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**HOPE OSAYANTIN AIFUWA\***

University of Benin

**MUSA SAIDU\*\***

Kwara State University

**OSARUESE CYNTHIA ENEHIZENA\*\*\***

University of Benin

**ALBERT OSAZEVBARU\*\*\*\***

University of Benin

## ACCOUNTING INFORMATION AND LENDING DECISION: DOES SUSTAINABILITY DISCLOSURE MATTER?

**Keywords:** monetary value of collateral, profit level, corporate sustainability disclosure, banks' lending decisions, GRI.

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\* Contact information: [aifuwahopeosyanting@gmail.com](mailto:aifuwahopeosyanting@gmail.com), Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, Edo State, Nigeria, phone: +2348113232082; ORCID ID: <https://orcid.org/0000-0001-8908-6637>.

\*\* Contact information: [musasaidu.aca2010@gmail.com](mailto:musasaidu.aca2010@gmail.com), Department of Accounting and Finance, Kwara State University, Malete, Kwara State, Nigeria, phone: +2348120453412; ORCID ID: <https://orcid.org/0000-0001-7783-4108>.

\*\*\* Contact information: [enehizena.cynthia@gmail.com](mailto:enehizena.cynthia@gmail.com), Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, Edo State, Nigeria, phone: +2349030147976; ORCID ID: <https://orcid.org/0000-0002-0247-3050>.

\*\*\*\* Contact information: [albert.osazevbaru@uniben.edu](mailto:albert.osazevbaru@uniben.edu), Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, Edo State, Nigeria, phone: +2347030434596; ORCID ID: <https://orcid.org/0000-0003-0920-6032>.

**J E L Classification:** M10, M41, M48.

**Abstract:** Lending decisions of banks is a function of accounting information of borrowing firms, however, in contemporary times the quality of their accounting information is not encouraging to be used as a yardstick in taking lending decision. Against this backdrop, we investigated the impact of accounting information on commercial banks' decision to Manufacturing firms in Nigeria. A sample of thirteen industrial listed firms was used. Descriptive and inferential statistics were employed to summarize the data and to draw inference on the population studied. We employed the Ordinary Least Squares in testing the hypotheses stated. Findings revealed that monetary value of collateral positively affects lending decisions of banks, profit level of borrowing form negatively influence the lending decision of banks, while corporate sustainability disclosure positively but insignificantly impact on banks' lending decisions. The study concluded that accounting information affect banks' lending decisions, also although corporate sustainability insignificantly influence bank lending decision, it does not matter.

## ■■■ INTRODUCTION

Analyzing companies' accounting information has been an important tool for decision makers such as creditors, investors, business analysts and financial managers. They utilize the data when assessing the performance of companies. Commercial banks are popularly known as deposit money banks – where customers deposit their money and withdraw it as at when needed. Apart from the function, they also give out loans to borrowing firms and individuals. This function tends to be the most profitable and has high risk attached to it. Just like the sayings goes “it is risky not to take risk”, lending decisions are risky with high rate of profitability.

Minh (2015) asserted that the role of accounting information to loan decisions in developing countries is less important. He further noted that quality of their financial statement is low and cannot be totally relied on by the users and banks, as compared to financial statements in developed countries such as the United State of America and Australia. Notwithstanding, Emeni (2014) saw a great deal of usefulness in accounting information from developing countries like Nigeria. He noted financial statement provide data which when processed, serve as useful information to management in its planning process. Pritchard (2013) noted that such accounting information may be contained in the financial statements of the borrowing firms. It includes cash balance, profit level, and monetary value of assets which could be considered as collateral.

The emergence of sustainability accounting and reporting which brought about sustainability disclosures have been accepted and adopted by business organizations across the globe. Moreover, the acceptance rate in developed countries is higher than that of developing countries, and as a result of this, three strands of empirical findings have also emerged. Some scholars have posited that sustainability disclosure would positively affects a firms performance (see, Onyekwelu & Ugwuanyi, 2014; Nwobu, 2015; Ekweme, Egbunike & Onyali, 2013; Burhan & Rahmanti, 2012; Aggarwal, 2013; Beredugo & Mefor, 2016), while some others submitted that it would negatively affect a firm's performance (see, Isa, 2014; Dhaliwal, Li, Tsang & Yang, 2011), and some of them submitted that sustainability disclosure do not affect a firms performance (see, Asuquo, Dada & Onyeogaziri, 2018; Venanzi, 2013; Adams, Thornton & Sepehri, 2012). These positions could invariably affect the usage of sustainability reports by banks in making lending decision.

Evidence from developed and developing countries show that deposit money banks rely on the information derived from audited financial statements in order to asses a company's past record (Emeni, 2014; Minh, 2015). In Nigeria, the banking industry, the use of accounting information in bank lending decisions is an issue of concern to stakeholders, owing to previous bank scandals which involved chief executive officers of major banks in the 2000's (Emeni, 2014).

### **STATEMENT OF THE PROBLEM**

Accounting information of low quality jeopardizes management effectiveness, which makes managers ineffective administratively. The consequence of this has been the persistent distress syndrome that Nigerian banking industry is facing intermittently. Deposit money banks' lending decisions is a function of accounting information of borrowers which is often gotten from the audited financial statements of the borrowing firms which lacks reliability, as a result of manipulations by the management of borrowing firms. These manipulations are mostly done in the statement of profit or loss & other comprehensive income and the statement of financial position.

Notwithstanding, deposit money banks still rely on the financial information found in the financial statement of the borrowing firms. They use collateral in hedging against risk, however the valuation of the borrowing firms' assets could be undervalued due to the historical nature of accounting figure or

overvalued due to inflation and as a result of earnings management practices of the top management of the firm. This could mislead the deposit money banks' in making lending decisions.

The profit level of the borrowing firm cannot be relied on to a great extent by deposit money banks in making lending decisions. This stem from the prevailing income smoothing practices of firms in Nigeria, such as the boosting of profit of one-time transactions, shifting of current costs or expenses to later period, and shifting of current income to later period may distort and mislead the deposit money banks in making accurate lending decision. The preparers of this report tend to do these sharp practices either for personal gain or for organizational gain, also the shareholders of such companies always expect the performance to be good.

Organizations across the globe have increasingly embraced sustainability accounting and reporting, as a result of ever amplified demand by stakeholders for organizations to be more transparent in how they treat economic, social and environmental issue. In developing climes, deposit money bank critically examines the sustainability reports of borrowing firms in order to give out credit. However, the current position of sustainability disclosure in Nigeria is not encouraging (being voluntary). Firms have the choice to either disclose such information or not. This truncate the objectives of this reporting. Also, another major drawback is that, even if they disclose such information, their reports tend to lack comparability quality, and the external auditors don't give attestation to the report because they lack the competence and required knowledge and skill on sustainability issues.

Extant literature has dwelled on the use of financial information by deposit money banks in taking lending decisions, but however, failed to look at the non-financial information- sustainability disclosure of firms in Nigeria. This gap identified served as the motivation of this study. Also, there exist paucity literature on the impact of accounting information on deposit money banks' lending decisions in Nigeria, hence this study tend to add to the literature.

## LITERATURE REVIEW

### Lending decision of commercial banks

Commercial banks also recognized as deposit money banks play a pivotal role in the growth and development of nation's economy. Eke, Eke and Iyang (2015) claimed commercial banks are financial intermediators, that serve as fund mobilizers in both unit of an economy where there is surplus fund (by mopping it up) and supplying it to the unit of the economy that have shortfall. Commercial banks in any country have a major role to stabilizing the economy of a country. That is why they are often referred to as "lubricant" of the economy (Eke et al., 2015). Various governments of the world have further advance their understandings of the roles of commercial banks as financial intermediators not only to stabilize the economy but to protect depositors' funds, maintenance of public confidence as well as to guard against systematic risk and large-scale failure in the sector (Eke et al., 2015; Olaifa & Ajagbe, 2015).

In Nigeria, commercial banks operations are regulated by the Apex bank (Central Bank of Nigeria), and supervised by the Nigeria Deposit Insurance Corporation (NDIC). Their presence in the financial sector have greatly and significantly improved commercial banks operations, as well as their lending decisions. Before a commercial give a loan Mohanty (2015) posited that the bank's credit department would analyze the borrower critically using the lending rate system. He called it the 5C's of creditworthiness of borrowers. They are; character, capacity, capital, collateral and conditions. The character consists of the features of the borrowers such as age, industry type, the reputation. The capacity includes the volume of operations of the borrowers. The capital, here deals with the borrower's source of capital, and the capital structure or mix, whether it is solely equity financed or solely financed through debt or both.

Similar to Mohanty's (2015) 5C's of creditworthiness of borrowers, researchers have suggested various determinants of bank lending decisions. Olokoyo (2011) highlighted the determinants of banks' lending decisions or behavior in Nigeria as volume of deposit, investment portfolio, interest rate or lending rate, stipulated cash reserve requirements ratio and liquidity ratio. Eke et al. (2015) attributed the factors affecting commercial banks' lending decisions as some macroeconomic influences such as monetary policy rate, interest rate spread, statutory liquidity ratio, exchange rates and inflation rate. Olaifa

and Ajagbe (2015) posited that board composition and CEO duality positively affects bank lending decisions, while board size negatively affect commercial banks' lending decisions. Ghulam and Iyofor (2017) opined that firm characteristics affects commercial banks' lending decisions, however owner characteristics do not influence the lending decisions of commercial banks. Eneje, Obidike and Chukwujekwu (2016) pointed out that IFRS adoption of borrowing firms in Nigeria have significantly affected commercial banks' lending decisions. They noted that the mechanics of loan loss provisioning in Post IFRS era differs significantly from that of Pre IFRS era.

Emeni (2014) was of the opinion that volume of the loans is the major factor that determines the lending decisions of commercial banks, and noted that the benefits of this criterion outweighs the challenges that other factors brings. Ironkwe and Otti (2016) further buttressed that if commercial banks could improve on the information on determining factor of bank lending, both the borrowers and the commercial banks would be better off.

Prior studies have used different proxies to measure commercial banks' lending decisions. Some used accounting information proxies such as volume of loan, loan and advances, total value of banks loans in the financial statement (Lear & Pannepack, 2004; Emeni, 2014), volume of deposit (Olokoyo, 2011), monetary policy rate (Eke et al., 2015), loan loss provisioning (Eneje et al., 2016), loan growth and future charge off (Bushman, Hendricks & Williams, 2013), external finance, credit demand and credit rationing (Angori, Aristei & Gallo, 2017), hard and soft information (Grunert & Norden, 2011), propensity ratio (Mkhaiber & Werner, 2014). This current study used the total value of banks loans in the financial statement to proxy banks' lending decisions as previously used by (Emeni, 2014).

### **Accounting information**

The phrase "accounting information" is a blend of two concepts: accounting and information. While the former is the process of recording, analyzing, classifying, summarizing financial transactions. The latter simply means the knowledge communicated or received concerning a particular fact or circumstance. Ironkwe and Otti (2016) sees accounting information as the ingredient needed in most managerial decisions. They further defined accounting information as the study and practice of accounting with the design, application and monitoring

of information systems. Emeni (2014) defined accounting information as knowledge communicated and received as regards a particular financial transaction. Both definitions accurately gave clear meaning of accounting information, however they did not incorporate the non-financial part of accounting into it.

Scholars have sounded that Information on financial statement is not considered important when making decisions (Dang, Marriott & Marriott, 2006; 2008). Mirshekary and Saudagaran (2005) opined that the most common issues of accounting information include time lags (delays), lack of reliability, and incomplete notes. However, financial statement is still used as a basis of information, Minh (2015) and Aifuwa, Embele and Saidu (2018) gave criteria for evaluating the usefulness of accounting information in accordance with International Accounting Standard Board (IASB). They are; relevance, faithfully representation, comparability, verifiability, timeliness and understandability. These criteria will be helpful to commercial banks in evaluating the usefulness of financial statement, before taking or making any lending decision.

This study incorporates non-financial information, therefore further defines accounting information as the knowledge communicated and received concerning financial and non-financial transactions of an entity. Karilainen (2014) opined that the source of accounting information that commercial banks may use in taking lending decisions are, media reports, financial statement, recommendation from other about a borrowing firm, industry information and trade association. Specifically, Emeni (2014) gave an expository that financial information is gotten from the audited and published financial statements of borrowing firms. In the same vein, non-financial components could also be gotten from the audited published financial reports but not as common as the financial transactions (Nobanee & Ellili, 2016; Anagnostopoulos, Skouloudis, Khan & Evangelinos, 2018). Hahn, Preuss, Pinks and Figgie (2014) and Suroso, Siahm, Purba, Sari and Rusiadi (2018) asserted that non-financial information includes as guarantee from reputable individuals, company age, experience of prospective debtor, the period of being a banks customer and Ownership diversification, and sustainability disclosures (environmental, social and economic).

Nobanee and Ellili (2016) and Anagnostopoulos et al. (2018) noted that environmental and social reports may be gotten from the sustainability accounting reports. They however noted that developed country have these reports added to their financial statement, while only few developing firm have it re-

ported in their financial statement. Nigeria firms have not totally accepted this, because these reports are still absent in the financial statement.

The quality of accounting information seems to be a good yardstick that commercial banks can use in its lending decisions. Ironkwe and Otti (2016) advised that only accurate, reliable and relevant accounting information will help commercial banks in make the best lending decisions. However, Aifuwa and Embele (2019) explicitly noted that accounting figure in the financial statements are not 100% reliable, because there might have been some manipulations by the board and preparers of the financial statement. They noted that the manufacturing sector most especially have frail quality on their financial reports. This was justified from their robust empirical work on the impact of board characteristics on financial reporting quality. Aifuwa, Embele and Saidu (2018) and Aifuwa and Embele (2019) further stated the cause of the unreliability of financial statement by organizations was due to low ethical accounting practices and compliance among business organizations in Nigeria and poor corporate governance.

Prior research proxies to measure accounting information such as monetary value of collateral, profit level, cash availability/ liquidity (Emeni, 2014), financial ratios (Theogene, Mulegi & Hosee, 2017). However, this current study employed two proxies used by (Emeni, 2014) - monetary value of collateral, profit level, and adds corporate sustainability disclosure as a non-financial information variable.

### **Monetary value of collateral and lending decision**

Proper monetary valuation of collateral is very crucial in credit risk management role of commercial banks. Karilainen (2014) defined a collateral as a property or assets that is used as a security for debt settlement, which usually includes valuation of assets. Voordecker and Steijver (2006) asserted that monetary valuation of collateral not only focus on the monetary aspect but also the non-monetary aspect too, such as the duration and future benefits of the collateral. Wilson (2015) argued that the biggest problems start-up business face includes lack of financial training, access to credit facilities and lack of collateral. He further noted that the quantifiable financial information requires judgment on the sufficiency of the collateral at a given situation Mkhairer and Werner (2015) noted that the valuation of collateral varies from borrowers to borrow-



ers. They were of the view that size of the borrowing firms plays a vital role in the valuation of securities. Aurizio, Oliviero and Romano (2015) advised that commercial banks should do the needful in verifying collateral brought by borrowers in order not to plunge into financial crisis. Liberti, Sturgess and Sutherland (2017) also advised that the type of collateral used presented should be scrutinized because commercial banks earn rent on their ability to prevent default and recover it as well. Emeni (2014) recommended that there is need for quality in financial reports amongst firms operating in Nigeria.

Trpeskaa, Atanasovskia and Lazarevskaa (2017) examined the relevance of financial information and contents of the new audit report for lending decisions of commercial banks in Macedonia. Survey research design was adopted in the study. The online survey covered a total 114 identified corporate loan officers and heads with 15 banks in the country. Chi square test was used to test the hypotheses stated in the study. They found out that the annual report of the company has consistently high importance and usability for respondents' decision making.

In Nigeria, Emeni (2014) examine the impact of accounting information in banks lending decisions. Cluster and simple random sampling was adopted for the study and a cross-section of data of companies for the year 2012 gotten from the Nigeria Stock Exchange. The data was analysed with the ordinary least square technique and accounting information were proxies by only the financial components. The study found out that accounting information have a significant relationship with commercial banks' lending decisions.

Musyoka (2016) investigated the effect use of financial statement in making lending decisions has on the level of NPLs among Kenyan banks. The study collected data on perceptions of importance of financial statements in lending decisions of Kenya bank officers, the characteristics of banks, use of financial statements in the banks and their levels of NPLs from a total of 37 out of the 42 commercial banks via structured questionnaire. Ordinary least square was employed as inferential statistic. Key bank staffs in lending sections view financial statements as not very useful in making lending decisions. The effect of use of financial statement information in decision making was not statistically significant. However, tier 3 and tier 4 banks have significantly higher levels of NPL than tier 1 registered in Kenya.

In Sweden, Karilainen (2014) examined the usefulness of financial accounting information in Commercial Lending. Survey research design was adopted in the study. The sample comprise of branch managers of the biggest commer-

cial banks in Sweden surveyed via a research instrument – the questionnaire. The study employed rank statistics as inferential statistic. Karilainen discovered that accounting information significantly affect banks' lending decisions, and concluded that virtually all three main statements; statement of financial position, comprehensive income statement and cash flow statement can be stated to be complementary.

Itoo, Mutharasu and Felipe (2013) investigated the effect loan value and collateral on value of mortgage Default. Dimensions such as borrower's profile, loan value contents and collateral security was used to predict mortgage loan default. Their investigation period spanned from 2011 to 2012, and sampled a total of 115 loan defaulter in Jammu and Kashmir Bank in India. Inferential statistic such as chi-square, regression, ANOVA, and logistic regression were employed. They found out that the gender, age, marital status, the borrower's income, loan rate, loan type, loan amount, amount repaid, form of collateral security, Value of collateral security, purpose of loan and secondary finance on collateral security are significantly positively correlated with the defaulter's outstanding loan amount. While the educational qualification of borrower is significantly negatively correlated with defaulter's outstanding loan amount. They concluded that income, secondary finance on collateral security and interest rate are mainly responsible for mortgage default.

Ho<sub>1</sub>: Monetary value of collateral has no significant effect on lending decisions of commercial banks.

### **Profit level and lending decision**

Profit is a monetary gain from the difference between the amount earned and the amount spent in purchasing, operating or producing a good or service. Investopedia (2019) defined profit as a monetary benefit that is realized when the amount of revenue gained from business activity surpasses the expenses, cost, and taxes needed to sustain the activity. As simple as the definition, there is an argument that profit is a proxy of a firm's performance, which cannot be totally relied on in making lending and investment decisions. This stems from the popular argument in accounting literature that "cash is real, while profit is an illusion".

Jean-Louis Gassée (2011) noted that sometimes, firms manipulate their profit figure which makes it difficult to accurately ascertain the true figure of their profit. Also, he noted this profit figure cannot be physically put in the pocket or use to help the business when in distress, however, cash can be pocketed and used to help the business out of distress. In line with this popular argument, Ilaboya (2019) further asserted that the main objective of a going concern firm is not only to make profit but to create value. This assertion was reechoed by Odia (2019) that a firm's goal in this present dispensation is not to maximize profit but to create value. Commercial banks need to be cautious when using the profitability level of a firm in making lending decisions. They could employ financial ratios to determine the profit level of the firm such as gross profit margin, operating margin, return on sales, return on investment in taking lending decision (Theogene et al., 2017).

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$H_{02}$ : Profit level has no significant influence on lending decisions of commercial banks.

### **Corporate sustainability disclosure and lending decision of commercial bank**

Aifuwa (2019) asserted that Sustainability Reporting is a blend of two concepts: Sustainability and Reporting. Whilst the former is meeting the needs of the present generation without compromising the ability of future generations to meet their own needs (Brundtland, 1987), the latter simply means disclosing an organization's information fully or partially to stakeholders who need it for different purposes. Corporate sustainability report or disclosure is a report issued by a company or organization about the economic, environmental and social impact caused by its everyday activities (Global Reporting Initiative, 2019). Hahn et al. (2014) described corporate sustainability as set of company's activities that demonstrates the inclusion of social and environmental concerns in business operation and interactions with stakeholders.

Novokmet and Rogošič (2016) see sustainability as a new business imperative, that companies in the 21<sup>st</sup> century should consider adopting. They noted that sustainability disclosure is the outcome of sustainability accounting by world institutions such as the EU, UN, and also flows from the stakeholders' pressure on firm to disclose their environmental and social issues. Major providers of sustainability reporting guidelines are The Global Reporting Initiative (GRI), the United Nation Global Compact, the International standardization organization (ISO), and the organization for economic cooperation and development (OECD) (Global Reporting Initiative, 2019; Zimara & Eudam, 2015).

Eweje and Sakai (2015) asserted that nowadays firms face various pressure to shift to a new business outline that enables sustainable growth. They further added that there is so much increasing understanding towards social and environmental issues and demands from various stakeholders expecting corporations to do more for the society. Rogošič and Čaljkušić (2015) opined that the purpose of sustainability disclosure was to assess the environmental, social and governance performance of the company and to provide a report on it. Elsakit and Worthington (2013) noted that the use of environmental and social information would enhance commercial banks lending decisions. They however based their assertion on developed country economy. Anagnostopoulos et al. (2018) reiterated the need for incorporating sustainability consideration into banks' lending decisions. They echoed that sustainability risk management is directly connected to the financial sector through its credit risk management process.

The current position of sustainability disclosure in Nigeria is dismal because it is voluntary, notwithstanding the Nigeria Stock Exchange adoption of the GRI framework on March 19, 2019. Unlike in some countries for example the Netherlands, Denmark and South Africa where it is mandatory for big firms to disclose only environmental issues (Ioannou & Serafeim, 2017). A major of drawbacks on sustainability reporting includes; the comparability of the reports, as various frameworks have been developed for reporting social, environment and economic issues in an organization. Frameworks such as the Global Reporting Initiatives (GRI) framework, International Integrated Reporting Council (IIRC), Sustainability Accounting Standard Board (SASB), Carbon disclosure Project.

Anagnostopoulos et al. (2018) did a study on incorporating Sustainability Considerations into Lending Decisions and the Management of Bad. Mixed-method approach was employed (online questionnaires and semi-structured interviews) to link and investigate managerial views of sustainability risks in Greece. They discovered that sustainability risk management exists, however, yet to penetrate core processes. They concluded that there is still abundant of room for improvement before sustainability risk assessments are widely unified in all phases of the credit risk management process so that a robust sustainability management approach underpins FI's core mission and goals.

Nobanee and Elilli (2016) did a study to measure the degree of the corporate sustainability disclosure using annual data for listed banks in United Arab Emirates financial markets. Secondary data for the study spanned through the period of 2003-2013. The study employed the Generalized Method of Moment System Estimation (GMM) as estimation technique. The results show that the overall level of sustainability disclosure based on sustainability reporting for banks listed in the UAE financial markets is at a low level. In addition, it discovered that the degree of the corporate sustainability disclosure of the conventional banks is higher than the Islamic banks. They concluded that sustainability disclosure positively and significantly affects the banking performance of the conventional banks whereas it has no significant effect on the Islamic banks performance.

Suroso et al. (2018) examined the influence of accounting and non-accounting information on credit decision in Bank Mandiri Medan branch of Imam Banjo, in Indonesia. The sample comprised 40 applications for credit for which the bank had approved credit. Multiple regression analysis models was used to test the research hypothesis. Non-accounting information was used as a control

variable of the study. The results of the study indicate that accounting information is not entirely influential on credit decision making whereas non-accounting information that influences bank credit decisions is the guaranteed value and experience of the prospective debtor leader.

Ho<sub>3</sub>: Corporate sustainability disclosure does not significantly affect lending decisions of commercial banks.

## **THE RESEARCH METHODOLOGY AND THE COURSE OF THE RESEARCH PROCESS**

### **Theoretical framework and model specification**

#### **Theoretical framework**

Owing to the unique feature of management science research (transdisciplinary nature) and to further explain the relationship between accounting information and commercial banks' lending decisions, we anchored our study on the Rational Choice Theory. This theory is an economic principle that assumes that individual always make prudent and logical decisions that provide them with the highest and personal satisfaction. These decisions provide people with the greatest belief or satisfaction, given choices available. Investopedia (2019) noted that most academic discipline assumptions and theories are based on this theory. This theory is based on the assumption that individuals try actively maximize their advantage in any situation and therefore consistently try to minimize their losses. In our study, we use this theory to predict how commercial banks make logical and prudent lending decisions maximize profit and minimize losses. The decisions taken is based on the according accounting information provided. These decisions include critically ascertaining the monetary value of Collateral, the true profitability position of firms, corporate sustainability disclosure.

The Rational Choice Theory have been criticized that individuals (commercial banks) do not always make Rational utility maximization decisions. Also, Simon (1982) noted that people (commercial banks) are not always able to obtain all the information they would need to make best possible decisions (lending decisions).

The monetary value of collateral has been said to be very important in taking lending decisions. Pritchard (2013) found that there is a positive relationship between collateral and bank lending decisions. This finding was in tandem with the result of (Emeni, 2014) that there is a positive and significant relationship between collateral and bank lending decisions. There we expect the relationship to be

$$\text{BLD} = f(\text{VOC}) \quad (1)$$

Profitability is often used as indicator of firm performance. Although extant literature literature have criticized it as not a true measure of firms performance (Gassée, 2011). The commercial banks' lending decisions could be affected by the profitability status of the borrowing firm. However, Theogene, Mulegi and Hosee (2017) noted that profitability ratios could be used in assessment of firms' financial performance. Emeni (2014) found out that profitability negatively and significantly affect commercial banks' lending decisions. We therefore expect the relationship to be

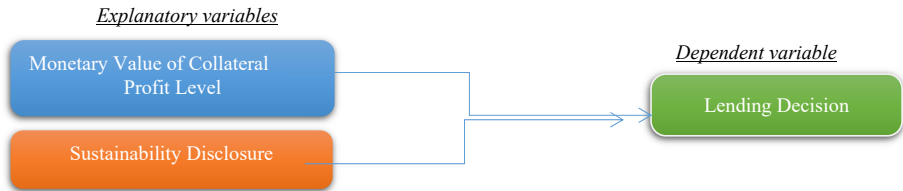
$$\text{BLD} = f(\text{PFL}) \quad (2)$$

The advent of sustainability accounting and reporting which brought about sustainability disclosures have not been fully accepted in developing countries. Researchers have suggested that sustainability disclosure will also affect commercial banks lending decisions. Anagnostopoulos et al. (2018) sound the need for incorporating sustainability consideration into banks' lending decisions, that sustainability risk management is directly related to the financial sector through is credit risk management process. Against this backdrop we expect the relationship to be

$$\text{BLD} = f(\text{CSD}) \quad (3)$$

## Model Specification

**Figure 1.** Schematic Representation of model



Source: author's compilation, 2019.

Our study adapted the model of Emeni (2014) in explaining the relationship between accounting information and commercial banks' lending decisions. His model is stated below

$$BLD = f(COL, CAS, FCR) \quad (4)$$

In econometric form:

$$BLD_i = \beta_0 + \beta_1 COL_i + \beta_2 CAS_i + \beta_3 FCR_i + \varepsilon_i \quad (5)$$

Where:

BLD = Commercial Banks' Lending Decision;

COL = Collateral;

CAS = Cash and Cash Equivalent;

FCR = Firm Characteristic.

A priori expectations in with extant literature to be  $\beta_1, \beta_2, > 0$ ;  $\beta_3, < 0$

We modified his model by removing cash and cash equivalent & Firm characteristics variables, and added a non-financial accounting variable – sustainability accounting disclosure. Fluent from the theoretical framework and existing literature, we specified our model (1), (2) & (3) as

$$BLD = f(MVC, PFL, CSD) \quad (6)$$



In econometric form:

$$BLD_i = \beta_0 + \beta_1MVC_i + \beta_2PFL_i + \beta_3CSD_i + \varepsilon_i. \tag{7}$$

Where:

BLD = Commercial Banks’ Lending Decision;

$\beta_0$  = Constant;

MVC = Value of Collateral;

PFL = Profit Level;

CSD = Corporate Sustainability Disclosures;

$\beta_1, \beta_2, \beta_3$  = Coefficient of independent variables;

$\varepsilon$  = Standard error,  $i$  = Cross sectional (Companies).

**Table 1.** Measures of variable

S/N	Variables	Type	Measurement	Supporting Scholars	A Priori
1	Lending Decision	Dependent	Total value of Banks loans in the financial statement	Emeni (2014)	
2	Monetary Value of Collateral	Independent	Total tangible fixed assets in the financial statement	Elsas, Heinemann, & Tyrell (2004) Emeni (2014)	+ive
3	Profit Level	Independent	Profit or loss value in the comprehensive income statement	Chen (2006) & Emeni (2014)	-ive
4	Corporate Sustainability Disclosures	Independent	Using the GRI framework, the economic, environmental and social disclosure index = Total level of disclosure/Total occurrence. If the level of indicator disclosed is quantitative is 3, else 2. Also, If coy disclose any occurrence of an indicator is 1; else 0.	Asuquo et al. (2018)	+ive

Source: author’s compilation, 2019.

### **Research design**

We adopted the expo-facto research design. This design was adopted because it seeks to analyze already existing events where the researcher cannot manipulate the data. The population consisted of all listed manufacturing firm in Nigeria, while the target population comprise of industrial goods firm as at 31 December. The industrial goods firms operation have immerse impact on the environment where it operate. All thirteen (13) of them were sampled. Secondary data was hand-picked from the annual report for the year 2018. The justification for choosing this period was because of the availability of data.

### **Method of data analysis**

The study employed both the descriptive and inferential statistics. The descriptive statistics which include Mean, Minimum, Maximum and Standard deviation was well presented in tables. Diagnostics test was carried out before we employed an inferential statistic – the ordinary least squares (OLS) in order to fulfill its regression classical assumption. The justification for the choice of inferential statistic in the study was due to the fact our data fulfilled all diagnostic tests and also, we want to know the causal relationship between variables investigated.

### **DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF FINDINGS**

As earlier stated, the study employed descriptive Statistics, diagnostics test (Serial Correlation, Normality, Linearity, Heteroskedasticity and Multicollinearity) and inferential statistic (Ordinary Least Squares) to explain variables used in the study.

**Table 2.** Descriptive Statistics

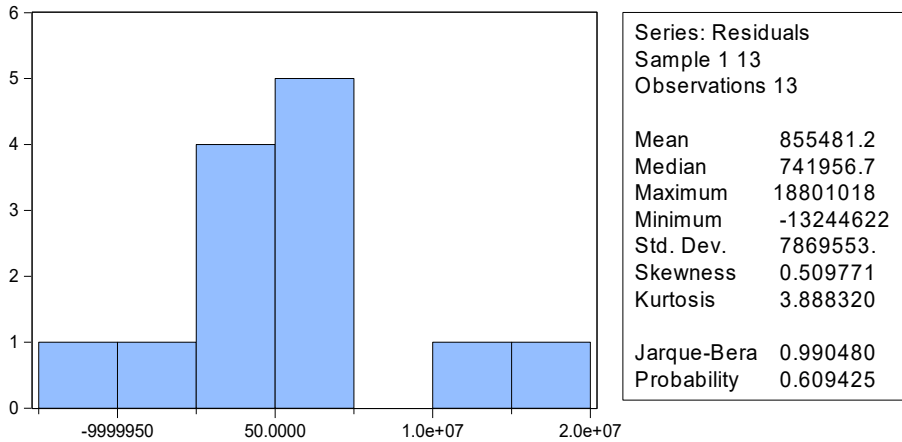
	BLD	MVC	PFL	CSD
Mean	6957105.	72008152	441999.2	0.384615
Maximum	77117274	4.26E+08	5731321.	3.000000
Minimum	0.000000	232774.0	-6470737.	0.000000
Std. Dev.	21189736	1.42E+08	2979236.	0.960769
Observations	13	13	13	13

Source: authors' compilation, 2019.

Table 2 above revealed the descriptive statistics of listed industrial goods firms investigated in the study. The mean value of banks' lending decision (BLD) as proxied by total value of bank loans stood at ₦ 6,957,105,000 with both least and extreme values of ₦ 0 and ₦ 77,117,274,000 respectively, and the standard aberration of ₦ 21,189,736,000 which is high and above the mean, suggesting that the volume of loan given by commercial banks is not enough. Similarly, the monetary value of collateral (MVC) which was proxied by total value of non-current assets stood at ₦ 72,008,152,000 with least and extreme values of 232774.0 and 4.26E+08 respectively, and the standard deviation of 1.42E+08 which is high and above the mean, suggesting that (MVC) have a wide dispersion from the mean values.

The mean value of Profit level (PFL) stood at ₦ 441,999,200 with least and extreme values of (₦ 6,470,737,000) and ₦ 5,731,321,000 respectively, and the standard aberration of ₦ 2,979,236,000 which is high and above the mean, suggests that the industry investigated rarely make good profit. Finally, Corporate sustainability disclosure (CSD) which was proxied by GRI index had a mean of 0.385, that is about 38.5% of firms investigated disclose, economic, social and environmental issues in their annual reports in form of quantitative or quantitative reports. The index had an extreme value of 3 and a least value of 0. Also, the standard aberration stood at 0.961 is high and above the mean suggesting that corporate sustainability disclosure among firms investigated is low.

**Figure 2.** Histogram Normality Graph



Source : authors’ computation using Eviews 8, 2019.

Figure 2 above visibly shows the normality distribution in the series. The series skewness and kurtosis were close to the recommended value of 0 and 3 respectively for a normal distribution (Wooldridge, 2012). Peck, Olsen and Devore (2008) posited that skewness and Kurtosis value range of -3 to +3 could be deemed for a series to be normally distributed. Be that as it may, our Skewness value was at the centre and our Kurtosis was Mesokurtic. This indicates that our data did fit into a normal bell-curve. The Jarque-Bera test value of 0.99 indicated an insignificant departure from normality in the series at 5% level of significance. This simply implies that our data satisfy the normality assumption (see, Mawutor, Enofe, Embele, Ndu & Awodola, 2019).

**Table 3.** Correlation Matrix

Variables	BLD	MVC	PFL	CSD
BLD	1.000000			
MVC	0.764764	1.000000		
PFL	-0.721124	-0.288577	1.000000	
CSD	-0.137221	-0.216694	0.138540	1.000000

Source : authors’ compilation, 2019.

The results of the correlation analysis are presented in table 3. The correlation coefficients are mixed with some variables reporting positive coefficients. Monetary value of collateral and Bank lending decisions (0.765); Profit Level and Bank lending decisions (-0.721); Corporate sustainability disclosure and Bank lending decisions (-0.137). The strength of the relationship between variables measured by the Pearson product moment correlation exposed that the association amongst the variables is relatively large but were below the threshold of 0.80, suggesting the absence of the problem of multicollinearity in the predictor variables (Aifuwa & Embele, 2019; Saidu & Aifuwa, 2020; Studenmund, 2000). To further confirm this, we will carry out a variance inflation factor (VIF) test.

**Table 4.** Basic Regression Assumptions

Assumptions	Test Employed	Results	Remark
Multi-collinearity	Variance Inflation Factor (VIF)	All centered VIF the value < 10	Fulfilled
Serial-Correlation	Breusch Godfrey Serial Correlation LM	$F(2,8) = 0.358, p = 0.710$ ;	Fulfilled
Heteroskedasticity	Breusch Pagan-Godfrey	$F(3,9) = 0.976, p = 0.446$	Fulfilled
Normality	Histogram Normality (skewness & kurtosis with Jacque-Bera)	Skweness and Kurtosis were within the threshold 0 & 3 respectively, Jacque-Bera was not statistically significant.	Fulfilled
Model Specification	Ramsey RESET	$F(2,10) = 0.976, p = 0.216$ .	Fulfilled

Source: author’s computation, 2019.

Table 4 above shows the basic Regression Assumptions fulfilled. The VIF was used to test for multicollinearity and consequently the result revealed that our data is free from this problem as the centered VIF’s of variables were all below 10. Serial Correlation using the Breusch-Godfrey serial correlation (LM) test. The null hypothesis of no serial correlation was accepted,  $F(2,8) = 0.358, p > .005$ . The Breusch-Pagan-Godfrey test of heteroskedcacity was conducted, and we found out that there was absence of heteroskedasticity,  $F(6,268) = 0.976, p > .005$ . This implies that the residual error is constant in the series. The model of the study was correctly specified as shown by the Ramsey RESET test.

### Multivariate analyses

Table 5 below presents the result of the Ordinary Least Square Summary. The summary is made up of the model employed in the study which was subsequently used to test hypotheses earlier stated. Our hypotheses were tested at 5% level of significance (that is, if  $p$ -value  $< 0.05$  reject  $H_0$ , else do otherwise).

**Table 5.** Inferential statistic - Ordinary Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1410338.	3222505.	0.437653	0.6720
MVC	0.092421	0.019489	4.742201	0.0011
PFL	-3.926226	0.918829	-4.273074	0.0021
CSD	1630479.	2794367.	0.583488	0.5739
R-squared	0.863218	Mean dependent var		6957105.
Adjusted R-squared	0.817624	S.D. dependent var		21189736
S.E. of regression	9049172.	Akaike info criterion		35.12190
Sum squared resid	7.37E+14	Schwarz criterion		35.29574
Log likelihood	-224.2924	Hannan-Quinn criter.		35.08617
F-statistic	18.93276	Durbin-Watson stat		1.572539
Prob(F-statistic)	0.000316			

Dependent Variable: BLD

Method: Least Squares

Date: 06/06/19 Time: 00:42

Sample (adjusted): 1 13

Included observations: 13 after adjustments

Source: authors' computation, 2019.

The result of the multivariate analysis (Ordinary Least Squares) presented in table 5. The analysis shows that there exist a positive association and significant relationship between Monetary value of collateral (MVC) and Bank lending decisions  $T(1, 13) = 4.742$ ,  $\beta_1 = -0.092$ ,  $p = 0.001$ . This infers that a unit increase in the monetary value of collateral will increase Bank lending decisions (Volume of loan) by 0.092. The study, therefore, accepts the alternate hypoth-

esis – That monetary value of collateral influences bank lending decisions. This finding is in tandem with the works of (Emeni, 2014; Trpeskaa et al., 2017), but sharply swerves from the findings of (Song, 2002) in his study on collateral in loan classification and positioning, where he expressed his opinion on the illiquidity and difficulty in realization of collateral as a major drawback for banks. Also deviates from the finding of Musyoka (2016) in his study investigated the effect use of financial statement in making lending decisions has on the level of NPLs among Kenyan banks. Itoo et al. (2013) noted that Value of collateral security, purpose of loan and secondary finance on collateral security are significantly positively associated with the defaulter's outstanding loan amount, invariably affect lending decisions of banks.

Slightly similar to the first result, there exist a significant but negative relationship between profit level (PFL) and bank lending decisions,  $T(1, 13) = -4.273$ ,  $\beta_2 = -3.926$ ,  $p = 0.002$ . This implies that a unit decrease in profit level will decrease banks' lending decisions by 3.926. The study, therefore, accepts the alternate hypothesis of significant influence of profit level on bank lending decisions. This finding is also in tandem with the work of (Emeni, 2014; Trpeskaa et al., 2017), but was in dissonance with the work of (Musyoka, 2016). Following from the argument that cash is real, profit is an illusion, the bank deem it fit to be cautious in using a firm profit level as a yardstick in take lending decisions. In corroborating this opinion, Jean-Louise Gassée (2011) echoed that often a time firms manipulate their profit figure in order to gain an undue advantage.

Contrary to the first two results, there exist a positive but an insignificant relationship between corporate sustainability disclosure (CSD) and Bank lending decisions,  $T(1, 13) = 0.583$ ,  $\beta_3 = 1630479$ ,  $p = 0.5739$ . This implies that a unit increase in corporate sustainability disclosure will increase banks' lending decisions. The study, therefore failed to reject the null hypothesis that corporate sustainability disclosure does not significantly affect lending decisions of commercial banks. Our finding is in dissonance with the work of Anagnostopoulos et al. (2018) on the incorporating sustainability Considerations into Lending Decisions, and further noted that sustainability risk management indeed exists, but it has yet to penetrate core processes. Also, Nobanee and Elilli (2016) noted that sustainability disclosure disclosure positively affects banks performance, invariably affects their lending decisions. Suroso et al. (2018) further added that accounting information (that is financial information) is not utterly

influential on credit decision making, non-financial information are also determinants of banks' lending decisions.

The synopsis statistics displays a coefficient of determination (R-squared) of 0.863, inferring that over 86.3% of the methodical variations in dependent variable were elucidated by the independent variables used in the model, while about 13.7% were caused by variables not shown in the model. Likewise, the Adjusted coefficient of determination (Adjusted R-squared) which was 0.818, advocates that over 81.8% of the methodical variations in dependent variable was elucidated by the independent variables, while about 18.2% was caused by variables not included in the model but captured by the standard error of the regression,  $S.E = 9049172$ . The general F-statistics (goodness-of-fit test) proficient in prediction stood at  $F(1, 13) = 18.932$ ,  $p < .005$ , this implies that all of the slope coefficients (excluding the constant, or intercept) in the regression are zero and jointly significant at 5%.

#### ■■■ CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Based on the findings of the study, we concluded that accounting information affect banks' lending decisions. This conclusion supports our theoretical framework – rational choice theory, that only financial information affects lending decisions of commercial banks. On the question whether sustainability disclosure matter, this research concluded that it does not matter, although we out that it was not statistically significant but was positively related to banks' lending decisions. Based on the finding of this study we recommended the following:

1. Banks should verify and scrutinize the collateral tendered by borrowing firms;
2. Banks should not rely on the profit of a borrowing firm in making lending decisions since profit is just figure – an illusion; and
3. Corporate sustainability disclosure is growing momentum across the globe, thus organizations should key into it in disclosing fully their economic, social and environmental impact.

The current study is subject to some limitations. First our study is limited first by the micro-numerocity of our research data. Secondly the study ignored unlisted manufacturing firms. Thus, any generalization of the results of this study cannot be made without caution. These limitations identified did not,



however, vitiate the generalization of our research findings. Therefore, in order to improve on this study, we suggest the following to be done.

1. The sample size could be increased and non-listed manufacturing firms can be studied together with listed ones.
2. Also, this study focuses mainly on the manufacturing sector; the future research needs to be conducted to cut across the other sectors of the economy for effective generalization.

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