

Effect of Corporate Information on Equity Investors' Decision Making in Listed Non-Financial Firms in Nigeria

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Abstract

The study examines the effect of corporate information on equity investors' decision making in listed non-financial firms in Nigeria. The population comprises all the listed non-financial firms in Nigeria and a filtering sampling technique was used to arrive at forty-eight (48) sampled firms covering the periods of 2012 to 2019. The hypotheses were tested using the Robust Fixed effect (RE) regression model after conducting some diagnostics tests like Pearson correlation, Variance Inflation Factor, Heteroscedasticity and Hausman Specification. The results show that firm growth (FG) and firm size (FS) have a significant positive effect on market price of shares (MPS) of quoted non-financial firms in Nigeria for the period under review. The study recommends among others, that the management of non-financial firms in Nigeria should put the growth level of their firms into consideration by ensuring a consistent increase in the value of their revenues yearly to attract more investments from the equity investors in the capital market. Their five-year growth rate should also be provided to all the stakeholders in their financial statements. Also, the non-financial firms should consolidate their firms to form a large capital base that would make them take advantage of large scale production to attract more equity investors to their firms in Nigeria.

Keywords: Corporate Information; Equity Investors; Decision Making; Non-Financial Firms

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Introduction

The divulgence of quality financial reports is rudimentary for actual decision making by investors and other stakeholders. Companies provide information through various mandatory and voluntary means. Mandatory disclosure includes financial reports and other regulatory filings while voluntary disclosure is those made in addition to disclosure mandated by regulations such as investors' presentations and ad hoc disclosures. United Nations (2017) asserted that corporate information is important for the working of effective capital markets and equally provides a wider audience to all the stakeholders, by providing useful information for assessing stewardship and making economic and policy decisions.

Equity investors of a corporation, both real and potential, will want to know how effective the directors are performing their stewardship function. They will use financial statements as a base for decisions to dispose of some, or all their shares or to buy some. Investment decisions depend on the expectations of the benefits of the investments, which in turn depend on the expectation of future growth and product demand. Relevant corporate information has predictive and/or confirmatory values that influence the decisions of users of corporate information. Faithful representation implies that decision-useful corporate information signifies realistically the economic portents that it senses to signify which help distinguish more useful information from less useful information.

The perception of investors' regarding the risk-return ability of companies will determine their investment decisions in respect of such companies. Organisations that satisfy shareholders' investment objectives based on their information need that are publicly available will enjoy

favourable investments from the shareholders which will, in turn, increase their market share prices. Zager and Zager (2006) asserted that corporate information is meant to guide the interests of the stakeholders.

Both existing and potential investors are primarily interested in evaluating the investment characteristics of firms regarding their risk, safety, liquidity, growth among others. The relationship of the current value of a stock to expectations of its future value is a function of investment opportunities. The safety of the investments of investors is equally paramount to them as indicated by the financial conditions of the company and its operating performance.

Since numerous investors are keen on firm growth potential they search for information on how the organization acquired its resources and how it utilizes them. Investors are additionally keen on observing the events and efficacy of the management. Information about how management acquires resources and uses the resources under its control can influence investment decisions. The corporate-related information regarding firm growth and firm size among others, affect shareholders decision and reflected in the market price of shares (Nirmala, Sanju & Ramachandran, 2011).

The investors are interested to know the growth potentials of the companies before committing their investment resources into the companies to earn returns, which is one of the investment objectives. The companies that have been established to have consistent growth will attract favourable investors' decisions from both within and outside the countries which will, in turn, increase the value of the firms through a rise in their market price of shares in the capital market. However, companies that have been established to have inconsistent growth will not enjoy favourable investors' decisions from both within and outside the countries which will, in turn, decrease the value of the firms by reducing their market share prices. Gikonyo (2008) asserted that poor growth prospects adversely affect the firm value of firms. The firm's size is the main factor that makes firms comparable. Al-Mwalla, Al-Oman and Ayed (2010) argued that investors are more exposed to public information for large firms rather than small firms and investors adjusted their expectations for large firms sooner than small firms. The reactions of investors based on size influence their investment decisions regarding the market price of shares.

The age of the firms is a factor in corporate information disclosure because the higher the number of years a company has been in existence the higher the availability of the information provided to the general public regarding their activities (Ghulam, Xiangning & Haji, 2019). Therefore, this study uses firm age as a control variable to minimize the level of information asymmetry. The need for this study is bone out of the quest to carry out study regarding corporate information and equity investors' decision making in listed non-financial firms in Nigeria in the post-International Financial Reporting Standards (IFRSs) implementation periods in Nigeria. This is because IFRS implementation in Nigeria has made a lot of changes to financial reporting in Nigeria.

Corporate information disclosure plays a major role in addressing the problem of information asymmetry between managers and owners thus it decreases agency problems (Diamond, 1985; Easley *et al.*, 2010). Corporate financial reporting, particularly annual reports, are a crucial tool in communicating vital information about a company financial information (Barako, 2007). Levi and Zarowin (1999) argued that there has been a systemic decline in the usefulness of financial information to investors over the past twenty (20) years, as manifested by a weakening association between capital market value and financial attributes.

Buzby (1974) also argued that many items were inadequately disclosed and there has been a gap between the users' needs of information and the actual information supplied by companies' annual

reports. The users of corporate information may need non-ratio financial information regarding the firm growth, management quality and firm size among others which cannot be identified through regular ratios analysis from the financial statements of companies and invariably increasing the information gaps between the managers and the stakeholders of the organizations. The size of the firm also determines the availability of information provided to the general public. Small firms suffer from inadequacy of information transparency and large firms carry lower risks compared to small firms due to the availability of public information which informed investors' investment decisions in favour of the large firms.

Some of these studies (e.g. Hamzah, 2017 and Mustafa, 2019) used weaker statistical tools of ordinary least square regression and stepwise regression technique for the panel data as against the postulate of Hausman (1978), who asserts that panel data (cross-sectional and time series) must be analysed with either fixed, random or pooled least square regression. This, therefore, affects the reliability of the results of these previous works. In a related development, most of the studies (e.g. Ugwu, Eneh & Uche, 2018) conducted in Nigeria combined the data for both pre and post IFRS implementation together which affect the findings as a result of changes made to financial reporting.

Also, the empirical works have shown that some of the studies (e.g. Agirman & Yilmaz, 2018; Ardina & Isnalita, 2018; Cory, Pandia & Idhar, 2020; and Ghulam, Xiangning & Haji, 2019) carried out in recent times regarding firm growth, firm size and investment decision in Nigeria and other countries of the world were not current in the data used for the analysis to reflect the current economic realities as all the data were within 2016 and below except the work of Mustafa (2019) whose data cover up to 2018.

Furthermore, these kinds of studies conducted in Nigeria were very scanty while most of these studies were mostly done in other countries of the world. These identified gaps in literature call for further study in this area which necessitated this study the effect of corporate information on equity investors' decision making in listed non-financial firms in Nigeria, to update the data up to 2019, use appropriate panel regression technique, cover only the periods of IFRS implementation in Nigeria and add to the scanty literature in this area in Nigeria.

The main objective of this study is to examine the effect of corporate information on equity investors' decision making of listed non-financial firms in Nigeria. This study is specifically intended to: (i) examine the effect of non-ratio based financial information (firm growth and firm size) on market price of shares of listed non-financial firms in Nigeria. The hypotheses are formulated for test in line with the specific objectives as follows: H_0 : Non-ratio based financial information (firm growth and firm size) have no significant effect on market price of shares of listed non-financial firms in Nigeria.

Literature Review

Conceptual Framework

The conceptual framework for this as adapted from Cory, Pandia and Idhar (2020) comprises two proxies (Firm Growth and Firm Size) representing independent variable and a proxy (Market Price of Shares) as a dependent variable with one control variable Firm Age.

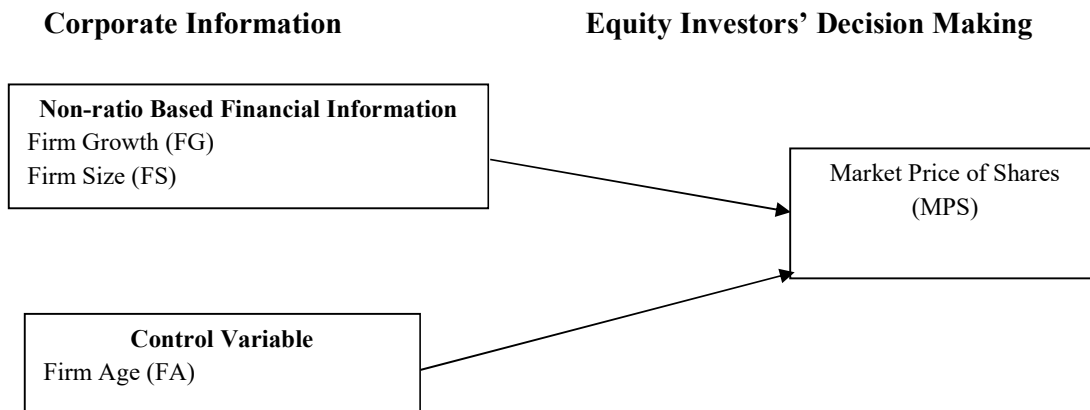


Figure 1: Adapted from Cory, Pandia and Idhar (2020)

Corporate Information

Meigns (1998) defines corporate information as the process of communicating financial information to decision-makers. It provides information useful for making investment decisions. Its disclosure provides both quantitative and qualitative information for its user's effective use and reliable decisions. Al-Shammari (2008) define corporate information in the annual reports as a medium for communicating both quantitative and qualitative corporate information to shareholders, investors and other users. Barron, Kile and O'keefe (1999) assert that corporate information assists to improve the ability of investors to forecast future income by making better profit estimates. Corporate information provides the company's both financial and non-financial performance that will be used as the base for the user decision-making related to the company's economic condition.

Accounting information otherwise called a financial report refers to a formal and comprehensive statement describing the financial activities of a business organisation. Accounting information is a statement that reports all relevant financial information, presented in a structured manner and in a form easy to understand by investors to enable them to make an informed investment decision and for management of a business entity to take a prompt and informed decision (Afolabi, 2013). Accounting information or financial report is the mechanism of communicating economic information to the stakeholders. It is a statement prepared by the directors of an organisation showing how well they have been able to manage the resources entrusted to them by the owners (shareholders) of the business. Financial reports are means through which the strengths and weaknesses of an organisation can be ascertained at a glance (Mohammed, Abubakar & Danrim, 2016).

Investors' Decision Making

Investment decisions according to Dewi and Iramani (2014), is a decision to invest capital in one or more assets for future gain. It is about how investors allocate funds into investment forms that will be profitable in the future to come. Adedoyin *et al.* (2019), define investment decision as the decisions taken by individual investors to invest in stocks, which directly reflect the market price of shares. This means that equity investors' decision to buy shares in a particular firm will reflect in the market price of the share of that firm. According to Sindhu and Kumar (2014), investors' decisions generally mean the decisions made by investors as to where, how, and how much funds will be invested in various financial instruments to generate income or value appreciation. For this study, the investment decision is measured by the market price of shares. A market price of a share is a price at which the ordinary shares of an organization are traded at any particular point. A share price is often volatile since it is largely dependent on the expectations of buyers and sellers. For this research, the closing prices of shares are taken to define market share price.

Corporate Information and Equity Investors' Decision Making

Nedlees Anderson and Caldwell (2000) opined that the information provided by accounting represent the basis on which decision-making process rely both inside and outside the company", stating that the purpose of accounting information is "to provide the basic data needed by different users to take fundamental decisions". Singhvi and Desai (1971) stated that the quality of corporate information in the annual report considerably influences the extent and quality of investment decisions made by investors. Annual reports are commonly regarded as an important means of acquitting accountability in the corporate and government sectors and often are one of the means by which sectors can improve stakeholders' perceptions of their accountability.

There is a general belief that firm growth thrives shareholders' wealth. When a company announces a lower growth rate than investors had already discounted into the stock price, its stock price decreases. Hampton (1993) explains that the means of internal growth is the firm's ability to increase sales and expand its operations. A firm may purchase a new plant or machinery to expand its capacity to produce existing products or a firm purchases plant or machinery and train its sales force to produce and sell a new product. Also, for expansion of existing production, the firm seeks a larger volume of sales with the existing product, captures the new market and emphasizes product diversification. The internal fund is derived from retained earnings, depreciation, tax shield, and other non-cash transactions. The outside funds are generated by debt and equity or both. However, the firms, which generate internal funds, are at the advantage for their internal growth than firms depending on external funds. The firm depends on the internal fund has the greater ability to compete with the other firm in the market.

The external growth means that it has the potentiality to acquire operations of another firm. Hampton (1993) explains that the term acquisition is generally used to refer to the taking over assets in the process of external growth. Takes over process seem to be the purchases of the assets or stock combined with another firm. Growth is defined as the annual percentage change in total assets and operating profit (Hampton, 1993). In assessing the growth of the company, the calculation of Total Assets Growth (TAG) can be used. Total assets showed growth projections of a company's growth potential between the current year with the previous year. Business expansion is usually encouraged because the company is in a growth phase, where production is getting bigger, getting the full confidence of investors and creditors, and business growth opportunities elsewhere are favourable.

Another aspect of non-ratio based financial information is firm size. Firm size indicates the size of how big a company owned assets. A large company will have three advantages which are easy to get venture capital, strong in bargaining, and has a big advantage as well. Firm Size can be measured using the natural logarithm of total assets. Muhammadi (2014) found that there was a direct link between firm size with an investment decision.

It is believed that some larger firms have enough resources acquired over the years given them an edge over smaller firms as they can engage in higher risks and effectively manage with a high expectation of result. Khaoula and Ayed (2013) and Rego (2003) observe that larger firms can achieve economies of scale and access loans within a short period. Biddle and Hilary (2009) find evidence that large firms usually have higher sales than small ones. Accordingly, the level of equity and debt is higher in large firms. Such levels provide strong evidence that financial reports are more transparent and have a stronger effect on these firms. This leads us to predict a positive relationship between firm size and market reaction. Berger and Bonaccorsi (2006) posit that size is an important determinant of a firm's performance arguing that larger firms are usually more diversified; better- managed and have larger risk tolerance. Small firms, on the other hand, may find it more difficult to solve the information asymmetry problem and thus may appear to perform worse than big companies (Berger & Di-Patti, 2006).

Firm Growth and Equity Investors' Decision Making

Ghulam, Xiangning and Haji (2019) examined the causal relationship between stock market performance and firm investment in China: the mediating role of information asymmetry. The study used an *ex post facto* research design. The sample size comprises 398 firms in Chinese manufacturing firms listed at the Shanghai Stock Exchange and the Shenzhen Stock Exchange, covering a period of 2002 to 2016. The study used random-effects model analysis to test the hypotheses. The study found a statistically significant and negative relationship between stock price and sales and trading volume while the study found a statistically significant and positive relationship between stock price and market capitalization and leverage. Information asymmetry (firm age and firm size) positively mediates relationships.

Ardina and Isnalita (2018) assessed the effect of profitability, liquidity, leverage and firm growth on firm value with its dividend policy as a moderating variable. The study used an *ex post facto* design while the population consists of 146 companies listed on the Indonesia Stock Exchange. The study sampled 112 companies using a judgmental sampling technique, covering the period of 2013-2016. The data were sourced from the financial statements of the sampled companies. The study used the classic assumption test of normality, multicollinearity test and test for heteroskedasticity while fixed-effect regression analysis was used to estimate the model. The study found that the company's profitability and growth variables have a significant positive effect on firm value while liquidity and leverage have a significant negative effect on Firm Value. The study used an appropriate statistical tool of technique to estimate the panel data which enhance the outcome of the results. However, the study was carried out in another environment outside Nigeria in the past which cannot be generalized because of the environmental differences and also the need to update the study up to the current period in Nigeria.

Ataünal, Gürbüz and Aybars (2016) evaluated if high growth creates value for shareholders? Evidence from S&P500 firms. The study used a longitudinal design while the population consists of Standard Poor's 500 companies (S&P500). The sample comprises 243 non-financial Standard companies using the purposive sampling technique, covering the period of 1993-2014. The data were sourced from the Bloomberg database. The study used a panel regression analysis of a fixed-effect model to estimate the model. The study found that sales growth below sustainable growth rate (SGR) enhance shareholder value at a significantly higher rate compared to growth above the sustainable growth rate. The study used a panel regression technique which is a good method for this kind of study and provides reliable results. But, the study was carried out in another environment outside Nigeria in the past which cannot be generalized because of the environmental differences and also the need to update the study up to the current period in Nigeria.

Altahtamouni and Alslehat (2014) examined the impact of accounting indicators and growth on the market value. The study used an *ex post facto* design, in all Jordanian banks. The study sampled companies subject to the availability of data covering the period of 2002-2011. The data were sourced from the financial statements of the sampled companies. The study used Pearson correlation and OLS regression analysis to estimate the model. The results show that there is a significant positive impact of accounting indicators and rate of future growth on the market value. Also, the study found that the best explanatory accounting indicator for the changes in the market value of the Jordanian banks is earning per share, and this indicates that it is the best accounting indicator, which is taken into account when making an investment decision in the financial market. The study used a weaker statistical tool of ordinary least square regression technique to estimate the panel data as against the postulate of Hausman (1978). Also, the study was carried out in another environment outside Nigeria in the past which cannot be generalized because of the environmental differences and also the need to update the study up to the current period in Nigeria.

Firm Size and Equity Investors' Decision Making

Cory, Pandia and Idhar (2020) assessed the effect of profitability, firm size, firm growth, and dividend policy on stock prices with capital structure as moderating variables. The study used a purposive technique in telecommunications companies listed on the Indonesia Stock Exchange, covering a period of 2011-2018. The hypotheses were tested using a fixed-effect model. The study found that profitability had a positive and significant effect on stock prices while company size and dividend policy had a negative and significant effect on stock prices and company growth had a positive and insignificant effect on stock prices. The study equally found that the capital structure does not moderate the relationship between profitability, firm size, and firm growth on stock prices but moderate the relationship between dividend policies on stock prices. The study used adequate statistical tools of analysis to examine the panel data. Also, the study was carried out in 2020 and the data covered up to 2018 which enhance the currency of the study. However, the study was carried out in another environment outside Nigeria in the past which cannot be generalized because of the environmental differences and also the need to update the data up to the current period.

Mustafa (2019) ascertained the relationship between brand value, firm size and stock price performance. The study used an *ex post facto* research design. The sample comprises seven (7) listed companies that operate in the retail and sports sectors whose shares have been traded on the Borsa Istanbul covering periods of 2012-2018. Ordinary least square (OLS) regression analysis was used for the analysis. The study found that brand value and firm size have a significant positive effect on stock prices. The study was carried out in 2019 and the data covered up to 2018 which enhance the currency of the study. However, the study used a weaker statistical tool of ordinary least square regression technique to estimate the panel data as against the postulate of Hausman (1978). The study also was carried out in another environment outside Nigeria in the past which cannot be generalized because of the environmental differences and also the need to update the data up to the current period in Nigeria.

Agirman and Yilmaz (2018) investigated whether financial information can predict stock returns. The study used an *ex post facto* design in Borsa Istanbul (BIST). The sample comprises 47 companies using the purposive sampling technique covering the periods of 2004-2014. The data were extracted from the Istanbul Stock Exchange's official website. The study used panel multiple regression analysis to estimate the model. The study found that firm size has a significant power to predict the stock return among the other variables. Dividend per share and price to book ratio have less forecasting power. However, there is no significant relationship between price to earnings ratio and stock returns. The study used adequate statistical tools of analysis to examine the panel data. However, even though the study was carried out in 2018 the data covered only up to 2014 which affect the currency of the study.

Ugwu, Eneh and Uche (2018) evaluated the effect of financial variables on the share prices of oil and gas firms in Nigeria. The study used an *ex post facto* design in oil and gas firms in Nigeria, covering the period of 2007-2016. The data were extracted from the annual reports and accounts of the sampled companies. The study used random effect regression to estimate the model. The study found that firms size and PAT have a positive and insignificant effect on share price while firms' leverage has a negative and insignificant effect on share price of oil and gas firms. The study used adequate statistical tools of analysis to examine the panel data but combined data from both pre (2007-2011) and post (2012-2016) IFRS implementation in Nigeria which affects the findings. Also, even though the study was carried in 2018 the data covered only up to 2016 which affect the currency of the study.

Hamzah (2017) assessed the determinants of corporate investment decision: Evidence from quoted manufacturing firms in Nigeria. The study used an *ex post facto* design of quoted

manufacturing firms in Nigeria. The study sample 13 manufacturing companies using a simple random sampling technique covering the period of 2005-2014. The data were extracted from the annual reports and accounts of the sampled companies. The study used descriptive statistics for the normality test and conducted a diagnostics test of Pearson correlation for multicollinearity while OLS multiple regression analysis was used to estimate the model. The study found that cash flow and firm size are the major determinants of investment decisions by manufacturing firms in Nigeria. The study used a weaker statistical tool of ordinary least square regression technique to estimate the panel data as against the postulate of Hausman (1978). The study also combined data from both pre (2005-2011) and post (2012-2014) IFRS implementation in Nigeria which affects the study findings.

The theory underpinning the Study

The theory underpinning this study is signalling theory. This theory is discussed below:

Signalling Theory

The signalling model was first postulated by Michael Spence in (1973). In this theory, financial information cannot be overemphasized to be one of the means through which the passage of information is successfully made to users (especially from managers to stockholders). A hypothesis was built by Fama, Fisher and Jensen (1969) which suggest that the announcement of splits by a company could foster the reduction of any asymmetric information in existence between stockholders and management. Oyerogba, Solomon and Olaleye (2014) explained in their study that the signalling hypothesis suggests that an announcement of a stock dividend conveys new information to the market. An examination of Foster and Vickrey's paper on daily returns around announcement dates in 1978 was made by Pathirawasam, The motive primarily lies in the determination of whether the announcement of stock dividend influences investor's expectations in the area of future firm's prospects.

The analysis covers 82 stock dividend announcements, the daily market model residuals during those announcement days. News announcements and cash dividend announcements for 3 days of the declaration were used to control the sample. Arthurs, Busenitz and Hoskisson (2009) discover from their findings that signalling and initial public offerings (IPOs) supported the signalling theory and can be used to further explain the signalling theory concerning bonus issues and stock splits. During the announcement of bonus shares and stock splits, the necessary signals before the announcement, breeds in shareholders' and other user's sensitisation.

Therefore, the existence of these splits in a company denotes its effectiveness and efficiency in operation and as a result, tells greatly on its huge markup potential. It is also issued by managers to ensure confidence is restored and retained to a large extent by the company. This act, therefore, necessitates an increase in the number of its shareholders. Appropriate disclosure of corporate information serves as a great signal to its users as it could be used in making a more effective decision by the shareholders of companies.

The signalling theory is relevant to this study because the theory emphasized that the appropriate disclosure of information such as (firm growth and firm size) serve as a great signal to its users as there are used in making a more effective decision by the shareholders of companies. It also holds that financial information cannot be overemphasized to be one of the means through which the passage of information is successfully made to users (especially from managers to stockholders). This implies that the disclosure of corporate information guides equity investors' in their investment decision making which reflect in the market prices of shares in the capital market.

Methodology

This study uses a descriptive research design precisely an *ex-post-facto* method because of the nature of the specific objectives, the population, the nature of the data and the test statistics adopted. This design is used because the variables under study are related, expressed in a numeric form and quantifiable in nature. This study involves the measurement of the proxies of the independent variable against the proxy of the dependent variable. An *ex-post-facto* method is appropriate for this study because it allows for predicting the effect of explanatory variables on the response variable.

The population of this study consists of all the one hundred and twelve (112) listed non-financial firms in Nigerian as of 31st December, 2019. The study used the periods of 2012-2019. The sample size of this study comprises all the non-financial firms listed on the Nigerian stock exchange, this sector is chosen as the area of the study as it constitutes 68% of the total listed firms on the Nigerian stock exchange. The study used filter criteria to arrive at the final sample size included from the non-financial sectors as stated below:

- (i) A firm must be listed on the floor of the Nigerian Stock Exchange (NSE) at least a year before the implementation of International Financial Reporting Standards (IFRS) (2012) in Nigeria.
- (ii) A firm must be listed on the Nigerian Stock Exchange and its shares traded on the floor of the exchange for the periods covered by the study.

Based on the criteria, forty-eight (48) firms were arrived at, making up the total sample size of the study. The study uses documentary firm-level data that were extracted from the annual reports and accounts of the sampled firms and the Nigerian Stock Exchange factbook and website. Data used for the estimation of the model were extracted from the sampled firms annual reports and accounts while the date of firms' quotation on the NSE and date of firm incorporation were extracted from the NSE factbook and website. The data were extracted from the periods of 2012 to 2019 through the internet from the sampled firms' websites.

A fixed-effect regression model was used to examine the effect of corporate information on equity investors' decision making in listed non-financial firms in Nigeria. Based on the nature of the data i.e. panel data, a Hausman test was used to determine the choice between the fixed-effect model and random effect model regression. The analysis was aided by STATA 15 software.

The dependent variable is equity investors' decision making proxy by the market price of shares (MPS) while the independent variable is corporate information proxies by Non-ratio based Financial Information [Firm Growth (FG) and Firm Size (FS)]. The study uses Firm Age (FA) as a control variable. Specifically, the functional linear equation as adapted from Cory *et al.* (2020) is presented as follows:

$$MPS = f(FG + FS + FA)$$

Econometrically, the above equation is rewritten into different a model as follow:

$$MPS_{it} = \beta_0 + \beta_1 FG_{it} + \beta_2 FS_{it} + \beta_3 FA_{it} + \mu_{it} \dots\dots\dots (1)$$

Where:

MPS = an indicator representing market price of shares (dependent Variable);

β_0 = Intercept term (a constant);

$\beta_1 - \beta_2$ = Coefficients of proxies of independent variable;

β_3 = Coefficient of firm age; and

FG = a predictor representing independent variable (firm growth);

FS = a predictor representing independent variable (firm size);

FA = a predictor representing control variable (firm age);

μ = Stochastic error term;

i = Firms

t = periods; and

f = Functional relationship.

A-priori Expectations: $\beta_1, \beta_2 > 0$

Operationalisation of Variables and Justifications

Table 1 below explains the variables under study

Variable	Acronym	Type of variable	Measurement	Justification
Market Price of Shares	MSP	Dependent	Average annual price shares.	Altahtamouni and Alslehat (2014); and Cory <i>et al.</i> (2020).
Firm Growth	FG	Independent	Natural log of total revenue.	Ardina and Isnalita (2018); and Ataunal <i>et al</i> (2016)
Firm Size	FS	Independent	Natural log of total assets.	Agirman and Yilmaz (2018); Hamzah (2017); and Ugwu <i>et al</i> (2018).
Firm Age	FA	Control	The total number of years the company has been in existence divide by the total sample firms.	Ghulam <i>et al.</i> (2019).

Source: Researchers' compilation (2021)

Data Analysis and Results

The data were analysed with the aid of Stata 15 software using Descriptive Statistics, Shapiro-Wilk Test, Pearson Correlation, Heteroscedasticity test, Hausman Specification Test and robust fixed effect regression model based on the data.

Descriptive Statistics

Table 2 summarises the descriptive statistics of the entire data set.

Variable	Obs	Mean	Std. Dev.	Min.	Max.
MSP	371	40.044	153.674	0.2	1461
FG	367	6.82	0.973	3.017	9.13
FS	374	6.996	0.829	4.758	9.031
FA	384	0.034	0.004	0.024	0.041

Source: Researcher's Computation using STATA 15 software

Table 2 shows that the market price of shares (MPS) has a minimum value of 0.2, a maximum value of 1, 461 and a mean value of 40.04 that is within the minimum and maximum values indicating a good spread within the period studied. The Table also reveals that MPS has a standard deviation of 153.67 that is more than the mean, which implies that it had strong growth for the period under review. Table 2 also shows that firm growth (FG) has a minimum value of 3.02, a maximum value of 9.13 and a mean value of 6.82 that is within the minimum and maximum indicating a good spread within the period studied. The table also reveals that FG has a standard deviation of 0.97 that is less than the mean, which implies that it had a slow growth during the period under review.

Table 2 further shows that the firm size (FS) has a minimum value of 4.76, a maximum value of 9.03 and a mean value of 6.99 that is within the minimum and maximum values indicating a good spread within the period studied. The Table also reveals that FS has a standard deviation of 0.83 that is less than the mean, which implies that it had slow growth for the period under review.

Table 2 finally shows that firm age (FA) has a minimum value of 0.02 a maximum value of 0.04 and a mean value of 0.03 that is within the minimum and maximum indicating a good spread within the period studied. The table also reveals that FA has a standard deviation of 0.004 that is less than the mean, which implies that it had a slow growth during the period under review.

Shapiro-Wilk Test for Normality

Table 3 below shows the results of the normality test conducted with the use of the Shapiro-Wilk method.

Variable	OBS	w	v	z	Prob. Chi2
MSP	371	0.251	192.662	12.474	0.00
FG	367	0.98	5.054	3.84	0.00
FS	374	0.986	3.579	3.024	0.00
FA	384	0.945	14.72	6.387	0.00

Source: Researchers' Computation using STATA 15 software

Table 3 above shows the probability values of all the variables i.e. the market price of shares (MPS), firm growth (FG), firm size (FS) and firm age (FA) are not normally distributed around their mean values. This indicates that one of the basic assumptions of the linear regression technique is violated. This is corrected in this study using robust regression technique as specified by (Gujarati, 2003).

Pearson Correlation

Table 4 below is the Pearson correlation matrix for the data set to show the extent of associations between the variables.

Variable	MSP	FG	FS	FA
MSP	1			
FG	0.3348*	1		
FS	0.3092*	0.8495*	1	
FA	0.1102**	0.2400*	0.0042	1

* = Significant at 1%

** = Significant at 5%

Source: Researchers' Computation using STATA 15 software

The correlation matrix determines the degree of relationships between the proxies of an independent variable and the dependent variable. It is also used to show whether there is an association among the proxies of independent variable themselves, to detect if a multicollinearity problem exists in the model. The result from table 4 shows a 33% positively and moderate relationship between firm growth (FG) and market price of shares (MPS) of quoted non-financial firms in Nigeria, from a correlation coefficient of 0.3348 at 1% level of significance (p-value 0.0000). The table indicates 31% positively and moderate relationships between firm size and market price of shares (MPS) of quoted non-financial firms in Nigeria, from a correlation coefficient of 0.3092 which is also significant at 1% level of significance (p-value 0.0000).

The table further indicates 11% positively and weak relationships between firm age and market price of shares (MPS) of quoted non-financial firms in Nigeria, from a correlation coefficient of 0.1102 which is also significant at 5% level of significance (p-value 0.0339). Finally, the relationships between firm size and firm growth of approximately 85% which lead to a further test of Variance Inflation Factor to determine if the high relationship will inflation the over results.

Variance Inflation Factor (VIF) Results

Table 5: Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
FG	4.65	0.214938
FS	4.25	0.235417
FA	1.15	0.86941
Mean VIF	3.35	

Source: Researchers' Computation using STATA 15 software

In a bid to further test the absence of multicollinearity problem among the exogenous variables, collinearity diagnostics test were observed as the Variance Inflation Factors (VIF) and the Inverse Variance Inflation Factors (1/VIF) values portray no multicollinearity problem in the data as their values are less than 10 and 1 respectively (Gujarati, 2003) as presented in table 5. This point to the fact that the variables are well selected and fitted in the same regression model because there is the absence of a multicollinearity problem in the model, which is one of the requirements for regression analysis.

Heteroscedasticity test

Table 6: Heteroscedasticity test

Type of test	Chi2	P-Value
Heteroscedasticity Test	117.23	0.00

Source: Researchers' Computation Using STATA 15 software

To establish that the data for this study was robust for the model, a heteroscedasticity test was carried out. However, the study revealed that data is heteroskedastic; as such the basic linear regression model would not be reliable. This can be confirmed from the heteroskedasticity result in table 6 which revealed the chi2 value of 117.23 with a p-value of 0.000. To correct this anomaly, the robust linear regression technique was used as suggested by (Hoechle, 2007). As it fails to satisfy the classical linear regression assumption of homoskedasticity (constant error variance).

Hausman Specification Test

The data for this study is panel and panel data can lead to an error that is clustered and possibly correlated over time. This is because each non-financial firm may have its entity-specific characteristic that can determine its information (i.e. unobserved heterogeneity). And this may bias the outcome variable or even the explanatory variables. As such there is need to control for that. The Hausman test shows that the fixed effect model is more appropriate. This can be confirmed from the Chi2 value of 113.12 with a p-value of 0.00 in table 7 which is significant at 1% level of significance as suggested by (Hoechle, 2007).

Table 7 below presents the result of the Hausman specification test conducted.

Chi2	113.12
Prob. Chi2	0.00

Source: Researchers' Computation using STATA 15 software

Non-Ratio Based Financial Information and Equity Investors' Decision Making using Robust Fixed Effect Model (FEM)

Table 8 below is the robust fixed effect regression model conducted for the estimation of this model.

Variable	Coefficients	t-value	Prob.
Cons.	-451.238	-13.46	0.000
FG	33.988	4.90	0.002
FS	27.937	3.42	0.011
FA	1817.236	5.96	0.007
R-sq overall	0.5282		
F-Statistic	137.53		
Prob. >F	0.000		

Source: Researchers' Computation using STATA 15 software

Table 8 above indicated that 53% variation of the market price of shares (MPS) is predicted by the combined effect of firm growth (FG), firm size (FS) and firm age (FA) with (Overall R-sq of 0.5282). This indicates that the model of the study is okay and the independent variables are properly combined and used. The Fisher statistic value of 137.53 with a P-value of 0.00 signified that the model is fit for the study.

Discussion of Findings

This study reveals that firm growth (FG) has a significant positive effect on market price of shares (MPS) of quoted non-financial firms in Nigeria for the period under review. This implies that firm growth increases the market price of shares (MPS) of quoted non-financial firms in Nigeria. The finding is in line with the a-priori expectation of the researcher because firm growth (FG) positively enhance the market price of shares of quoted non-financial firms in Nigeria. The finding is also in line with the signalling information theory which asserts that appropriate disclosure of information serves as a great signal to its users as there are used in making an effective decision, which translates into the movement of the market price of shares. The firm growth (FG) has a significant positive effect on market price of shares of quoted non-financial firms in Nigeria for the period under review. This finding agrees with the findings of Altahtamouni and Alslehat (2014), Ardina and Isnalita (2018), Ataünal *et al.* (2016). However, the finding does not support Cory *et al.* (2020) finding.

This study also reveals that firm size (FS) has a significant positive effect on market price of shares (MPS) of quoted non-financial firms in Nigeria for the period under review. This implies that an increase in firm size will increase the market price of shares (MPS) of quoted non-financial firms in Nigeria. The finding is in line with the a-priori expectation of the researcher because firm size (FS) positively enhance the market price of shares of quoted non-financial firms in Nigeria. The finding is in line with the agency theory which asserts that an increase in information supply by the managers to the shareholders reduces the level of information asymmetry and influences market share prices of firms. The firm size (FS) has a significant positive effect on market price of shares of quoted non-financial firms in Nigeria for the period under review. This finding is in agreement with the findings of Agirman and Yilmaz (2018) and Mustafa (2019). However, the finding is not in line with the finding of Ugwu *et al.* (2018).

Conclusion and Recommendations

The management of non-financial firms in Nigeria must put the growth potentials of their firms into consideration by ensuring a consistent increase in the value of their revenues yearly to attract more investments from the equity investors in the capital market. Companies with a relatively consistent increase in their revenues will attract more equity investments from the investors and, therefore, commutates into a favourable market price of shares. The firm size is also one of the

factors that are being considered by most equity investors when making decisions on where to put their investments. The companies in the non-financial must merge to form a large capital base that would make them take advantage of large scale production to attract more equity investors to their firms in Nigeria. This is because equity investors prefer to invest more in large firms than small firms as big firms are believed to disclose more information than small firms. Based on the above conclusion, the following recommendations are proffered:

- i. The management of non-financial firms in Nigeria should put the growth level of their firms into consideration by ensuring a consistent increase in the value of their revenues yearly to attract more investments from the equity investors in the capital market. The firms' five-year growth rate should be provided to all the stakeholders in their financial statements.
- ii. The non-financial firms should consolidate their firms to form a large capital base that would make them take advantage of large scale production to attract more equity investors to their firms in Nigeria.

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