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Determinants of Capital Structure and Performance of Microfinance Banks in Nigeria

Bayonle Liafeez O. Kazeem[1], Abimbola Oluwaseyi Ademola[2] & Babalola Oluwayemi Ogini[3]
[1&2]Department of Banking and Finance, Osun State University, Okuku
[3]Department of Human Resource Development, Osun State University, Okuku
Corresponding Email: abimbola.ademola@uniosun.edu.ng

Abstract
In recent times, capital structure decisions have become increasingly important, particularly for financial institutions such as microfinance banks (MFBs). As a result, this study seeks to analyze factors determining the capital structures of MFBs in Nigeria alongside examining its effect on their performance. Return on Equity (ROE) was employed as an indicator for the evaluation of bank performance, and capital structure was assessed via proxies like the Debt Ratio (DR), Short-Term Debt to Total Asset Ratio (STA), and Debt to Equity Ratio (DER). The study selected 20 MFBs using purposive sampling method and collected secondary data from their annual reports between 2012 and 2021. Analyzing this data involved utilizing descriptive statistics and panel data regression techniques. Findings showed that all the variables (DER, STA and DR) positively and substantially influenced ROE, implying higher debt funding may enhance bank performance. Interestingly, asset tangibility, bank size and age were found to have a considerably favorable effect on capital structure whereas liquidity and capital adequacy had an unfavorable effect. The study indicates the robust predictive power of the tested variables on MFBs' capital structure. Consequently, it is prudent for bank executives to acknowledge these salient variables in order to optimize their operational efficiency.

Keywords: Asset Tangibility, Liquidity, Return on Equity, Capital Structure, Performance
JEL Classification Codes: C1, C4, G21, G32, M41

1. Introduction

Microfinance banks (MFBs) undeniably play a vital role in the Nigerian economy (Ademola, Kazeem & Ajayi, 2022).These institutions specialize in providing services intended for individuals and businesses that

cannot access mainstream banking (Gyimah & Boachie, 2018) By providing economic solutions to disadvantaged populations deprived of conventional banking services, MFBs help to lessen disparities (Ademola, 2022). Given the significant role that MFBs play in the Nigerian economy, the Central Bank of Nigeria (CBN) introduced a number of initiatives to enhance MFBs' performances in light of their economic contributions. For instance, the CBN increased the minimum capital requirements for MFBs to 200,000,000 Naira for unit MFBs, 1,000,000,000 Naira for state MFBs, and 5,000,000,000 Naira for national MFBs. The CBN likewise offered avenues for merger and acquisition to ensure that MFBs were stable and sustainable (CBN, 2018).

In spite of government's efforts and the CBN, the number of failing MFBs in Nigeria is still increasing and the performance of the current MFBs is falling short of expectations. It was discovered that about 103 MFBs had shut down in December 2021 alone (Nigeria Deposit Insurance Corporation [NDIC], 2021). The causes for this high failure rate include poor financial management, lack of reserves, and excessive interest rates levied by commercial banks, all of which can have a detrimental effect on the capital structure decided by MFBs as well as their operational effectiveness. It is essential to pay attention to the capital structure component so as to guarantee sustainability and ideal performance of MFBs. The capital structure of banks plays a crucial role in their overall financial stability and performance. According to Sharon and Celani (2019), capital structure pertains to the manner in which an organization uses various financial sources to pay its activities. The composition of debt and equity utilized to finance firms' activities is known as capital structure (Aziz & Abbas, 2019; Aramvalarthan, Kannadhasan & Babu, 2018). Ahmed *et al*., (2020) argued that it is important for performance and capital structure to be related. However, due to MFBs modest equity position in relation to their overall balance sheet, they are susceptible to changes in liabilities, making capital structure decision significant.

Furthermore, the capital structure of MFBs is heavily regulated and holds significant importance to all stakeholders due to the potential risk associated with an inappropriate blend of debt and equity. Historically, MFBs that are highly leveraged tend to be more perilous but offer elevated returns to shareholders. Hence, MFBs encounter significant risks when capital structure decisions are taken due to the distinct costs associated with each funding source (Al-Kayed, Zain & Duasa, 2014). It is therefore crucial for MFBs to maintain an appropriate blend of funding sources that can yield greater returns. However, it is necessary to understand the determinants of MFBs capital structure. These determinants encompass a wide range of elements that influence the decisions made by MFBs in terms of their debt-

to-equity ratio. Understanding these factors holds significant importance due to the nation's ever-changing financial sector. Numerous factors unique to the firm like profitability, size, tangibility, age, tax shield, market conditions, inflation, and risk among many others are considered to shape their capital structure. However, current literature is yet to reach an agreement on the determinants of capital structure due to differences among nations and industries. Thus, this study seeks to bridge the gap by examining cogent factors influencing capital structure of MFBs specifically in Nigeria.

Moreover, a considerable amount of research has been conducted on capital structure and firms' performance in industrialized nations, for instance (Ngoc, Trang & Payel, 2017; Pham & Hung, 2020; Czerwonka & Jaworski, 2022) however, there has been a limited focus on capital structure in emerging nations, particularly Nigeria. Previous studies in Nigeria have primarily concentrated on capital structure within manufacturing firms and commercial banks, overlooking the MFBs. This study aims to address this research gap by examining how capital structure affects MFBs performance and by evaluating the factors that influence their capital structure. By doing so, this research intends to contribute to the existing knowledge base, fill the void in previous studies, and advance the long-term sustainability of MFBs. Specifically, this study will analyse how Short-Term Debt to Total Asset (STA), Debt-to-Equity Ratio (DER) and Debt Ratio (DR) affect MFBs performance and also investigate the factors influencing capital structure (Asset Tangibility, Liquidity Ratio, Capital Adequacy, Banks' Age and Size) of MFBs in Nigeria.

2. Literature Review

2.1 Concept of Capital Structure

Capital structure refers to the mix of debt and equity that a company utilizes to fund its activities (Muhammad, Ahsan & Kiran, 2017). Capital structure encompasses all of a firm's assets and liabilities, as well as how they are organized to reflect the company's value and effectiveness. Several factors can influence a firm's capital structure, such as its size, profitability, earnings, ownership and liquidity. Rosario and Chavali (2019) stated that these factors correlate directly with the overall assets and debts constituting the equity portion of the company's balance sheet. Whenever a firm seeks funding for its activities through capital infusion from investors, it minimizes the risk associated with debt and decreases the likelihood of bankruptcy. Additionally, by opting for debt financing, the owner can retain firms' control and enhance operational returns. Muhammad *et al*., (2017) proposed that an optimal capital structure blends debt and equity to maximize the firm's value. Muhammad and Fateh (2016) asserted that firms

can attain the most favorable capital structures by employing the appropriate mix of equity and debt funding.

2.1.2 Capital Structure Metrics

2.1.2.1 Debt Ratio

2.1.2.1 Short Term Debt to Total Assets

Ayuki (2015) explained that STA ratio takes into account both accruals and creditors and is utilized to evaluate a bank's performance and repayment of outstanding obligations. It also indicates the relative share of firm's assets that are backed by long-term debts. Conversely, it is calculated by dividing the total current liabilities by the overall assets. Banks with lower leverage ratios tend to have lower short-term debt ratios, which indicate investment with long-term stability. (Abdulkadir & Ozlem, 2015).

2.1.2.2 Debt Ratio

Total liabilities are divided by total assets to determine debt ratio. MFBs with low leverage ratios tend to be more financially secure and present chances for long term investments even though every bank could have different debt guidelines. The ideal ratio for MFBs is typically 0.5 (Nzotta, 2018). The debt ratio is regarded as a solvency ratio because it shows the banks' capacity to pay its obligation. A larger debt ratio could worry creditors and reduce the amount of new lending that is possible. A concentration on equity financing on the other hand can assist MFBs with greater debt ratios in expanding their operations.

2.1.2.3 Debt to Equity Ratio

This indicates the relative share of banks' funding derived from creditors and investors (Nzotta, 2018). High ratio indicates that the bank relies more on borrowing from creditors than on investments from shareholders (Abdulkadir & Ozlem, 2015). Banks can have different levels of leverage, implying that they have varying debt to equity ratio. However, debt to equity ratio of 0.5 infers that debt and capital are equally distributed (Nzotta, 2018).

2.2 Theoretical Review

2.2.1 Pecking Order Theory

The theory was introduced by Myers (1984). It has since become a significant investment theory, challenging the static trade-off theory's idea that there is an optimal level of leverage for firms. The theory posited that retained earnings are favored over debt and equity funds as a source of capital for firms. The fundamental tenet is that using retained earnings for

operating expenses is more cost-effective and convenient than using other forms of funding. Because of its tax advantage, debt is the next option if retained profits are inadequate. According to the pecking order concept, a firms should only seek equity as its final option.

2.2.2 Theory of Agency Cost

A crucial term in finance is agency costs, which were initially articulated by Jensen and Meckling (1976). According to the theory, numerous interest groups, including shareholders, lenders, and corporate internal decision-makers, have an impact on an organization's capital structure. When selecting a financing source, a trade-off must be made that takes into account the interests of all parties involved. The agency cost theory aligns with the static trade-off theory by suggesting that companies should balance the benefits and costs of taking on additional debt to achieve an ideal capital structure while also considering the associated agency costs (Akingunola, Olawale & Olaniyan, 2017).

2.2.3 Signaling Theory

According to the signaling hypothesis, managers may eliminate information asymmetry by using financial actions to communicate information to investors. The firm's financial communication strategy is based on these signals. Gangeni (2006) posits that the main issue is that managers are only able to raise additional funds through debt or stock issuance when they require extra cash or when the risk is commensurate with the expected profits. In order to spot trends, it is crucial to evaluate the nature, breadth, and credibility of the evidence presented. If management believes, based on insider knowledge, that the present share price has a low value they will not issue additional shares. As a result, the issuance of additional shares could be seen negatively by investors, which would lower the stock price.

2.3 Empirical Review

Global finance scholars have extensively researched the connection between capital structure and firms' performance. Kassabeh (2021) studied the impact of funding choices on business performance in Jordan and found that total debt to total assets and short-term debt to total assets ratios negatively affected ROA and ROE. However, the effects of long-term debt on total assets were substantial and favorable for both ROA and ROE. The study recommended placing greater emphasis on long-term financing options to alleviate financial strain on the business. Ahmed and Amina (2020) examined the influence of capital structure decisions on firm

performance. Findings showed that capital structure positively influenced ROA but negatively affected ROE. They recommended optimizing the combination of debt and equity to enhance profitability. Adeniyi *et al.*, (2020) investigated the relationship between capital structure and performance. Results revealed a direct correlation between debt and banks' profitability. It was recommended that bank managers should not rely solely on debt capital for financing but also consider utilizing retained earnings to enhance performance.

Kimoro, Muturi and Gekara (2019) conducted a study on Kenyan banks and found that capital structure decisions had a negative impact on profitability. They recommended aligning the capital structure with profitability levels and avoiding excessive debt burdens to maintain financial stability. In a study focused on Nigerian companies in the consumer goods sector, Uremadu and Onyekachi (2019) found that capital structure had an insignificant adverse effect on performance. They strongly recommended using more equity than debt for financing business activities.

Additionally, Rahman *et al.,* (2019) studied manufacturing firms in Bangladesh and found that a higher debt ratio had a favorable effect on profitability. They advised firms to maintain an optimal capital structure in order to maximize stockholders' wealth. Aziz and Abbas (2019) examined 14 Pakistani economic sectors and found that debt financing had a negative impact on firms' performance. They recommended relying more on internal sources of finance, considering it a cheap and reliable option in the Pakistani context. Dang *et al.,* (2019) explored the relationship between capital structure and company performance, revealing that leverage ratio had a positive impact on EPS and ROE but a negative impact on ROA. They advised firms to adjust their leverage ratio to balance maximizing ROE while mitigating the negative impact on ROA.

Ganiyu *et al.,* (2019) studied the association between capital structure and firms' performance in Nigeria and found a strong connection. They recommended that firms should regularly review their debt structure and policies to avoid liquidation. Mboi *et al.,* (2018) assessed the influence of the Short-term Debt Ratio on Kenyan SMEs' performance, showing that it had a significant adverse effect. They recommended reducing the usage of short-term debts to improve financial performance in SMEs. Aramvalarthan *et al.,* (2018) studied Indian firms and found that capital structure had a favorable impact on firms' performance. They suggested that banks should consider using more debt in their capital structure mix to reduce overall cost of capital due to its tax advantage. Adesugba and Olalere (2021) explored the determinants of capital structure in Nigerian banks and found that firm size, growth, and profitability were major factors influencing leverage. They

recommended that bank management focus on improving bank growth to attract debt providers. Uçarkaya *et al.,* (2021) investigated the determinants of capital structure in Turkish banks. They found that the capital adequacy ratio had an adverse connection with loan ratio, alternative cost of capital, liquidity, and growth, but a positive relationship with equity-to-assets ratio, size, and inflation. They recommended that banks maintain a strong capital base to enhance financial resilience.

Anthony and Odunayo (2015) studied Nigerian insurance firms and found that tangibility, growth, and liquidity negatively influenced leverage, while risk, return on assets, and size had considerable effect. They recommended establishing a more favorable financial structure to enhance sustainability in the insurance industry. Saleem *et al.,* (2013) studied Pakistani oil and gas enterprises and found that leverage had a favorable link with business size, tangibility of assets, and profitability, while sales growth correlated adversely with leverage. They recommended that firms should invest in physical assets, monitor debt capacity, and align borrowing decisions with sustainable growth plans to maintain financial stability.

Arean *et al.,* (2014) investigated the drivers of capital structure in Nigerian agro-listed firms. They found that large enterprises with strong tangible assets used more short-term debts as they could provide security and access loan capital. They recommended implementing appropriate protectionist policies for agro-based listed firms seeking short-term financing. Chechet *et al.,* (2013) explored the factors influencing capital structure in Nigerian chemical and paints firms. They found that tangibility and profitability had substantial effect on leverage, while size, growth, and age had little influence. They suggested that firm managers should increase the tangibility of assets and focus on improving profitability to reduce reliance on debt financing.

Bassey *et al.,* (2013) examined the capital structure of agro-based enterprises in Nigeria and found considerable favorable correlations between firm size, asset structure, and growth with both long- and short-term loan finance. Age was strongly associated with long-term debt. They recommended that firm owners should evaluate the optimal mix of debt and equity financing that aligns with their financial goals. Aremu *et al.,* (2013) investigated the factors influencing capital structure choice in the Nigerian banking industry and found that bank size among others played a crucial role. They recommended that bank managers consider these factors to enhance competitiveness in the banking sector. Shubita and Alsawalha (2012) studied the association between capital structure and profitability in Jordanian firms and found that profitability exhibited an insignificant association with leverage. They also observed that size and sales growth

enhanced profitability of firms. They suggested that firms should consider adopting an optimal capital structure to enhance their performance.

2.4 Conceptual Framework

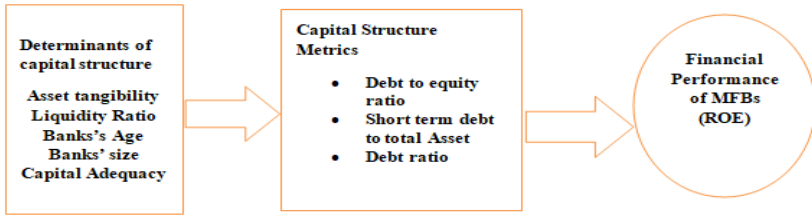

Figure 1: Determinants of Capital Structure
Source: Author's Conceptualization, 2022

3. Methodology

The study used an explanatory research design to analyze how capital structure affects MFB performance in Nigeria and assess the factors that influence MFB capital structure there. All regulated microfinance banks functioning in Nigeria as of December 31, 2021, made up the study's population. 20 MFBs from the states of Oyo, Osun, Lagos, Ondo, and Ogun in the South West of Nigeria were chosen for the study using purposive sampling. Data was gathered from the CBN Bulletin and the annual reports of the selected MFBs and then assembled into a robust, balanced panel type that included both cross-sectional and time-series dimensions. Descriptive statistics, panel data regression techniques with diagnostic tests like Hausman tests were employed for the analysis.

3.1 Model Specification

Several researchers have examined capital structure and its impact on bank performance, employing diverse research methodologies. This study utilized the same approach and model employed by Shubita & Alsawalhah (2012).

$ROE = f(DER, STA, DR)$ ……. ……..…….... 1

$ROEit = \alpha it + \beta DERit + \beta STAit + \beta DRit + \mathcal{E}it$……..... 2

Where: ROE = Performance of MFBs, DER= debt to equity ratio, STA= short term debt to total asset and DR = total debt ratio, $\beta_1 - \beta_3$ are the slope coefficients of the regressors

To determine the factors influencing the capital structure of MFBs, we have:

$DER = f\ (AST, LQR, AGE, BSZ, CAD)$ ……..……..…3

$DERit = \alpha it + \beta ASTit + \beta LQRit + \beta AGEit + \beta BSZit + \beta CADit + \mathcal{E}it$……..…4

Where; DER = Debt to equity ratio; AST = Asset tangibility; LQR = Liquidity ratio; AGE = Banks' age; BSZ = Bank size; CAD = Capital Adequacy t = Time period; β_0 = regression constant. β_1- β_4 = coefficients of the variables.

Table 1: Measurements of variables

S/N	Variables	Abbrev	Measurement
1.	Profitability (ROE)	ROA	Net profit / Equity
2.	Bank age	AGE	Number of years bank operated
3.	Liquidity	LQR	Ratio of cash and cash equivalent to total assets of bank
4.	Capital adequacy	CAD	Banks capital / Risk weighted assets
5.	Bank size	BSZ	Natural log of total asset
6.	Asset tangibility	AST	Ratio of tangible assets to total assets
7.	Debt ratio	DR	Total debt / total assets
8.	Debt equity ratio	DER	Total debt /shareholders' equity
9.	Short term debt to total asset	STA	Current liabilities/ total assets

Source: Author's Computation, 2022

4. Results and Discussion

Table 2: Descriptive Statistics

	ROE	STA	DR	DER
Mean	22.5120	0.1345	0.6734	0.3342
Maximum	35.8456	0.3200	0.8672	1.2002
Minimum	-10.1239	0.0311	0.6129	0.1288
Std. Dev.	23.1839	0.3299	0.7655	0.5201
Skewness	-0.5412	0.7844	0.5122	0.8765
Kurtosis	2.8944	1.765	2.3524	2.6722
Jarque-Bera	15.1214	3.8760	0.8123	52.0451
Probability	0.3342	0.1134	0.6877	0.1266

Source: Author's Computation, 2022

Table 2 presents the outcome of the descriptive analysis. Findings showed that the average ROE was 22.5%, ranging from -10.12% to 35.84%. The average value of the debt ratio was 0.76, ranging from 0.51 to 0.94, and had a standard deviation of 0.85. The mean DER (Debt-to-Equity Ratio) was 0.334, with the lowest and highest values being 0.12 and 1.20, respectively. The standard deviation values were higher than the average values, indicating a significant dispersion of the data. The data showed a positive skewness between -1 and +1, suggesting that it was right-skewed. Moreover, all kurtosis values were below three. The Jarque-Bera statistics values

surpassed the critical values of 0.05, indicating that the variables followed a normal distribution.

Table 3: Correlated Random Effects – Hausman Specification Test Result

Equation: Untitled :Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. df.	Prob.
Cross-section random	1.0287	4	0.6599

Source: Author's Computation, 2022

The outcome of the Hausman Test, which evaluated the model's suitability, are shown in Table 3. Findings show that the corresponding p-value was 0.659 and the Chi-Square statistics value was 1.028. This implies that the analysis is well-suited to the random effect model.

Table 4: Unit Root Test Result

	Critical values					
Variables	1% level	5% level	10% level	ADF statistics	p-value	Order of integration
ROE	-3.9564	-3.1212	-2.6432	-5.8711	0.0003	1(0)
STA	-3.7545	-3.0552	-2.6551	-4.5088	0.0026	1(0)
DER	-3.7298	-3.0844	-2.8442	-4.0765	0.0075	1(0)
DR	-3.7700	-3.0661	-2.6339	-3.7234	0.0086	1(0)

Source: Author's Computation, 2022

Table 4 displays the results of the Augmented Dickey Fuller (ADF) tests employed to evaluate the stationarity of the variables. Findings revealed that ADF test statistics values for all the variables tested were greater than the critical values. This implies that all the variables are integrated at order zero I(0), thus, panel least square regression can be used.

Table 5: Summary of Regression Result

Variable	Coefficient	Std.Error	t-statistics	Prob
C	1.2547	0.86921`	1.29550	0.3012
STA	0.1867	0.07221	3.65231	0.0063*
DER	0.1654	0.03442	5.43320	0.0018**
DR	0.1987	0.04550	4.33891	0.0038**

Weighted Statistics

R-squared	0.69853	Mean dependent var	0.32118
Adjusted R-squared	0.62675	S.D. dependent var	0.54775
S.E. of regression	0.48720	Akaike info criterion	4.02344
F-statistic	12.6130	Durbin-Watson stat	2.12547
Prob(F-statistic)	0.00107		
Dependent Variable: ROE			

Source: Author's Computation, 2022

The R-squared value indicates that the tested variables, explain 69.8% of the variance in ROE, while the remaining 21.2% can be attributed to other factors. The Durbin-Watson stat value of 2.00 is acceptable. The results revealed that all proxies of capital structure positively and substantially affected ROE. Findings revealed that STA with t-stat of 3.65 significantly and favorably affected ROE, and that all of the independent variables taken into account were essential for predicting ROE. In particular, a 1 unit rise in STA resulted in a 0.186 unit increase in ROE, demonstrating the importance of STA in shaping the capital structure of Nigerian MFBs. This finding differs from that of Mboi *et al.*, (2018) who found that STA had a substantial but adverse influence on ROE. The signaling hypothesis, which contends that the issue of short-term debt is a sign that a firm faces little credit risk, is supported by this data. Nonetheless, due to decreased refinancing risks, businesses with greater creditworthiness are likely to issue short-term debt. This outcome aligns with reports (Aziz and Abbas (2019).

Additionally, it was discovered that DR's regression coefficient was 0.164 with t-stat of 5.43 proving that it significantly and favorably affected ROE. This demonstrates how debt affects performance of banks. Given that banks frequently have high levels of leverage, managers may need to put strategies in place to lower default rates so as to boost profitability and pay debts. This result supports Rahman *et al*., (2019) who claimed that companies with high debt levels typically have greater ROE. Similar to this, Kasasbeh (2021) asserted that firms can accomplish their goals with less capital if their ROE is higher.

Moreover, the research discovered that DER, with a coefficient of 0.198 and t-stat of 4.33 had a significant and advantageous influence on ROE. This implies that a 1% rise in DER translates in a 0.198 improvement in bank performance. Since higher debt levels are linked to higher profitability, MFBs that utilise debt financing typically have higher profitability. Debt financing may be preferred by successful firms because it allows them to benefit from economies of scale and mitigate risk of adverse selection. This research is consistent with findings from Ahmed and Amina (2020) and Kasasbeh (2021). In summary, this study shows that capital structure significantly and favorably influences MFBs performance

Table 6: Correlated Random Effects – Hausman Specification Test Result

Equation: Untitled :Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. df.	Prob.
Cross-section random	1.3654	4	0.5006

Source: Author's Computation, 2022

The outcome of the Hausman Test, which evaluated the model's suitability, are shown in Table 6. Findings show that the corresponding p-value was 0.5006 and the Chi-Square statistics value was 1.3654. This implies that the analysis is well-suited to the random effect model.

Table 7: Summary of Regression Result

Variable	Coefficient	Std. Error	t-statistics	Prob
C	2.50980	4.52117	3.87002	0.00145
AST	0.69844	1.20888	1.53211	0.00844*
BSZ	0.96112	1.08443	3.01255	0.00332**
AGE	0.51229	2.12900	4.85021	0.00662*
CAD	-0.15341	1.20558	-4.37091	0.00166**
LIQ	-0.43006	2.76332	-1.47007	0.00378**

Weighted Statistics

R-squared	0.71200	Mean dependent var	0.54221
Adjusted R-squared	0.64885	S.D. dependent var	0.85342
S.E. of regression	3.56211	Akaike info criterion	5.32008
F-statistic	20.8854	Durbin-Watson stat	1.85033
Prob(F-statistic)	0.00442		
Dependent Variable: DER			

Source: Author's Computation, 2022

According to the R-squared value, the examined variables account for 71.2% of the variation in DER, with other factors accounting for the remaining 29.8%. The value of 1.85 for the Durbin-Watson stats is acceptable. AST with t-stat of 1.53 significantly and favorably impacted the capital structure of MFBs, as shown by its coefficient of 0.698. This implies that MFBs with greater levels of tangible assets depend on borrowing to fund their activities. The results highlight the importance of assets in determining bank's capital structure. AST plays a significant role in its ability to secure loans for banks' operations. The pecking order hypothesis suggests an adverse link between a company's financial leverage and AST, while the trade-off theory suggests otherwise. Chechet *et al*. (2013) found that companies with more AST have lower leverage ratios, but Anthony and Odunayo (2015) and Saleem *et al*., (2013) reported to the contrary.

Additionally, BSZ, with a value of 0.961 and t-stat of 3.01 favorably and substantially influenced capital structure. This is clear from the fact that bigger MFBs typically employ debt financing. This may be due to the fact that larger organizations have an edge over smaller ones when it comes to negotiating better terms for debt financing, allowing them to take advantage

of cheaper interest rates while having a higher debt commitment. According to Aremu, *et al*., (2013), firm's size has a significant impact on its capacity to obtain external finance.

This finding is in line with those of Adesugba and Olalere (2021) and Anthony and Odunayo (2015) however, conflicting with Bassey, *et al*., (2014).The results also showed that AGE with t-stat of 4.85 favorably and substantially affected capital structure, indicating that the age of MFBs is related to their ability to secure external financing. This implies that older MFBs are more creditworthy and may have established relationships with financial institutions, making it easier for them to secure financing. The result tallies with Bassey, *et al*., (2014) who discovered that established firms have easier access to financing at lower interest rates compared to startups.

In addition, the analysis showed that CAD, which measures a bank's ability to meet its financial obligations had substantial adverse effect on capital structure. Because they are unlikely to see a decline in lending activity, banks with strong capital bases and high negotiating ability employ equity financing more frequently. This backs up the assertions made by Uçarkaya *et al*., (2021) that banks with significant negotiating leverage tend towards equity financing. LIQ also had an adverse but substantial effect on banks' capital structures, suggesting that banks with higher liquidity rely less on debt financing. This could be due to the fact that banks are mandated by liquidity regulations to maintain adequate levels of liquid assets to deal with abrupt changes in liquidity. To maintain liquidity ratios, banks' capital structures should have a higher proportion of equity and a lower proportion of debt. This finding is in agreement with Anthony and Odunayo (2015).

5. Conclusion and Recommendations

MFBs have been essential in helping to end poverty by providing financing and giving low-income people greater decision-making power. MFBs have, however, received little scientific attention. The study analyzed factors determining the capital structure of MFBs in Nigeria alongside examining its effect on their performance. As substitutes for capital structure, DER, STA and DR were employed in the study, ROE was also utilized to evaluate MFB's performance. Descriptive statistics and regression models were used to analyse data from 20 MFBs spread across five states in the South West of Nigeria from 2012 to 2021.

The results showed that STA had a large and favorable impact on ROE, demonstrating that MFBs performance improves when short-term debt to asset ratios rises. This demonstrates how STA is an important consideration when deciding capital structure decisions of MFBs in Nigeria.

Additionally, DR and DER had beneficial and substantial impact on ROE, indicating that MFBs perform better when they have more debt financing. Findings further revealed that the capital structure of MFBs was substantially impacted by asset tangibility, size, and age, but not by liquidity or capital adequacy, which had an inverse but significant impact. The findings suggest that MFBs' performance is likely to be improved by having an ideal capital structure made of debt and equity, with STA, DR, and DER having a significant beneficial impact. The study indicates the robust predictive power of the tested variables on MFBs' capital structure.

These results have important implications for economic reality, particularly in the context of MFBs and poverty reduction. By considering the identified factors in capital structure decisions, bank executives, policymakers, and regulators can optimize the performance of MFBs, enhance poverty reduction efforts, and contribute to the sustainable development of the microfinance sector. Continued research and application of these findings can further strengthen the positive impact of MFBs in ending poverty and promoting inclusive economic growth.

Consequently, it is prudent for bank executives to strive to achieve an ideal capital structure that combines debt and equity and regularly review and adjust the capital structure to optimize operational efficiency and enhance performance. Also, given the significant impact of asset tangibility, size, and age on the capital structure of MFBs, it is crucial for bank management to strengthen risk management practices and conduct thorough assessments of assets, portfolio quality, and collateral management to ensure the stability and sustainability of the MFB's operations. Conclusively, MFBs should ensure that they maintain adequate liquidity levels and meet regulatory requirements for capital adequacy.

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