DETERMINANTS OF VOLUNTARY DISCLOSURE QUALITY IN EMERGING ECONOMIES: EVIDENCE FROM FIRMS LISTED IN NIGERIA STOCK EXCHANGE

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ABSTRACT

The main objective of this study is to analyze the determinants of voluntary disclosure quality among listed firms in emerging economy. Unweighted voluntary disclosure quality index was used as the dependent variable, while firm disclosure quality determinants such as size, profitability, Board Composition and Gearing constitute the independent variables. Ex-post facto research method was employed as the research design. Data was sourced from 793 corporate annual reports of firms listed in the Nigeria stock exchange between 2000 to 2014. Two models; one based on the combined sample and the other on the non-financial companies only were developed. Generalized Method of Moment (GMM) regression techniques is used to test the statistical significance of the hypotheses of the study. Using the reduced model and full model, the results indicate that firm size and Board Composition has significant and positive relationship with voluntary disclosure quality. On the other hand, profitability and gearing were found to be significant and negatively related to the voluntary disclosure quality of listed firms in Nigeria. The implication of these findings is that large firm discloses more extensive information than do small firms. Moreover, highly profitable firms in Nigeria tend to disclose less information to avoid political attention in the form of pressure for the exercise of social responsibility and greater regulations such as price control and higher corporate taxes. Moreover, high number of non-executive independent directors on the board promotes extensive disclosure than do firms with less number of non-executive independent directors and finally, firms with more debt in their capital structure tend to provide less information to gain access to the capital markets and to reassure investors of the possibility of continuous going concern by the firms.

KEYWORDS: Voluntary Disclosures, Nigeria Stock Market, Listed Firms, Disclosure Quality

1. INTRODUCTION

Non financial firms consist about 90% of listed firms in Nigeria. As at October, 2015, the total number of firms listed in the Nigeria stock exchange stood at 310 (Three hundred and ten); made up of 129 financial firms (22 banks, 35mfbs, 56 insurance firms, and 16 brokerage firms) and 181 non-financial firms. Available evidence indicate that financial firms in Nigeria are highly regulated compared to its non-financial counterparts. The manufacturing sectors, service organisations and other agricultural and allied companies provide basic funds for the financial sector to triumph. With the separation of ownership from control, shareholders of firms become far and detached from daily operations, necessitating the owner to incur agency costs. One of such essential costs is the mandate for management to provide detailed information of their activities in the annual reports and accounts. Conflict of interest usually arise between manager and shareholders; wherein managers motive would tend towards profitability which ordinarily will make them to better off but the shareholders interest is on value maximization and/or creation. Providing detail information in the annual
report and accounts would normalize such conflicts.

In the relevant literatures, the term disclosure refers to the whole array of different forms of information produced by firms, such as the annual report which includes the directors statement, the operating and financial review, profit or loss account, the statement of financial position and statement of cash flow (Solomon 2010). It also includes all forms of voluntary corporate communications such as management forecasts, environmental information disclosure, corporate social responsibility information disclosure, corporate governance reporting, and reporting of risk management strategies of firms. In today’s modern establishments, various forms of disclosure exist. Ali et al (2007) identifies three forms of corporate disclosure to include mandatory and voluntary, financial and narrative, printed and internet disclosure.

In developing countries with ineffective financial market and weak corporate governance mechanism, extensive disclosure in the annual reports and account are very important. Undoubtedly, few studies that have examined the disclosure practices of firms in Nigeria posted that the disclosure practices of Nigeria firms are weak and poor (Umoren 2009, World Bank Report 2000). The reasons for and the implications of the relatively poor disclosure stances among Nigerian firms are however not yet sufficiently documented. A glimpse of literatures shows that there is currently limited study examining the accounting information disclosure at firm level. The near lack of empirical and theoretical evidence on the causes and implications of poor disclosure practices make it difficult for the enforcement of disclosure standards both at the national and at the firm quality. No doubt, there are a number of external measures put in place to curb poor disclosure practices by firms in Nigeria. Among such measures is the imposition of financial penalties on firms that fail to adhere to set disclosure standards (CAMA 2004). This is also in line with the Financial Reporting Council of Nigeria (FRCN) Act of 2011 No 6 which provides more strict measure for disclosure practices.

Despite this likelihood of firms incurring sanctions, there has continued to be prevalent cases of breaches of disclosure codes and standards. In the past years, some firms have been fined for failure to disclose relevant information.

Theoretically, the overriding argument in some quarter is that the primary causes of poor and weak financial disclosure among firms have to do with the internal structures and characteristics of the firms (Karani and Akhgar, 2014). Among the most popular internal features of firms affecting disclosure include firm size, profitability, board composition and the financial leverage of firms. The Extend these characteristics influence disclosure quality remains constable. However, this aspect of the debate in practice is one of the most neglected in designing disclosure laws or policies especially in developing countries. This might explain why a country like Nigeria scores very poor mark in the area of disclosure requirements and practice. There is scanty local evidence to explain the interaction between firm’s internal characteristics and their disclosure behaviour.

The emerging country like Nigeria is also an interesting one because of so many reasons; First, over the recent years, the Nigerian government has attempted to formulate and enforce some major structural reforms and fiscal policies aimed at integrating the Nigeria economy into globalised world. Examples of such reforms include the integration of the reporting practice to be in line with the global IFRS accounting standards. Furthermore, regulations regarding capital markets and harmonization efforts in accounting have taken place in the country. Financial Reporting Council of Nigeria (FRCN) has been passed into law so as to promote transparency in financial reports while Nigeria corporate governance principle was issued, regulated and supervised for the first time in Nigeria (FRCN Act 2011). The passage of Freedom of Information (FOI) bill into law was also made to protect any whistle blowers and to encourage firms to provide extensive
Internally also, Nigerian firms appear to have some form of peculiarities. For instance, a good number of the firms have concentrated ownership structure (Umoren, 2009), which has implication for board composition (Healy and Palepu 2001; Adelopo, 2010; and Uyar et al, 2014). Equally, the quality of corporate governance structure of the firms is in itself weak – a factor that creates incentives for firms to default in terms of full disclosure and financial reporting (Solomon 2010). Due to some inefficiency in the Nigerian financial markets, there are reported cases of inside and related lending, which lead to a situation where financial leverage positions are not true reflection of the funding patterns of firms.

All these are likely to effect on the practices of financial disclosure among firms in the country. To address some of the contending issues arising from existing disclosure literature and provide empirical premise for the Nigerian case, this paper therefore aims to test a set of hypotheses on the effect of several internal characteristics on the quality of accounting information disclosed by a sample of Nigeria firms for a fourteen year periods. The paper contributes significantly to global knowledge by using data from an emerging capital market with inefficient markets and unstable corporate business environments to widen the scope of corporate disclosure practices and internal firm characteristics debates around the world.

The rest of the paper is organised as follows: section 2 presents a review of related literatures and development of hypotheses. The research methodology is discussed in section 3 while section 4 presents the findings and analysis of the findings. Finally, section 5 presents the conclusion, limitations and direction for future research.

2. REVIEW OF RELATED LITERATURE

Since the inception of the work of Cerf (1961) on disclosure quality of firms, a lot of empirical works have been devoted to the study of disclosure practices. Most of this study however focused on identifying Micro structure of business such as size, age, leverage among others. For instance Raffournir (2006); Uyar, Kilic and Bayyurt (2014); Dedman, Lin, Prakash and Chang (2008) using experimental variable found that leverage, size,profitability and age has significant relationship with disclosure quality of firms. Some other researchers classified the determinants into external and internal. For example Donneelly and Mulcahy (2008); Aksu and Kosedag (2006); Inchausti(1997) and Barako (2007) argued that economic, culture, political, legal system and technological development and other environmental factors affects the quality of firms disclosures quality, While Shehu (2012) and Umoren (2009) stated that the internal factors which include the age, type of auditors and leverage position etc to a large extent determine firms disclosure quality. Along this line of argument, the emphasis placed on internal characteristics can only be fully understood in the context of the nature of the firm itself and that the incentives for disclosure are endogenous to the firm (Penrose 2009). Cadbury report (1992:37) stated that “the life blood of markets is information and barrier to the flow of relevant information represents imperfections in the market. The more the activities of firms are transparent, the more accurately will their securities be valued” Increased and improved transparency is likely to reduce agency costs as better information flows from the firm to the shareholders, which in turn reduces information asymmetry. The point is that when a price-maximizing manager withholds information from the market investors become suspicious about the quality of investments and they discount its quality to the point where the manager is always better of with a full disclosure. The popular argument among scholars in developed countries is that extensive disclosure bridges the gap between owners and managers and by extension other stakeholders such government.
A cursory look at prior literature such as Akhtaruddin (2005); Glaum and Street (2003); Kolsi (2012); Raffournir (2006); Uyar, Kilic and Bayyurt (2014); Dedman, Lin, Prakash and Chang (2008); Donneelly and Mulcahy (2008); Aksu and Kosedag (2006); Inchausti(1997); Barako (2007) and Shehu (2012) indicate that research in this area are more in developed countries such as United States of America(U.S),United Kingdom(U.K),Canada than as it is in developing countries. This therefore account for why this study in an emerging country like Nigeria is very important.

Essentially there have been many corporate disclosure theories that have been formulated over the years such as codification theory, Dye’s theory of mandatory and voluntary disclosure and disclosure transformation theory, agency theory, signalling theory, political cost theory, capital needs theory and legitimacy theory – each of which explains different sub-points of disclosure. For instance, the codification theory and Dye theory explain the integration of mandatory and voluntary disclosure practices. The increase in disclosure is particularly pronounced for firms that have positive and large financing needs and growth opportunities (Leuz and Schrand 2008).This was buttressed by Latridis (2008) who found that in order to raise finance in the capital and debt markets, firms tend to provide informative accounting disclosure. Kolsi (2012) in his study using the theory found that mandatory and voluntary disclosures are positively related. Generally the variations in the quality of compliance with mandatory disclosure are hypothesized based on the manager’s incentive disclosure theories. In economic perspective, we looked at some problems based on actual market failure –information asymmetry, agency problem and the adverse selection problem in order to account for the differences in financial disclosure practices. For example, Latridis (2008) states that insiders (Managers) know more than the outsiders (shareholders and other stakeholders), hence the quality of information that will be disclosed will vary to deter others from knowing what they know about the market. Cheung, Jiang and Tan (2010) proves that high(low) disclosure frictions lead to the reduction of agency costs and information asymmetry between management and stakeholder. The determinants of disclosure quality decision for company listed in Nigeria is complex and are influenced by number characteristics such as culture, political, economic and corporate factors. However, in this study only four determinants are identified. These include; size, profitability, leverage and board composition. The quality to which these affect disclosure quality is the focus of this research.

3. DATA AND METHODOLOGY

This study adopted a quantitative research design using a regressive panel technique to predict the dependent variable with independent variables. The dependent variable consists of forty-five (45) information items drawn from mandatory and voluntary accounting information scorecards. Based on the unweighted disclosure index using the scorecard, relative disclosure index (RDI) computed as the ratio of information disclosed by each firm in a year over the total information expected to be disclosed was used as the disclosure practices. The value arrived from this computation forms the dependent variable. For the independent variables, four internal firm characteristics were used as shown in table 1.

Table 1: Operational Definitions of Variables

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variables</th>
<th>Operational Definitions</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Disclosure Scores</td>
<td>Scores for Mandatory and Voluntary</td>
<td>EX/n***</td>
</tr>
<tr>
<td>2</td>
<td>Firm Size</td>
<td>Logarithms of Total Assets</td>
<td>Log TA**</td>
</tr>
<tr>
<td>3</td>
<td>Profitability</td>
<td>Ratio of EBIT to TA</td>
<td>EBIT/TA**</td>
</tr>
<tr>
<td>4</td>
<td>Board Composition</td>
<td>Ratio of NEID to TNODOB</td>
<td>NEID/TNODOB**</td>
</tr>
</tbody>
</table>
In order to determine the sample size, judgmental sampling technique was used. Some listed firms were excluded based on the fact that some firms’ usage of financial leverages substantially differs from the others, and then finally firms whose data cannot be traced for the periods under study were also not included. Therefore, we can summarize the five criteria put in place to make our sample as follows;

- The company must have been non-financial listed in the Nigeria Stock Exchange earlier before 2000 and must remain active in the exchange as at year 2013.
- The company must not be a bank, investment company, financial brokers and/or leasing company
- The financial year of the company must end between March 31, to December 31, 2013
- The stock of the company must be traded at least once during the year as at December 31, 2013.
- Financial information or the corporate annual report must be accessible or available

Considering the above factors, the sample size after the systematic elimination method includes 61 firms. Therefore, 61 non-financial listed firms were finally selected for use in this study.

Secondary data was used in this study. The secondary data includes the annual reports of the 61 selected firms for the period 2000 through 2013. This makes a total of 14 years under eight hundred and fifty four (854) observations. Some of the online depositories used includes; the various firm’s websites, Nigerian Stock Exchange websites and the AfricanFinancial.com website. Annual reports of firms used in this study were extracted from these sources.
3.1 Estimation Regression Models

For the purpose of data analysis, fixed effect multiple regression model used by Blundell and Bond (1998) was adopted but modified to form the multiple linear equation. Relative Disclosure Index (RDI) was modelled as a function of a set of explanatory variables X for firm i at time t, time-invariant unobservable firm specific-effects v, a set of firm specific-effect that change over time but are common to all firms n, and a serially uncorrelated time-varying disturbance term ε. This relationship can be represented as shown below:

In this study, we expressed relative disclosure index of firms (RDI) as a function of the independent variables, thus,

\[ RDI_{ij} = \alpha + \beta_1 \log TA + \beta_2 \frac{EBIT}{TA} + \beta_3 \frac{NEID}{TONOB} + \beta_4 \frac{TD}{TA} + \epsilon_{ij} \]

(1)

Where \( \alpha \) is the unknown intercept or constant factor

\( \epsilon \) Is The Error Terms (Incorporating Omitted Factors)

And terms i,j implies ith time(year 2000...2013, and jth firm(for the 61 sampled firms).

This model was estimated using the ordinary least square regression criterion. The signs and significance of the regression coefficients were relied upon in determining the nature of the relationship of each of the internal firm characteristics and disclosure practices of listed non-financial listed firms within the period studied. To account for the possible effects of some control variable on the disclosure practices of non-financial listed Nigerian Firms, more explanatory variables were added to equation 1, thus giving rise to the equation 2 below

\[ RDI_{ij} = \alpha + \beta_1 \log TA + \beta_2 \frac{EBIT}{TA} + \beta_3 \frac{NEID}{TONOB} + \beta_4 \frac{TD}{TA} + \beta_5 \log Age + \beta_6 FATA + \epsilon_{ij} \]

(2)

For robustness test, we separated the equation 2 into two; and test their specific effect on disclosure practices so as to determine their contribution to either mandatory disclosure or voluntary disclosure.

\[ VDI_{ij} = \alpha + \beta_1 \log TA + \beta_2 \frac{EBIT}{TA} + \beta_3 \frac{NEID}{TONOB} + \beta_4 \frac{TD}{TA} + \beta_5 \log Age + \beta_6 FATA + \epsilon_{ij} \]

(3)

\[ MDI_{ij} = \alpha + \beta_1 \log TA + \beta_2 \frac{EBIT}{TA} + \beta_3 \frac{NEID}{TONOB} + \beta_4 \frac{TD}{TA} + \beta_5 \log Age + \beta_6 FATA + \epsilon_{ij} \]

(4)

Moreover, the components of financial leverages were also individually tested to see the effect of each of the components on disclosure practices. As shown in equation 5. This was to take account of both the narrow and broad definition of financial leverage.

\[ TDS_{ij} = \alpha + \beta_1 \log TA + \beta_2 \frac{EBIT}{TA} + \beta_3 \frac{NEID}{TONOB} + \beta_4 \frac{TD}{TA} + \beta_5 \frac{STD}{TA} + \beta_6 FATA + \epsilon_{ij} \]

(5)

Where LTD is the Long term debt and STD is the short term debt.

The signs and significance of the regression coefficients arising from the fixed effects panel regression and
Random effect panel regression were compared as basis for judging the strength of the influence of Internal Firm characteristics on the disclosure practices of non-financial listed firms in Nigeria.

4. RESULTS

4.1 Descriptive Results

Table 2 presents the descriptive statistics of the Overall Disclosure index of the sampled firms. These are the mandatory disclosure index and voluntary disclosure index arising from the mean results of the 14-year period. From the table, it is observed that the relative disclosure index (RDI) of all the firms sampled stands at a mean quality of 55.81 percent. In other words, less than 45 percent (44.19%) of the total expected disclosures was accounted for by other sources such as managers motives. A greater proportion of the RDI is made up of MDI which contributes 66.16 percent of the total disclosure quality.

This trend is an indication that the mandatory disclosure index within the period studied is below average. For the voluntary disclosure, an interesting change was observed over the years. For instance, the evidence from the table revealed that the mean value of the voluntary disclosure index within the period changed from 20.92 percent in 2000 to 54.99 percent in 2013. This in a way should be capable of mitigating agency problems between management and shareholders. It also gives an impression that non-financial listed firms in Nigeria apart from the mandatory requirements also strive to disclose above the minimum required by law. On the other hand, mandatory disclosure index which is a disclosure required by law and statutes also improved significantly over the period. The Mandatory disclosure index in 2000, though poor (40.28 percent), shows an increase from 40.28 to 66.16% in 2013. It was observed that the variability of the disclosure index around the mean (standard deviation) significantly improved from 5.85 to 9.116 percent, while overall disclosure changed from the media value 5.22 percent in 2000 to 36.6 in 2013.

Table 2: Descriptive Statistics of Disclosure Index of Non-Financial Listed Firms in Nigeria for the Period Covering 2000-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
<th>Mean</th>
<th>SD</th>
<th>25th Percentile</th>
<th>Median</th>
<th>75th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Disclosure index</td>
<td>55.808</td>
<td>10.230</td>
<td>48.750</td>
<td>54.688</td>
<td>62.500</td>
</tr>
<tr>
<td></td>
<td>Voluntary Disclosure Index</td>
<td>40.986</td>
<td>15.443</td>
<td>30.556</td>
<td>38.021</td>
<td>50.000</td>
</tr>
<tr>
<td></td>
<td>Mandatory Disclosure Index</td>
<td>66.161</td>
<td>9.873</td>
<td>59.483</td>
<td>65.945</td>
<td>72.8455</td>
</tr>
</tbody>
</table>

Source: SPSS

Table 3 below shows the disclosure range among the 61 sampled firms. The result of descriptive analysis indicate that only 29.51% (18 firms) scored between 70-80 percent, 44.26% (27 firms) scored between 80-90 percent.

Table 3: Disclosure Range of Firms

<table>
<thead>
<tr>
<th>Disclosure Range</th>
<th>No of Firms</th>
<th>Proportion of Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-80</td>
<td>18</td>
<td>29.51</td>
</tr>
<tr>
<td>80-90</td>
<td>27</td>
<td>44.26</td>
</tr>
<tr>
<td>90-100</td>
<td>16</td>
<td>26.23</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Furthermore, the study also indicates that about 26.23 percent (16 firms) out of the total number of firms got score ranging from 90-100 percent. This finding is an indication that the disclosure quality of the sample firms is relatively is low. This suggests that the compliance quality of firms with the mandatory disclosure requirements is relative poor. The table also point to the fact that most of the firms sampled have both low levels of mandatory and voluntary disclosures.
4.2. Multicollinearity Test

We checked for multicollinearity by manually observing the correlation coefficient for each independent variable. Our results indicate mild collinearity as none is more than 80%. The table below presents the partial outcome of the regression analysis done using SPSS to show the VIF. From the table, it was observed that both VIF are less than 10 which indicates non-existence of multicollinearity. This also agrees with the previous finding that none is more than 80%. When we employed VDI as a proxy for extent of disclosure, we found that the maximum VIF is LogTA = 1.258, with the mean VIF = 1.103.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Eigen value</th>
<th>Condition index</th>
<th>Tolerance</th>
<th>Quality (1/VIF)</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.694</td>
<td>1.000</td>
<td></td>
<td>.990</td>
<td>1.010</td>
</tr>
<tr>
<td>PBITTA</td>
<td>.654</td>
<td>2.952</td>
<td>.990</td>
<td>1.010</td>
<td></td>
</tr>
<tr>
<td>LOGTA</td>
<td>.288</td>
<td>4.449</td>
<td>.795</td>
<td>1.258</td>
<td></td>
</tr>
<tr>
<td>TLTA</td>
<td>.204</td>
<td>5.283</td>
<td>.964</td>
<td>1.038</td>
<td></td>
</tr>
<tr>
<td>NEDTNODOB</td>
<td>.135</td>
<td>6.504</td>
<td>.973</td>
<td>1.027</td>
<td></td>
</tr>
<tr>
<td>FATA</td>
<td>.024</td>
<td>15.346</td>
<td>.910</td>
<td>1.099</td>
<td></td>
</tr>
<tr>
<td>LogFAge</td>
<td>.002</td>
<td>47.998</td>
<td>.843</td>
<td>1.186</td>
<td></td>
</tr>
</tbody>
</table>

Source: Result Generated from SPSS Computer Package

We also used condition index as another test for multicollinearity. However, we found that the results reported by condition index and VIF are contradictory. The condition index reported that the condition number is 47.998, which is higher than the normal accepted quality that is 30. We note that multicollinearity detected in condition index is possibly due to the inclusion of year and industry dummies in the model. Given that VIF is widely used as a measurement for multicollinearity, we assume that contradictory results between VIF and condition index shown that multicollinearity is mild. As precaution, we tried to rerun the models with and without industry and year dummies. We found that our results (especially related to extent of disclosure, Corporate Governance and firm characteristics) are largely unaffected. Hence, we conclude that multicollinearity is not an issue in our case. Moreover, we checked for the tolerance quality which is a reciprocal of VIF (1/VIF). Result shows that there is no case of multicollinearity among the variables.

4.2 Empirical Results

Table 5 presents the finding of the regression model using RDI as the dependent variable and firm size, leverage, profitability and board composition as the independent variables. Firm size is adjusted to normalize the distribution of the data while leverage is adjusted to control for the outliers and spurious data. Listing age and asset tangibility are used as control variables. In the table it was found that r2 (equation 1) is 0.6 or 60% an indication that 60% of the variables used account for 60% of the changes in RDI while 40% of the variations is caused by other variables other than the ones used. When some of the variables were adjusted for possible endogeneity problem and the possibility of outliers, result show that the p-values are firm size (0.502), leverage (0.589), profitability (0.025) and board composition (0.880).

In the third model, robustness test was done to ascertain the extent to which the various explanatory variables are responsible to the change in MDI, and VDI using fixed effect models. Result show that 41% of the change in MDI is caused by the explanatory variables selected while 59% is caused by other variables other than that used. The import of the above finding is that operators of firms manipulate the existing laws on disclosures. It also mean that the motive of managers affect the quality of disclosure whether mandatory or voluntary. For instance, when reporting is meant for tax
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Purpose, managers advertently conceal vital profit information to avoid paying high amount of money as income tax. This is further buttressed by the high inverse relationship recorded (−0.77). Somehow similar result is found in firm size, leverages and board composition.

In model 4, VDI is expressed as a function of certain explanatory variables. Finding show that r² is 45% which is an indication that about 45% are explained by these variables while 55% are unexplained. The result is an indication for instance that more profitable firms disclose higher degree of voluntary information than the unprofitable firms. When the whole models are compared, the coefficient increases across various models while the significance quality changes from one model to another. Over all the coefficient of determination (r²) shows that 76% of the change in the dependent variables –RDI are explained by the independent variables while 24% are explained by other variables other than the ones used.

| Table 5: Regression Results of Firm Characteristics on the Disclosure Index |
|---------------------------------|-----------------|-----------------|-----------------|
| | (1) RDI | (2) RDI | (3) MDI | (4) VDI |
| Disclosure index | 0.00*** [0.001] | 0.005 [0.70] | 0.022*** [0.56] | 0.016 [0.067] |
| Firm Size-ind adjusted | -0.001 [0.502] | -0.001 [0.539] | -0.001 [0.539] |
| Leverage-ind adjust | -0.011 [0.589] | 0.110 [0.095] | 0.110 [0.095] |
| Profitability | 0.025*** [0.001] | 0.077*** [0.002] | 0.077*** [0.002] |
| Board Independence | 0.019 [0.880] | -0.076 [0.848] | -0.076 [0.848] |
| Listing Age | 1.218*** [0.018] | 2.231 [0.183] | 2.231 [0.183] |
| Asset Tangibility | 0.082 [0.546] | 0.399 [0.375] | 0.399 [0.375] |
| Constant | -0.587*** [0.000] | 0.058 [0.387] | -1.320 [0.003] | -0.107 [0.743] |
| Observations | 384 | 370 | 386 | 371 |
| R-squared | 0.60 | 0.760 | 0.416 | 0.454 |

p-Values are reported in parentheses.

* indicate significance at 10% quality.

** indicate significance at 5% qualitys.

*** indicate significance at 1% quality.

This is further tested using variable additive model, in this model the six explanatory variables (control variable inclusive) are tested separately and added back to determine usefulness or otherwise of the various independent variables. The result of this model enables us to determine which variable is useful, superfluous or detrimental to the model used. The result from the table below (table 5) indicates that all the explanatory variables except assets tangibility are useful in the model. The assets tangibility was the only variable found to be superfluous. None of the variable however was detrimental to the model.

By using variable additive method as shown below, (table 6), we progress to the hypothesis given the fact that all our variables are useful.
Table 6: Results of Regression Using Variable Additive Method

<table>
<thead>
<tr>
<th>Models</th>
<th>Variables</th>
<th>R-Squared (Adj)</th>
<th>Std Coefficient</th>
<th>Regression Coefficient</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>LogTA</td>
<td>0.513</td>
<td>0.223</td>
<td>-3.486</td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td>LogTA, PBTTA</td>
<td>0.614</td>
<td>0.224</td>
<td>-3.497</td>
<td>Useful</td>
</tr>
<tr>
<td>Model 3</td>
<td>LogTA, PBTTA, NNEIDTNONOB</td>
<td>0.713</td>
<td>0.135</td>
<td>-1.257</td>
<td>Superfluous</td>
</tr>
<tr>
<td>Model 4</td>
<td>LogTA, PBTTA, NNEIDTNONOB, TLTA</td>
<td>0.813</td>
<td>0.135</td>
<td>-1.29</td>
<td>Useful</td>
</tr>
<tr>
<td>Model 5</td>
<td>LogTA, PBTTA, NNEIDTNONOB, TLTA, LogAge</td>
<td>0.821</td>
<td>0.135</td>
<td>-1.28</td>
<td>Useful</td>
</tr>
<tr>
<td>Model 6</td>
<td>LogTA, PBTTA, NNEIDTNONOB, TLTA, LogAge, FATA</td>
<td>0.086</td>
<td>0.136</td>
<td>-0.27</td>
<td>Useful</td>
</tr>
</tbody>
</table>

Note: A variable is useful if it improves the value of R² without rendering the individual value of coefficient unacceptable; superfluous if the new variable does not improve the value of R² and the individual coefficients are not affected in any way and detrimental if the new variable affect individually the signs and value of the coefficients.

5. CONCLUSIONS

The main objective of this study was to analyze the determinants of disclosure quality of listed firms in Nigeria. Four independent variables were used. They are firm size measured by logarithm of total assets, profitability, measured by ratio of Profit before interest and tax to total assets, board composition measured by percentage of non independent directors on the board and financial leverage measured by total loan to total assets. Disclosure checklists relevant to shareholders and creditors were utilized to quantify the quality of disclosure of listed firms while quantitative research design involving ex-post facto research method was employed as the research design. The major finding of the study is that firm size has significant and positive relationship with disclosure practices of listed firms in Nigeria. Moreover, Board composition is found to be significant and positively related with the quality of information disclosures in Nigeria. On the other hand, profitability and leverage were found to be significant and negatively related to the disclosure quality of listed firms in Nigeria.

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September, 20, 2014.


