, Francis, Uwuigbe, & Oyenike (2016). The failure of Nigerian stock Exchange will adversely affect the economy due to the fact that capital market is the backbone of economic development in Nigeria (Okeke, 2004; Uwuigbe, et.al, 2016).

There have been a number of studies on IFRS and stock market reaction in developed countries (Lambert et al., 2006; Pradhana, 2014; Laureiro & Taboada, 2012; Klimczak, 2011); however, the same is not true for developing economies (e.g. Nigeria) where there is a dearth literature in this area. Prior studies such as (Ejuvbekpokpo & Edesiri, 2014; Okoye, Okoye & Ezejiofor, 2014; Umoren & Enang, 2015; Uwalomwa et al., (2016) looked at the effects of IFRS adoption on stock market activities. Hence, this study seeks to examine the effect of IFRS adoption on stock market behaviour because the study will serve as a source of vital information to investors, policymakers, and market regulators. In addition, this study attempts to bridge the gap in the literature by examining the impact of IFRS adoption on stock market behaviour taking into consideration stock market variables such as trading volume and stock informativeness of listed firms in Nigeria. More so, it will attempt to find out if IFRS adoption will improve the stock prices informativeness of listed firms in Nigeria.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. IFRS and Stock Market Behaviour

The study of stock market behaviour infers investors' perception by examining the equity market reaction to the adoption of IFRS (Armstrong et al., 2010). Stock market behaviour is thus the reaction of the entire stock market activities to the information need of both individual and institutional investors. It is possible that investors would react positively towards IFRS adoption if they expect that IFRS adoption will result in higher quality of financial reporting relative to local standards, thereby, resulting in financial reporting transparency, reducing information asymmetry and information risk, thus, lowering cost of capital (Barth, Landsman & Lang, 2008). The expected consequences of IFRS adoption include stock market reaction by investors because IFRS are more market-oriented, disclosure requirement for IFRS are larger and it reduces information asymmetry. Stock market behaviour builds its postulation on Efficiency Market Hypothesis (EMH) which states that financial markets are 'informationally efficient'. There are three forms of market hypothesis: (i) weak (ii) semi-strong and (iii) strong. While the Weak EMH postulates assume that prices on securities already reflect all past publicly available information, the Semi-strong EMH assumes that prices reflect all publicly available information and that securities change instantly to reflect new public information. The Strong EMH believes that prices immediately reflect even hidden and insider information. Thus, it is important to know that accounting report is informative only if it provides data not previously known to the public.

2.2. IFRS and Trading Volume Activities

Hong and Stein (2007) argue that IFRS implementation is a major indicator of trading volume movement on the stock market in many European countries. Stock prices and earnings are tightly correlated to movement in volume, thus higher volume is more likely to accompany higher price level. The author contends that there is a strong connection between trading volume and flow of information available to both individual and institutional investors. In the work of Donalson and Kamstra (2004) a high/low trading volume indication variable signals the markets that have higher or lower investors' sentiment.

Kindleberger and Aliber (2005) observe that IFRS adoption has enhanced adequate information through full disclosure in the new accounting standard. This level of information tends to influence investors sentiment regarding stock market activities. Investors now based their predictions on publicly available information which tend to affect the trading volume of stock market activities. Trading volume plays a critical role in stock market behaviour because it determines the strength of capital allocation efficiency within the market. It also affects firm's share price, returns and market capitalization.

2.3. IFRS and Stock Price Informativeness

Stock price informativeness is the ability of new information such as IFRS to improve the amount of firm-specific information capitalised into stock pricing through enhanced financial reporting (Beuselinck, Joos, Khurana and Meulen (2009). Thus, more efficient capital markets incorporate information of stock prices timely and accurately. Laureiro and Taboada (2012) reveal that IFRS adoption will reduce costs and increase the speed at which information can be processed. This will have a great impact on the level of stock price information available to investors in the stock market. IFRS requires a wider extent of disclosure and capital market-oriented than most local accounting standards because this reflects on the stock market activities for most countries adopting IFRS (Ding, Hope, Jean & Stolowy, 2007; Ashbaugh & Pinus, 2001). Stock price informativeness is consistent with the view that more transparent disclosure, less cost of private information and better investor protection has more information on stock prices (Morck, Yeung & Yu, 2000). Also, stock price informativeness is positively correlated with the sensitivity of investment of stock prices, better capital allocation and facilitation of corporate investment (Chen, Goldstein, & Jiang, 2006; Durnev, Yeung & Zarowin, 2003). IFRS reduces the cost associated with obtaining information, improvement in the information environment, which all have a positive impact on stock price informativeness.

2.4. IFRS and Emerging Markets

Nigeria is situated in Western Africa, bordering the Gulf of Guinea, between Cameroon and Benin. It has an estimated population of over 170 million with the largest market for goods and services in Africa. As at 2012, it's estimated gross domestic product (GDP) is valued at $44.3 billion (NSE Factbook, 2014). Nigeria is regarded as one of the fastest emerging markets in the sub-Saharan Africa. The Nigerian Stock Exchange has been very active with 257 listed companies with a combined market capitalization of Nigerian Naira (NGN) 18.949 trillion (about US$ 1165.68 billion) as at December 2014 (NSE, 2014). The adoption of IFRS in Nigeria by 2012 is expected to shape the frontier of the Nigerian Stock Market in terms of volume, relevance and competitiveness.

Banga and Mahajan (2005) identified some major characteristics of emerging markets, they include weak infrastructure, low level of per capita income, underdeveloped technology, high rate of immigration, demanding markets and culture, fragmented markets, weak distribution channels, large youth population and rapidly changing the market. Emerging markets have been predicted to grow by three to four times faster than the developed nations like the US, UK and Germany. Christie and Valluri (2011) opined that many emerging markets are associated with weak corporate governance, lack of transparency and laxity in the timing of financial reporting. They further stated that emerging markets are characterised by high risk and unreliable returns than the developed markets.

One of the major reasons why Nigeria adopts IFRS is to improve the overall capital market transparency and efficiency (Essien, 2011). IFRS will position Nigeria stock market in the global marketplace as well as accountability, transparency and integrity of financial reporting in Nigeria which is a pre-requisite for economic development. Cross-country transactions and trades have grown rapidly that the world in now facing internationalisation of both politics and markets, and this, have eventually created a higher demand for international harmonisation of financial reporting especially the emerging economies.

2.5. Review of Prior Studies

In the last decade, IFRS adoption and stock market activities have become the focus of accounting and capital market research. Ball and Brown (1968) examine market reaction to earnings announcements. Based on their studies, they were of the view that accounting information is useful to investors in estimating the risks of security returns and expected market value. Their findings show that earnings are important to stock market indices. Based on the objectives of this study, this section provides a review of related literature on IFRS and stock price informativeness and IFRS and trading volume activities of the stock market.

Kim and Shi (2008) study whether voluntary adoption of IFRS in 34 countries for the periods 1998-2004 will influence stock price synchronicity. The study observed that IFRS adoption decrease stock price synchronicity. Similarly, Kim & Shi (2008), Morck et al. (2000) examined whether IFRS implementation has a direct impact on stock price movement. They found out that IFRS does not explain synchronous stock price movement. In the same vein, Wang and Yu (2008) examined IFRS adoption and stock price synchronicity. A sample of 44 countries around the world for 10 years was used to examine the effects of IFRS on stock price synchronicity. The found out that a negative relationship does exist between accounting standards and stock price synchronicity in common-law countries. In summary, the evidence on the relationship between voluntary IFRS adoption and stock price synchronicity is mixed based on their findings.

Similarly, Florou and Pope (2009) examined the relationship between investors' allocation and IFRS implementation. They found out that institutional investors increase the level of their participation in firms that adopt IFRS listed on stock market. They opined that the information environment after the mandatory IFRS adoption was perceived as higher quality and reflect timely information needs of investors. In a related study, KPMG (2005) and Deloitte (2006) examined the effects of mandatory IFRS on stock price informativeness. Findings from their study reveal that mandatory IFRS adoption has resulted in more extensive and timely disclosure of stock prices. This is reflected in the higher levels of institutional holdings in both years of mandatory IFRS adoption and in the post-IFRS adoption.

In a related study, Morck et al. (2000) looked at that the degree of firm-specific return variation in emerging markets is low because there is a lack of proper property rights protection in these markets that explains the low level of information content in stock prices. Jin and Myers (2006) confirm that there is a low level of information content in most emerging economies because governments in low-income countries do not protect property rights properly, shares prices in those countries stock markets may move more synchronously.

Horton and Serafeim (2008) examined market reaction to the first-time adoption of IFRS in the UK. Findings from the study show that information environment improved after the mandatory adoption of IFRS. In addition, they observed that financial analysts become better in disseminating uniform information across all firms in the industry after adopting IFRS. Stock price informativeness was more pronounced both in the year of IFRS adoption and in the post-IFRS adoption period in the UK. Mandatory IFRS adoption increases the overall flow of information release to the stock market but it does not necessarily eliminate the information edge of the institutional investors.

Prior studies such as (Ramnath 2002; Piotroski & Roulstone 2004; Chan & Hameed 2006) also revealed that financial analysts are likely to increase the amount of industry-level information in stock prices due to their power to better interpret and disseminate uniform information across all firms in the industry. It thus means that financial analysts activities have increased the firm-specific information component which ultimately has positive results on stock price informativeness. It also provides an explanation that widely followed stocks may demonstrate more co-movement because such stocks are more priced and reflect more information in the stock market. Also, studies by Jegadeesh, Kim, Krische and Lee (2004) and Womack (1996) opined that analyst recommendations provide very useful specific-firm information. The study argued that because financial analyst makes their

reports known to various categories of investors, the accessibility of these reports may turn private information to public information. Their studies confirm that analyst recommendations not only predict future stock prices information but also have information value for industry returns and future market. In the same vein, Roll (1988), observed that stock return synchronicity is used as a proxy for measuring stock price informativeness, based on the argument that stock prices change to reflect new information about a company, its industry and the market.

In a related study, Beuselinck et al. (2009) observed that the adoption of IFRS has encouraged the inclusion of firm-specific information to prices of stock. They argued that IFRS adoption in EU countries is associated with increasing stock price informativeness, as measured by stock return synchronicity. They believe that the extent to which total stock volatility is explained by variation in market-level return or industry-level return is known as systematic volatility, and the remaining volatility is referred to as idiosyncratic volatility. Their study also revealed that the first time adoption of IFRS in EU countries in 2005 led to more increase in disclosed information, because companies not only explained the transition impact to IFRS but also disclosed more useful information about pensions, footnotes about segments, share-based payment, and other transactions that were not previously disclosed under the local standards.

Correspondingly, Hong and Stein (2007) observed that stock prices and firm's return are positively related to movement in volume traded on the stock market. They opined that higher trading volume is more likely to be accompanied by higher stock prices. Findings from their study also revealed that the introduction of IFRS has contributed to the rise in market capitalization of firms due to the large trading volume of shares in the stock market. They, however, contend the fact that high-priced stocks tend to be exchanged in higher volume than the low-priced value stocks. In a related study, Cassidy (2002) examined the relationship between trading volume and investors' sentiment. As part of the findings, the study proposed asset-pricing theories in which volume plays a crucial role. The study, in addition, opined that the introduction of new accounting standards will pave way for free flow of information through publicly available financial statements.

2.6. Hypotheses Development

Donaldson and Kamstra (2004) examined trading volume indicators and investors decision. The study uses two models, logit model and a linear regression model to demonstrate investors' sentiment effects on stock returns and to visualise the effect of investors' perception on the probability of an upward market. The finding shows that investors' sentiment as reflected in trading volume has a significant positive effect on the stock prices and earnings of a firm which is a major indicator of IFRS. Therefore, this study thus predicts that:

$H_0$1: There is no significant relationship between the effects of IFRS and volume/trading activities of listed firms on the Nigerian Stock Exchange.

Stock price informativeness is consistent with the view that more transparent disclosure, less cost of private information and better investor protection has more information on stock prices (Morck et al. 2000). Furthermore, stock price informativeness is positively correlated with the sensitivity of investment of stock prices, better capital allocation and facilitation of corporate investment (Chen, Goldstein, & Jiang, 2006; Durnev, Yeung & Zarowin. 2003). IFRS reduces the cost associated with obtaining information, improvement in the information environment, which all have a positive impact on stock price informativeness. Therefore, this paper hypothesises that:

$H_0$2: There is no significant relationship between the effects of IFRS adoption and stock prices informativeness of listed firms in Nigeria.

2.7. Theoretical Framework

This study adopts Efficiency Market Theory (EMT) because the stock market is efficient if information spreads very quickly and is immediately incorporated into the stock prices (Lukas, 2012). Therefore, stocks are traded for fair value. Randomly chosen portfolio of stock is expected to have the same desired return as a portfolio of stocks which is properly chosen using a fundamental or technical analysis (Malkiel, 2005). This explains why the introduction of IFRS has been a good platform for companies to effectively access capital market.
Keane (1993) asserts that stock market thrives on efficient information because information plays a key role in reducing investors' challenges in the capital market. Information is essential because it enables investors to monitor their resources whether it has been used wisely by managers. In addition, information is important to investors because it helps in investment evaluation in order to know how to allocate savings for investment opportunities. Keane (1993) posits that market react quickly to new information under the efficient market theory and for information to be made available to market participants, the following requirements must be met: a strong regulatory accounting and auditing profession, fast and wide dissemination of information provided by the companies and clear and distinct information needs of the market participants. These requirements should also be supported by an effective and efficient institutional infrastructure such as rigorous monitoring of insider trading, effective investors protection mechanism and well-informed investors. Dutta (2001) has examined the investors" reaction to information using primary data collected from 600 individual investors and observed that the individual investors are less reactive to bad news as they invest for a longer period.

3. METHODOLOGY

This study adopted both time series and cross-sectional methods in examining the impact of IFRS adoption on stock market behaviour on the Nigerian Stock Exchange. A cross-sectional study is an observational study that involves the analysis of data collection at one specific point in time. Time series method is a research design in which interval measurement are made on a group of items both prior and after implementation of an invention. This study adopted both methods because data were collected at a particular point in time at the year-end across the period of the study and within the timeframe of four years. This study made use of secondary data to examine the Nigerian stock market behaviour in respect to IFRS adoption in

Nigeria. This study considers two years for pre-IFRS (2010-2011) and two years for post-IFRS (2011-2014).

The population for the total stock market behaviour in relation to IFRS adoption consist of all the listed firms in the financial sector and consumer goods sector on the Nigerian Stock Exchange. There is a total of 50 companies for financial sector while 30 companies for consumer goods sector that were listed on the Nigerian Stock Exchange as at the end of 2014 (NSE, Factbook, 2014). The reason for the choice of these sectors was based on the fact that financial and consumer goods sector accounts for 75percent of the entire total market capitalization on the Nigerian Stock Exchange (NSE Q4 Factsheet, 2014). In this study, 80 companies represent the population of listed firms in both the financial and consumer goods sector quoted on the Nigerian Stock Exchange for the periods 2010 to 2014. The initial sample size was 67 companies but further reduced to 52 companies when the issue of compliance with IFRS requirement was applied.

3.1. Variable Measurement (Dependent Variables)

There are two dependent variables used in this study because the study has two models that explain the impact of IFRS adoption on stock market behaviour.

Stock Return (Rt): This is the return that the investors generate out of the stock market investment. This return is in form of profit through trading activities in the stock market.

Stock Price: This is the price of a single share of a saleable stock of a company.

3.2. Independent Variables

There are several independent variables used in this study with respect to the model specification that is used.

Volume of Traded Shares (V): This is the number of shares traded both domestic and foreign multiplied by their respective matching prices.

Closing Price of Stock (CP): It is the last trading price at which a stock trades during a regular trading session in a year.

Market Return for Current Year (MKTRET): This is the return on the overall market portfolio which includes all assets and having the portfolio weighted for value.

Market Return for Prior Year (MKTRET-1): This is the return on the overall market portfolio which includes all assets and having the portfolio weighted for value for the previous year.

Industry Return for Current Year (INDRET): This refers to the average market portfolio across the specific industry in the stock market.

Industry Return for Prior Year (INDRET-1): This refers to the average market portfolio across the specific industry in the stock market for a previous year.

Table 1. Measurement of variables

Variables	*Measurements*
Rt	Profit realised from the investment of shared traded.
V	Last day of shares traded in monetary value
CP	Last day trading closing price of a company's share in a particular year
SP	The price of the stock of a company as at the last day of the year.
MKTRET	Current year market returns of different portfolio in the stock market
MKTRET-1	Prior year market returns of different portfolio in the stock market
INDRET	Current year industry returns of the different portfolio in the stock market across the specific industry.
INDRET-1	Prior year industry returns of the different portfolio in the stock market across the specific industry.

Source: Author (2016)

3.2.1. Model Specification

The aim of this study is to investigate the impact of IFRS adoption on stock market behaviour by examining the pre-IFRS period (2010-2011) and post-IFRS period (2013-2014). This study uses the separate model to test each hypothesis, therefore, this study adopts the following models that are stated below.

Trading volume is one of the stock market indices in measuring the effects of IFRS on investors' sentiment towards stock market behaviour. There are previous studies on the importance of trading volume effect on investors' sentiment regarding stock market activities and IFRS adoption (Hong & Stein, 2007; Baker & Wurgler, 2007). This study, however, wants to investigate whether IFRS adoption has helped increased the trading volume of firms after IFRS implementation.

Based on the study of Baker and Wurgler (2007), trading volume market model is formulated as follows:

SMB=(Rt) and IFRSA=(V,CP),

where,

SMB = Stock Market Behaviour, IFRSA = IFRS Adoption.

Consequently, SMB(y)=IFRSA (x_1 x_2, x_3).

$$Rt_{it} = \beta_0 + \beta_1 TE + \beta_2 V_{it} + \beta_3 CP_{it} + \varepsilon_{it} \quad (1)$$

where,

Rt_{it} = stock return of firm i in period t,

TE = Time Effect (as a Dummy for IFRS adoption),

V_{it} = money value of trading volume of firm i in period t,

CP_{it} = closing price of stock of firm i in period t,

β_1 = coefficient of time effect,

$\beta_{2\ to}\beta_3$ = coefficients of the independent variables,

ε_{it} = error term (a surrogate for all other variables not included).

Stock price informativeness is one of the stock market variables for measuring the impact of IFRS on accounting information. Stock price informativeness is modelled through the use of stock return synchronicity. Stock return synchronicity measures the impact of IFRS on stock price information asymmetry of investors' behaviour regarding stock market investment. Prior studies on

stock return synchronicity were used as a measure of information contained in stock prices (Laureiro &Taboada, 2012; Kim & Shi, 2008; Morck, Yeung, & Yu, 2000). Morck et al. (2000) observed that stock return synchronicity can be used to measure firm-specific information reflected in their stock returns.

Based on Morck et al. (2000) study, the stock return synchronicity market model is formulated as follows:

$$SMB = (SP) \text{ and } IFRSA = (MKTRET, MKTRET\text{-}1, INDRET, INDRET\text{-}1)$$

where:
SMB = Stock Market Behaviour,
IFRSA = IFRS Adoption.
Consequently, *SMB(y)* = IFRSA (x_1, x_2, x_3, x_4, x_5).

$$SP_{i,t} = \beta_0 + \beta_1 TE + \beta_2 MKTRET_{i,t} + \beta_3 MKTRET_{i,t}\text{-}1 + \beta_4 INDRET_{i,t} + \beta_5 INDRET_{i,t}\text{-}1 \quad (2)$$

where,
$SP_{i,t}$ = Stock price for firm i in period t,
TE = Time Effect (as a Dummy for IFRS adoption),
$MKTRET_{i,t}$ = current year value-weighted market return of firm i in period t,
$MKTRET_{i,t}\text{-}1$ = Prior year value-weighted market return of firm i in period t,
$INDRET_{i,t}$ = current year value-weighted industry return of firm i in period t,
$INDRET_{i,t}\text{-}1$ = Prior year value-weighted industry return of firm i in period t,
β_0 to β_5 = coefficients of the independent variables.

Yearly market and industry value-weighted returns are obtained from all the firms in the market and industry where the firm i belong.

3.3. Control Variables

Apart from the independent variables mentioned above, there are other controlled variables that could influence investors' behaviour outside the IFRS adoption which could have an effect on firms listed on the NSE. The impact of IFRS adoption as it relates to stock market behaviour modelled through some control variables such firm size, capital structure, internationality and audit size. A dummy variable is used as dependent variable which dichotomous and takes two values i.e. 1 for firms reporting post-IFRS financial statement and 0 for firms reporting under Nigerian NAAP financial statement.

The study uses the following logit model:

$$RR_{i,t} = \beta_0 + \beta_1 FIRMSIZE_{i,t} + \beta_2 CAPITALSTRUCTURE_{i,t} + \beta_3 AUDITSIZE_{i,t} + \beta_4 INTL_{i,t} \quad (3)$$

where,
$RR_{i,t}$ = a dummy variable representing the regulatory regime,
$RR_{,i,t}$ = 1 for financial statement reported under IFRS,
$RR_{i,t}$ = 0 for financial statement reported under Nigerian GAAP.

Firm Size (Proxy by natural log of Total Assets), Capital Structure (Proxy by Total Debt divided by Total Assets, Audit Size (Proxy by the Big Four or others), Internationalisation (Proxy by cross-listing status).

4. DATA ANALYSIS AND DISCUSSION OF FINDINGS

A total of 52 firms (30 from the financial sector, and 22 from the consumer goods sector) were selected for the study. The data for pre-IFRS adoption consist of firm entries for years 2010 and 2011 (averaged), while those of post-IFRS adoption consists of entries for 2013 and 2014 (also averaged). Analyses were conducted with the aid of the Statistical Package for Social Sciences (SPSS).

4.1. Test of Hypothesis & Model 1

Table 2. Descriptive statistics

	Mean	*Std. Deviation*	*N*
Rt (AVG)	9.0332	9.58728	104
V (AVG)	8.0447	5.74679	104
CP (AVG)	6.8649	3.97943	104

Source: SPSS Output from Field Data, 2016

Table 2 shows the descriptive estimate of each variable. The results show that money value of trading volume (V) (mean 8.0447 and Std. deviation 5.74679) has a higher significant impact than the closing price of stock (CP) on the stock returns (Rt) of listed firms in Nigeria.

Table 3. Test of variance inflation factor (VIF)

Model		*Unstandardized Coefficients*		*Standardized Coefficients*	*T*	*Sig.*	*Collinearity Statistics*	
		B	*Std. Error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	-2.039	.763		-2.672	.009		
	V (AVG)	1.651	.078	.990	21.221	.000	.687	1.456
	CP (AVG)	-.322	.112	-.134	-2.864	.002	.687	1.456

Source: SPSS Output from Field Data, 2016

Table 3 shows the result of variance inflation factor (VIF). In order not to violate the assumptions underlining the application of regression analysis, multicollinearity diagnostic statistics (variance inflation factors (VIF) and tolerance) were computed. The results show that VIF was 1.456 apiece; which is

far lower than the upper limit of 10 and tolerance value was 0.687 apiece which is also far higher than 0.1. These indicate that the explanatory variables are not strongly correlated; hence there is not a problem of multicollinearity (Lind, Marchal & Wathen, 2010; Argyrous, 2005).

Table 4. Tests of between-subjects effects

Source	*Type III Sum of Squares*	*Df*	*Mean Square*	*F*	*Sig.*
Corrected Model	8193.139[a]	3	2731.046	214.334	.000
Intercept	156.968	1	156.968	12.319	.001
V(AVG)	6503.841	1	6503.841	510.426	.000
CP(AVG)	80.112	1	80.112	6.287	.014
Time Effect	153.883	1	153.883	12.077	.001
Total	17953.552	104			
Corrected Total	9467.338	103			

a. R Squared = .865 (Adjusted R Squared = .861)
Dependent Variable: Rt (AVG)

Table 4 presents the coefficients of the effect of the variation between the subjects within the periods. It shows that the sum of squares, mean squares and the F-statistics for the intercept, Volume of trading (V), and closing price (CP) (156.968, 12.319, $p<0.05$) (6503.841, 510.426, $p<0.05$) and (80.112, 6.287, $p<0.05$) respectively are significant. The table also indicates that R^2=.865 (86.5%).

Table 5. Regression estimate for equation 1 (pre- and post-IFRS period)

Parameter	*B*	*Std. Error*	*T*	*Sig.*	*95% Confidence Interval*	
					Lower Bound	*Upper Bound*
Pre-IFRS						
Intercept	-3.863	.895	4.318	.000	-5.637	-2.088
V (AVG)	0.677	.074	22.593	.000	1.530	1.825
CP (AVG)	0.270	.108	2.507	.001	-.484	-.056
Post-IFRS						
V (AVG)	0.753	.078	24.639	.000	1.645	1.945
CP (AVG)	0.354	.128	2.701	.000	-.424	-.535
[Time Effect=0]	0.513	.723	3.475	.001	1.078	3.948
[Time Effect=1]	0[a]	.	.	.	.	.

Source: SPSS Output from Field Data, 2016
Dependent Variable: Rt (AVG)

Table 5 shows the parameter estimates for the model. It shows that the intercept is negative with positive t value and significant (a_1=-3.863, t=4.318, $p<0.05$). The beta coefficients for Volume and Closing price and their t values are significant (β_1=0.677, β_2=0.270 t=22.593, $p<0.05$) and (β_2=.270, t=2.507, $p<0.05$) for Pre-IFRS period while the beta coefficients for Volume and Closing price and their t values are more significant (β_1=0.753, β_2=0.354, t=24.639, $p<0.05$) and (β_2=.354, t=2.701, $p<0.05$) respectively for Post-IFRS period. Also, the beta coefficients for TE is significant (β_1=0.513, t=3.475, $p<0.05$). This result signifies that the explanatory variables (V, CP) under Post-IFRS period contribute more to the dependent variable (Rt) than under the Pre-IFRS period.

These results indicate that not only do volumes traded and closing prices significantly affect stock returns as a component of stock market behaviour, there is a positive significant difference between post- and pre-adoption effects. This result invariably suggests that IFRS adoption has significantly affected firm behaviour in respect of the volume and trading activities of listed firms in Nigeria. This result is in tandem with the findings (Hong and Stein 2007; Donalson and Kamstra, 2004) where they opined that trading volume contributed significantly to stock returns of firms in European countries. This implies that IFRS has contributed to the rise of the market capitalization of firms and enhance returns on the stock price of investors in Nigeria due to large trading volume in the stock market. This study, therefore, rejects the null hypothesis and alternative hypothesis which states the there is a significant relationship between the effects of IFRS and volume/trading activities of listed firms on the Nigerian Stock Exchange.

Table 6 shows the means and the standard variation estimates of the model. It is observed that the mean for the post-adoption period (9.556) is significantly higher than that of the pre-adoption (8.509).

4.2. Test of Hypothesis & Model 2

Table 6. Descriptive statistics (dependent variable: SP (AVG)

Period	*Mean*	*Std. Deviation*	*N*
Pre-IFRS Adoption	8.5096	8.78419	52
Post-IFRS Adoption	9.5567	10.38812	52
Total	9.0332	9.58728	104

Table 7 shows of variance inflation factor (VIF) in respect of multicollinearity diagnostic statistics and other statistical results. The result shows that all the independent variables that only the VIF lies within the acceptable range of 0-10. The result thus suggesting that there is no presence of multicollinearity among the variables.

Table 7. Test of variance inflation factor (VIF)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.905	.724		1.249	.215					
MKTRET (AVG)	-.043	.072	-.031	-.601	.549	.522	-.060	-.025	.638	1.568
INDRET (AVG)	1.006	.301	.866	3.346	.001	.908	.317	.140	.026	1.984
INDRETt-1 (AVG)	.074	.302	.062	.244	.808	.898	.024	.010	.027	2.002

Source: SPSS Output from Field Data, 2016

Table 8. Tests of between-subjects effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	7816.175[a]	5	1563.235	92.781	.000
Intercept	21.274	1	21.274	1.263	.264
MKTRET-11AVG	2.868	1	2.868	.170	.681
INDRETAVG	95.220	1	95.220	5.651	.019
INDRET-11AVG	.012	1	.012	.001	.979
MKTRETAVG	3.324	1	3.324	.197	.658
Time Effect	2.535	1	2.535	.150	.699
Error	1651.163	98	16.849		
Total	17953.552	104			
Corrected Total	9467.338	103			

a. R Squared = .826 (Adjusted R Squared = .817)
Dependent Variable: SP (AVG)

An examination of Table 8 reveals that the coefficient and parameter estimates are not significant at the 5% level, except those of INDRET. This is not unexpected given the previous results from the Table 7. We may, therefore, conclude that the two time periods are not significantly different in respect of these variables.

Table 9. Regression estimates for equation 2 (pre- and post-IFRS period)

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	1.174	1.077	1.090	.278	-.964	3.312
Pre-IFRS						
MKTRET-1AVG	.610	1.478	.413	.681	-2.324	3.543
INDRETAVG	.450	.458	2.377	.019	.180	2.000
INDRET-1AVG	-.013	.468	-.027	.979	-.941	.916
MKTRETAVG	-.612	1.377	-.444	.658	-3.345	2.121
Post-IFRS						
MKTRET-1AVG	-.710	1.631	.574	.542	-2.641	3.678
INDRETAVG	.520	.489	3.417	.002	.214	2.847
INDRET-1AVG	-.041	.541	-.014	.754	-.974	2.141
MKTRETAVG	-.747	1.514	-.314	.124	-3.412	1.456
[Time Effect=0]	-.652	1.682	-.388	.699	-3.990	2.685
[Time Effect=1]	0[a]					

a. This parameter is set to zero because it is redundant.
Dependent Variable: SP (AVG)

Table 9 reveals that the coefficient and parameter estimates are not significant at the 5% level, except those of INDRET. The beta coefficients for MKTRET-1, INDRET, INDRET-1 and MKTRET, and their t values are not significant ($\beta_{2=}$-0.610, $\beta_{3=}$0.450, β_4=-0.013, β_5=-0.612, t=1.090, p>0.05) for Pre-IFRS period while the beta coefficients for MKTRET-1, INDRET, INDRET-1, MKTRET and their t values are not significant as well at ($\beta_{1=}$0.710, $\beta_{2=}$0.520, β_3=-.041, β_4=-0.747, t=1.090, p>0.05) respectively for Post-IFRS period. This result signifies that the explanatory variables (TE, MKTRET-1, INDRET, INDRET-1 and MKTRET) under IFRS do not contribute significantly to the dependent variable (SP) than under the Pre-IFRS period.

This is not unexpected given the previous results from the diagnostics. We may, therefore, conclude that the two time periods are not significantly different in respect of these variables. This shows that IFRS adoption has not improved the information contained in stock/share prices of listed firms in Nigeria. This result is consistent with the findings of (Kim and Shi, 2008; Wang and Yu, 2008). They opined that a negative relationship between IFRS adoption and stock price informativeness in European countries. This implies that investors do not have enough information about specific share/share prices of firms. However, this result does not agree with the findings of (Florou and Pope 2009; Beuseclinck et al., 2009) where it was observed that IFRS adoption improved firm-specific information contained in the prices of stock. In summary, the evidence on the relationship between IFRS adoption and stock price informativeness is mixed based on their findings.

Table 10. Descriptive statistics for control variables

IFRS Adoption	*DESCRIPTIVES*	*FIRM SIZE*	*CAPITAL STRUCTURE*	*AUDITSIZE*	*INTL*
Pre IFRS	*N*	*52*	*52*	*52*	*52*
	Mean	38.52	30.42	21.02	27.42
	Median	19.32	16.21	10.01	13.42
	Std. deviation	45.10	42.49	37.42	40.91
	Skewness	0.32	0.09	0.21	0.45
Post IFRS	*N*	*52*	*52*	*52*	*52*
	Mean	39.42	32.92	22.11	28.51
	Median	19.45	16.91	11.10	14.01
	Std. deviation	47.29	43.95	39.45	41.82
	Skewness	0.41	0.11	0.35	0.51

Source: SPSS Output (2016)

Table 11. Inferential statistics for control variables

Variable	*t*	*df*	*Sig. (2-tailed)*	*Mean difference*	*SE of Diff.*
FIRMSIZE	1.431	1	0.100	0.90	0.09
CAPITALSTR	2.217	1	0.003	2.50	0.02
AUDITSIZE	1.053	1	0.015	1.10	0.14
INTL	0.014	1	0.006	1.09	0.06

Source: SPSS Output (2016)

The descriptive statistics for the control variables show that the mean and standard deviation for the post-adoption period is a little bit higher than that of the pre-adoption period. This means that all the control variables have a mild effect on investors' behaviour apart from the IFRS adoption. The inferential statistics affirms that all the control variables are statistically significant (FIRMSIZE (0.100), CAPITALSTR (0.003), AUDITSIZE (0.015), INTL. (0.006) less than p-value (0.05). Findings show that the entire control variables contribute to investors' perception in the Nigerian stock market.

5. CONCLUSION AND RECOMMENDATIONS

It can be concluded that IFRS adoption has a significant impact on the stock market behaviour of listed firms in the financial and consumer goods sector in Nigeria. Trading volume activities have a significant impact on firms' stock returns of firms after the adoption of IFRS. IFRS adoption has not increased more information about the stock price of firms taking into consideration weighted market return of firms and weighted industry return of firms. Since the findings indicate that IFRS adoption plays a significant role in investment decision-making and by implication, stock market development. Therefore, it is expected that firms improve the quality of accounting information which in turn is expected to affect economic development. This should make preparers of financial statement improve its quality by being IFRS compliant. This paper recommends that regulatory bodies in the country must ensure that companies listed on the Stock Exchange comply strictly with the IFRS implementation so as to ensure that investors have relevant information regarding stock market indices. In addition, preparers of financial statement should gear effort towards improving the quality of earnings and share price information in their financial statements which are the most widely used accounting information for investors.

5.1. Limitations /Future Research

This study is limited by the fact that it only examined two sectors of the Nigerian economy. However, future research could evaluate other sectors of the Nigerian economy. In addition, based on the number of years considered in this study, future research in this area could extend the number of years considered in this study.

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