

*Research Paper***Balanced Scorecard and Firm Value of Listed Deposit Money Banks in Nigeria***Submitted on 06 January 2025**Accepted on 24 March 2025**Evaluated by a double-blind review system*

MUINAT WURAOLA SALAWU¹
OMOWUMI JUMOKE OGUNLEYE²
DAMILOLA FAGBORO³

ABSTRACT

Purpose: The study examined how balanced scorecard (BSC) adoption and implementation affects firm value of listed deposit money banks (DMBs) in Nigeria.

Methodology: The ex-post facto research design was used collecting secondary data from published annual reports of eleven listed DMBs that met the studies criteria. The study measured financial, customer, internal process and learning and growth perspectives using return on assets, number of customer complaints, employee productivity and employee training respectively while market capitalization and total assets were used in measuring firm value and firm size respectively. Analyses were carried out with the panel data ordinary least square regression.

Findings: Adoption and implementation of BSC positively affects firm value of listed DMBs in Nigeria however only customer perspective insignificantly affects it.

Research Limitations: The study was focused on only listed DMBs which are a subset of the financial sector in Nigeria.

Practical implications: The study elucidates the perspectives of the BSC that can be adopted by an organisation towards enhancing its firm value. This would help ensure that perspectives with significant influence are focused on towards attaining better performance within the organisation.

Originality: The study provides empirical evidence as to the effect of perspectives of the BSC on firm value of listed DMBs in Nigeria showing through empirical methods the improvement in firm value as a result off adoption and implementation of the BSC.

Keywords: *Balanced scorecard; Customer perspective; Deposit money banks; Learning and growth perspective*

¹ University of Lagos, Nigeria. makeem-omosanya@unilag.edu.ng

² University of Lagos, Nigeria. oogunleye@unilag.edu.ng

³ University of Lagos, Nigeria. dfagboro@unilag.edu.ng

1. Introduction

Measurement serves as a tool for more effective management through anticipating needed changes in strategic direction and having a methodology for effecting strategic change (Pollalis, Gartenberg & Edmunds, 2004). This is achievable with the balanced scorecard (BSC) which was developed as an alternative to traditional financial performance measurement systems for organisation's wholistic assessment through financial and non-financial metrics (Kaplan & Norton, 2001).

The deposit money banks (DMBs) play a crucial role in stabilizing Nigeria's financial system. Several studies have documented adoption and implementation of BSC by DMBs in Nigeria though excessive focus is on financial perspective with minimal leveraging of other perspectives of the BSC (Oyewo, Olowo and Obanor, 2021). Eferakaye (2017) also found that there is a great extent of diffusion and implementation of the BSC in the Nigerian banking industry although some banks adopted the BSC perspectives with some modifications. Ibrahim (2015); Ladan and Nyikyaa (2019) found that BSC is used in the Nigerian banks.

The firm value relates to investors' perception of the firm's success (Ghani, Samah, Baharuddin & Ahmad, 2023) and is therefore necessary that the organization puts in place measures that would enable it increase its value which serves a decision-making purpose for many users of its financial statements. The financial perspective of the BSC is found to insignificantly affect financial performance which shows that relying on financial indicators is not enough for evaluation of banks performance thereby making it necessary to consider an approach which captures performance from several perspectives such as the BSC in Nigerian banks (Nnamseh & Umoh, 2019). However, the effect that other BSC perspectives have on the firm value has not been adequately researched in the Nigerian literature as only few studies including Okoye, Odum and Odum (2017) has focused on this despite the abundance of literature in developed countries. This calls for a study of this nature which investigates the effect of the BSC perspectives on the value of the banks in Nigeria.

Also, various studies such as Noor, Mseden and Mohammed (2015); Nnamseh and Umoh (2019); Ofurum, Afodigbueokwu and Ezejiofor (2019) have revealed the achievement of superior results

with adoption of BSC which necessitates an enquiry into the role it plays on firm value of listed DMBs in Nigeria. Therefore, it is imperative to analyze how the adoption and implementation of BSC can affect the firm value of DMBs listed on Nigerian Exchange Group (NGX) from 2017 to 2023. Understanding how BSC affects DMBs firm value will provide insights into how to improve operational efficiency, profitability and customer satisfaction of DMBs in Nigeria. It could aid an understanding of how the implementation of the BSC perspectives in a banks annual report affects its value and serve as a basis for enforcing the adoption and implementation of BSC perspectives in financial reporting thereby enriching the financial reporting process of listed firms in Nigeria.

The study thus aims to determine how adoption and implementation of the BSC in Nigerian listed banks affects their firm value with specific objectives to determine effect of adoption and implementation of:

- i. customer perspective on firm value of listed DMBs in Nigeria
- ii. internal process perspective on firm value of listed DMBs in Nigeria
- iii. learning and growth perspective on firm value of listed DMBs in Nigeria
- iv. financial perspective on firm value of listed DMBs in Nigeria

The study however focuses on only DMBs listed on the NGX within the period 2017 to 2023 without reference to other institutions within the Nigerian financial industry such as microfinance banks and insurance companies. The study is thus limited to a very restricted number of firms in the Nigerian business environment and this may affect the generalizability of its results. Also, regulations peculiar to the focus industry may not affect other industries thus creating a limitation for the study.

The rest of the paper is structured as follows: section two reviews the concepts based on extant literature and sets the theoretical framework for the study; section three explains the methodology; section four presents the results of analyses in tables and explains same in line with the study objectives while section five concludes and contains recommendations.

2. Literature Review

2.1 Conceptual Review

2.1.1 Balanced Scorecard (BSC)

The BSC is a performance measurement tool that balances financial measures against non-financial measures as alternative to traditional financial performance measurement systems in order to overcome financial measures limitation which have limited predictive ability because of measurement of historical events (Nnamseh & Umoh, 2019). Kaplan and Norton (1992) defined BSC as “a strategic management technique for communicating and evaluating the achievement of the mission and strategy of the organisation”. It is a tool that enhances traditional financial measures by providing three additional non-financial perspectives assessing organisations in terms of customers, internal business processes and learning and growth (Kaplan & Norton, 1992). According to Kaplan (2010), the BSC is not concerned with attainment of objectives only but rather emphasizes improvement as an organization that fails to continually improve would eventually lose out to its competitors.

Each of these perspectives reflects different aspects of an organization which are combined together to enable the organization to perform at an optimal capacity. Thus, management can measure and manage how value is created for current and future customers (customer perspective); build and enhance internal capabilities (internal processes perspective); invest in people, systems and procedures necessary to improve future performance (learning and growth perspective) rather than focusing all performance measurement efforts on only financial measures which encompasses the financial perspective of the BSC (Okoye, Odum & Odum, 2017). It therefore helps in determining organisation balanced performance by providing direction and strategies needed for improvement in performance and achievement of long-term goals (Umoh, 2018).

2.1.1.1. Customer Perspective

Customers are an integral part of any organization as the failure to treat customers right might lead to an organizations ruin. Thus, the BSC customer perspective is designed to enable an organization product and services meet its client’s expectations by ensuring that customer needs - service, time,

quality, performance and price- are met in order to ensure continued patronage (Kaplan & Norton, 1992). The perspective reflects the customer value proposition through which the organization achieves a competitive advantage in its market by meeting customers' needs efficiently and effectively (Ladan & Nyikyaa, 2019). This perspective therefore focuses on customer related issues including satisfaction, attitudes and market share goals with similar metrics for measurement (Nnamseh & Umoh, 2019). The study thus hypothesises that "adoption and implementation of customer perspective does not significantly affect firm value of listed DMBs in Nigeria".

2.1.1.2 Internal Process Perspective

This focuses on various processes carried out towards achieving organization goals which could be focused on creating and delivering value for customers or improving performance towards attaining its financial goals (Kaplan & Norton, 1992). It thus focuses on ensuring availability and implementation of proper processes and resources to achieve maximum organizational performance (Ladan & Nyikyaa, 2019). These processes could be concerned with operational management, customer management, innovativeness and social or regulatory issues (Atkinson, Kaplan, Matsumura & Young, 2009) and its measures include service, quality, efficiency, cost reduction, lead time, innovation rates etc. (Nnamseh & Umoh, 2019). The study thus hypothesis that "adoption and implementation of internal process perspective does not significantly affect firm value of listed DMBs in Nigeria".

2.1.1.3 Learning and Growth Perspective

This perspective focuses on measures that ensures continual improvement in an organization which reflects in all other areas of its performance thereby providing a link across all other perspectives as it describes the infrastructure needed for the attainment of other perspectives (Ladan & Nyikyaa, 2019). It is thus concerned with creating an atmosphere that facilitates organizational change, growth and effectiveness through assessing employee skills and competency (Nnamseh & Umoh, 2019). The categories of this perspective are capabilities and motivation of employee, information system resources which is aligned to organization activities and units (Kaplan & Norton, 1992). The study thus hypothesises that "adoption and

implementation of learning and growth perspective does not significantly affect the firm value of listed DMBs in Nigeria”.

2.1.1.4 Financial Perspective

This focuses on attainment of organization financial goals which could be measured using return on assets (ROA), growth in revenue, profitability e.t.c. (Kaplan & Norton, 1992) and reveals if organization strategy would lead to improved economic success (Ladan & Nyikyaa, 2019). This is a major focus of any organization as it relates to the generation of profits for its shareholders (Nnamseh & Umoh, 2019) and is the ultimate outcome which measure the economic consequences of organisations actions. However, financial goals are limited as they are concerned with the past decisions of an organization and do not take into consideration the processes in place to improve performance from time to time. Thus, the BSC financial perspective stresses the importance of addressing all issues pertaining to realization of the organization financial goals as metrics under this perspective are designed to show how strategy implementation in an organization are geared towards enhancing improved performance results (Kaplan, 2010). The study thus hypothesises that “adoption and implementation of financial perspective does not significantly affect firm value of listed DMBs in Nigeria”.

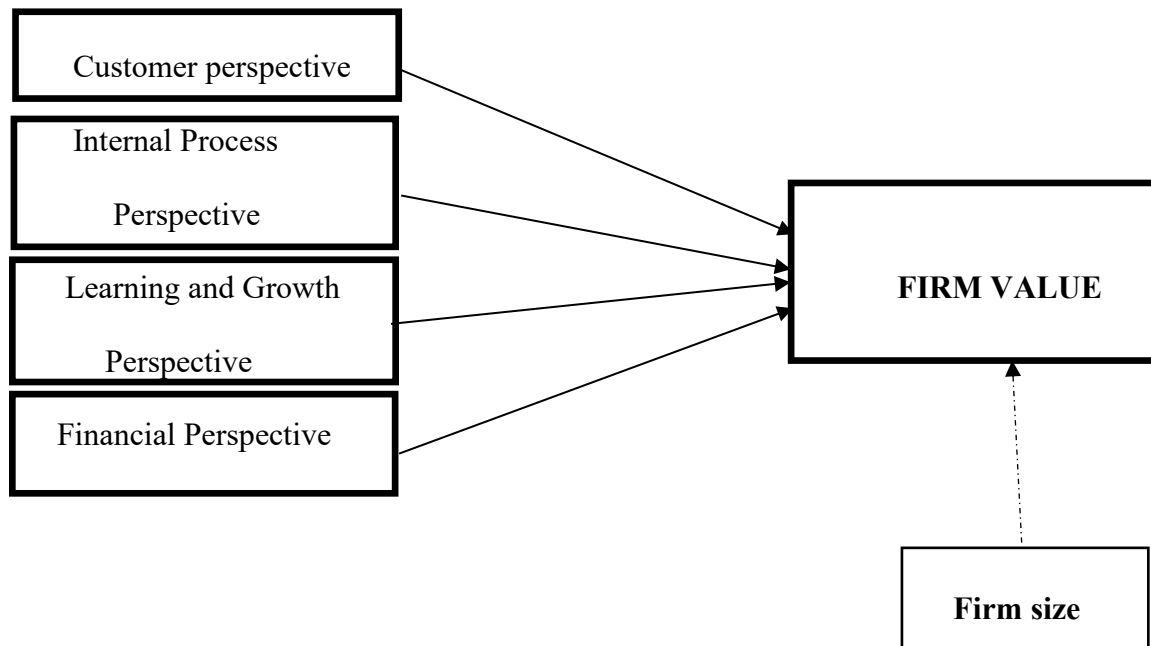
2.1.1.5 Adoption and implementation of BSC

The importance of identifying and incorporating right measures in adopting the BSC cannot be overemphasized and alignment of the four perspectives with organizations vision and strategic objectives as well as alignment of organizational subsystems is necessary for effective adoption and implementation (Kaplan & Norton, 1992; Guest, 2011). Kala and Bagri (2014) in their study on various lodging establishments in India whose results also highlight identification and incorporation of the right set of measures and linking them to the organizations objectives so as to achieve superior performance by adopting the BSC.

The manner of use of BSC in the organization has been advocated to facilitate improvement in organizations performance by Braam and Nijssen (2008) study on Dutch firms while top management support is key for successful adoption and implementation of BSC as revealed by Shutibhinyo (2013) in his study on firms in Thailand. Owolabi, Adetula and Akinwunmi (2016)

support this view as they are of the opinion that the support of every member of the organization is a major requirement for successful implementation of the BSC in any organization. In line with this, Zuriekat, Salameh, and Nrawasdeh (2015) also point out the importance of allowing employees and managers participation in selecting performance measures while adopting and implementing the BSC for better outcomes.

Figure 1: Conceptual Model of the Study



Source: Authors representation (2024)

2.2 Theoretical Framework

2.2.1 Innovation Diffusion Theory

Propounded by Rogers (1962), it explains how ideas gain momentum and spreads over time thereby leading to adoption of the idea within the social system as it is perceived as new or innovative. A performance gap is expected to exist for an organisation to make the decision of adopting an innovation; this occurs when there is a discrepancy between the expectations of the organization and its actual performance (Rogers, 1962). This theory is adopted because of its ability to explain the various reasons for the adoption of BSC in DMBs listed on the NGX.

2.2.2 *Action Network Theory*

Developed by Callon and Law (1986) and Latour (1987) to understand how technology is created the theory's basic assumption is that any entity results from interactions of heterogeneous actors and their networks. It also assumes that every actor within a system has its own interests which are aligned through interactions to trigger, develop and shape organizational change (Zawawi, 2018). These actors-human and non-human alike- are also assumed to have same capacity to influence the entity's development (Dwiartama & Rosin, 2014). This theory is useful in explaining the interaction between various actors in Nigerian listed DMBs whose interests are aligned towards adopting and implementing the BSC in order to achieve their various similar and dissimilar goals.

2.3 *Empirical Review*

Noor, Mseden and Mohammed (2015) found out that each perspective of the BSC significantly and positively affects financial performance indicators based on companies listed on Amman Stock Exchange. Rozita, Ibrahim and Zainuddin (2008) also found that non-financial measures positively affect organizational performance in Malaysia. The results of Thuong and Singh (2023) from the multiple regression analysis of questionnaires in 265 Vietnamese enterprises demonstrated that the four perspectives of the BSC have a significant relationship with enterprise performance. This is in consonance with Bshayreh, Qawqzeh, Al-Momany, Saleh and Al Qallap (2024) who found a positive and significant influence of the BSC perspectives on the performance of 15 Jordanian banks with the exception of the learning and growth perspective.

Ofurum, Afodigbueokwu and Ezejiofor (2019) using ex-post facto research design on the Nigerian manufacturing industry found out that the non-financial perspectives of BSC have significant effect on ROA of those companies. They therefore concluded that BSC contributes to improving performance and recommended greater involvement of the customers to encourage continued patronage which leads to better performance. Using bi-variate analysis and Pearsons product moment correlation, Ondieki (2017) in a study on Kenya Bureau of Standards also found out that the four perspectives of the BSC positively affect performance. Mardinata Rusli and Surjadi (2021) found a significant influence of the customer perspective and learning and growth on the performance of MSMEs in Indonesia however, the internal process perspective was found to have

an insignificant effect on the performance based on analysis of questionnaires distributed to various MSMEs in Jakarta, Bandung, and Surabaya areas.

Using the multiple regression analysis on secondary data collected from the Palestine Stock Exchange between 2015-2018, Frehat and Al Koni (2021) found an insignificant but positive effect of BSC on firm value. Learning and growth perspective was however found to have a significant impact on the firm value. The results of Na, Kim and Jo (2022) show an insignificant influence of the BSC standpoints in the CEOs message on the firm value however, they opine that this might be significant in the long term. However, the customer perspective was found to be more important in determining the financial performance by Jeong, Lee and Park (2022) using data obtained from 246 firms through online survey.

Umoh, Nnamseh and Ebitto (2019) evaluated Nigerian micro finance banks performance using the BSC. Adopting a mixed method methodology, they found out that all except learning and growth perspective significantly influences their performance and recommended that policies which can reposition the learning and growth perspective appropriately from its current underperforming position should be formulated by the microfinance banks.

Using the Tobins Q as a measure of firm value, Okoye, Odum and Odum (2017) study revealed that financial and customer perspectives of BSC significantly and positively influence firm value of Nigerian manufacturing firms while internal processes and learning and growth perspectives have negative influence with significant and insignificant effects respectively. However, the negative influence of internal processes may be explained as a result of the different matters of importance to the management (internal process) and outsiders (firm value). The varying results in the sparse extant literature accentuates the need to determine the current significance and extent of these relationships.

3. Methodology

Research design employed is ex-post factor since data used is publicly available in the financial statements of the focus organizations. Several similar studies situated in Nigeria and other countries such as Okoye, Odum and Odum (2017); Aggarwal and Padhan (2017); Oyewo, Olowo and Obonor (2021) have used same design.

The study population is the 13 listed DMBs on the NGX as at 31st December, 2023. However, only 11 of these organizations satisfied the required criteria of having adequate financial statements and reporting in the local currency and forms the adjusted population of the study. Thus, the census sampling method is adopted and the 11 listed DMBs form the sample. The variables were measured selected based on the most frequently reported variable within Nigerian DMBs as well as extant literature (table I). Secondary data on focus variables from the published annual reports of each DMB available in electronic format on the NGX website were collected for the financial years 2017-2023 and analyzed using descriptive statistics and OLS regression employing Eviews version 10 software.

Panel data OLS regression model used for the study is stated as:

$$FV = f(FP, CP, IPP, LGP) \dots\dots\dots (i)$$

$$FV = \beta_0 + \beta_1 FP + \beta_2 CP + \beta_3 IPP + \beta_4 LGP + \varepsilon \dots\dots\dots (ii)$$

Firm size has been found to affect the value of a firm (Ghani, Samah, Baharuddin & Ahmad, 2023; Handriani & Robiyanto, 2018) and is adopted as a control variable. The OLS regression model thus becomes:

$$FV = \beta_0 + \beta_1 FP + \beta_2 CP + \beta_3 IPP + \beta_4 LGP + \beta_4 FS + \varepsilon \dots\dots\dots (iii)$$

Table I: Operationalisation and Measurement of Variables

Variable	Measurement	Source
Financial perspective (FP)	Return on Assets	Tominac (2014); Wu, Lin and Chang (2009); Raphael and Man (2013)
Customer perspective (CP)	Number of customer complaints	El-Mousawi, Zaraket and Fakihi (2022); Ladan and Nyikyaa (2019); Shaverdi, Akbari and Tafti (2011); Oyewo, Olowo and Obanor (2021)
Internal process perspective (IPP)	Employee productivity	El Khatib and Al-Khoury (2019); Abofaied (2017); Al-Mawali, Zainuddin and Ali (2010)
Learning and growth perspective (LGP)	Employee Training	Ladan and Nyikyaa (2019); Panicker and Seshadri (2013); Al-Mawali, Zainuddin and Ali (2010); Oyewo, Olowo and Obanor (2021)
Firm Value (FV)	Market capitalization	Aggarwal and Padhan (2017); Dhankar and Boora (1996); Chadha and Sharma (2016)
Firm size (FS)	Total assets	Hashmi, Gulzar, Ghafoor and Nas (2020); Dang, Li and Yang (2018)

4. Results

Table II: Descriptive Statistics of Variables

	FP	CP	IPP	LGP	FS	FV
Mean	0.019184	308652.6	60.23255	232321.9	745000.00	194000.00
Median	0.012883	140604.5	52.84801	631	5505025	86800.00
Maximum	0.112633	2205214	251.2227	4753818	966000.00	973000.00
Minimum	0.001845	220	1.387396	7	266903	2664
Std. Dev.	0.019365	446346.4	37.28103	22150.5	1990.00	232000.00
Skewness	3.29427	2.428649	2.382853	3.917339	3.271729	1.640338
Kurtosis	15.7794	8.987709	12.14003	18.61028	12.95094	5.115392
Jarque-Bera	594.3255	153.5688	305.4747	864.345	413.6944	44.44335
Probability	0	0	0	0	0	0
Sum	1.323679	19136463	4156.046	15797887	5.22E+10	1.36E+13
Sum Sq. Dev.	0.0255	1.22E+13	94511.51	4.53E+13	2.72E+20	3.70E+24

Source: EViews 10 Output Window (2024)

The mean value of FP indicates an average of 2% returns on the assets invested among the DMBs while the maximum and minimum figures are 11.2% and 0.18%. The mean value for CP (308,653) indicates a relatively high average annual customers complaint while minimum and maximum values are 220 and 2,205,214. Mean value of employee productivity for IPP (₦60.23million) indicating average revenue earned by DMBs per employee while minimum and maximum values are ₦1.39million and ₦251.22million. Mean value for LGP is ₦232,222million indicating that DMBs in Nigeria heavily invest in the training of their employees and management to acquire the necessary skills and certification.

FS has a mean of ₦745,000million indicating the large average investment in assets of DMBs with a wide variability in the total assets of DMBs as larger banks tend to have more capital invested in their assets. Furthermore, the mean value of FV is ₦194,000 million indicating relatively high average value of DMBs in Nigeria with minimum and maximum values of ₦973,000 million and ₦2,664 million.

4.2 Pre –estimation Tests

4.2.1 Multicollinearity Test

Correlation matrix presented in table III used to test presence of multicollinearity shows correlation coefficients below the 70% threshold indicating absence of multicollinearity among the variables.

Table III: Correlation Matrix

	FP	CP	IPP	LGP
FP	-0.09169			
CP	0.028313	0.232304		
IPP	-0.060806	0.365197	0.17872	
LGP	-0.095570	0.415163	0.183268	0.0940624

Source: EViews 10 Output Window (2024)

4.2.2 Hausman Test

The Hausman test presented in table IV indicates random effect regression model as most appropriate to establish effect of BSC adoption and implementation on firm value in this study.

Table IV: Hausman Test

Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		1.601653	4	0.8085
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
CP	26690.46	26568.52	4437524	0.9538
IPP	1.85E+08	1.83E+08	1.97E+15	0.9597
FP	1.55E+11	1.92E+11	2.19E+21	0.4297
LGP	16196.83	16848.09	30654192	0.9064

Source: EViews 10 Output Window (2024)

4.3 Regression Analysis Result

Table V: Balanced Scorecard and Firm Value

Dependent Variable: FV				
Method: Panel EGLS (Cross-section random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FP	0.02350	6.76E+11	0.348416	0.0072
CP	0.17501	35668.68	0.49082	0.6255
IPP	0.23088	3.63E+08	0.559382	0.0082
LGP	0.75075	34204.82	0.219494	0.0271
FS	0.08867	19.77375	0.448437	0.6556
C	1.47E+11	1.12E+11	1.313761	0.1944
Effects Specification				
			S.D.	Rho
Cross-section random			3.24E+11	0.9589
Idiosyncratic random			6.71E+10	0.0411
Weighted Statistics				
R-squared	0.59338	Mean dependent var		1.42E+10
Adjusted R-squared	0.526176	S.D. dependent var		6.40E+10

S.E. of regression	6.48E+10	Sum squared resid	2.31E+23
F-statistic	0.433897	Durbin-Watson stat	2.745874
Prob(F-statistic)	0.0430239		

Source: EViews 10 Output Window (2024)

Financial perspective has a significant and positive effect (coeff. = 0.02350; p-value = 0.0072) on firm value of DMBs which leads to rejecting the null hypothesis as adoption and implementation of financial perspective seems to significantly affect the firm value of DMBs. This indicates that focus on the financial perspective tends to favorably affect firm value significantly as investors and shareholders typically prefer more profitable banks that can generate higher returns on their investments.

Customer perspective positively affects firm value of DMBs (coeff. = 0.17501; p-value = 0.6255) insignificantly thereby not rejecting null hypothesis as its adoption and implementation seems to affect firm value of DMBs insignificantly. This signifies that the number of customer complaints does not significantly influence firm value of DMBs.

Internal process perspective significantly and positively affects firm value of DMBs (coeff. = 0.23088; p-value = 0.0082) thereby rejecting null hypothesis as adoption and implementation of internal process perspective seems to significantly affect firm value of DMBs. Thus, firm value of banks can be enhanced by internal process improvement as a well-structured and efficient internal process can reduce operating expenses and also boost performance.

Learning and growth perspective significantly and positively affects firm value of DMBs (coeff. = 0.75075; p-value = 0.0271) thereby rejecting null hypothesis as adoption and implementation of learning and growth perspective seems to affect firm value of DMBs significantly.

These findings align with the study of Okoye, Odum and Odum (2017) which established that the financial perspective tends to influence the value of manufacturing firms in Nigeria. The findings of Noor, Mseden and Mohammed (2015) are also similar with the exception of the effect of adoption and implementation of customer perspective on firm value which is contrary. The results align with Frehat and Al Koni (2021) on the significant effect of the learning and growth perspective on the value of the firm but contradicts that of Bshayreh, Qawqzeh, Al-Momany, Saleh and Al Qallap (2024) who found an insignificant effect of the learning and growth perspective on the performance of banks.

However, Umoh, Nnamseh and Ebitto (2019) found an insignificant negative influence of learning and growth perspective as well as a negative effect of internal processes. The results are also contrary to the findings of Na, Kim and Jo (2022); Jeong, Lee and Park (2022) who found an insignificant effect of the BSC and significant effect of the customer perspective respectively.

5. Conclusion and Recommendations

5.1 Conclusion

The study has highlighted the importance of the adoption and implementation of the BSC within the Nigerian banking industry by showcasing the effect of the various perspectives of the BSC measured using quantitative data as established in literature on the value of these organisations. The various perspectives were found to exhibit effects of varying significance on the value of the banks with implementation of all perspectives leading to a positive effect on the value of the banks.

Positive and significant effect of adoption and implementation of financial perspective signifies that market participants including investors, shareholders and the general public tend to value banks and organizations that are profitable and report higher returns on their investments. An organization that is performing well financially is also expected to perform well in the market, thus the significant effect of the financial perspective on the value of the bank measured using market capitalization is not far-fetched.

Positive and significant effect of internal process perspective on firm value also highlights the crucial role and importance of having well-structured and efficient internal processes within the banks. Implementation of the BSC framework to improve internal processes can lead to cost savings, reduced timeline in delivering services and better performance which can enhance the bank's attractiveness to investors. The learning and growth perspective results highlights importance of human resources development through continuous training and skill acquisition as a well-trained workforce is a valuable asset to the bank.

The study thus concludes that adoption and implementation of BSC significantly affects firm value of DMBs listed on the NGX although the significance of this relationship varies based on the aspect of the BSC that is been assessed. The aspect of BSC with the highest significant effect (learning and growth perspective) to the value of the banks highlights the importance of training

and development within any establishment towards ensuring its growth. The findings of this study are however limited to the banks listed in Nigeria and may not apply to other industries within and outside the country.

Thus, further research can evaluate the impact of adopting and implementing the BSC on other variables such as sustainability, risk management, and environmental, social and governance disclosures. Also, the adoption of BSC in other key industries such as oil and gas or extractive industry can be studied.

5.2 Recommendations

- i. Banks should invest in streamlining and optimization of their internal processes as efficient operations reduce costs, enhance performance, and can directly translate into higher firm value
- ii. Banks should continually invest in training programs and courses for their employees and management teams as a well-trained workforce can enhance productivity and contribute to higher returns for investors and shareholders
- iii. Banks should continue to monitor and address customer complaints as part of their commitment to delivering excellent customer service and also conduct regular process reviews to achieve operational excellence
- iv. Banks should continually develop and implement strategies that can improve the financial perspective of the firm such as optimizing their assets portfolio and investment, diversifying their revenue streams and controlling their cost of operations
- v. Cross-functional collaboration and cooperation should be encouraged to enable banks to implement strategies aimed at achieving the objectives laid out in their BSC framework

References

- Abofaied, A. (2017). Evaluation of Bank's Performance by Using Balanced Scorecard: Practical Study in Libyan Environment. *International Journal of Business and Management*, 5(1), 1-14
- Aggarwal, D. and Padhan, P. (2017). Impact of Capital Structure on Firm Value: Evidence from Indian Hospitality Industry. *Theoretical Economics Letters*, 7(4), 982-1000. doi: 10.4236/tel.2017.74067.

- Al-Mawali, H., Zainuddin, Y. and Ali, N. (2010). Balanced Scorecard (BSC) Usage and Financial Performance of Branches in Jordanian Banking Industry. *International Scholarly and Scientific Research & Innovation*, 4(6), 1161-1168.
- Atkinson, A. A., Kaplan, R. S., Matsumura, E. M., and Young, S. M. (2009). *Management Accounting*. Pearson Education: London
- Bshayreh, M. M., Qawqzeh, H. K., Al-Momany, I. A. A., Saleh, M. M. A., & Al Qallap, K. D. H. (2024). The influence of balanced scorecard perspectives on the firms' performance: Evidence from the banks in the developing market. *Corporate & Business Strategy Review*, 5(2), 243–254. <https://doi.org/10.22495/cbsrv5i2art21>
- Braam, G. and Nijssen, E. (2008). Exploring the Antecedents of Balanced Scorecard Adoption as a Performance Measurement and Strategic Management System: Nijmegen Center for Economics (NiCE), NiCE Working Paper 08-115
- Callon, M. and Law, J. (1986). *Mapping the dynamics of science and technology: Sociology of science in the real world*. London: The Macmillan Press Ltd.
- Chadha, S. and Sharma, A. (2016) An Empirical Study on Capital Structure in Indian Manufacturing Sector. *Global Business Review*, 17(2), 411-424. <https://doi.org/10.1177/0972150915619817>
- Dang, C.D., Li, F. and Yang, C. (2018). Measuring Firm Size in Empirical Corporate Finance. *Journal of Banking and Finance*, 86,159 - 176
- Dhankar, R.S. and Boora, A.S. (1996) Cost of Capital, Optimal Capital Structure, and Value of Firm: An Empirical Study of Indian Companies. *Vikalpa*, 21, 29-36. <https://doi.org/10.1177/0256090919960303>
- Dwiartama, A., and C. Rosin. 2014. Exploring agency beyond humans: the compatibility of Actor-Network Theory (ANT) and resilience thinking. *Ecology and Society*, 19(3), 28-39
- Eferakeya, I. (2018). Is the balanced scorecard framework applicable in Nigerian banking industry? Searching for empirical evidence. *Unihez Journal of Contemporary Research*, 7 (2), 185-203.
- El Khatib, A. and Al-Khoury, P. (2019). The Balanced Scorecard as a Measure for Performance of Banks in Lebanon: A Review of Literature. *International Review of Management and Business Research*, 8(3), 254-271.
- El-Mousawi, H., Zaraket, M. and Fakih, I. (2022). Do Lebanese Banks Apply Balanced Scorecard in Evaluating Their Performance? An Exploratory Study. *Research in Economics and Management*, 7(1). doi: 10.22158/rem.v7n1p1.
- Frehat, R. and Al Koni, S. (2021). *The impact of balanced scorecard on firm value: Evidence from Palestine*. In: Musleh Al-Sartawi, A.M., Razzaque, A., Kamal, M.M. (eds) Artificial Intelligence Systems and the Internet of Things in the Digital Era. EAMMIS 2021. Lecture Notes in Networks and Systems, 239. Springer, Cham. https://doi.org/10.1007/978-3-030-77246-8_39
- Ghani, R. A., Samah, A. R. A., Baharuddin, N. S. and Ahmad, Z. (2023). Determinants of Firm Value as Measured by the Tobin's Q: A Case of Malaysian Plantation Sector. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 13(2), 420–432
- Guest, D. E. (2011). Human resource management and performance: Still searching for some answers. *Human resource management journal*, 21(1), 3-13
- Handriani, E. and Robiyanto, R. (2018). Corporate finance and firm value in the Indonesian manufacturing companies. *International Research Journal of Business Studies*, 11(2), 113-127.
- Hashmi, S.D., Gulzar, S., Ghafoor, Z. and Nas, I. (2020). Sensitivity of firm size measures to practices of corporate finance: Evidence from BRICS. *Future Business Journal*, 6(1), 9-19. <https://doi.org/10.1186/s43093-020-00015-y>
- Ibrahim, M. (2015). Investigating the use of the four perspective balanced scorecard as technique for assessing performance by Nigerian banks. *Journal of Accounting and Taxation*, 7 (4), 62-70
- Jeong, J.-W., Lee, H.-H., & Park, H. (2022). A Study on the Effect of Knowledge Services on Organizational Performances Based on the Concept of Balanced Scorecards for the Sustainable Growth of Firms: Evidence from South Korea. *Sustainability*, 14(19), 12610. <https://doi.org/10.3390/su141912610>

- Kala, D. and Bagri, S.C. (2014). Balanced Scorecard Usage and Performance of Hotels: A Study from the Tourist State of Uttarakhand, India. *Asia-Pacific Journal of Innovation in Hospitality and Tourism*, 3(2), 153-173
- Kaplan, R. (2010). Strategic performance measurement and management in nonprofit organisations. *Non-profit Management and Leadership*, 1(3), 353-370
- Kaplan, R. S. and Norton, D. P. (1992). The Balanced Scorecard – Measure That Drive Performance. *Harvard Business Review*, 70 (1), 71-79
- Kaplan, R.S. and Norton, D.P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part 1. *Accounting Horizons*, 15(1), 87-104
- Ladan, K.A. and Nyikyaa, M.N. (2019). Application of Balance Score Card as Key Performance Measurement Tool in Assessing the Performance of Deposit Money Banks in Nigeria. *International Journal of Current Innovations in Advanced Research*, 2(7), 1-13.
- Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Cambridge: Harvard University Press.
- Mardinata Rusli, Y. & Surjadi, M. (2021). Business Development Strategy for Non-Financial Perspective Balance Scorecard Methods to Increase the Performance of MSMES in Indonesia During the Covid-19 Pandemic. *Dinasti International Journal of Management Science*, 3(2), 276–286. <https://doi.org/10.31933/dijms.v3i2.1024>
- Na, H. J., Kim, S. R., & Jo, H. J. (2022). Integrating Text-Mining and Sustainability Balanced Scorecard Methods to Examine the Relationship between CEO Messages of Homepages and Firm Value: Emphasis on Fashion Companies in South Korea. *Sustainability*, 14(22), 15285. <https://doi.org/10.3390/su142215285>
- Nnamseh, M.P. and Umoh, V.A. (2019). Efficacy of Balanced Scorecard on Performance of Banks in Nigeria. *European Journal of Business and Management*, 11(23), 33-40. DOI: 10.7176/EJBM
- Noor, A., Mseden, A. and Mohammad, A. (2015). The Effect of Balanced Scorecard (BSC) Implementation on the Financial Performance of the Jordanian Companies. *Proceedings of 11th International Business and Social Science Research Conference 8 - 9 January, Crown Plaza Hotel, Dubai, UAE. ISBN: 978-1-922069-70-2*
- Okoye, E.I., Odum, A.N. and Odum, C.G. (2017). Effect of Balanced Scorecard on Firm Value: The Case of Quoted Manufacturing Companies in Nigeria. *The 2017 International Conference on African Entrepreneurship and Innovation for Sustainable Development (AEISD)*
- Ofurum, C.D.I., Afodigbueokwu, H.E. and Ezejiofor, R.A. (2019). Balanced Scorecard and Financial Performance: Evidence from Nigerian Consumer Goods Manufacturing Companies. *International Journal of Advanced Academic Research*, 5(5), 1-17.
- Ondieki, E. M. (2017). The effect of the balanced scorecard on organizational performance in the public sector in Kenya: A case of Kenya bureau of standards. United States International university.
- Owolabi, F. and Adetula, D. T. and Akinwumi, T. (2016). *Balanced score card and performance evaluation in Small and Medium Enterprises (SMEs) in Nigeria*. Proceedings of the 28th International Business Information Management Association Conference, 9-10 November 2016, Seville, Spain
- Oyewo, B., Olowo, R. and Obonor, A. (2021). Is the use of performance measurement system by banks really “integrated”? A structural equation modelling approach. *Journal of East-West Business*, 27(3), 259-290, DOI: 10.1080/10669868.2021.1892008
- Panicker, S. and Seshadri, V. (2013). Devising a Balanced Scorecard to Determine Standard Chartered Bank's Performance: A Case Study. *International Journal of Business Research and Development*, 2(2), 35-42.
- Pollalis, Y.A., Gartenberg, M. and Edmunds, B. (2004). Applying The Balanced Scorecard methodology In The Public Sector: The Case Of The Department Of Defense In The United States. *SPOUDAI*, 54(1), 33-58

- Raphael, G. and Man, W. (2013). Integrating Financial and Non-Financial Measures to Measure the Performance of Commercial Banks: Evidence from Tanzania. *Research Journal of Finance and Accounting*, 4(3), 1-11.
- Rogers, E. M. (1962). *Diffusion of Innovations* (5th ed.). New York: Free Press.
- Rozita, J.R., Ibrahim, D.N. and Zainuddin, Y. (2008). The performance consequence of multiple performance measures usage: Evidence from the Malaysian manufacturers. *Multiple performance measures*, 57(2), 119-136
- Shaverdi, M., Akbari, M. and Tafti, S. (2011). Combining Fuzzy MCDM with BSC Approach in Performance Evaluation of Iranian Banking Sector. *Advances in Fuzzy Systems*, 2011(1), 1-12.
- Shutibhinyo, W. (2013). Balanced Scorecard Attributes: Key Determinant and Perceived Benefits. *Global Journal of Business Research*, 7(2), 1-8
- Thuong, C.V. and Singh, H. (2023). The Impact of a Balanced Scorecard on Enterprise Performance in Ho Chi Minh City, Vietnam. *International Journal of Organizational Leadership*, 12, 198-215
- Tominac, S. (2014). Possibilities of Balanced Scorecard Application in Commercial Banks. *International Journal of Scientific Research*, 3(10), 119-121.
- Umoh, V.A. (2018). Influence of Balanced Scorecard on Deposit Money Banks' Performance in Nigeria. Ph.D. Thesis, Department of Business Management, University of Uyo
- Umoh, V.A., Nnamseh, M.P. and Ebitto, I.N. (2019). Beyond Financial Performance of Microfinance Banks in Nigeria: The Balanced Scorecard Exposition. *International Journal of Scientific and Research Publications*, 9(7), 931-937. doi: 10.29322/IJSRP.9.07.2019.p91122
- Wu, H.Y., Lin, Y.K. and Chang, C.H. (2011). Performance Evaluation of Extension Education Centers in Universities Based on the Balanced Scorecard. *Evaluation and Programs Planning*, 34(1), 37-50.
- Zawawi, N.H.M. (2018). Actor-network theory and inter-organizational management control. *International Journal of Business and Society*, 19(2), 219-234