TSU-International Journal of Accounting and Finance (TSUIJAF)
e-ISSN: 28811-2709, p-ISSN: 28811-2695.Volume 2, Issue 1 (March, 2023).

MODERATING EFFECT OF MARKET RISK ON THE RELATIONSHIP BETWEEN INCOME SMOOTHING AND FIRM VALUE OF QUOTED NON-FINANCIAL FIRMS IN NIGERIA

Abdullahi, I.O Ph.D[1], Ugoh, T.T. Ph.D[2] & Adebiyi, Shola Tajudeen[3]
1,2&3Department of Accounting, Nasarawa State University, Keffi.
ismailaolotu@nsuk.edu.ng, timothyterver@gmail.com

Abstract

The 21st century like never before is witnessing the prevalence of accounting scandals resulting in the collapse of firms which has been attributed to the opportunistic behaviors of managers. This seems to be adversely affecting the value of companies on the stock Market. Hence, this study aims to examine the moderating effect of market risk on the relationship between income smoothing and firm value of quoted non-financial companies in Nigeria. The ex post facto research design was employed. The population of this study included the entire 116 non-financial firms quoted on the Nigerian Exchange group as at December 31st, 2021. However, a sample size of 51 companies were sampled using Taro Yamane sampling size determination technique. The study collected data through secondary sources for a period of ten years (2012-2021) through audited annual financial statements. Income smoothing was measured using the accrual-based methods, while firm value was measured using share price. The quantitative approach was also used in the study. Furthermore, the system generalized method of moments (Blundell–Bond) panel estimation technique was used for analyzing the data. The study found that income smoothing has a negative significant impact on firm value. The study also revealed that market risk is a significant variable that defines the relationship between income smoothing and firm value. The study concluded that income smoothing and market risk are veritable factors for predicting shares prices in non-financial sector of the economy. Thus, the study recommended that investors pay close attention to market risk when assessing the value of firms based on the level of income smoothing carried out by managers.

Keywords: Income smoothing, Market risk, Firm value, Moderating effect, Agency problem

Introduction

Globally, informed earnings announcements automatically cause the market to react. The market reaction is indicated by changes in stock prices in the market as the response given by the market to published financial reports is indicated by the value of Cumulative Abnormal Return (CAR). In making a decision to invest, of course, investors will think about how much risk that will be borne in investing. Risk and return have a positive and unidirectional relationship, where the greater the risk borne, the greater the return will be compensated (Chen et al., 2020). Investors will pay attention to the company's stock price trends to assess the company's performance. Investors can judge whether a company is good or bad through the company's value. Harrison (2012) opined that firm value varies depending on the net income earned by the company, financial position, and the company's prospects in the future, as well as economic conditions. Market value is the overall value that occurs in the stock market in a certain period of time (Ratnasari et al., 2014). Prices will reflect market players' expectations of market value.

Conversely, firms' valuations by investors have been plagued by a lack of relevant and reliable information, especially in developing economies such as Nigeria. The management of earnings through smoothing has made it difficult for investors to assess the underlying performance of

firms, thus, limiting the ability of investors in valuing firms accurately. This has also culminated into inefficient resource allocation between low-rated firms in terms of performance and the high-rated ones.

Literature suggests that income smoothing is an attempt by management to reduce abnormal variations in earnings to the extent allowed under sound accounting and management principles. Income smoothing is a form of earnings management (Agrawal & Chatterjee, 2015; Demerjian et al., 2020; Tabassum et al., 2015). Managers either use their discretion to alter earnings by different accounting choices or change operations for the sake of earnings targets (Cvetanovska & Kerekes, 2015). This target may be set by management or requested by a group of stakeholders (Chong, 2006). By reducing the fluctuation in income, future earnings can be predicted more accurately and enhance shareholders' value (Baik et al., 2019; Feihn & Struck, 2011; Huang et al., 2008; Li & Richie, 2016; Susanto & Pradipta, 2019). Thus, capital market pressure to report smooth earnings that meet performance benchmarks is one key reason for managers to engage in smoothing that resulted from manipulations (Graham et al., 2015).

Furthermore, one of the factors that explain firm value is market risk. This idea of market risk is reflected in the volatility of the market. Pereira and Zhang (2010) posit that investors adapt their trading strategy to the volatility in the market. It argued that higher market risk (beta) indicates better prospects for managers to profit from inside information and for outside shareholders to engage in profitable monitoring of managers. There are countless reasons why managers engage in income smoothing; this includes reaching bonus targets, protect their job, meeting performance goals, improving firm value, meeting debt covenants, reduce tax liabilities and political costs and enhancing the reliability of financial forecasts (Chen et al., 2020; Demerjian et al., 2020; Flourien, 2019; Jung et al., 2020; Monjed & Ibrahim, 2020; Novianti & Firmansyah, 2020; Trueman & Titman, 1988). The capital market tends to appreciate companies that report highly stable earnings because it is easier for future earnings of such companies to be forecasted more accurately. Also, earnings variability is interpreted as an essential measure of the overall riskiness of the firm and has a direct effect on investors' capitalization rates (Beidleman, 1973).

The motivation for this study is from the fact that most findings in this area of research emanated from economies where market forces determine asset prices. However, in a regulated market like that of Nigeria, prices of assets are determined by forces other than market mechanisms to include price regulation. Therefore, there is a need for empirical evidence from a regulated market. Nigeria is a typical case being the largest economy in Africa and most populate amongst the black race. The Nigerian Securities and Exchange Commission (SEC) was saddled with the sole responsibility of determining share price before the introduction of the SEC Act, 1990 (Fadiran & Olowookere, 2016). Although, share prices are now expected to be determined by market forces, in some securities such as the mutual fund, the Securities and Exchange Commission (SEC) may prescribe the methods for determining such prices (The Investment Securities Act, 2007). This is expected to curb manipulation in the securities market which could affect investors funds. This practice affects the amount of information impounded by the share price.

Accordingly, the impact of income smoothing on firm value appears to vary among countries and across industries considering the market effect in such countries. Again, market risk is a key determinant of capital asset price (share price); and it is also capable of influencing the connection between income smoothing and firm value. However, review of the literature showed

that past studies failed to examine the moderating effect of market risk on the relationship between income smoothing and firm value. To this end, this study is unique and important. Furthermore, the scope of this study is based on listed companies on the Nigerian Exchange Group (NEG), excluding financial institutions as a result of complexities in their financials. Therefore, the main objective of this study is to examine the effect of income smoothing on firms' value as moderated by market risk.

Statement of Hypotheses

H_O1: Income Smoothing has no significant effect on value of quoted non-financial companies in Nigeria.

H_O2: Market risk has no significant moderating effect on the relationship between income smoothing and value of quoted non-financial companies in Nigeria.

Literature Review

Income Smoothing

Earnings smoothing is one of the accounting-based earnings quality proponents. Beidleman (1973) defined income smoothing as an attempt on the part of the firm's management to reduce abnormal variations in earnings to the extent allowed under sound accounting and management principles. Similarly, DeFond and Park (1997) define earnings smoothing as reduction of volatility in reported earnings that would otherwise exist in the absence of some action. Income smoothing is a legal right of the incumbent management to refine financial statements. Managers either use their discretion to alter earnings by different accounting choices or they change operations for the sake of earnings targets. Income smoothing is an earnings management strategy. There are countless reasons why managers are engaged in income smoothing like for instance reaching bonus targets, protecting their jobs, providing private information for outsiders or reducing tax obligations.

Goel and Thakor (2003) suggest that managerial choice of smoothing earnings is a response to investors' perception of unstable reported earnings. Literature reveals that investors react negatively to unstable reported earnings. However, the capital market has a natural mechanism to penalize managers that engage in dysfunctional behavior such as self -motivated earnings smoothing (Banyopadhyay et al., 2011). The capital market operates such that the share/stock of firms engages in self-motivated earnings smoothing are priced low. This differentiates between natural earning smoothing and smoothing as a result of manipulation carried out by managers for personal gains. Based on agency theory therefore, it can be deduced that negative income smoothing is a form of agency cost. This is so because the practice of smoothing income by managers toward achieving their target and consequently incentive bonus at all cost is a possible problem capable of affecting organizational outcome negatively. Organizational outcome is multidimensional which may take the form of financial performance; operational performance; stock market performance and corporate failures. Since the opportunistic behavior of managers affects organizational outcome, it is expected that self-motivated income smoothing would affect firm value. Based on this expectation, this study hypothesized that: income smoothing has significant effect on the value of Nigerian listed non-financial firms.

Market Risk

Market risk is the risk that a firm will incur losses because of a change in the price of assets held resulting from changes in interest rate, securities, commodity prices, foreign exchange rate and other market risk factors. Ekinci (2016) upholds that market risk is the risk of losses in liquid portfolio arising from the movements in market prices and consisting of interest rate, foreign currency, equity and commodity price risks. In the words of Ekinci (2016) and Namasake (2016), market risk exposure is more volatile than credit risk exposure because of rapid changes in market condition that can cause severe financial losses and possible collapse. The determinants of organizational outcome are multi-dimensional in nature to include the effect of market risk. Therefore, this study also hypothesized that: market risk has moderating effect on the link between income smoothing and the value of Nigerian listed non-financial firms.

Firm Value

Firm value represents the assets owned by the company. Firm value is considered as a crucial thing since it describes the prosperity of the company's owner. Therefore, the manager, as the representative of the company, is responsible to achieve the firm value optimally (Nurul, 2014). A good firm value is able to attract other parties‟ interests to join the company. Modigliani and Miller (1958) stated that firm value is determined by company's asset earnings power. The positive impact of asset earnings power shows that if the company has higher earnings powers, then the asset turnover will be more efficient and the profit will be bigger. As a result, the firm value will also increase. Besides asset and profit, the company debt policy also influences the changes of firm value. The higher the debt, the higher the stock price. However, it will be the opposite in certain conditions when the benefit of debt utilization is less than the cost incurred. The debt policy can create the expected firm value, but it depends on the firm size. This means firm size will influence the competition in the stock exchange.

In this study, firm value is represented by market price per share. A Share price is the cost of purchasing a security on an exchange. It is affected by a number of things including volatility in the market, current economic conditions, and popularity of the company. Allen, Larson and Sloan (2010) argued that share price is not merely a reflection of accounting fundamentals but the combination of appropriate discount rate and the pattern of cash flow that make the stock market to decide the price (random walk theory). Subbramanyam and Wild (1996), assert that higher share price may signal that the company has a good product and induce consumers to adopt its product to start positive feedback. They conclude that a higher share price can also make the term equity related transactions more favorable. For example, it can increase the proceeds received from the equity offerings or increase executive's personal wealth.
Ejuvbekpokpo and Edesiri (2014) posited that share prices serve as the basis for the assessment of whether a firm is breaking even or not. According to Geetha, Ti and Swaaminathan (2015), stock market is an imperative part of the economy of a country. Its importance can be seen from both the industries and investor's point of view. These prices are relevant metrics of returns to stakeholders, and therefore the value attached to them matters so much to both existing and prospective investors in the capital market (Ejuvbekpokpo & Edesiri, 2014). Generally, share price in an efficient market provides investors with a good measure of any firm's performance and its value (Olawale & Olaniyi, 2015).

Empirical Review

Aguguom and Salawu (2022) investigated the impact of earnings smoothing on the market share price of listed companies in Nigeria. The study adopted ex-post facto research design using data sourced from published financial statements of selected companies. The population comprises 173 listed companies in Nigeria, covering a period of 2009-2020 as of 31st December 2020. 51 companies were purposively selected. The reliability and validity of the data are based on financial statements audited by the external auditors. The panel data is employed for the estimation using the Unobserved Effects Model (UEM), and Hausman test results to choose between random effect and fixed-effect models. The study found that earnings smoothing has a positive significant on market share price. This current study is specific to non-financial firms in Nigeria since findings from all listed companies cannot be applied to this sector.

Munjal, Singh and Tijani (2021) empirically examined the impact of earnings smoothness on operational and market performance of Indian National Stock Exchange (NSE) using panel data. The dynamic generalised method of moment is utilised in this study. The study covered a period of seven years (2013-2019) and the sample firms were drawn from companies listed on NSE 500 Index. The results revealed a significant effect of earning smoothing on company's operational as well as market performance. These results are consistent with a number of prior studies which found that both ROA and Tobin's Q affect the earning smoothness. Similarly, firms with non-smooth earnings are significantly affected by only ROA. This current study took a market approach to assessing firm value by using share prices.

Jabin and Sumona, (2021) studied the effect of income smoothing on the possibility of bankruptcy risk of non-banking institutions in Bangladesh. Using data for a period of 5 years 2013 to 2017, the study adopted Altman's Z score model and find that income smoothing had a negative effect on bankruptcy risk, implying that many companies involved in bankruptcy risk were not involved in income smoothing. The study was conducted in another economy and as such its findings cannot be used for effective decision in the Nigerian context due to ontological, methodological and behavioural complexities.

Abogun and Adigbole (2021) examined the impact of income smoothing on the value of firms in a regulated security market. The ex post facto research design was employed, and as such, data were gathered from secondary sources. The population of the study consisted of all listed firms on the Nigeria Stock Exchange except the firms in the financial institutions. Thirty (30) firms were randomly selected from the various sectors as the sample for the study. The quantitative approach was also used in the study. Furthermore, the system generalized method of moments (Blundell–Bond) panel estimation technique was used for analyzing the data. Income smoothing was measured using the accrual-based methods, while firm value was measured using share price. The study found that income smoothing has a negative significant impact on firm value. Although, current the random selection of firms without recourse to any scientific method of sampling is a fundamental weakness.

Ajekwe and Ibiamke (2017) studied market rewards to earnings smoothing from the perspective of a firm's valuation in Nigeria. The study measures earnings smoothing using the standard deviation of earnings stream over a five-year rolling period of 3 years (2013-2015) using 48 firms. The study finds that the Nigerian market patronized stable earnings companies and to some degree indifferent to the smoothing trends of the company's cash flows. The study collected data to 2015 as such a more current study is desirable to more informed decisions.

Agency Theory

This study is built on agency theory being a theory of organizational process, behavior and outcome. The agency theory developed by Berle & Means, in (1932) suggests that there is a contractual relationship between the principal (shareholders) and agents (Managers) when the agents agree to run the business of the principal who voluntarily consents to that arrangement.

Agency theory provides insight and understanding of corporate processes and designs to address emerging problems from the principal–agent relationship. According to Jensen and Meckling (1976), the principal–agent relationship is defined as a contract under which one or more persons (the principal) engage another person (the agent) to perform some services on their behalf which involves delegating some decision-making authority to the agent. Zhai and Wang (2016) identified agency problems such as moral hazards, for example, shirking, adverse selection (making of accounting choices that maximized reported income in other to gain higher bonus). The shirking problem arises due to the inability of the principal to observe the performance of the manager directly, and the principal can only assess a manager's performance based on the outcome communicated through the annual report (Vasiljevic, 2009).

Furthermore, adverse selection arises because the agent's compensation is based on the assessment of performance measures (Panda & Leepsa, 2017). The monitoring strategies result in the following cost: monitoring cost, bonding cost, residual cost. Eisenhardt (1989) posits that agency theory suggests mechanisms that reduced agency cost, which can come in the form of incentive schemes for managers and installation of control mechanisms (for instance, management control system; corporate governance). Compensation packages are viewed as important in mitigating the conflict of interest between managers and shareholders in corporations. From a research perspective, agency theory is a theory that explains and predicts agency problem/agency cost. It further explains and predicts managerial and organizational behavior and outcomes.

Methodology

This study adopted ex post facto research design. The population of the study consists of all listed firms on the Nigeria Stock Exchange except the firms in the financial institutions. These were exempted because the industry is relatively highly regulated. Including such sectors into the data stream could introduce large heterogeneity capable of distorting the result of this study. As a result, a sampling frame consisting a total number of hundred and fourteen (116) listed non-financial firms as at 31st December, 2020 was used. The Thirteen (13) sub-sectors comprising of healthcare, conglomerate, real estate, technology, consumer goods, industrial goods, healthcare, technology, real estate, agriculture, oil and gas, services sectors and natural resources were considered. The study adopted stratified and purposive sampling techniques in selecting the sample size of the study because of the unique nature of the population. The sampling techniques afford each unit of the population an equal chance of selection in the sample. This initial sample size is supported by Yamane (1967) sample selection method (Guilford & Frucher, 1973) as stated below: According to Yamane (1967), $n = N / [1 + (Ne^2)]$, Where: "n" is the sample size, "N" is the population, "e'' is the error limit (5% precision level was used for the purpose of this study)

Therefore, $n = 116 / [1 + 116 (0.05^2)]$

$n = 116/1.29$

$n = 90$

Adjusted Yamane (1967), $n1=n/1+(n-1)/N$

Therefore, $n1=90/1+(90-1)/116$

n1=90/1.77
n1=51

Given the above calculation, the sample size of 51 with error limit of 5% is considered appropriate for this study. The proposed samples from each of the sector for the study will be determined through the use of proportional sampling technique as thus:

Table 1: Population and Sample Size of the Study

S/N	Sector	Number of firms	Computation	Number of firms selected
1	Agriculture	5	5/116*51	2
2	Conglomerate	6	6/116*51	3
3	Consumer goods	23	23/116*51	10
4	Industrial goods	13	13/116*51	6
5	Healthcare	10	10/116*51	4
6	Technology	9	9/116*51	4
7	real estate and construction	9	9/116*51	4
8	Oil and Gas	12	12/116*51	5
9	Services	25	25/116*51	11
10	Natural resources	4	4/116*51	2
Total		116		51

Source: Researcher's computation, 2022.

The secondary source of data was employed in this study. As such, data were extracted from the financial reports of sampled firms for a period of ten (10) years from 2012 to 2021. In estimating the model specified in this study, the dynamic panel generalized method of moments GMM (Blundell–Bond) estimator was adopted because the number of firms under consideration in the study (51) exceeds this study's period (8). Also, the dynamic panel GMM estimator controls for unobserved individual heterogeneity, endogeneity problem, simultaneity bias/reverse causality, measurement error, omitted variable bias, heteroskedasticity and uses variables that are orthogonal to the error term as instruments. As a result of the nature of dynamic panel data, the lagged dependent variables are endogenous and correlated with the error terms. This could be estimated by the "Difference" or "System" GMM. However, research showed that difference GMM results are affected by weak instruments; therefore, this study employs the system GMM. The functional model for this study is specified as:

FMV f(INSM,MKTRK, PROF, SIZE, LEV)

This model can be econometrically stated as;

$$FMV_{it} = \beta_0 + \beta_1 INSM_{it} + \beta_2 MKTRK_{it} + \beta_3 INSM*MKTRK_{it} + \beta_4 PROF_{it} + \beta_5 SIZE + \beta_6 LEV + \varepsilon_{it} \ldots\ldots (1)$$

Where: FMV= Firm Value, INSM=Income Smoothing, MKTRK=Market Risk, PROF=Profitability, SIZE= Firm Size, LEV=Leverage, β_0= is the intercept, β_1-β_6= are the parameters estimate or coefficients in equation, ε = error term, it= Time Series Properties.

Measurement of Variables

Income Smoothing: This study employed the accrual-based measures of income smoothing. This method was used by Tucker and Zarowin (2006) to estimate income smoothing as the negative correlation between the change in a firm's discretionary accruals proxy (ΔDAP) and the change in its pre-discretionary income (ΔPDI); that is, Corr (ΔDAP, ΔPDI). The advantage of this measure over others is that it directly examines the income smoothing effort while other measures do not (Bandyopadhyay et al., 2011). To estimate discretionary accruals, the study used the cross-sectional version of the Jones (1991) model as modified by Kothari (1992), as;

$$TAC_{it} = a_o + a_1 \Delta REV_{it} + a_2 PPE_{it} + a_3 ROA_{it} + a_4 TA_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where: TAC: Total accruals in year t, for firm i, ΔREV: Revenues in year t, minus the revenues from year t-1, for firm i, PPE: Net income divided by average assets in period t for firm i, ROA: Net income divided by average assets in period t for firm i, TA: Total assets at the end of the fiscal period t-1 for firm i, ε: Error in the course of the year t, for firm i, α1, α2, α3, α4: The parameter estimates for firm i

Firm Value: The proxy for measuring firm value in this study is the average share price. Firms' share price is a direct measure of firm value. This has been documented in previous studies such as Ajekwe and Ibiamke (2017), Bao and Bao (2004), Chen et al. (2016), De Jong et al. (2013) and Yu et al. (2017).

Market Risk: In order to measure the market risk, the standard deviation of the All-Share Index (ASI) of the Nigerian Stock Exchange was used as proxy. Yang and Zhu (2014) point out that market uncertainty is a major factor that determines how income smoothing affects a firm value. Therefore, income smoothing affects shareholders' wealth when market is volatile (Cvetanovska & Kerekes, 2015).

Firm size: Larger firms have a greater incentive to smooth income (Moses, 1987). There are mixed results on the relation between the firm size and earnings quality (Cvetanovska & Kerekes, 2015; Feihn & Struck, 2011; Huang et al., 2008; Rountree et al., 2008). Firm size in this study is measured by the logarithm of total assets.

Profitability: Profit tends to be positively related to firm value. Therefore, the study controls for profitability across the sample. It is calculated as return on assets (ROA), i.e., the ratio of net income to total assets. This was used in Cvetanovska and Kerekes (2015), Feihn and Struck (2011), and Huang (2011).

Leverage: Previous studies evidence a relationship between firm values and leverage (Aggarwal & Zhao, 2007; Bao & Bao, 2004; Feihn & Struck, 2011). This was included in the study model to control for differences in the capital structure of the sampled firms (Rountree et al., 2008). It is measured as the ratio of long-term debt to total assets.

Results and Discussion

Summary Statistics

This section of the study presents the descriptive statistics of the firm value ratio (Share price), income smoothing (INSM), market risk (MKTRK), and firm characteristics which serve as control variables for the study, profitability (PROF), firm size (SIZE), and leverage (LEV) of non-financial firms on the Nigerian Stock Exchange. The result is presented in the Table 2.

Table 2: Summary Descriptive Statistics

Variables	Observations	Mean	Standard deviation	minimum	Maximum
FMV	510	95.7034	211.1285	0.5000	1556.000
INSM	510	-0.7210	0.3994	-0.9998	0.6118
MKTRK	510	3040.208	895.2891	1910.249	4303.749
PROF	510	0.1663	1.3914	-0.2062	20.1874
SIZE	510	17.6906	1.5117	14.2889	21.2667
LEV	510	0.1624	0.2042	0.0000	2.6137

Source(s): Authors' Computation, 2022

From Table 2, the average value of firm value (proxied with share price), Income smoothing, market risk, profitability, size and leverage is 95.7034, -0.7210, 3040.208, 0.1663, 17.6906, and 0.1624 respectively. The low mean values of profitability and leverage compared to their standard deviation implies that profitability has been fluctuating largely over the years, in contrast, to the firm size and firm value. The mean value of income smoothing -0.7210 implies quite a number of firms reported smoothen income. Firm value, income smoothing, market risk, profitability, size and leverage have minimum values of 0.5000, -0.9998, 1910.249, -0.2062, 14.2889, and 0.000, respectively. The minimum value of profitability reveals that some firms reported loss, while the minimum value of leverage depicts that some companies had no long-term debt.

System GMM Estimation Results

This section presents the results of the system generalized method of moments (GMM) estimated for the model of this study.

Table 3: Two-step system GMM estimation results

Variable	Coefficient	p value
FMV_t1	0.7769	0.000*
INSM	136.5482	0.000*
MKTRK	0.0118	0.000*
INSM*MKTRK	0.0098	0.000*
Profitability	0.7666	0.102
Size	0.3058	0.339
Leverage	20.4219	0.000*
Model statistics		
Wald x^2	13.9613	0.000*
Sargan statistics	6.72eþ06	0.732
Number of groups	51	
Number of observations	510	
Number of instruments	25	

Source(s): Authors' Computation, 2022

The estimates of the model as shown in Table 3 revealed that the one period lagged value of firm value is positively significant to the current value of FMV with a coefficient of 0.7769 (p-value < 0.001). This indicates that a key factor that determines the current value of a firm is the past value of the firm. Income smoothing (INSM) is negatively related to firm value with a coefficient of -136.548 (p-value 1< 0.001), while market uncertainty (MKTRK) is positively related to firm value which showed a coefficient of 0.0118 (p-value < 0.001). This result implies that high market volatility enhances firm value. Also, the reduction in income fluctuation increases the value of listed non-financial firms in the Nigerian stock market. The interaction of income smoothing and market volatility (INSM*MKTRK) showed a positive significant relationship with firm value (coeff. 0.0098, p-value < 0.001). This depicts that income smoothing in high uncertain market environment enhances firm value. Results of firm characteristics which serve as control variables showed that firm profitability (PROF) and size (SIZE) are not significant in influencing firm value. These variables showed coefficients of 0.7666 (p-value 5 0.102) and -0.3058 (p-value, 0.339) . However, financial leverage (LEV) showed a coefficient of -20.422 (p-value, < 0.001) is negatively associated with firm value. This reveals that a firm's capital structure is significant in determining the value of the firm. The Sargan statistic fails to reject the null hypothesis of overidentifying restrictions at a 5% significance level since the test statistics show a p-value of 0.732. This also infers that the internal instruments (lagged value of the explanatory variables) used for the estimation of model are valid. The p-value of the Wald x2 statistics indicates that the model is fit at 1% significant level.

Discussions

The study examined the influence of income smoothing on the value of Nigerian listed non-financial firms. The result of the study showed that the one-period lagged value of share price significantly affects their current values, thereby confirming the importance of estimating dynamic models. It also implies that the past value of a firm significantly affects the current value of the firm.

Income smoothing showed a negative impact on firm value. This implies that smoothing carried out by Nigerian non-financial firms appears to be deliberate rather than natural, and investors priced firms' shares that engaged in smoothing, particularly intentional smoothing low. Also, smoothening income reduces the shock/surprise in the market when the reported income by managers meets investors' forecasted income (Baik et al., 2019; Chen et al., 2016; Demerjian et al., 2020; Oler et al., 2016; Shabani & Sofian, 2018; Shubita, 2015). This result is similar to the findings of Chen et al. (2016); Novianti and Firmansyah (2020); Susanto and Pradipta (2019), and Yu et al. (2017) which revealed that investors perceive smoothing as an increase in risk and a means of managerial opportunism resulting in reduced firm value. The result contradicts the findings of Ajekwe et al. (2017), Agugom et al. (2022) and Monjed and Ibrahim (2020) that found a positive relationship between earnings smoothing and firm value.

Market uncertainty significantly influences firms' value. This implies that volatility seem to enhance investment activity in the Nigerian market, thus, improving stock returns. This result indicates that the Nigerian market, though a frontier market, is fast growing as developed markets are found to facilitate trading activity and incorporate market innovations into stock returns more efficiently than other markets (Marshal et al., 2016).

The result of the interaction of the variables arose from findings of previous studies on how environmental uncertainty might motivate income smoothing practice or behavior. In high market volatility, investors prefer stable earnings as this gives assurance to investors on the financial position of the firms (Chen et al., 2020; Cvetanovska & Kerekes, 2015; Jung et al., 2020; Takasu & Nakano, 2012). The increase in firm value can be attributed to investors' preference for more stable earnings. More so, this suggests that smoothen practices are seen to signal private information by managers to investors, thus, income smoothing is perceived from the information view rather than the garbling (managerial opportunistic) view. This result supports the findings of Allayannis and Simko (2009), Bitner and Dolan (1996), Habib et al. (2011), De Jong et al. (2013), Jung et al., (2020), Makela (2012), Takasu and Nakano (2012), and Yang and Zhu (2014) that found smoothing of earnings improves the informativeness of earnings and signal future earnings persistence to investors.

Leverage is negatively significant to firm value; this depicts that increase in debt capital, reduces firm value. This finding is consistent with Bao and Bao (2004), Chen et al. (2016), Feihn and Struck (2011), Huang et al. (2008), and Makela (2012) which documented negative relationship between financial leverage and firm value. On the other hand, Cvetanoska and Kerekes (2015); Demerjian et al., (2020); Yang and Zhu (2014), and Yu et al. (2017) found contrary results.

Conclusion

The study examined the influence of income smoothing and market risk on the value of Nigerian listed non-financial firms. The study found that majority of Nigerian firms smoothed their income, and this practice decreases the value of firms significantly. Also, the study found sufficient evidence to support the claim that market risk influences firm value. The study also provided sufficient evidence to support the claim that market risk has moderating effect. Therefore, this study concluded that income smoothing negatively affects firms' value, especially in a regulated market like Nigeria and that market risk moderates the relationship between income smoothing and value of Nigerian listed non-financial firms.

Recommendations

This study is important in many ways because it has implications for management, investors and regulators. Based on the findings, the study following implications:

i. Since income smoothing has a negative impact on firm value, managers are advised to reduce income smoothening practices.
ii. Since income smoothing is capable of influencing negatively organizational outcome, investors are advised to figure out firms that engage in intentional smoothing and do not invest in such firms for safety of investment.
iii. Investors are advised to pay close attention to market risk when assessing the value of firms based on the level of income smoothing carried out by managers.
iv. The Nigerian security market regulators are advised to put in place policies that could engender and raise the level of the Nigerian security market efficiency. Through market efficiency, investors are able to discover and penalize any firm that engages in intentional income smoothing.

References

Aggarwal, R. & Zhao (2007). The diversification discount puzzle: empirical evidence for a transaction costs resolution, The Institute for International Integration Studies Discussion Paper Series, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id51330202.

Agrawal, K. & Chatterjee, C. (2015), Earnings management and financial distress: evidence from India, *Global Business Review*, 16(5),140S-154S, doi: 10.1177/0972150915601928.

Aguguom, T.A., & Salawu, O.R. (2022). Earnings smoothing and market share price: evidence from nigeria. *Academy of Accounting and Financial Studies Journal*, 26(2), 1-13.

Ajekwe, C.C. & Ibiamke, A. (2017). Market rewards to earnings smoothing: evidence from firm's valuation in Nigeria, *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(4), 62-70.

Allayannis, G. & Simko, P.J. (2009). Earnings smoothing, analyst following, and firm value: an international comparison, *Journal of Financial Economics*, 69(3),505-527, doi: 10. 1016/S0304-405X(03)00121-1.

Baik, B., Choi, S. & Farber, D.B. (2019). Managerial ability and income smoothing, *The Accounting Review*, 95(4), 1-47, doi: 10.2308/accr-52600.

Bandyopadhyay, S.P., Huang, A.G. & Wirjanto, T.S. (2011). Does income smoothing really create value? available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id51784017.

Bao, B.H. & Bao, D.H. (2004). Income smoothing, earnings quality and firm valuation", Journal of Business Finance and Accounting, 31(10), 1525-1557. doi: 10.1111/j.0306-686X. 2004.00583.

Bartov, E., Givoly, D. & Hayn, C. (2002). The rewards to meeting or beating earnings expectations, *Journal of Accounting and Economics*, 33(2),173-204.

Bebchuk, L., Kraakman, R. & Triantis, G. (2000). Stock pyramids, cross-ownership, and dual class equity: the creation and agency costs of separating control from cash flow rights, in Morck, R.K. (Ed.), Concentrated Corporate Ownership, University of Chicago Press, Chicago, IL. available at: http://www.nber,org/chapters/c9013.pdf.

Beidleman, C.R. (1973). Income smoothing: the role of management, *The Accounting Review*, 48(4), 653-667, available at: http://www.jstor.org/stable/245289.

Bitner, L.N. & Dolan, R.C. (1996). Assessing the relationship between income smoothing and the value of the firm, *Quarterly Journal of Business and Economics*, 35(1), 16-35.

Bluman, A.G. (2009). Elementary Statistics: A Step-by-Step Approach, 7th ed., McGraw Hills, New York, NY.

Chen, C., Kim, J.B. & Yao, L. (2016). Earnings smoothing: does it exacerbate or constrain stock price crash risk? *Journal of Corporate Finance*. doi: 10.1016/j.jcorpfin.2016.11.004.

Chen, C.L., Weng, P.Y. & Lin, Y.C. (2020), Global financial crisis, institutional ownership, and the earnings informativeness of income smoothing, *Journal of Accounting, Auditing and Finance*, 35(1), 1-26, doi: 10.1177/0148558X17696759.

Chong, G. (2006), Is income smoothing ethical? *Journal of Corporate Accounting and Finance*, (18)1, 41-44.

Chung, K.H. & Chuwonganant, C. (2017). Market volatility and stock returns: the role of liquidity providers, *Journal of Financial Markets*, doi: 10.1016/j.finmar.2017.07.002.

Cvetanovska, B. & Kerekes, B.S. (2015). The impact of income smoothing on firm value after the Sarbanes-Oxley Act: an empirical research on US public companies between 2006-2012, Masters Thesis, Lund University, available at: https://lup.lub.lu.se/student-papers/search/ publication/5434763 25 June 2019.

De Jong, A., Mertens, G., van der Poel, M. & van Dijk, R. (2013), How does earnings management influence investor's perceptions of firm value? Survey evidence from financial analysts, *Review of Accounting Studies*, 19, 606-627.

Demerjian, P., Donovan, J. & Lewis-Western, M.F. (2020). Income smoothing and the usefulness of earnings for monitoring in debt contracting, *Contemporary Accounting Research*, 37(2), 857-884.

Demerjian, P., Lewis-Western, M. & McVay, S. (2020). How does intentional earnings smoothing vary with managerial ability? *Journal of Accounting, Auditing and Finance*, 35(2) 406- 437.

Demsetz, H. & Villalonga, B. (2001). Ownership structure and corporate performance, *Journal of Corporate Finance*, 7(3), 209-233.

Eisenhardt, K.M. (1989). Agency theory: an assessment and review, *The Academy of Management Review*, 14(1), 57-74.

Fadiran, T.P. & Olowookere, A.E. (2016). Determinants of share price on the Nigerian stock exchange, *International Journal of Business and Applied Social Science*, 2(7), 49-60.

Feihn, S. & Struck, H. (2011). The impact of smoothing on firm value – an industry analysis, Master thesis, Lund University, available at: https://www.semanticscholar.org/paper/Theimpact-of-smoothing-on-firm-value-an-industry-struck-feihn.

Flourien, N.C. (2019). The effect of financial performance to income smoothing practice in property and real estate companies listed on Indonesia Stock Exchange, *Advances in Economics, Business and Management Research*, 127, 46-50.

Goel, A.M. & Thakor, A.V. (2003). Why do firms smooth earnings? *Journal of Business*, 76, 151-192.

Graham, R.J., Harvey, C.R. & Rajgopal, S. (2005). The economic implications of corporate financial reporting, *Journal of Accounting and Economics*, 40, 3-73.

Habib, A., Hossain, M. & Jiang, H. (2011). Environmental uncertainty and the market pricing of earnings smoothness, *Advances in Accounting, incorporating Advances in International Accounting*, 27, 256-265.

Huang, X. (2011). Earnings Smoothness and Investment Sensitivity to Stock Prices, Dissertation Georgia State University, available at: https//schlarworks.gsu.edu/accountancy_dist/10.

Huang, P., Zhang, Y., Deis, D.R. & Moffitt, J.S. (2008). Do artificial income smoothing and real income smoothing contribute to firm value equivalently?, *Journal of Banking and Finance*, 33(2), 224-233, doi: 10.1016/j.jbankfin.2008.07.012.

Jensen, M.C. & Meckling, W.H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure, Journal of Financial Economics, 3(4), 305-360.

Jones, J.J. (1991). Earnings management during import relief investigations, *Journal of Accounting Research*, 29(1), 93-228.

Jung, B., Lee, D., Shin, I. & Yuen, C.Y.D. (2020). Foreign equity ownership and income smoothing, *Journal of International Accounting Research*, 19(2), 141-162.

Kitson, M. & Michie, J. (2014). The deindustrial revolution: the rise and fall of UK manufacturing, Working paper, Centre for Business Research, University of Cambridge.

Kothari, S.P. (1992). Price-earnings regressions in the presence of price leading earnings, *Journal of Accounting and Economics*, 173-202.

Li, S. & Richie, N. (2016). Income smoothing and cost of debt, *China Journal of Accounting* Research, Vol. 9, pp. 175-190, available at: https://www.sciencedirect.com/science/article/pii/ S1755309116300028.

Lyimo, G.D. (2014). Smoothness, earnings surprise and stock price informativeness: evidence from Indian Stock Market, *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(2), 389-398.

Makela, M. (2012). The effect of smooth performance in firm value European evidence, Master's ethesis, Aalto University, School of Economics, available at: http://urn.fi/URN:NBN:fiaalto201203011258.

Marshall, B.R., Nguyen, H.T., Nguyen, N.H. & Visaltanachoti, N. (2016). Country governance and international equity returns, Paper Presented at the 2016 Asian Finance Association Conference, Bangkok, Thailand, available at: https://papers.ssrn.com/sol3/papers.cfrm?abstract_id52701603.

Monjed, H. & Ibrahim, S. (2020), Risk disclosure, income smoothing and firm risk, *Journal of Applied Accounting Research*, 1-25, doi: 10.1108/JAAR-05-2019-0085.

Moses, O.D. (1987). Income smoothing and incentives: empirical tests using accounting changes, *The Accounting Review*, 62(2),358-77.

Novianti, T. & Firmansyah, A. (2020). The effect of tax risk, hedging, income smoothing, and cash flows volatility on firm value, *Test Engineering and Management*, 83, 9675- 9686.

Nyberg, J.A., Fulmer, I.S., Gerhart, B. & Carpenter, M.A. (2010). Agency theory revisited: CEO return and shareholder interest alignment, *The Academy of Management Journal*, 53(5), 1029-1049.

Oler, M., Pitre, T.J. & Song, C.J. (2016). Perverse market rewards for meeting or beating earnings expectations",Asia-Pacific *Journal of Accounting and Economics*. doi: 10.1080/16081625.2016. 1263158.

Panda, B. & Leepsa, N.M. (2017). Agency theory: review of theory and evidence on problems and perspective", Indian Journal of Corporate Governance, 10(1), 74-95.

Pandey, K.D. & Sahu, T.N. (2019). Concentrated promoters' ownership and firm value: re-examining the monitoring and expropriation hypothesis, *Paradigm*, 23(1), 70-82.

Pereira, J.P. & Zhang, H. (2010). Stock returns and the volatility of liquidity, *The Journal of Financial and Quantitative Analysis*, 45(4), 1077-1110.

Rountree, B., Weston, J.P. & Allayannis, G. (2008). Do investors value smooth performance?", *Journal of Financial Economics*, 90, 237-251.

Shabani, N.A. & Sofian, S. (2018). Earnings smoothing as information signaling or garbling: a review of literature, *Asian Journal of Finance and Accounting*, 10(1), 131-142, doi: 10.5296/ajfa.v10i1.12768.

Shubita, M.F. (2015). The impact of income smoothing on earnings quality in emerging markets: evidence from GCC Markets, *Journal of Accounting in Emerging Economies*, 5(3), 299-324, doi: 10.1108/JAEE-04-2011-0011.

Susanto, Y.K. & Pradipta, A. (2019). Firm value, firm size and income smoothing, *Journal of Finance and Banking Review*, 4(1),1-7.

Tabassum, N., Kaleem, A. & Nazir, M.S. (2015). Real earnings management and future performance, Global Business Review, 16(1), 21-34, doi: 10.1177/0972150914553505.

Takasu, Y. and Nakano, M. (2012). What do smoothed earnings tell us about the future? *The Japanese Accounting Review*, 2, 1-32.

The Investment and Securities Act (2007), available at: http://sec.gov.ng/wp content/uploads/2016/02THE-INVESTMENTS-AND-SECURITIES-ACT-2007_NIGERIA.pdf.

Trueman, B. & Titman, S. (1988). An explanation for accounting income smoothing, *Journal of Accounting Research*, 26, 127-139, available at: http://www.jstor.org/stable/2491184.

Tucker, J.W. & Zarowin, P.A. (2006). Does income smoothing improve earnings informativeness?", *The Accounting Review*, 81(1), 251-270, doi: 10.2308/accr.2006.81.1.251.

Vasiljevic, M. (2009). Corporative management and agency problem, Faculty of Law, Belgrade, 1, 5-25.

Yang, M. & Zhu, H. (2014). How does market value earnings smoothing under uncertainty?", Applied Financial Economics, 24(20), 1335-1345, doi: 10.1080/09603107.2014.925060.

Yu, K., Hagigi, M. & Stewart, S.D. (2017). Income smoothing may result in increased perceived riskiness: evidence from bid-ask spreads around loss announcements, *Journal of Corporate Finance*. doi: 10.1016/j.jcorpfin.2017.11.007.

Zhai, J. & Wang, Y. (2016). Accounting information quality, governance efficiency and capital investment choice, China Journal of Accounting Research, 9(4), 251-266, available at: https://www.sciencedirect.com/science/article/pii/S175530911630020X/pdfft?md5571ca7580 969f0d129847f8ee18cc1e7a&pid51-s2.0-S175530911630020X-main.pdf.