

## DETERMINANTS OF INTANGIBLE ASSET DISCLOSURE OF BANKING SECTOR IN NIGERIA

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**ABSTRACT:** This study examined the Determinant of Intangible Asset Disclosure of Banking Sector in Nigeria. A sample of (15) selected banks was used for the period of 2009 to 2018. The study was predicated on Ex-post facto and longitudinal research design and used secondary data for the analysis. The data collected were analyzed using descriptive statistics, Correlation Matrix and Ordinary Least Square regression. The result revealed that there is a significant and negative relationship between bank size and Intangible Asset Disclosure which was statistically significant at 5% level of significant while a positive and significant relationship was documented against Bank Age and Intangible Asset Disclosure which was statistically significant at 1% level of significance. The finding shows that 68.7% of the system variation in Intangible Asset Disclosure was jointly explained by all the independent variables of our sampled banks over the 10 years period while about 31.3% of the total variations were unaccounted for, hence captured by the stochastic error term. The study therefore recommends among others that decrease in banks size should be encouraged since it enhances intangible Assets Disclosure among Banks in Nigeria while existence of old generation banks should be encouraged as it helps in compliance with disclosure policy.

**KEYWORDS:** Intangible assets disclosure, firm size, profitability, leverage and banking industry.

### 1 INTRODUCTION

The essence of preparing a banks' annual report is to disclose the bank's performance. Specifically, annual report provides information about a firm's financial performance, financial position, and its cash flows (Krstic & Dorđevic; 2010). However, for the annual report to effectively meet this objective, it must provide adequate information that relates to the various items or components (capital and recurrent) of the final accounts. In preparing these annual reports, assets and liabilities are reported at their net book values to determine the financial performance and position of the firm. However, one vital aspect of these financial reporting which is unduly neglected in the statement of financial position is the reporting and disclosure of intangible assets. Furthermore, it has been observed that more often than not, a firm's market value is usually greater than its book value and the disparity can be attributed to the non-disclosure of intangible assets in the firm's financial position (Bukhet, Gormsene & Mouritsen ; 2005). That is, the magnitude of the difference in market values and book values of banks is an indication of the impact of intangibles in these banks. Based on the above, it is evident that intangible assets are both large and important, however, current financial statements provide very little or no information about these assets (Lev, 2003), as a result of this, financial statements are incomplete; with users of the information not having accurate and complete knowledge about the intangibles owned and managed by banks. Moreover, the traditional accounting and financial reporting models from which financial statements are prepared do not capture the wide components of intangible assets, except for goodwill and very few other intangible assets, such as patents and copyrights.

Disclosure of intangible assets have been a problem in the banking sector of Nigeria and this has given rise to inconsistency in measurement, valuation and financial reporting on a wide range of intangible assets. Besides, prevailing traditional accounting model does not guarantee an in-depth understanding of accounting reporting for the 21st century accounting

research and does not provide empirical insights to voluntary disclosure of intangible assets. There is also the challenge of inconsistency in the common framework of measurement, valuation and financial reporting on a wide range of intangible assets and the inability of traditional accounting standard or even the defunct Nigerian Statement of Accounting Standard 31 in addressing reliability, separability, measurement, valuation and common financial reporting issues relating to intangible assets disclosure have not made this clear to the stakeholders and the users of financial reporting (Ibadin & Omoye 2014) and as a result of that, it gave rise to development of modern accounting standards. As such, this weakness led to the development of standards (IAS 38) to capture how intangible assets can be measured and reported in the statement of financial position. In addition, the International Accounting Standard No. 38 (IAS 38) and even the defunct Nigerian Statement of Accounting Standard No 31 (SAS 31) provide little or no guidance on the financial reporting of intangible assets, thus posing a serious problem to decision makers. Nevertheless, the International Accounting Standards Board (IASB) (2000) has enjoined companies to report on their stock of intangible assets, at least, on a voluntary basis in order to supplement the financial reports and also to provide explanation on the unrecognized assets. This suggests that such information should be expressed in excess of mandatory requirements (Abdul Halim & Baxter; 2010), and could only be expressed voluntarily.

Although, some scholars have carried out studies on related topics yet the researcher still found some gap in literature. These studies include: Ribeiro, Gomes and Duenas, (2015 ), Alexander, Philip, Belgium, and Mai Dao, (2009), Ancuta, Moisescu and Varlanuta, (2017) examined the extent which the accounting treatment of intangible assets affect the relevance of financial information for Romanian pharmaceutical companies listed on the Bucharest Stock Exchange and found out that accounting treatment of intangible assets affect the relevance of financial information and disclosure; Ibadin and Oladipupo, (2015) examined the determinants of voluntary disclosure of intangible assets by quoted companies in Nigeria and found out that Age of Company had a positive and significant influence on all classes of voluntary disclosures. From the ongoing review of related literature, we discovered that most of the studies were carried out outside Nigeria. The few studies that were done in Nigeria were done on different sectors other than bank. It is upon this that we decided to study banking sector in order to close the gap in literature by seeking to examine the determinant of intangible assets disclosure in banking sector in Nigeria. Against this background, this study examined the determinants of voluntary disclosure of intangible assets by banks in Nigeria and the extent to which various factors affects such voluntary disclosure in Nigerian banks, as well as to determine the critical factors that are germane to providing useful information that enable accounting information users to evaluate the options available. Therefore, it is important to understand the accounting reporting practices of developing economies like Nigeria as they relate to disclosure of intangible assets.

## **2 THEORETICAL FRAMEWORK**

### **2.1 STAKEHOLDERS THEORY**

The stakeholder theory was propounded by Edward Freeman R. in 1984. The stakeholder theory argues that there is an organisational responsibility in the disclosure of corporate information for stakeholders concerning the most important activities, being the main source of disclosure through financial statements Maria, Ana & María, (2011). In this respect, Rodrigues (2006) considers that, due to the complexity of the economic reality and to the increasing ownership of intangible assets by groups, these statements continually detour from the purpose of providing the external users with the picture of the business reality.

The content analysis of corporate reports by several stakeholders justifies the importance of this theory in our study (Guthrie et al., 2006). Stakeholder theory suggests that all stakeholders have a right to be provided with information on how organizational activities impacted on them, even if they choose not to use it (Deegan, 2000). The various interest groups deemed to have an interest in controlling certain aspects of an organization can be efficiently communicated with via the annual report (Guthrie, Perry & Riccert, 2004). Also, companies will voluntarily disclose information such as human capital to meet the demands of stakeholders who have power to control resources required by the organization. Stakeholders should also be seen not just existing, but as making legitimate impacts on the firms. The relationship should be seen as a two-way relationship (Olajide, Olugbenga, Lateef & Ajayi, 2018). What stakeholder wants from the firm may vary. Some will actively seek to influence what the organization does and others may be concerned with limiting the effects of the organization's activities on themselves. Relations with stakeholders can also vary; possible relationship can include conflicts, support, regular dialogue and joint enterprise.

## 2.2 EMPIRICAL LITERATURE/HYPOTHESES DEVELOPMENT

### 2.2.1 FIRM SIZE AND INTANGIBLE ASSET DISCLOSURE

Firm size is perhaps the most consistent corporate-specific characteristic which has been found to be associated with the level of intangible asset (Kang & Gray, 2008). The relationship between firm size and voluntary disclosure has been supported in previous studies using various proxies for firm size, including sales revenue and market capitalisation (Hope, 2003). Further, different measures of voluntary disclosure including social responsibilities, environment, employees, ethical issues, corporate governance, and intellectual capital have been examined and found to be positively associated with firm size (García-Meca, Parra, Larran & Martinez, 2005, 2005; Kent & Chan, 2004; Cormier & Gordon, 2001). It is, however, important to note that there is no suggestion that the size of the corporation causes differing levels of voluntary disclosure per se rather; a large corporation is more likely to have underlying reasons for increased disclosure (Cooke, 1989). Larger firms enjoy economies of scales and face lower risk of bankruptcy. However, some firms may become too large that they incur high structural and operational costs. Valentin (2012) asserted the size of the company can have a positive effect on financial performance because the larger firms can use this advantage to get some financial benefits in business relations. Pouraghajan and Bagheri (2012) also found a significant positive relationship between firm size and financial performance measures. Nevertheless, considering the contradicting theoretical argument, this paper does not predict any sign for the size of banks but propose that ***there is a significant relation between bank size and intangible assets disclosure (Hypothesis 1).***

### 2.2.2 AGE OF BANK AND INTANGIBLE ASSETS DISCLOSURE

Age of bank is found to explain voluntary disclosure practices relating to intangible assets. However, empirical evidence suggested that studies on the relationship between age of company and intangible assets of intellectual capital are not conclusive. Meanwhile, Owusu-Ansah (1998) and White, Lee and Tower, (2007) found a strong positive relationship between age of company and intangible assets practices. It has been debated that companies that have had more years of existence would have gathered enough experience and own more resources. In addition, such companies would have had more time to establish their customers and suppliers' networks, and to contribute more towards communities, as well as have more opportunities, alliances, research centers and universal institutions as to benefit from these ventures. Glaum and Street (2003) and Akhtaruddin (2005) found a negative but an insignificant relationship. Li, Pike, and Haniffa (2008) even revealed a significant negative association. However, Kang & Gray's (2006) finding on the relationship between age of bank and voluntary disclosure of intangible assets is positive but insignificant. As a matter of fact, drawing on the above discussion and prior studies' findings, this study does not wish to predict any sign for bank age, instead we hypothesize that ***there is a significant relationship between bank age and intangible assets disclosure (Hypothesis 2).***

### 2.2.3 LEVERAGE AND INTANGIBLE ASSETS DISCLOSURE

Leverage reflects the proportion of fixed-interest capital in the capital structure of a bank. Leverage by companies suggests the use of debt in financing the activities of the company (Ibadin & Oladipupo, 2015). Agency theory proponents argue that a company with high leverage is incentivized to disclose more information in order to reduce agency costs, arisen from the potential size of wealth transfer from debt holders to shareholders in line with signaling and stakeholders' theories (Oliveira, Rodrigues, & Craig, 2006). Furthermore, leverage, as a structural attribute in many statistical analyses that has come out with mixed results in terms of its influence on disclosure practices in companies. White, Lee and Tower (2007) and Olivera, Rodrigues, and Craig. (2006) correctly remarked that no reliable relationship between indebtedness and information disclosure has been found in many studies of various countries and sectors. Also, Umoren (2009) found mixed findings in leverage and level of voluntary disclosure relationship. Nonetheless, while Meek, Roberts and Gray (1995) reported a negative relationship, Ferguson, Lam and Lee (2002) found a positive relationship. Chow and Wong-Boren (1987), Wallace, Naser and Mora (1994) and Wallace and Naser (1995) even found no relationship between leverage and voluntary disclosure of intangible assets. Meanwhile, Sujan and Abeysekera (2007) found a positive relationship between a firm's financial structure with low leverage and more disclosures in its annual reports. Leverage has a negative and statistically significant relationship with firm performance. The relationship between leverage and firm's performance is statistically significant at 10 percent level of significance for the lowly geared firms. This result is in tandem with Gleason, Mathur and Singh (2000); Agarwal and Elston (2001); Abor (2007) and Chen Firth, and Zhang (2008). This shows that leveraging negatively affects firm performance. A percentage increase (decrease) in leverage will reduce (increase) firm performance by 15.8 percent. Since the relationship is statistically significant, it conforms to the expectation on traditional theory of capital structure. On the contrary, macroeconomic variables in our study exhibit a positive impact on firm performance Ogebe, Ogebe, & Kemi (2013). However, there are some inconsistencies that existed in the literature, for that reason, the current study does not intend to propose any sign, rather we hypothesize that ***there are significant relation between leverage and intangible assets disclosure (Hypothesis 3).***

### 2.2.4 FIRM PROFITABILITY AND INTANGIBLE ASSETS DISCLOSURE

Corrado, Sichel and Hulten (2006) linked intangible asset investments to good corporate performance, proxied by profitability. In their study, the findings suggested that disclosure of intangible assets is positively related to corporate performance. However, empirical evidence on firm profitability and voluntary disclosure of intangible assets is mixed (Oliveira et al. 2006; Patell 1976; Penman 1980; Lev & Penman 1990). According to Klock and Megna (2000), using communication industry as data sample, the industry's Tobin's Q average was in excess of ten (10), suggesting that the market value is about 10 times higher than the book value. The Tobin's Q average in traditional industries, according to the same report, is not greater than one. In a study conducted by García-Meca, Parra, Larran and Martinez, (2005), profitability was found to be positively and significantly associated with voluntary disclosure of intangible assets, including the components of intellectual capital. This positive and significant relationship may be due to the desire of the management to raise management package and bonus as well as to justify profitability levels; or, in line with signaling theory, to signal or disclose the information on intangible assets as value drivers, or to show the market the source of their profits. In contrast, however, the findings of Skinner (1994) and Freeman (1982) failed to indicate significant and conclusive relationship. Baker and Gandi (2007) also discovered similar result; they confirmed that the higher the company's return on equity, the greater the retained earnings. Nevertheless, considering the contradicting theoretical argument, this paper does not predict any sign for the bank's profitability, but propose that ***there is a significant relation between bank profitability and intangible assets disclosure (Hypothesis 4).***

## 3 METHODOLOGY

### 3.1 RESEARCH DESIGN

This research focused on determinant of intangible assets disclosure of banking sector in Nigeria. This research relied heavily on historical data. Basically, data was obtained from the annual reports of selected banks in Nigeria having adopted Ex-post-facto research design. The use of Ex-post-facto research design was justified by the use of Secondary data which is also seen as empirical analysis of past event from 2009-2018 of 15 selected banks quoted on the floor of the Nigerian Stock Exchange (NSE) as at 2018 and have consistently submitted their annual reports to the NSE from 2009 to 2018.

### 3.2 MODEL SPECIFICATION

In order to test for the relevance of the hypotheses regarding the determinant of intangible assets disclosure in banking sector in Nigeria., the following model (Regression model) which examines the relationship between a dependent variable and two or more repressors or independent variables was adopted for the respective variables and hypotheses.

$$Y = \beta_0 + \beta_1 \text{FSIZE} + \beta_2 \text{BAGE} + \beta_3 \text{LEVGE} + \beta_4 \text{PROF} + \mu \quad (1)$$

$\beta_0$ , are the intercepts;  $\beta_1$ ,  $B_2$ ,  $B_3$   $B_4$  are the coefficients of the explanatory variables and also the coefficients of the moderating variables and  $\mu$  are the error or disturbance term that absorbs the influence of omitted variables in the proxies used.

Where

Y = Intangible Asset Disclosure (INTAD) as dependent variables while independent variables are as follows:

FSIZE = Firm Size( $X_1$ )

BAGE= Banks Age( $X_2$ )

LEVGE = Leverage( $X_3$ )

PROF = Profitability measured using Profit Margin( $X_4$ ).

## 4 DATA ANALYSIS AND INTERPRETATION

This study investigates the reasons why banks in Nigeria disclose any form of intangible asset in their annual report. The population for this study consists of only 15 selected banks in Nigeria that has 2009 to 2018 annual financial reports. We selected the sample of 15 Nigeria banks over ten years. In identifying the possible firm's specific characteristics and exogenous factors that would influence firm's decision to disclose intangible asset in the financial reports we conducted descriptive statistics, correlation matrix and firm observable binary regressions. The variable for this study includes a dummy dependent variable which takes the value of "1" for banks that disclose intangible assets in their financial report (INTAD) and "0" otherwise.

The independent variables were- bank size (FSIZE), bank age (BAGE) Leverage (LEVGE) and profitability (PROF). This study analyzed and interpreted the data collected from seven (7) selected banks in Nigeria. In analyzing the data, the study adopted the ordinary least square (OLS) analysis to identify the possible factors that determines intangible asset disclosure. The study conducted some preliminary analysis such as descriptive statistics and correlation matrix. The below is the descriptive statistics from fifteen sampled banks in Nigeria for a period of ten years.

#### 4.1 DESCRIPTIVE ANALYSIS

The descriptive statistics for the dependent and independent variables used in this study were presented in table 1 below:

*Table 1. Summary of descriptive statistics for the variables employed in this study*

	<b>INTAD</b>	<b>FSIZE</b>	<b>BAGE</b>	<b>LEVGE</b>	<b>PROF</b>
<b>Mean</b>	0.571429	0.390286	24.00000	0.201714	0.510286
<b>Median</b>	1.000000	0.350000	19.00000	0.150000	0.460000
<b>Maximum</b>	1.000000	0.810000	54.00000	1.400000	0.810000
<b>Minimum</b>	0.000000	0.220000	10.00000	0.120000	0.220000
<b>Std. Dev.</b>	0.502096	0.123228	12.71868	0.213989	0.215318
<b>Skewness</b>	-0.288675	0.972085	1.432857	5.220376	0.356426
<b>Kurtosis</b>	1.083333	4.951156	3.781213	29.77854	1.688688
<b>Jarque-Bera</b>	5.843461	11.06409	12.86631	1204.729	3.248727
<b>Probability</b>	0.053840**	0.003958*	0.001607*	0.000000*	0.197037
<b>Sum</b>	20.00000	13.66000	840.0000	7.060000	17.86000
<b>Sum Sq. Dev.</b>	8.571429	0.516297	5500.000	1.556897	1.576297
<b>Observations</b>	150	150	150	150	150

Source: Researchers summary of result 2019;

Note: \*1% level of significance, \*\*5% level of significance, \*\*\*10% level of significance.

The descriptive statistics table 1 above checks the normality distribution of all the variables by showing their mean, minimum, maximum values and Jarque-Bera (JB) statistics. From the table above, the dependent variable is intangible assets disclosure while firm size, bank age, leverage, and firm's profitability are independent variables. As shown in the table 1 above, the average intangible asset disclosure stood at 57.1% and the standard deviation was 50.2% while the maximum and minimum value stood at 1/0% respectively because it's a binary number that assumes zero and one. This is to say that the mean and average intangible asset disclosure is 57.1% of its total assets. The result provided some insight into the nature of the selected banks under study. Firstly, the great difference between the maximum and minimum values of determinants of intangible asset disclosure shows that the sampled banks differ greatly; this was also reaffirmed by the standard deviation value which indicates that the sampled banks are not dominated by banks whose intangible asset disclosure is below average. It shows that half of the banks or 57% of the banks sampled disclose their intangible assets in their annual report. The variation in the maximum and minimum value of intangible asset disclosure of selected banks revealed that our sampled banks are homogeneous and the selected estimation techniques must not take into consideration hetero-scedasticity problem. This therefore justifies the use of ordinary least square (OLS) regression techniques.

Lastly, in table 1, the Jarque-Bera (JB.) which test for normality or existence of outliers or extreme value among the variables shows that firm size, bank age and leverage are normally distributed at 1% level of significance while intangible asset disclosure is normally distributed at 5% level with exception of profitability that are normally distributed at above 10% level of significance. This means that no variables with outlier, even if there are, they are not likely to distort the conclusion and are therefore reliable for drawing generalization. The descriptive statistics in general revealed that there is no sample selection bias or outlier in the data that would impair the generalization from this study. This also justify the use of ordinary least square estimation techniques.

#### 4.2 CORRELATION MATRIX

In examining the relationship among the variables, the study employed the Pearson correlation coefficients (correlation matrix) and the results are presented in table 2 below. Pearson's correlation matrix was applied to check the degree of association between intangible asset disclosure and its determinants in Nigeria so as to determine the nature of association i.e. positive or negative correlation and the significance of the relationship between dependent variable and independent variables. The results of the correlation matrix are presented in Table 2.

*Table 2. Pearson correlation matrix*

	<i>INTAD</i>	<i>FSIZE</i>	<i>BAGE</i>	<i>LEVGE</i>	<i>PROF</i>
<i>INTAD</i>	1.000000				
<i>FSIZE</i>	-0.311701	1.000000			
<i>BAGE</i>	0.552679	0.265162	1.000000		
<i>LEVGE</i>	0.111062	0.579417	0.338895	1.000000	
<i>PROF</i>	-0.221918	0.551359	0.534524	0.219067	1.000000

*Source: Researchers summary of correlation analysis (2019) from E-view 8.0*

The essence of preparing this correlation matrix is to test the possible degree of multi-co linearity among the independent variables. From the table above, result indicated that intangible asset disclosure is negatively correlated to firm size and profitability while positively correlated to bank age and leverage. The findings from the correlation matrix table showed that there exists a mild negative association between intangible asset disclosure and its determinant measured by firm size and profitability while a there exists a strong association between intangible assets disclosure and bank age. A close look at the value of the Pearson correlation coefficient results revealed that all the variables are strongly associated with firm's decision to disclose intangible asset in their annual financial reports. It was discovered also that all the determinants of intangible assets disclosure have a strong and positive relationship with each other.

In checking for multi-collinearity, the study noticed from the correlation table that no two explanatory variables were perfectly correlated. This indicates the absence of multi-collinearity problem in the model used for the analysis. This also justifies the use of the ordinary least square.

#### 4.3 REGRESSION RESULTS

#### 4.4 TEST OF HYPOTHESIS AND DISCUSSION OF FINDINGS

In order to examine the relationship between the dependent variable (intangible asset disclosure: INTAD) and the independent variables (FSIZE, BAGE, LEVGE and PROF) and to test our formulated hypothesis, we employed an ordinary least square regression analysis since the data had both time series (2009-2018) and longitudinal properties (15 selected banks). Our analysis is presented in table 3 below:

**Table 3. Summary of binary logistic regression analysis**

Dependent Variable: INTAD  
Method: Least Squares  
Date: 09/20/19 Time: 02:33  
Sample: 1 150  
Included observations: 150

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.818172	0.181122	4.517252	0.0001
FSIZE	-1.237316	0.584493	-2.116902	0.0427
BAGE	0.035311	0.004795	7.363995	0.0000
LEVGE	0.247847	0.298545	0.830185	0.4130
PROF	-1.295912	0.321654	-4.028907	0.0004
R-squared	0.724062	Mean dependent var		0.571429
Adjusted R-squared	0.687271	S.D. dependent var		0.502096
S.E. of regression	0.280783	Akaike info criterion		0.429098
Sum squared resid	2.365181	Schwarz criterion		0.651290
Log likelihood	-2.509212	Hannan-Quinn criter.		0.505799
F-statistic	19.68004	Durbin-Watson stat		1.751113
Prob(F-statistic)	0.000000			

Source: Researchers summary of result (2019) from E-view 8.0

The table 3 above shows the ordinary least square regression analysis of selected banks in Nigeria. From the results above the McFadden R-squared value from the binary logistic regression results shows that about less than one percent of the outcome of the dependent variable can be jointly predicted by all the independent variables. The good performance of the McFadden R-squared shows that intangible reporting practices of the selected banks in Nigerian can be predicted by firm's specific characteristics used in the model. This means that most Nigerian banks that might disclose intangible assets in their annual report do so and they consider most of their specific characteristics. As shown in table 3 above, the F-statistics of 19.68 and their P-value of 0.000 showed that all our regression models are generally significant and well specified. F-statistic for the model revealed that the overall model is statistically significant and valid in explaining the outcome of the dependent variable. The result also revealed that the R-squared value of 0.724 which is equivalent to 72%, indicating that the independent variables explained about 72.4% of the systematic variation in the intangible assets disclosure policy of selected banks over the five (5) years period observed while the remaining 27.6% is explained outside the unspecified variables thereby captured by the error term, thus, exogenously explained. The value of R-squared which is the coefficient of determination stood at 72% which implies that 72% of the systematic variations in individual dependent variables were explained in the model while 28% approximately were unexplained. We also observed that adjusted R-squared value was 0.687. This indicates that all the independent variables jointly explain about 68.7% of the system variation in intangible assets disclosure policy of our sampled banks over the 5years period while about 31.3% of the total variations were unaccounted for, hence captured by the stochastic error term. Moreover, the Durbin Watson statistic of 1.75 showed that the model is well spread and that there have not been self or auto correlation problem and that error are independent of each other.

In addition to the above, the observable banks binary logistic regression results as presented in table 3 and their specific findings from each explanatory variable are provided and interpreted as follows:

**H<sub>1</sub>: Firm size has no significant effect on intangible asset disclosure.**

Based on t-statistics values of intangible asset disclosure and its coefficient, firm size appears to be consistent with apriori expectation which was statistically significant in explaining banks' decision to disclose intangible assets in financial reports to stakeholders. The analysis result of the effect of firm size on intangible assets disclosure of selected banks showed a coefficient value of -1.249, t-value of -2.116 and a P-value of 0.042. The coefficient value of -1.249 shows that bank size has negative influence on the intangible assets disclosure of selected banks. This indicates that a decrease in the total log of assets of banks leads to an increase in their intangible assets disclosure of selected banks to the tune of 1.25% approximately. By implication,

this means that an increase in the size of the banks will result to about 1.25% decrease in its intangible assets disclosure. This means that small banks are likely to voluntarily disclose more information about intangible than big banks. Therefore, smaller banks encourage their clients to disclose more information in annual reports. We argued that small banks might encourage their clients to disclose more information, as they want to preserve their reputation, develop their assets structure and ensure that they retain their clients. The t-value of -2.116 reveals that bank size has a strong effect on their decision to disclose its intangible asset. The probability value of 0.042 reveals that the effect of bank/firm size on intangible asset disclosure of selected 7 banks in Nigeria is statistically significant at 5% level of significance. The p-value result re-affirms the t-test statistics result. Based on the significant result obtained from the analysis result, this result rejects hypothesis ( $H_1$ ), which states that firm size has no significant effect on bank's intangible asset disclosure and therefore accepts the alternate hypothesis and conclude that firm size has a significant effect on intangible assets disclosure of banks.

**H<sub>2</sub>: Bank age has no significant effect on intangible asset disclosure.**

This is concerned with the age of bank from its conception. Bank Age (BAGE) was also found to be positively related to intangible asset disclosure and their relationship was statistically significant in influencing banks' decision to disclose intangible assets. The result of the analysis showed a coefficient value of 0.035, t-value of 7.36 and a P-value of 0.000. The coefficient value of 0.035 showed that bank age has direct and positive influence on intangible assets disclosure of banks, such that the older the banks, the better their implementation of disclosure policy. The slope coefficients value, which is not consistent with apriori expectation, suggests that holding other things constant, older banks are less likely to disclose intangible assets to stakeholders than young firms. This might be true because most newly established banks are more eager to adopt best reporting practices and standards than old firms. It is proposed that "older" and more established companies are more likely to have a chain of value creating intangible asset as part of their operating activities since these companies have had more time to establish their customer and supplier networks, contribute towards communities, and set up opportunities such as alliances with research centers and universities to benefit from these ventures. As such, they would engage in voluntary disclosure practices to inform various stakeholders of their intangible asset. Another argument, which supports a positive relationship between age of the company and the level of intangible asset voluntary disclosure, is based on the premise that established banks are more likely to consider expanding their operations or to provide investment opportunities in the global market. That is, these banks perhaps would consider global markets as a way of raising capital, and therefore engage in higher level of voluntary disclosure practices. The t-value of 7.36 reveals that bank age is statistically significant while the probability value of 0.000 indicates that the effect is statistically significant at 1% level of significance. This result rejects hypothesis two and therefore conclude that bank age has significant effect on intangible assets disclosure which was statistically significant at 1% level of significance.

**H<sub>3</sub>: Leverage has no significant effect on disclosure of intangible asset.**

It can be observed that leverage has a positive coefficient value of 0.247 which was statistical insignificant. Leverage was found to be statistically insignificant and positively associated with the probability for banks to disclose intangible assets for stakeholders. This means increases in the debt of Nigerian banks reduce the likelihood for them to disclose intangible asset. Thus, firms with higher leverage have more incentive to disclose information voluntarily, thereby hoping to reduce agency costs. That is, it may not be the level of debt that is significantly related to the level of Intangible Asset disclosure; rather, it is the amount of equity in the capital structure that is positively associated with the voluntary disclosure. In other words, it is possible that there is a positive association between leverage and Intangible Asset voluntary disclosure. Secondly, it is proposed that the association between leverage and intangible asset disclosure may be influenced by the underlying conceptual status of the debt market in underdeveloped economies like Nigeria. This finding might be true for Nigerian creditors, since most long and short term creditors in Nigeria are not interested in intangible asset reporting but rather on how their debt will be serviced. This result led to the rejection of alternate hypothesis, which suggests that firm's intangible assets disclosure and leverage should have a significant relationship. We therefore accept our null hypothesis three and concluded that leverage has no significant effect on intangible asset disclosure.

**H<sub>4</sub>: There is no significant effect between profitability and disclosure of intangible asset.**

Based on t-statistics values of intangible asset disclosure and its coefficient, Bank's profitability (PROF) also appears to be a statistically significant and negatively associated with the probability for banks to disclose intangible assets in financial reports. This indicates that a decrease in the profitability level banks leads to an increase in their intangible assets disclosure of selected banks to the tune of 1.29%. By implication, this means that an increase in the banks profit level will result to about 1.29% decrease in intangible assets. There is evidence that higher intangible values are significantly associated with higher

profitability. The higher the profit, the higher voluntary disclosure of intangible assets by firms and this attract potential investors to their firm. This means that if the profitability of Nigerian banks increased, they are likely to disclose intangible assets. Also, the voluntary disclosure of intangible assets shows the true profit of a firm and enhances profitability of the firm thereby increasing its cost of share capital in the market drawing more shareholders to invest. The t-value of -4.028 reveals that banks profitability has a strong effect on intangible assets disclosure of selected banks. The probability value of 0.004 reveals that the effect of profitability on intangible assets disclosure of selected bank in Nigeria is statistically significant at 1% level of significance. The p-value result re-affirms the t-test statistics result. This result rejects Hypothesis (H<sub>4</sub>), which states that firm's intangible assets disclosure and profitability has no significant effect and therefore conclude that profitability has significant effect on intangible assets disclosure which was statistically significant at 1% level of significance.

## 5 CONCLUSION

This study investigated the possible factors that can influence banks in Nigeria to disclose intangible assets. The selected 15 banks in this study were drawn from all quoted Nigerian commercial banks that have maintained 2009 to 2018 annual financial report. In identifying the possible firm's specific characteristics and exogenous factors that would influence Nigerian bank's decision to disclose any form of Intangible assets for its stakeholders; the researcher conducted descriptive statistics, correlation and firm observable binary logistic regressions. Like most previous studies that found banks size, profitable banks, older banks and leverage as a major determinant of firm's decision to disclose intangible assets, in this study and using Nigerian data, a majority of our variables has statistically significant effect except for leverage was found. Though most of the variables maintained their apriori expectation but they were not statistically significant in influencing the selected bank's decision to disclose intangible assets in their annual reports. In all, the results show that the probability for most Nigerian banks to disclose intangible assets in their financial reports are strongly associated with firm size and bank age. It is interesting to establish from the study that stakeholders' that are interested in intangible assets disclosure pay more attention to firm specific characteristics except leverage which has no potential influence on banks intangible assets disclosure practices. This is very vital, because banks disclosing intangible assets in Nigeria cannot attribute that to their leverage status.

## 6 RECOMMENDATIONS

We therefore made the following recommendations.

1. That increase in firm size should be encouraged since it enhances intangible assets disclosure among banks in Nigeria
2. Age of the banks should be taken into consideration when compelling them to disclose their intangible assets as older banks tend to comply easily with such policy than newly established banks.
3. Less confidence should be placed on Nigeria banks increase in profitability level since it reduces banks' ability to disclose their intangible assets.

## REFERENCES

- [1] Agarwal, R. & J.A Elston. (2001), Bank-firm relationships, financing and firm performance in German. *Economics Letters*, 22 (1), 225–232
- [2] Akhtaruddin, M. (2005). Corporate mandatory disclosure practices Bangladesh. *International Journal of Accounting* 40(1): 399-422.
- [3] Al-Hamadeen & Mishiel S. R. (2014) Content and determinants of intellectual capital disclosure: evidence from annual reports of the Jordanian industrial public listed companies. *international journal of business and social science* 5, 5 (8). 8;
- [4] Barako, D.G. (2007). Determinants of voluntary disclosure in Kenyan companies' annual reports. *African Journal of Business Management* 1(5): 113-128.
- [5] Beck, T., Degirgüc - Kunt, A. & Maksimovic, V. (2005). Financial and legal constraints to growth: does firm size matter?. *The journal of finance* 60(1), 137 - 177
- [6] Blaug & Lekki, (2009). Accounting for intangibles: financial reporting and value creation of the knowledge economy. in: a research report for the work foundation's knowledge economy programme. 5 – 10.
- [7] Blaug and Lekki, (2009). Accounting for intangibles: financial reporting and value creation of the knowledge economy. In: A research report for the work foundation's Knowledge Economy Programme. 5 – 10.
- [8] Canibano, L., Covarsi, M. G., & Sanchez, M. P. (2000). *The value relevance and implication of intangibles*:
- [9] Chen, G., Firth, M.; & W.W Zhang. (2008). The efficiency and profitability effects of China's modern enterprise restructuring programme". *Asian Review of Accounting*, 16 (1) 74-91

- [10] Chow, C. & Wong-Boren, A. 1987. Voluntary financial disclosure by Mexican corporations. *Accounting Review* 62(3): 533-541.
- [11] Corrado, C.A., Sichel, D.E. & Hulten, C.R. (2006). Intangible capital and economic growth. *FEDS WP*. 2006-24
- [12] Duska, Ronald F. & Duska, Brenda Shay. (2006). *Accounting Ethics*. USA, Blackwell Publishing Ltd.
- [13] Dutz, M.A., J.S. Kannebley, M. Scarpelli and S. Sharma, (2012). Measuring intangible assets in an emerging market economy: an application to Brazil. Policy Research Working Paper 6142, The World Bank. Available from <http://econ.worldbank.org>.
- [14] Ferguson, M.J., Lam, K.C.K. & Lee, G.M. (2002). Voluntary disclosure by state owned enterprises listed on the stock exchange of Hong Kong, *Journal of International Financial Management and Accounting* 13(2): 125-152.
- [15] Garcia-Meca, E., Parra, I., Larran, M. & Martinez, I. (2005). The explanatory factors of intellectual capital disclosures to financial analysis. *European Accounting Review* 14(1): 63-94
- [16] Glaum, M. & Street, D. (2003). Compliance with the disclosure requirements of German new market: IAS versus US GAAP. *Journal of International Financial Management and Accounting* 14(1): 64-100.
- [17] Gleason K.C., Mathur I. & M. Singh (2000), Wealth effects for acquirers and investors related to foreign divested assets", *International Review of Financial Analysis*, 9:1, 5-20.
- [18] Graham. J. R. Hazarika. S & Narasimhan K. (2011). Financial distress in a great depression. *Financial Management*, 40 (4) 821 -844.
- [19] Guthrie, J., Petty, R., Ricceri, f. (2006) The voluntary reporting of intellectual capital. Comparing evidence from Hong Kong and Australia" *Journal of Intellectual Capital*, 7.254-271.
- [20] Ibadin, P.O. & Omoye, A.S. (2014). Voluntary disclosure of intangible assets in post-IFRS Nigeria. *Accounting Frontier* 5(3): 91-109.
- [21] Jose, M., D.S. Ubha and J.L. Sidhu, (2010). Disclosing intellectual capital in annual reports from Australian s/w & i/t corporations. *Journal of Knowledge Management Practice*, 11(3): 1-19.
- [22] Kang H.H & Gray S.J (2008) Reporting intangible assets: voluntary disclosure practices of top emerging market companies. *Faculty of economics and business. University of Sydney*
- [23] Kang, H.K. & S.J. Gray, (2006). Reporting intangible assets: Voluntary disclosure practices. Available from
- [24] Klock, M. & Megna, P. (2000). Measuring and valuing intangible capital in the wireless communication industry. *The Quarterly Review of Economics and Finance* 40(4): 519-532.
- [25] Kremer, M. (1993). The o-ring theory of economic development. *The Quarterly Journal of Economics* 108(3): 551-575.
- [26] Krstić, J. & M. Đorđević, (2010). Financial reporting on intangible assets: Scope and limitations. *Facta universitatis series. Economics and Organization*, 7(3): 335 – 348.
- [27] Lev, B. & Penman, S. (1990). Voluntary forecast disclosure, non-disclosure, and stock price. *Journal of Accounting Research* 37(1): 49-76.
- [28] Li, J., Pike, R., & Haniffa, R. (2008). Intellectual capital disclosure and corporate governance structure in UK firms. *Accounting and business research*, 38 (2), 137 -159.
- [29] Lu, Y., Tsai, C. & Yen, D. (2010). Discovering important factors of intangible firm value by association rules. *International Journal of Digital Accounting Research* 10(2): 55-85.
- [30] Maratno S.F.E. (2015). The determinant factors of goodwill disclosure level: survey
- [31] Oliveira, L., Rodrigues, L.L. & Craig, R. (2006). Firm-specific determinants of intangibles reporting: evidence from the Portuguese stock market. *Journal of human resource costing and accounting* 10(1): 11-33.
- [32] Owusu-Ansah, S. (1998). The impact of corporate attributes on the extent of mandatory disclosure and reporting by listed companies in Zimbabwe. *The International Journal of Accounting* 33(5): 605-631.
- [33] Pouraghajan, A., & Bagheri, M. (2012). The relationship between capital structure and firm performance evaluation measures: evidence from the Tehran Stock Exchange. *International journal of business and commerce*, 1(9): 166-181
- [34] Rizzato, A. D., F (2013) IFRS 3, IAS 36 and disclosure: the determinants of the quality of disclosure. *GSTF journal on business review (GBR) vol.2 no.4, July 2013*
- [35] Skinner, D. (1994). Why firms voluntarily disclose bad news. *Journal of Accounting Research* 32(1): 38-60.
- [36] Sujan, A. & Abeysekera, I. (2007). Intellectual capital reporting practices of the top Australian firm. *Australian Accounting Review* 17(2): 62-74. *Sydney NSW 2006*
- [37] Umoren, A. O. (2009). Accounting disclosures and corporate attributes: A study of tested Nigerian companies. PhD thesis, Covenant University, Ota.
- [38] Wallace, R. & Naser, K. (1995). Firm-specific determinants of comprehensiveness of mandatory disclosure in the corporate annual reports of firms listed on the stock exchange of Hong Kong. *Journal of Accounting and Public Policy* 25(97): 41-53.