Non-Financial Performance Indicators and Operational Efficiency of Deposit Money Banks in Nigeria

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Abstract: **This study examined the effect of non-financial performance indicators, based on balanced scorecard model, on operational efficiency of Deposit Money Banks (DMBs) in Nigeria with a view of evaluating the impact of the drivers of operational efficiency. Emphasis, from prior studies, on measuring operational efficiency have been on financial performance indicators with little or no consideration for the contributions of non-financial performance indicators (NFPIs) that drive the financial indicators. The study adopted a descriptive survey research design and a structured questionnaire was administered on sampled employees of the DMBs. Data collected were analysed with the mean of descriptive and inferential statistics. The study found out that internal control and business process, customer satisfaction and learning and growth of employees individually have significant effect on operational efficiency of DMBs in Nigeria. The study concluded that NFPIs have positive relationship with, have significant effect on operational efficiency of DMBs in Nigeria and explain about 56.9% variations in operational efficiency. The study contributed to literature on significance of NFPIs and recommended that DMBs should develop objective matrices to measure individual non-financial performance indicators that tend to contribute to their operational efficiency.**

Keywords- **Balanced scorecard; Financial performance indicators; Internal control and business process; Customer satisfaction; Learning and growth of employees**

I. INTRODUCTION

Achieving operational efficiency in any organisation cannot be separated from performance management strategy of such an organisation due to the reason that only organisations that are ready to offer new products and services of high quality, while maintaining cost at its lowest ebb, will have the capacity to increase or at worse sustain market share and profitability level. Operational efficiency is a vital strategic initiative that can ensure sustainability of an organisation or dwindle the fortune of a business organisation if not properly addressed. Operational efficiency minimises wastes and improves the ability of a business to provide products of good quality and render services of high standards to their clients. It also recognised uneconomical processes that contributed negatively to the bottom-line and strategise on better processes that will enhanced output and quality (Devina & Gupta, 2012).

Managing performance is one of the objectives of businesses or goal of management in whose hands the day-to-day running of the business is placed. Achieving this goal or objective often depend on the information relating to the business and its environment. According to Enyi, Akintoye and Akinrinola (2019), such information will not only be information that can be used to assessed financial indicators but also include non-financial indicators that may or may not be disclosed in the numbers in the financial statement.

Business emphasis on measuring performance and operational efficiency in general have been on financial performance indicators with little or no emphasis on the contributions of non-financial indicators that drive the financial indicators. This error of judgement in the contribution of non-financial performance indicators may affect the long term financial goal of the firm as the financial indicators mostly assess the firm in short term. The most common method of measuring non-financial performance indicators is the balanced scorecard (BSC) model, developed by Kaplan and Norton (1996), which put proper attention to both the financial and non-financial indicators with emphasis that non-financial performance measures are better indicators for long-term financial performance and business operational efficiency.

According to Ikhide (2008), research into operational efficiency of banks has become an important issue in African economies for many reasons ranging from the fact that banks' operational efficiency has a positive correlation with the growth of the economy in which they operate. The assets of the banking system are very significant and constitute a high percentage of total output in many African economies. The role of banks in providing fund for small businesses that ordinarily have limited access to finances required and the roles in financial intermediation through acceptance of deposits from surplus units, creation of assets to the deficit units, provision of liquidity and safekeeping of valuables cannot be overemphasised. Besides these, banks also perform a vital role in ensuring an effective and efficient payment system that facilitates free flow of economic resources to the desire users who can put them into most economical use. With the ever growing financial liberalisation in many economies in African countries, researches in the area of banking efficiency have shown that inefficiencies in banks' operations require

attention as a probable study area that required investigation (Howard & Haynes, 2001).

Organisational structure and internal processes are part of the factors that can affect operational efficiency and if the operational efficiency is not measured from time to time, there may be value erosion that will impact negatively on market share and profitability objective of such company both in the short and long run, which may affect its going concern. There are several techniques that companies use to measure their operational efficiency. These include quantitative and qualitative approaches. Quantitative approaches involve analysis of financial statements, cost of goods and services and operations generally. Adopting qualitative techniques is the process of comparing performance with competitor companies and using the industry standard to benchmark their operations. Another approach is the customer survey which has proved to be another statistical data source on operational efficiency (The Lab, 2017).

Eboh, Eke and Agu (2017) stated that managing performance and improving operational efficiency by Deposit Money Banks (DMBs) in Nigeria have been a very important issue for a long time. It has gained more attention recently due to high competitive business environment and the eagle eyes of the Central Bank of Nigeria and other regulators. Nevertheless, there has been a misconception by mistaken performance management as performance evaluation. In actual sense, both performance evaluation and performance management are interrelated but they differ in context and concept. Performance management involves the process for improving operational efficiency through development of both individuals and team performance. It is a way or process of obtaining better results from the organisation, teams, and individuals by understanding and improving operational efficiency based on a defined framework of prearranged goals, standards, and competence requirements. Performance management entails the broad coverage of entire four perspectives of balanced scorecard which includes financial performance, customer satisfaction, process improvement and organisational capability/training and development. These perspectives drove profitability and generally, the operational efficiency of a firm (Gomes & Liddle, 2009).

1.1 Statement of Research Problem

Performance measurement and operational efficiency in general rested on the contributions and assessment of both financial and non-financial performance indicators. It was asserted by Kaplan and Norton (1993) that non-financial performance measures are better indicators for future financial performance and business operational efficiency. The non-financial performance measures included in the model are internal business process, customer and learning and growth. According to Li, Peters, Richardson and Watson (2012), internal control can be likened to the central nervous system of a human being of which the breakdown would result to the death of the individual being. Liken the human nervous system to the internal control and business process system, breakdown of internal control in any organisation can lead to the extermination or threat to the going concern of such organisation. Shagari, Abdullah and Saat (2017) opined that mismanagement arising from either non-adherence to the standard principles and policies within the internal control and business process systems might have contributed to the distress experienced in the banking industry in the past. Juhl, Kristensen and Ostergaard (2002) stated that, “customer satisfaction is the holy grail of success for businesses in the customer service industry”. The goal of every successful business is to maintain a high level of customer satisfaction by providing their clientele with value added transactions. Researchers like Ahmad, Bahir and Malik (2010) have appraised services of the banks by looking at the various customer’s satisfaction parameters. Human customers, being a complex creature that changes over time with the environment, do not have their preferences and priorities static but change their perceptions relating to how well satisfied or not satisfied which in turn affects their patronage and loyalty.

Notwithstanding a high-tech based environment, where employees have access to the required amount of information, if they are not skilled in the application of the required tools they may request for more than what is required and as such will be overwhelmed by the amount of information available to them. They might be confused about their decision-making process as they cannot comprehend the information into usable knowledge. Therefore, training of users in understanding the level of information required and how to organise such information for effective use is paramount (Marwick, 2001; Bock & Kim 2002).

Many researchers appraised business performance with accounting and financial data and as such, focus of past studies on the subject of performance management and operational efficiency has been on financial performance indicators, mostly ignoring other indicators that drive operational efficiency. The achievement of favourable financial indicators could not have been possible without harnessing human resources of the organisation, knowledge and skills of the personnel, process that ensures the assets of the organisation are safeguarded and the continuous loyalty and patronage of the customers. This narrow focus has created a gap in proper and complete assessment of operational efficiency and the factors responsible for it. The inadequate measure of operational efficiency by businesses with little or no emphasis on non-financial performance indicators has led to some problems in DMBs in Nigeria.

Therefore, this study empirically examined the effect of non-financial performance indicators on operational efficiency of Deposit Money Banks (DMBs) in Nigeria with a view of evaluating the impact of the drivers of operational efficiency.

1.2 Objective and Hypothesis of the Study

The main objective of this study is to examine the effect of Non-financial performance indicators on operational efficiency of Deposit Money Banks (DMBs) in Nigeria and the study hypothesis is stated thus:

Ho: Non-Financial performance indicators have no significant effect on operational efficiency of DMBs in Nigeria.

H1: Non-Financial performance indicators have significant effect on operational efficiency of DMBs in Nigeria.

1.3 Scope of the Study

This research work focused on non-financial performance indicators, as explained by Kaplan and Norton (1996) in their discussion of Balanced ScoreCard. There are 27 Deposit Money Banks, Commercial, Non-Interest and Merchant, operating in Nigeria as at May 2018. However, the study focused on the 21 commercial Deposit Money Banks with the staff of the banks as the focus for the purpose of colleting required data necessary for the study. The choice of commercial DMBs and their staff was based on the fact that the operations of commercial DMBs are broader in scope.

II. REVIEW OF LITERATURE

2.1 Conceptual Review

2.1.1 Operational Efficiency

Operational efficiency is a concept wider in scope, which assess the variation from cost-efficient frontier set as the maximum expected output that can result from given resources into the production process. Considering the different meanings, operational efficiency is a concept used as a high level planning in an organisation to ensure a proper balance between cost and output. Operational efficiency is concerned with identification of process waste that drains resources and impacts negatively on the bottom-line of the organisation. Cost reduction is a must for organisations that want to reduce wastages and this can be achieved either by ensuring the same production level with smaller resources or increasing production level with less proportionate increase in cost, thus reducing average production cost. Production in this sense can be service or intangible goods.

Operational efficiency is also focuses on efficient utilisation of all resources including man, materials, machines and finances. Appropriate use and mix of these resources in production of goods and services can result in high productivity and cost reduction (KarimZadeh, 2012). Operational efficiency can be measured both in quantitative and qualitative terms. Among these measures are financial performance, customer satisfaction, internal control and business process, and employees' growth and development in the organisation (KarimZadeh, 2012). Performance can be defined as the achievement of a pre-agreed task measured against pre-set standards of accuracy, completeness, cost, and speed. The pre-agreed task and the pre-set standards must be related in such a way that comparison will be meaningful and motivating. It is the efforts extended to achieve the targets efficiently and effectively, which involve the use of human, financial and natural resources. This study used the three non-financial performance perspectives of Balanced ScoreCard to proxy operational efficiency.

2.1.2 Balanced ScoreCard

BSC as a concept, comprises of group of Key Performance Indicators – KPIs that relate to internal control and business process, customers, and learning and growth in addition to the main financial KPIs. These additional KPIs, according to Kaplan and Norton (2001) are referred to as "the leading measures", which advocates the benefits attained through the use of a unified group of KPIs. The adoption of the BSC in totality confirms the necessity to rely on the group of KPIs for the purpose of assessing the extent to which organisational goals are being achieved.

The Balanced Scorecard (BSC) is a strategic performance management tool developed to address the theory that the existence of business organisation is just to meet the expectations of the shareholders (Kaplan & Norton, 1992). BSC is built on a framework with four facets with each facet representing a set of stakeholders. These are: Financial; Internal Control and Business Processes; Learning and Growth; and Customers (Kaplan & Norton, 1996). The idea of Balanced Scorecard (BSC) was first brought to notice, after years of research, in a 1992 article by Kaplan and Norton, which made it a distinctive tool from the traditional perspectives of management accounting. Although their article was just one of the several articles published on the subject in early 1992, it was a well acclaimed milestone and was followed by a second article in 1993.

In 1996, a book "The Balanced Scorecard" was written and the two articles together with the book popularised the concept of Balanced Scorecard with the knowledge being put into practice. The popularity enjoyed by the book makes Kaplan and Norton to be acclaimed as the author of the BSC concept. The word 'balanced' in the BSC arose because financial performance measurements in the past focused on financial results, which were then considered vital to proprietors of businesses and led to imbalanced in measurement system. Emphasis begin to shift from the early eighties through to the nineties from just financial result but to include consumers, internal business processes, quality and services. The term 'BSC' reflects an effort to maintain a balance between the financial and non-financial measures such that business can achieve performance in both short-term and long-term (Gomes & Liddle, 2009).

Kaplan and Norton established that strategy and vision are important to all the stakeholders in an organisation when they observed that the old assessment based on the financing function is ineffective because of the presence of some control bias. It is, therefore, of necessity to develop a system that will measure performance that will take into consideration of both financial results and other facets like customers' interests, internal activities of the organisation, innovations and future trends (Barnes, 2002). Many organisations across the world have quicken the adoption and application of the BSC due to its observed importance and effect on their daily operations. According to Zaman (2013), a study revealed that most companies in Australia have adopted BSC and confirmed its

importance as a strategic tool to evaluate and assess operational efficiency of an organisation. Major business organisations in Jordan, particularly banks, have applied BSC as a strategic tool of measuring operational efficiency (Al-Sawalqa, Holloway & Alam, 2011). Another study by Atkinson (2006) provided empirical evidence showing that close to 60% of the richest 1000 organisations across the globe have adopted BSC as their strategic measure of operational efficiency. Al-Sawalqa et al. (2011) revealed further that because banks in Jordan are seen as most important within the financial system in Jordan, the activity of the banking sector has witnessed visible development in the recent years in the area of electronic business powered by latest technology despite facing competition from foreign banks (Zuriekat & Al-Sharari, 2010). Faced with these challenges, coupled with other changes Jordanian banks moved towards the adoption of latest innovation and approaches of operational efficiency and performance measurement that offer a complete knowledge of all aspects of their operations. The adoption gives the banks the opportunity to progress in the area of their operations despite the multiple challenges faced in achieving their business objectives (Zuriekat & Al-Sharari, 2010).

Kaplan and Norton, in 1990, conducted a study using 12 organisations at the top edge of performance measurement. The conclusion was that traditional performance and operational efficiency measures overlooked the main issue of connecting operational performance to strategic goals and transmitting these goals and performance outcomes to various organisational echelons (Isoraite, 2008). Kaplan and Norton also published an article in Harpoon Business Review titled, "BSC to measure performance motives" and this article attracts the attention of many researchers resulting in increased sale of the periodical in 1992 when it was published. The BSC concept is proposed and considered as a management system that aims to decrease the gap between an organisation's strategic objectives and its operational efficiency implementation.

Several authors (Isoraite, 2008; Johnson, 2007; Sundin, 2010; Zuriekat & Al-Sharari, 2010) having examined the works and studies by Kaplan and Norton concluded on some benefits and significance of the BSC.It stands-out as among the modern management accounting system's tools related with measurement and assessing organisations' performance in order to increase its competence in the contemporary business environment, including two types of indicators, the financial and non-financial indicators related to four perspectives (financial, customer, internal operations, learning and growth) (Zuriekat & Al-Sharari, 2010).

BSC stresses the achievement of financial objectives with other in addition to the other issues that contribute to supporting and achieving those objectives. It also plays a significant role in balancing the various aspects of competence in a harmonised and creative manner (Johnson, 2007).BSC aids the management of businesses in making correct decisions as it provides the necessary information and tools to manage the organisation effectively. It also provides management with a precise tool to realise the objectives and methods of achieving them by translating the organization's long-term strategy into a set of performance standards (Sundin, 2010). BSC interprets vision and strategy of organisations into an all-inclusive group of performance standards which offer complete framework that can be used in strategy execution and achievement of financial and non-financial objectives. The significance of BSC is that it is a unified and integrated system that strikes a balance between the financial and non-financial performance standards and short-term and long-term performance standards of an organisation's system (Isoraite, 2008).

The content of the BSC and linkage of the related KPIs as explained can be graphically shown in figure 2.1

Figure 2.1: Content of Balanced ScoreCard and the Linkage of the Related KPIs

Source: Adapted from Kaplan and Norton (1996), Linking the balanced scorecard to strategy.

The Four Core Perspectives of Balanced ScoreCard

BSC has been discussed as a measurement system that defines the organisation's strategy from four perspectives as shown in figure 2.1. It is also a communication system, which connects the fixed objectives of various executive and operational managers. Explanations of the four perspectives in contribution towards the achievement of organisation's vision and strategy are as stated below.

Financial Perspective

Financial perspective is concerned with the financial aspect of the business organisation's adopted strategy. This is the need for financial inputs and it is the traditional approach to performance and operational efficiency measure of an organisation which Kaplan and Norton (1992) did not ignore. The basic objectives of the financial perspective is to ensure sustainability and improve income generation. According to Devina and Gupta (2012), performance is a universal term that relates to the conduct of activities of an organisation over a period of time; often with reference to past or projected cost efficiency, management responsibility or accountability. It considers the accomplishment of objectives as well as goals setting for an organisation comparing the present progress with the past in context of the present. Financial performance is a critical study of various measures observed in the operation of business organisation towards achieving its financial goals. The concept of a business organisation is similar to that of the concept of human body which requires periodic examination to ensure fitness of the body. The financial performance of an organisation has to be assessed periodically. Financial performance refers to the act of performing financial activity in an organisation which may be profit oriented or a non-profit oriented. It is a degree to which financial objectives is being achieved. It is a process that involves an evaluation of actual against desired performance.

Most importantly, financial performance cannot be isolated as a metric without looking at the influencers. It helps in reviewing various factors, which are the non-financial performance indicators that drive financial performance.

Customer Perspective

Customers' satisfaction and expectations' fulfilment have become the emphasis of management philosophy in recent time. The business environment has become highly competitive that customers now have choices of who provide services for them and demand quality service from such organisation. Failure to receive service that will meet minimum expectation may result in customers seeking for other service providers (competitors) leading to decline in future business performance. Customers' perspectives stress the significance of measuring organisation's performance by considering the level of satisfaction of recipient of services on offer and assessment of trend in the share of market by the organisation. In the words of Claessens and Laeven (2004), in modern competitive business environment of today, organisations have to consider their customers more than ever and ensure their needs are met if not surpassed. With the increasing power of customers and fierceness of competitive environment, organisations must be customer oriented. To be customer oriented means constant evaluation of factors that influence customers' satisfaction and loyalty and the ultimate effect of customers' contribution to the business efficiency

Internal Operations Perspective

This perspective consists of internal control and internal business process. Assessment of a business organisation's performance tends to highlight the efficiency of the business and internal operations in service delivery and how well the assets and resources of the organisation used to run the operations are safeguarded. The internal operations' perspective is of two edges as it is important to customers in the area of efficient service delivery and to the organisation in terms of safeguarding its resources.

Effective internal control and business process is a very critical operational efficiency element which serves as a foundation for the safe and sound operations of an organisation. An effective internal control and business process helps an organisation to ensure that the goals and objectives are met. Internal control is a body of policies, procedures, practices and organisational structures implemented to provide reasonable assurance that past and present resources and wealth created are held and use to create future wealth for the organisation based on all management compliance initiatives (Teru & Hla 2015). Without this assurance, not only that there would be disruptive tendencies towards efficiency of the organisation, there would be destroying tendencies toward previously accumulated wealth.

Learning and Growth Perspective

Learning and growth perspective focused on employees of an organisation in the area education, training and general development of individual staff of the organisation. Employees are considered as a vital resources by an organisation that valued knowledge management of their employees as a contributor to the growth of the organisation. In the rapid technology driven environment, innovations and market competition, it is of necessity for employees adjust and move with the dynamism of the business environment through structured training and continuous learning. In discussing this perspective, Kaplan and Norton stressed the importance of learning and growth which they related to many factors within an organisation like ease of communication between employees and their supervisors and other technological aid that will assist them in resolving problems when one occurs.

2.2 Empirical Review

Banker, Potter and Srinivasan (2000) investigated the use of non-financial performance based incentive plan and the finding on one of the indicators, customer satisfaction, revealed a positive relationship between customer satisfaction measures and future accounting performance. The study

concluded that non-financial performance indicators are better indicators of future financial performance. Study by Van der Stede, Chow and Lin (2006) viewed non-financial measures from the perspective of objective and subjective measures and found out that business entities that use these measures in assessing their performance recorded superior overall performance. The study demonstrated the superiority of non-financial measures over the financial measures as an aid to implementing and managing novel creativities.

Ahmad and Zabri (2016) examined the effect of the non-financial performance measurement systems (NFPMSs) on firm performance within Malaysian manufacturing firms. The study adopted the use of multi variable measures of product quality, efficiency, customer, employee, product development and business growth and corporate social responsibility to assessed the effect of non-financial performance indicators on average performance of firms. It was found out that most firms studied often use customer, efficiency, product development and business growth, and corporate social responsibility to measure performance within the firms. This indicated that the non-financial performance indicators with the exception of product quality are important indicators in measuring firm performance.

The study highlighted the importance of non-financial performance indicators in the present day firms and emphasised its adoption to improve firms' decision making and ultimately improve performance. The study concluded that non-financial performance indicators play significant roles in the production and operations environment of the manufacturing firms, especially for increasing their performance and have a positive significant relationship with performance. The findings of the study empirically confirm the studies of Banker et al. (2000) and Van der Stede et al. (2006). Decoene and Bruggeman (2006) discussed on the motivation in a balanced scorecard settings and opined that non-financial performance measures has the capability of generating forward-looking information that cannot be tracked by financial performance measures. The argument was that these non-financial performance measures assist the managers and the business to foresee long-term goals and align their efforts. Study by Otley (1978) which is supported by many recent studies concluded that the use of financial data is not alone a sufficient measure of efficiency and business performance. The study further confirmed that performance is not measured only by financial performance indicators but that the inclusion of non-financial performance indicators reduce the potential side of dysfunctional behavior and lead managers to improve performance in the absence of information from accounting measures.

However, despite all the empirical evidences proclaiming the contributions of non-financial performance indicators to business performance and operational efficiency in general, a thoughtful research conducted by Ittner and Larcker (2000) viewed non-financial performance indicators from two angles of the merits and demerits when compared with financial performance indicators. Ittner and Larcker (2003) in their work "coming up short on non-financial performance measurement" completed their analysis and further explained their view on the two-sided opinion and a summary conclusion on non-financial performance indicators. The works identified that business organisations are faulty in their process of measuring non-financial performance indicators, they also opined that non-financial performance indicators are not backed by adequate statistical reliability. They cited, for example, customer satisfaction indicators, which is one of the non-financial perspectives of the BSC as being based on surveys with certain number respondents with quite few questions on which opinion about satisfaction is based. They further stated that the BSC method does not precisely determine the quantum in which each of the perspectives contribute to the firm's financial results and firms have been using causal models to identify the links between the implemented non-financial indicators and performance results.

III. METHODOLOGY

The study adopted a descriptive survey research design, which is predicated on the use of primary source of information. The population of the study was the staff of licensed Commercial Deposit Money Banks by the Central Bank of Nigeria which are 21 with a total staff of 100,590 as at June, 2018 and a sample size of 420 employees determined using the Krejcie and Morgan Table, at 5 per cent level of precision or margin of error, were purposively and randomly selected. A structured questionnaire, on a 5-point Likert scale ranging from Strongly Disagreed (1 point) to Strongly Agreed (5 points), was used in collecting data for the study. The questionnaire contained test items that address all the variables and passed the reliability and validity test. This was administered on the sampled employees and data collected were analysed with the mean of descriptive and inferential statistics.

Operationalisation of Variables and Model specification

Examining the effect of non-financial performance indicators on operational efficiency of DMBs in Nigeria has the following constructs:

Dependent: Operational Efficiency - OPEF

Independent: Non-financial Performance Indicators - NFPI

This is mathematically expressed as $Y = f(X)$

Where Y = Dependent Variable

X = Independent Variable

Y = Operational Efficiency

X = Non-financial Performance Indicators

$X = (x_1, x_2, \text{and } x_3)$

x_1 = Internal Control and Business Process = ICTL

x_2 = Customer Satisfaction = CSAT

x_3 = Learning and Growth of Employees = LEGR

Therefore, $Y = f(x_1, x_2, x_3)$

$OPEF = \beta_0 + \beta_1 ICTL + \beta_2 CSAT + \beta_3 LEGR + \varepsilon_t$ .....equation 1

In aggregate, $OPEF = \beta_0 + \beta_1 NFPI + \varepsilon_t$ ....equation 2

IV. DATA ANALYSIS, RESULT AND DISCUSSION

Four hundred and two (402) questionnaire were retrieved and usable out of the four hundred and twenty (420) distributed representing 96 per cent retrieval rate. Most relevant demographic information of the respondents showed that 24 per cent of the respondents have spent between 1-5 years, 38 per cent of the respondents have spent 6-10 years, while 30 per cent and 7.2 per cent of the respondents have spent between 11-15 years and 15 years and above in the banking sector respectively. It was also discovered that about 24 per cent of the sampled respondents were below the assistant managerial position; about 233 of the respondents were in the assistant manager and deputy manager position accounting for about 58.1 per cent of the total respondents. About 18.2 per cent of the respondents were in the manager and above position. The levels of educational qualifications of the respondents were adequate, with about 47.3 per cent of the respondents having either HND or degree qualifications, 34.1 per cent of the respondents have a Master's degree and 13.2 per cent possess a doctorate degree as their highest qualification. Less than 5 per cent of the respondents have senior school leaving certificate and National Diploma and 0.7 per cent belongs to the others category asides from the listed academic qualifications.

Thirty four (34) test items were used to solicit responses on the dependent and the independent variable measures. The responses from the administered questionnaires were summarized in Table 1.

Table 1: Summarised Responses on Measured Variables

Measured Variables	No. of test items	Average Mean Score	Standard Deviation
Operational Efficiency	12	3.87	0.91
Internal Control and Business Process	8	3.91	0.82
Customer Satisfaction	7	4.03	0.75
Learning and Growth of Employees	7	3.58	0.87

Source: Field Survey, 2019 (Summary of SPSS Output)

Table 1 revealed the average mean score and the average standard deviation for the number of test items used to assess each of the measured variables. The average mean score for the measured variables ranges between 3.58 and 4.03 while the standard deviation ranges from 0.75 and 0.91. With a cut-off point of 3.0, which is the simple average of the points attached to the Likert scale, it means there is high level of agreement on the dependency of each of the independent variables on the operational efficiency. The standard deviation revealed that the responses of the respondents on the test items for each variable does not materially different, tend to close to the average mean score and not likely to change over time.

The study adopted a two-step analysis to determine the effect of the non-financial performance indicators on operational efficiency at 5 per cent significant level. It first analysed and test how the three variables of measure of non-financial performance indicators (internal control and business process, customer satisfaction and learning and growth of employees) individually affect operational efficiency and how significant they are. The study model equation relating to this is as stated:

$OPEF = \beta_0 + \beta_1 ICTL + \beta_2 CSAT + \beta_3 LEGR + \varepsilon_t$ ……… Study Model Equation 1

The result is illustrated in Table 2

Table 2: Coefficients Dependent Variable: Operational Efficiency

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
I (Constant)	4.834	.045			
Internal Control and Business Process	.479	.041	.451	11.712	.001
Customer Satisfaction	.637	.037	.612	17.029	.000
Learning and Growth of Employees	.375	.043	.358	8.642	.002

Source: SPSS Analytical Output (2019)

The estimated parameters in Table 2 revealed that all the three measures of non-financial performance indicators; internal control and business process, customer satisfaction, and learning and growth of employees are positive. The unstandardized beta coefficient (0.479, 0.637, 0.375) of the predictors implies that internal control and business process, customer satisfaction, and learning and growth of employees have a direct positive relationship with operational efficiency

and are all significant factors, p value < 0.05, (p= 0.001, 0.000, 0.002) affecting operational efficiency. It also means that a unit increase in value of internal control and business process, customer satisfaction, and learning and growth of employees will leads to 0.479, 0.637 and 0.375 increase in operational efficiency respectively. The result also shows that if the explanatory variables/predictors (ICTL, CSAT, LEGR) are held constant, the dependent/explained variable (OPEF) will be 4.834 units better off. The implication of this is that where there is no consideration for the monitoring of the NFPI (explanatory variables), OPEF will remain constant at 4.834 which represent the slope of the model.

The second step involved the analysis of the combined or aggregate effect of all the three proxies or variables of measure of non-financial performance indicators (NFPI) affect operational efficiency. The study model equation relating to the combined or aggregate effect of the three proxies on non-financial performance indicators is as stated:

$OPEF = \beta_0 + \beta_1 NFPI + \varepsilon t$ ………… Study Model Equation 2

The result is illustrated in Table 3

Table 3: Model Summary

Model	R	R Square (R^2)	Adjusted R Square (Adj. R^2)	Standard Error of the Estimates
I	.762	.581	.569	.8375

a. Predictors: (Constant), Non-Financial Performance Indicators (internal control and business process, customer satisfaction and learning and growth of employees)
b. Dependent Variable: Operational Efficiency

Source: SPSS Analytical Output (2019)

The model summary as shown in Table 3 revealed that there is 76.2% (R = 0.762) relationship between operational efficiency (OPEF) and non-financial performance indicators (NFPI). The R square (R2 = 0.581) indicates that the predictors of NFPI (ICTL, CSAT and LEGR) explain 58.1% variations in operational efficiency (OPEF). The adjusted R2 (Adj. R2 = 0.569) which takes into cognisance of the number of variables of measure of the predictors and the error term signifies that the consideration and monitoring of the NFPI (ICTL, CSAT and LEGR) explain 56.9% variations in operational efficiency (OPEF) while remaining 43.1% are explained by other factors, represented by the error term (εt), not captured by the model.

V. CONCLUSION AND RECOMMENDATIONS

While it is common for businesses to put much emphasis on monitoring of financial performance indicators as a measure of operational efficiency, the result of the analysed data revealed that there is almost a consensus on the importance of consideration and monitoring of non-financial performance indicators towards the operational efficiency of deposit money banks in Nigeria. This was in line with the studies of Van der Stede, et al. (2006) where the superiority of non-financial measures over the financial measures was demonstrated; Ahmad and Zabri (2016), which indicated that the non-financial performance indicators of customer, efficiency, product development and business growth, and corporate social responsibility are important indicators in measuring firm performance. However, this conclusion was at variance

The study also concluded that the Balanced Scorecard, a performance measurement model that consists of both financial performance and non-financial performance indicators, is an effective and holistic approach of assessing performance contributors to operational efficiency of DMBs in Nigeria. The three non-financial performance measures, as contained in the BSC model has a positive and significance effect, individually and collectively, on operational efficiency of DMBs in Nigeria. In general terms, the study concluded that non-Financial performance indicators, as measured by internal control and business process, customer satisfaction and learning and growth of employees have positive and significant effect on operational efficiency of DMBs in Nigeria.

The study recommended that DMBs should develop objective matrices to measure individual non-financial performance indicators that tend to contribute to their operational efficiency. This will ensure optimization of the use of all resources committed to the business rather than maximisation based on the measurable financial performance indicators only. In developing the non-financial performance indicators' matrices, care must be taken to ensure that the non-financial performance indicators are backed by adequate statistical reliability devoid of any ambiguity and subjectivity.

REFERENCES

[1]. Ahmad, A., Bashir, M., & Malik, M. I. (2010). Performance evaluation of conventional banks in Pakistan by using Non-Financial Measures. Interdisciplinary journal of contemporary research in business, 2(7), 50-62.
[2]. Ahmad, k., & Zabri, S. M. (2016). The effect of non-financial performance measurement system on firm performance. International journal of economics and financial issues, 6(S6), 50-54.
[3]. Al Sawalqa, F., Holloway, D., & Alam, M. (2011). Balanced Scorecard Implementation in Jordan: An Initial Analysis. International Journal of Electronic Business, 9(3), 196-210.
[4]. Atkinson, H. (2006). Strategy implementation: A role for the balanced scorecard? Management decision, 44(10), 1441-1460.
[5]. Banker, R. D., Potter, G., & Srinivasan, D. (2000). An empirical investigation of an incentive plan that includes non-financial performance measures. The Accounting review, 75(1), 65-62.

[6]. Barnes, S. (2002). Knowledge management systems : Theory and practice (Ist ed.). London: Thomson Learning.
[7]. Bock, G. W. & Kim, Y. (2002). Breaking the Myths of Rewards: An Exploratory Study of Attitudes About Knowledge Sharing. Information Resources Management Journal, 15(2), 14 - 21.
[8]. Claessens, S. & Laeven, I. (2004). What Drives Bank Competition? Some International Evidence. Journal of Money, Credit and Banking, 36(3), 563-583.
[9]. Decoene, V., & Bruggeman, W. (2006). Strategic alignment and middle-level manager's motivation in a balanced scorecard setting. Internation journal of operations & production management, 26(4), 429-448.
[10]. Devina, U., & Gupta, A. (2012). Efficacy of performance management system: An empirical study at ICCI bank. International journal of advanced research in management and social sciences, 1(3), 216-225.
[11]. Eboh, E. F., Eke, U. M. & Agu, G. A. (2017). Assessment of performance management in the banking industry in Nigeria: A study of selected Banks. Journal of Social Science and Humanities Research, 5(2), 740-752.
[12]. Enyi, P. E., Akintoye, R. I., & Akinrinola, O. O. (2019). Accounting information system and financial performance of deposit money banks in Nigeria. The international journal of business & management, 7(3), 87-96.
[13]. Gomes, R. C., & Liddle, J. (2009). The balanced scorecard as a performance management tool for third sector organisations: The case of the Arthur Bernardes Foundation, Brazil. Brazillian Administartion Review, Curitiba, 6(4), 354-366.
[14]. Howard, M., & Haynes, C. (2001). Commercial banks efficiency in Barbados. Savings and Development, 25(3), 293-312.
[15]. Ikhide, S. I. (2008). Measuring the operational efficiency of commercial banks in Namibia. South African Journal of Economics, 76(4), 583-595.
[16]. Isoraite, M. (2008). The balanced scorecard method: From theory to practice. Intellectual Economics, 1(3), 18-28.
[17]. Ittner, C. D., & Larcker, D. F. (2003, November). Havard business review. Retrieved January 17, 2019, from Coming up short on nonfinancial performance measurement: https://hbr.org/2003/11/coming-up-short-on-nonfinancial-performance-measurement
[18]. Ittner, C., & Larcker, D. (2000, December 6). Non-financial performance measures: What works and what doesn't. Retrieved January 17, 2019, from Knowledge@Wharton: https://knowledge.wharton.upenn.edu/article/non-financial-performance-measures-what-works-and-what-doesnt/
[19]. Johnson, C. C. (2007). Balanced scorecard for state-owned enterprises: Driving performance and corporate governance. Philippines: Asian Development Bank.
[20]. Juhl, H. J., Kristensen, K., & Ostergaard, P. (2002). Customer satisfaction in European food retailing. Journal of retailing and consumer services, 9(6), 327-334.
[21]. Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard - Measures that drive performance. Harvard business review, 71-79.
[22]. Kaplan, R. S., & Norton, D. P. (1993). Putting the balanced score card to work. Havard business review, 1993, 71(5), 134-147.
[23]. Kaplan, R. S., & Norton, D. P. (1996). The balanced scorecard: Translating strategy into action. Boston, USA: Harvard Business School press.
[24]. Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part I. Accounting horizons, 15(1), 87-104.
[25]. KarimZadeh, M. (2012). Efficiency analysis by using data envelop analysis model: Evidence from Indian banks. International Journal of Finance, Economics and Science, 2(3), 228-237.
[26]. Li, C., Peters, G., Richardson, V. & Watson, M. (2012). The consequences of information technology control weaknesses on management information systems: The case of Sarbanes-Oxley internal control reports. Management Information Systems Quarterly 36 (1), 179–203.
[27]. Marwick, A. D. (2001). Knowledge management technology. IBM System Journal, 40(4), 814 - 830.
[28]. Otley, D. (1978). Budget use and managerial performance . Journal of accounting research, 16(1), 122-148.
[29]. Shagari, S. L., Abdullah, A., & Saat, R. M. (2017). Accounting information systems effectiveness: Evidence from the Nigerian banking sector. Interdisciplinary Journal of Information, Knowledge, and Management, 12, 309-335.
[30]. Sundin, H. (2010). Balancing multiple competing objectives with a balanced scorecard. European accounting review, 19(2), 203-209.
[31]. Teru, S. P., & Hla, D. T. (2015). Appraisal of accounting information system and internal control frameworks. International Journal of Scientific and Research Publications, 5(9), 1-3.
[32]. The Lab. (2017). How to increase operational efficiency in the banking sector. Retrieved July 8, 2018, from Insight from the lab: www.thelabconsulting.com/how-to-increase-operational-efficiency-in-the-banking-sector/amp/
[33]. Van der Stede, W. A., Chow, C.W., & Lin, T. W. (2006). Strategy, choice of performance measures and performance. Behavioral research in accounting, 18, 185-205.
[34]. Zaman, M. (2013). Hawaii international conference on business. Hawaii International Conference on Business. Honolulu, Hawaii: Citeseer.
[35]. Zuriekat, M. I., & Al-Sharari, M. A. (2010). The relationship between business strategy, market competition and the use of the balanced scorecard: An application on Jordanian commercial banks & insurance companies. Jordan Journal of Business Administration, 4(2), 245-256.