ISSN: 2958-2326

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Publisher's Home Page: https://ijcsacademia.com/

AFRICAN JOURNAL OF COMMERCIAL STUDIES

Research Paper | Peer Reviewed | Open Access

Assessing the Effects of Financial Inclusion on the Financial Performance of Non-Banking Institutions in Zambia

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African Journal of Commercial Studies, 2025, 6(2), 157–166
DOI Link: https://doi.org/10.59413/ajocs/v6.i2.15

Article Info

Volume 6, Issue 2

Publication history:
Accepted on 10 April 2025;
Published: 14 April 2025

Article DOI:
10.59413/ajocs/v6.i2.15

Abstract

This study assessed the effects of financial inclusion on the financial performance of Non-Banking Financial Institutions (NBFIs) in Zambia, focusing on the impact of Bank Account Penetration (BAP), Utilization of Financial Products (UFP), and Loan Accessibility (LA) on Return on Equity (ROE). The study tested three hypotheses: (1) BAP positively affected ROE, (2) UFP enhanced ROE, and (3) LA improved ROE, while considering macroeconomic factors like GDP per Capita (GDPC) and institutional factors such as Total Assets (TA). Using a quantitative approach, the study employed regression analysis on monthly secondary data from 36 registered NBFIs over the period 2010-2023, yielding 168 observations. The results revealed that UFP had a significant positive relationship with ROE ($p = 0.003$), indicating that higher product utilization boosted profitability. In contrast, LA showed a significant negative impact on ROE ($p = 0.000$), suggesting that increased loan accessibility introduced higher credit risk and negatively affected profitability. BAP, however, had an insignificant effect though positive on ROE ($p = 0.254$), highlighting that merely increasing the number of bank accounts did not improve financial performance unless coupled with active engagement. The study concluded that while financial inclusion initiatives like UFP and economic growth enhanced NBFI performance, unregulated loan expansion might have harmed profitability. Policymakers were encouraged to prioritize financial product usage, financial literacy, and robust credit risk management. NBFIs were advised to focus on product innovation and effective risk management to ensure long-term sustainability. The study contributed valuable insights to the literature on financial inclusion and offered practical recommendations for improving NBFI performance in Zambia.

Keywords: Financial Inclusion, Non-Banking Financial Institutions, Return on Equity, Bank Account Penetration, Utilization of Financial Products, Loan Accessibility, Zambia

1. Introduction

1.1. Background

Financial inclusion has emerged as a crucial enabler of economic development and poverty reduction, particularly in developing economies like Zambia. Over the years, the Zambian government, in collaboration with financial institutions and development partners, has implemented several initiatives to expand access to banking services, credit facilities, and other financial products. These efforts have aimed to stimulate savings, investment, and overall economic participation, which are essential components of inclusive growth (Demirgüç-Kunt et al., 2015). Evidence from global research suggests that financial inclusion leads to improved household welfare, higher investment rates, and broader economic progress (Allen et al., 2016).

Zambia has made substantial progress in advancing financial inclusion. According to the World Bank (2014; 2020), the proportion of adults with access to formal bank accounts increased from 29% in 2011 to 59% in 2020. This growth indicates the success of policies and innovations in digital finance, such as mobile money platforms and agency banking.

However, despite these positive trends, challenges persist—particularly in rural and underserved areas—where about 38% of the population remained excluded from formal financial services as of 2021 (World Bank, 2021). These disparities continue to undermine the full potential of financial inclusion in supporting equitable economic development.

Non-bank financial institutions (NBFIs), especially microfinance institutions, have played a pivotal role in expanding access to finance for individuals and small businesses excluded from traditional banking systems. These institutions offer customized financial products such as microloans, savings schemes, and insurance services tailored to low-income clients. Their importance in financial sector deepening is reflected in their growing numbers; by 2021, Zambia had 43 NBFIs, including 34 microfinance institutions. Their ability to remain financially sound and operationally efficient is critical to their sustainability and their continued contribution to economic development (Mersland & Strøm, 2009; Ngugi & Mutiso, 2022).

Despite their growing prominence, the financial performance of many NBFIs remains a concern. These institutions often face challenges such as high default rates, limited capital, and operational inefficiencies. While various financial inclusion efforts have expanded access to financial services, it remains unclear whether this increased access translates into improved financial outcomes for NBFIs themselves. There is thus a growing need to explore whether the progress in financial inclusion positively correlates with the financial sustainability and profitability of NBFIs in the Zambian context.

1.2 Statement of the Problem

Ideally, financial inclusion should improve the financial performance of NBFIs by broadening their client base, increasing revenue through greater product uptake, and enhancing risk distribution. A well-functioning inclusive financial system enables NBFIs to grow sustainably while addressing the financial needs of underserved populations, ultimately contributing to national economic development (Ngugi & Mutiso, 2022; World Bank, 2022). However, despite Zambia's progress in financial inclusion—evidenced by increased bank account penetration and the growing use of financial products—many NBFIs continue to face financial challenges such as limited profitability, high default rates, and operational inefficiencies (Bank of Zambia, 2022; FinScope Zambia, 2020; Musonda & Phiri, 2023). These include low profitability, high non-performing loans, and liquidity issues. Furthermore, there is limited empirical evidence on how key financial inclusion indicators such as bank account penetration, utilization of financial products, and loan accessibility affect the financial performance of NBFIs, making it difficult to evaluate the institutional benefits of inclusion initiatives.

This disconnect raises concerns about the long-term sustainability of NBFIs and their capacity to support inclusive economic growth. If financial inclusion does not yield tangible financial improvements for these institutions, their ability to serve low-income and financially excluded groups may diminish, potentially undermining Zambia's broader development goals. Therefore, this study aimed to assess the effects of financial inclusion on the financial performance of NBFIs in Zambia. Specifically, it sought to examine the influence of bank account penetration, financial product utilization, and loan accessibility on institutional profitability and sustainability, with the goal of informing evidence-based financial sector policies and interventions.

1.3 Objectives of the Study

The primary objective of this study was to assess the effects of financial inclusion on the financial performance of NBFIs in Zambia. Specific objectives of the study were to:

i. To determine the effect of Bank Account Penetration (BAP) on the financial performance of non-bank financial institutions (NBFIs) in Zambia,
ii. To assess the impact of the Utilization of Financial Products (UFP) on the financial performance of NBFIs in Zambia,
iii. To evaluate the influence of Loan Accessibility (LA) on the financial performance of NBFIs in Zambia.

2. Literature Review

2.1. Financial Inclusion: Concepts and Importance

Financial inclusion refers to the provision of affordable, accessible, and sustainable financial services such as savings, credit, insurance, and payment systems to individuals and businesses, especially in underserved areas (Demirgüç-Kunt et al., 2015). It plays a critical role in poverty reduction, economic empowerment, and financial stability by integrating more people into the formal financial system (Sahay et al., 2015). In Zambia, despite significant progress—such as increasing bank account ownership from 29% in 2011 to 59% in 2020 (World Bank, 2021)—a large portion of the population, particularly in rural areas, remains excluded. Financial inclusion supports national development by enabling savings and investment (Allen et al., 2016), and it is closely linked to the work of Non-Banking Financial Institutions (NBFIs), such as microfinance institutions, which extend services to low-income groups (Mersland & Strøm, 2009; Ngugi & Mutiso, 2022). However, barriers like limited financial literacy, infrastructure gaps, and regulatory challenges continue to impede full inclusion, calling for targeted policy responses to unlock the full developmental potential of financial inclusion in Zambia.

Non-Banking Financial Institutions and Their Role in Financial Inclusion

Non-Banking Financial Institutions (NBFIs) such as microfinance institutions, leasing firms, insurance companies, and

pension funds are essential in promoting financial inclusion by serving populations that traditional banks often overlook (Mersland & Strøm, 2009). In Zambia, NBFIs have expanded access to financial services in rural and underserved areas by offering flexible, tailored products like microloans, savings schemes, and microinsurance (Cull et al., 2009; Bank of Zambia, 2021). These institutions support entrepreneurship, reduce financial vulnerability, and mobilize savings for long-term investment (Armendáriz & Morduch, 2010; Hu et al., 2021). Despite their importance, NBFIs face challenges such as regulatory compliance burdens, limited access to capital, and the need to adopt new technologies to remain competitive (Beck et al., 2015). As Zambia's financial ecosystem evolves, the success of NBFIs in advancing inclusion will depend on their ability to adapt, innovate, and maintain financial sustainability while delivering services to marginalized populations.

The Relationship between Financial Inclusion and NBFI Performance

Financial inclusion has the potential to enhance the financial performance of NBFIs by expanding their customer base and diversifying revenue streams, particularly through outreach to underserved populations (Cull et al., 2014). However, studies caution that rapid expansion without proper risk management can lead to increased defaults and financial instability (Beck et al., 2015). In Zambia, where NBFIs play a key role in advancing inclusion, the challenge lies in balancing outreach with sustainability. Bank account penetration, a key indicator of financial inclusion, is linked to improved institutional performance through increased deposits, liquidity, and customer engagement (Demirgüç-Kunt et al., 2015; Sahay et al., 2015). Yet, high costs of service delivery and the need for tailored financial products remain barriers. Addressing these barriers requires innovative models that integrate technology, risk assessment, and customer-centric services. This study therefore explores how NBFIs in Zambia can strategically leverage financial inclusion while managing associated risks to achieve sustainable financial outcomes.

Bank Account Penetration and Financial Performance

Bank account penetration is a vital metric for financial inclusion, reflecting access to and use of formal financial services, which enhances savings, investments, and economic stability. In Zambia, higher penetration boosts the financial performance of both banks and NBFIs by expanding customer bases and capital flows. For NBFIs, particularly those targeting underserved populations, increased account access drives financial engagement, revenue, and sustainability; though challenges like high outreach costs and infrastructure limitations persist. Successful penetration strategies must balance inclusivity with cost-effectiveness and service relevance to achieve both social and financial goals.

Utilization of Financial Products and Services

The use of financial products such as savings, credit, and insurance significantly promote financial inclusion and economic activity, particularly in Zambia's rural and low-income areas. NBFIs have been central in extending tailored services that empower underserved populations and strengthen their own financial performance through diversified revenue streams. Literature highlights that innovation and product adaptation to client needs enhance outcomes, while diversification reduces operational risk. Therefore, promoting product utilization is not only vital for client welfare but also for the financial stability and sustainability of NBFIs amid Zambia's evolving financial landscape.

Loan Accessibility and NBFI Performance

Loan accessibility is essential for empowering low-income populations and driving financial inclusion, particularly in Zambia, where NBFIs provide critical credit access. While credit expansion can enhance NBFI revenues and economic participation, it also heightens exposure to credit risk, necessitating strong risk management and borrower assessment. Effective lending strategies that include borrower education and portfolio diversification can mitigate risks and sustain financial performance. Additionally, supportive regulations are key to balancing responsible lending with financial stability, ensuring NBFIs can fulfill their developmental role without compromising long-term viability.

Return on Equity as a Measure of Financial Performance

Return on Equity (ROE) serves as a key measure of financial performance in this study, highlighting how effectively NBFIs utilize their equity base to generate returns. A strong ROE reflects not only profitability but also the sustainability of the institution's operations in the context of expanding financial inclusion (Beck et al., 2020). In Zambia, achieving a stable or rising ROE demonstrates the ability of NBFIs to balance profitability with the costs associated with reaching underserved populations (Allen et al., 2016). While increasing access to financial services can enhance ROE by driving revenue growth, it also exposes institutions to challenges such as higher credit risk and elevated operating expenses. The literature underscores that maintaining ROE requires effective risk management, solid corporate governance, and operational efficiency, particularly in an environment characterized by economic volatility and uneven income levels (Demirgüç-Kunt et al., 2015).

2.2. Empirical Review

A myriad of studies examining financial inclusion as well as non-bank financial institutions exist. For instance, Sharma et al. (2020) conducted a survey across rural regions in India, collecting data before and after the introduction of mobile money services. It used regression analysis to assess changes in financial inclusion indicators, such as bank account ownership and access to credit, comparing areas with and without mobile money services. The study revealed that, the

introduction of mobile money significantly increased the number of individuals with access to formal financial services in rural India. Bank account ownership and usage improved notably in areas where mobile money services were available.

Chen et al. (2021) conducted a study, which focused on financial literacy programs and savings behaviour with an empirical evidence form Southeast Asia. This study conducted a randomized controlled trial (RCT) across various communities in Southeast Asia. It implemented financial literacy programs among randomly selected groups and compared their savings behaviour over a specified period using pre-program and post-program surveys along with qualitative interviews. Key findings revealed that participants who underwent the financial literacy programs demonstrated improved savings behaviour compared to the control group. They exhibited increased savings rates and a better understanding of financial concepts.

In a recent study, Ifediora et al. (2022) conducted a study on the impact of financial inclusion on economic growth. The study employed the system Generalized Method of Moments (GMM). Using a composite index of financial inclusion as well as individual financial inclusion indicators, the study results revealed that the availability dimension of financial inclusion, penetration dimension of financial inclusion and composite financial inclusion (all indicators put together) significantly and positively affect economic growth while the usage dimension of financial inclusion improves economic growth but not significantly.

On the other hand, Tshuma et al. (2023) conducted a study to examine the impact of digital financial inclusion on financial sector stability. The study adopted a quantitative research design and used two-step Generalized Method of Moments. The results of the study suggested that digital financial inclusion has a significant positive relationship with bank stability (Z score) while economic growth has a marginal positive effect with bank stability.

In trying to investigate the impact of non-bank financial institutions on financial inclusion in rural Ghana, Adu et al. (2022) employed a mixed-methods approach involving surveys and interviews in rural areas of Ghana. The study utilized regression analysis to compare financial inclusion indicators between individuals utilizing non-bank financial services and those solely relying on traditional banking. Key Findings of the study revealed that non-bank financial institutions significantly contributed to rural financial inclusion by providing accessible and tailored financial services, fostering savings, credit accessibility, and promoting financial literacy among rural populations.

Several studies have also been conducted in Zambia in with this study topic. For instance, Mwansa et al. (2017) conducted a study on the impact of microfinance on rural communities in Zambia. The study conducted surveys and interviews in rural Zambian communities by way of employing a a mixed-methods approach. The study utilized regression analysis to assess the effects of microfinance services on financial inclusion indicators, such as access to credit and savings. Key findings of the study revealed access to microfinance significantly improved financial inclusion in rural Zambia. Participants who accessed microfinance services demonstrated increased savings and better access to credit, contributing to economic empowerment.

Ng'andu et al. (2019) with the aim to investigate mobile money adoption and its impact on urban financial inclusion in Zambia study employed a cross-sectional survey of urban areas in Zambia, investigating the adoption of mobile money services. It utilized logistic regression to analyze the relationship between mobile money adoption and various financial inclusion parameters. Key findings of the study revealed that adoption of mobile money significantly enhanced urban financial inclusion in Zambia. Individuals using mobile money showed increased access to formal financial services and improved financial security.

With an aim to assess non-bank financial institutions and financial inclusion in Zambia, Mwansa et al. (2021) utilized a mixed-methods approach, combining surveys and interviews with clients of non-bank financial institutions in Zambia. Employed statistical analysis to compare financial inclusion indicators between bank and non-bank customers. Key findings of the study revealed that while traditional banks dominated the market, non-bank financial institutions significantly contributed to improving financial inclusion, especially among underserved rural populations, through innovative services and accessibility.

In a similar vein, Ng'andu et al. (2020) conducted a longitudinal study with the aim to investigate the role that microfinance institutions and financial inclusion play in urban Zambia. The study used surveys and transaction data analysis in urban areas of Zambia by also employing propensity score matching, to compare the impact of microfinance institutions on financial inclusion metrics among urban residents. Key findings of the research revealed that microfinance institutions significantly contributed to urban financial inclusion by providing accessible credit and savings services to low-income households, enabling them to engage more actively in formal financial systems.

2.3. Theoretical Framework and Conceptual Model

The Financial Intermediation Theory provides the theoretical backbone of this study, elucidating how financial intermediaries such as non-bank financial institutions (NBFIs) bridge the gap between savers and borrowers, thereby facilitating efficient resource allocation and reducing risks like information asymmetry and moral hazard (Gurley & Shaw, 1960; Diamond, 1984). This study applies the theory to assess how financial inclusion, represented by three key independent variables—Bank Account Penetration (BAP), Utilization of Financial Products (UFP), and Loan Accessibility (LA)—influences the financial performance of NBFIs, measured using Return on Equity (ROE) as the dependent variable. These dimensions reflect how access to and usage of financial services by previously underserved populations can translate into improved institutional performance, customer base expansion, and enhanced profitability for NBFIs.

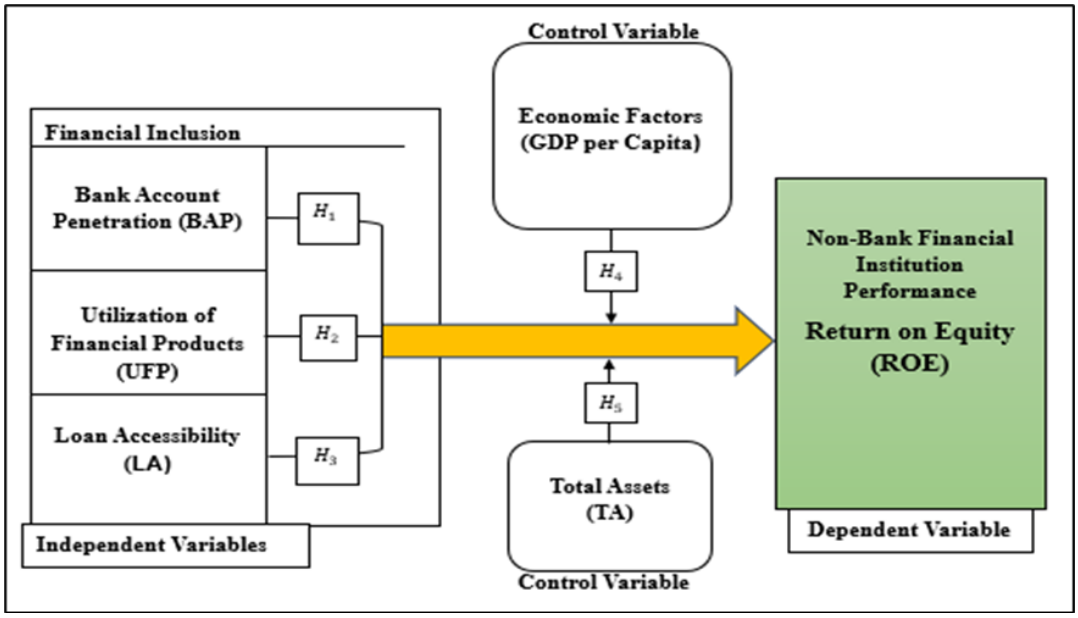

Figure 1: Conceptual Model
Source: Author's Compilation, 2025

In addition to these core relationships, the model Figure 1 above, incorporates two control variables—Economic Factors (GDP per capita) and Total Assets (TA)—to account for external influences on financial performance. The conceptual model above (Figure 1) demonstrates the hypothesized pathways (H_1–H_5) through which financial inclusion and contextual economic variables interact to affect ROE. Grounded in Financial Intermediation Theory, the framework underscores the relevance of financial intermediaries in fostering inclusive finance and sustaining institutional growth in emerging markets like Zambia. While the theory remains robust, it must also be viewed in light of contemporary challenges such as fintech disruption and agency issues, which may alter traditional intermediation roles and demand adaptive strategies.

2.4. Research Hypotheses

The following are the main research hypotheses for this study:

- H_0: BAP does not have a significant positive effect on the financial performance of NBFIs in Zambia
  H_1: BAP has a significant positive effect on the financial performance of NBFIs in Zambia.
- H_0: UFP does not have a significant positive impact on the financial performance of NBFIs in Zambia.
  H_1: UFP has a significant positive impact on the financial performance of NBFIs in Zambia.
- H_0: LA does not have a significant positive influence on the financial performance of NBFIs in Zambia.
  H_1: LA has a significant positive influence on the financial performance of NBFIs in Zambia

Table 1 below presents the operational definitions of the study variables, detailing their definitions, measurement indicators, and corresponding data sources to provide clarity on their role within the research.

Table 1: Operationalization of Study Variables

Variable	Definition	Measurement Indicators	Sources
Non-Bank Financial Institution Performance (NBFIP)	Refers to the financial outcomes and sustainability of non-banking financial institutions (NBFIs)	Profitability (Return on Equity in percentage form)	BoZ
Total Assets (TA)	Represents the overall value of resources owned by an NBFI	Total asset value as a percent of GDP	BoZ
GDP per Capita Growth Rate	Annual percentage change in the economic output of the country per capita	Percentage growth rate in Gross Domestic Product per Capita	WDI
Bank Account Penetration (BAP)	The percentage of adults with access to a formal bank or financial institution account	Number of active bank accounts per 1,000 adults, percentage of adults with access to formal financial services	BoZ
Utilization of Financial Products (UFP)	The degree to which individuals and businesses use financial services provided by NBFIs	Number of financial products per customer (i.e., savings accounts)	BoZ
Loan Accessibility (LA)	The ease with which individuals and businesses can obtain credit from financial institutions	Average loan approval rates	BoZ

Source: Author's compilation, 2025

3. Research Methodology

This study followed a positivist research philosophy, grounded in the idea that reality is objective and observable, and used a deductive approach to test pre-existing hypotheses about financial inclusion's effects on Non-Banking Financial Institutions (NBFIs) in Zambia. The deductive approach involved forming hypotheses based on the Financial Intermediation Theory and testing them using structured, systematic methods. This approach ensured that the research was objective, reproducible, and capable of generating reliable, generalizable results.

The research design was quantitative and correlational, focusing on relationships between financial inclusion indicators and NBFIs' financial performance. A correlational design allowed the study to identify patterns and associations between variables without presuming causality. The study utilized secondary data for 168 monthly observations from January 2010 to December 2023. This longitudinal dataset supported the analysis of trends over time, providing a robust foundation for statistical testing and hypothesis validation.

Data collection involved gathering secondary data from the Bank of Zambia and the World Development Index. The dataset included financial inclusion indicators and macroeconomic variables such as GDP growth rates. The data were cleaned and organized into a time-series format. Statistical software like STATA was used to run regression analyses, ensuring rigorous examination of the relationships between financial inclusion and NBFI performance. By employing these quantitative methods, the study achieved objective, measurable insights into the factors influencing NBFIs.

Ethical considerations were central to the methodology. The study ensured that the secondary data complied with ethical standards, protecting participants' privacy and ensuring confidentiality. Strong data security measures safeguarded the dataset, while results were presented transparently and responsibly. By adhering to ethical guidelines, the research maintained its credibility and upheld rigorous academic standards.

4. Research Results and Analysis

4.1. Descriptive Statistics

Table 2 below provides a summary of the variables, including Return on Equity (ROE), Bank Account Penetration (LNBAP), Utilization of Financial Products (UFP), Loan Accessibility (LA), GDP growth (GDPC), and Total Assets (TA). The mean ROE of 18.563 reflects moderate profitability among non-banking financial institutions (NBFIs), with a slight positive skewness (0.795) due to a few high-performing observations. The data shows moderate variability (standard deviation of 7.931), with ROE ranging from 7.767 to 36.370. Similarly, LNBAP (mean of 5.485, standard deviation 0.245) suggests stable bank account penetration, though slightly negatively skewed (-0.714). UFP had higher variability, with a mean of 30.590 and standard deviation of 9.127, indicating diverse usage levels of financial products.

Loan Accessibility (mean 13.338, standard deviation 7.075) showed considerable variation, with negative skewness (-0.325) and a few extreme low values. GDP growth (mean 1.093, standard deviation 2.267) demonstrated notable fluctuations over the period, ranging from -5.596 to 6.508, reflecting economic volatility. Total Assets (mean 8.866, standard deviation 2.100) were more consistently distributed, showing less skewness (0.064) and reflecting differences in institutional capacity among NBFIs. These descriptive statistics highlight key patterns and variability within the data, providing a foundation for more detailed analysis.

Table 2: Descriptive Statistics

VARIABLES	ROE	LNBAP	UFP	LA	GDPC	TA
Mean	18.563	5.485	30.590	13.338	1.093	8.866
Median	17.411	5.508	28.348	16.289	1.046	8.754
Maximum	36.370	5.805	47.116	23.467	6.508	12.210
Minimum	7.767	4.891	20.842	2.675	-5.596	5.383
Std. Dev.	7.931	0.245	9.127	7.075	2.267	2.100
Skewness	0.795	-0.714	0.555	-0.325	-0.671	0.064
Observations	168	157	168	168	157	168

Source: Author's Compilation from Stata 14.2, 2025

4.2. Correlation Analysis

The Pearson's Correlation Matrix in Table 3 below reveals significant relationships between the study variables and NBFIs' financial performance. ROE, a key indicator of performance, has a strong positive correlation with UFP (0.617) and GDPC (0.497), indicating that product utilization and economic growth are linked to higher profitability. However, LA's weak negative correlation with ROE (-0.129) suggests that more accessible loans may slightly reduce profitability, possibly due to increased credit risk. LNBAP shows weak positive correlations with UFP (0.259) and LA (0.357), reflecting its role in fostering financial inclusion, while its negative correlation with GDPC (-0.416) suggests economic growth might limit banking penetration.

Further, UFP's strong link to ROE (0.617) highlights its central role in boosting financial performance, though its negative correlation with LA (-0.254) suggests a trade-off between product utilization and credit access. LA's positive correlation with TA (0.743) indicates its contribution to asset expansion, but its negative correlations with ROE (-0.129) and GDPC (-0.522) point to risks like overleveraging. GDPC's positive correlations with ROE (0.497) and UFP (0.328) affirm economic growth's role in driving financial performance, yet its negative correlations with LNBAP (-0.416) and LA (-0.522) reveal potential barriers to financial inclusion. TA, moderately correlated with ROE (0.341) and strongly with LA (0.743), underscores the importance of asset growth in supporting financial performance and loan access. Together, these correlations provide valuable insight into the interconnectedness of financial inclusion variables and their impact on the financial performance of NBFIs in Zambia.

Table 3: Pearson's Correlation Matrix

VARIABLE	ROE	LNBAP	UFP	LA	GDPC	TA
ROE	1.000					
LNBAP	-0.046	1.000				
UFP	0.617	0.259	1.000			
LA	-0.129	0.357	-0.254	1.000		
GDPC	0.497	-0.416	0.328	-0.522	1.000	
TA	0.341	0.254	0.149	0.743	-0.362	1.000

Source: Author's Compilation from Stata 14.2, 2025

4.3. Multiple Regression Analysis

The regression analysis in Table 4.3 examines the relationship between Return on Equity (ROE) and various independent variables—LNBAP, UFP, LA, GDPC, and TA—using the least squares method. The model provides a clear view of how these variables influence financial performance, revealing both positive and negative factors. While LNBAP's coefficient (1.858) is positive, its insignificance (p = 0.254) indicates a limited direct impact on profitability. Conversely, UFP shows a significant positive relationship with ROE (coefficient = 0.160, p = 0.003), confirming that higher utilization of financial products enhances financial performance by increasing revenue streams. Loan Accessibility (LA), however, has a negative coefficient (-0.372, p = 0.000), suggesting that while more accessible loans may expand outreach, they also introduce risk, potentially lowering profitability.

Macroeconomic conditions play a major role, with GDPC showing a strong positive impact on ROE (coefficient = 1.544, p = 0.000). This indicates that a growing economy creates a favorable environment for NBFIs, stimulating demand for financial services and boosting profitability. Meanwhile, Total Assets (TA) demonstrate the largest positive effect (coefficient = 2.651, p = 0.000), emphasizing that asset growth enhances financial performance by diversifying income and reducing risk. Collectively, these findings highlight UFP, GDPC, and TA as key drivers of profitability; whereas LA's negative effect underscores the importance of managing credit risk.

The model's R-squared value of 0.709 indicates that it explains approximately 71% of the variance in ROE, supported by an adjusted R-squared of 0.699. The F-statistic (73.427, p = 0.000) confirms the model's statistical significance. Additionally, the Durbin-Watson statistic of 1.886 shows no evidence of autocorrelation in residuals, affirming the reliability of the regression results. Together, these diagnostics suggest a robust model fit, making the findings both valid and actionable.

Table 4: The Long Regression Model

Dependent Variable: Return on Equity (ROE)
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Constant (C)	-17.207	8.605	-1.999	0.047
Bank Account Penetration (LNBAP)	1.858	1.622	1.146	0.254
Utilization of Financial Products (UFP)	0.160	0.054	2.988	0.003
Loan Accessibility (LA)	-0.372	0.081	-4.617	0.000
GDP per Capita (GDPC)	1.544	0.175	8.799	0.000
Total Assets (TA)	2.651	0.276	9.591	0.000
R-squared	0.709	Mean dependent var		17.315
Adjusted R-squared	0.699	S.D. dependent var		6.589
S.E. of regression	3.615	Akaike info criterion		5.446
Sum squared resid	1973.483	Schwarz criterion		5.562
Log likelihood	-421.481	Hannan-Quinn criter.		5.493
F-statistic	73.427	Durbin-Watson stat		1.886
Prob(F-statistic)	0.000			

Source; Author's Compilation from EViews Output, 2025

4.4. Discussion of Results

This study assessed the effects of financial inclusion on the financial performance of NBFIs in Zambia, drawing on the Financial Intermediation Theory and examining ROE as the dependent variable. The theoretical framework guided the hypotheses, positing that financial inclusion indicators—LNBAP, UFP, and LA—would positively influence financial performance by addressing information asymmetry, improving resource allocation, and fostering operational efficiency. The first hypothesis (H1) anticipated that higher bank account penetration (LNBAP) would expand the customer base, increasing transaction volumes and enhancing ROE. However, the results did not support this hypothesis, as the relationship between LNBAP and ROE was statistically insignificant ($p = 0.254$). This finding suggests that simply increasing the number of bank accounts is not sufficient to improve profitability unless paired with active customer engagement and product uptake.

The second hypothesis (H2) proposed that greater utilization of financial products (UFP) would significantly improve ROE, and the data strongly supported this assertion. The positive and significant relationship between UFP and ROE ($p = 0.003$) highlights the importance of offering diverse, tailored financial products that meet the needs of underserved populations. This aligns with the Financial Intermediation Theory's premise that efficient financial services reduce transaction costs and broaden institutional revenue streams. Similarly, the third hypothesis (H3) posited that loan accessibility (LA) would have a positive impact on ROE. However, the results showed a significant negative relationship ($p = 0.000$), challenging the assumption that broader credit access always improves financial outcomes. Instead, this finding suggests that poorly managed loan expansion can increase credit risk and operational inefficiencies, ultimately eroding profitability.

These results align with global research while adding important context for Zambia's financial inclusion initiatives. Studies such as Beck et al. (2007) and Cull et al. (2018) underscore the importance of product diversity and tailored financial services, which is reflected in the positive impact of UFP. On the other hand, the negative effect of LA echoes concerns raised by Chikalipah (2016), who found that rapid credit growth often compromises portfolio quality. These findings emphasize that financial inclusion strategies must be carefully designed to balance accessibility with risk management. For instance, encouraging product utilization and improving credit oversight, rather than solely expanding account penetration, is crucial for sustainable profitability.

From a theoretical standpoint, the Financial Intermediation Theory helps explain why UFP positively contributes to performance—by reducing informational gaps and fostering more efficient financial interactions—while also highlighting the risks of unregulated credit expansion that the negative LA coefficient illustrates. The findings suggest that while financial inclusion initiatives are valuable, their success depends on how well they are aligned with institutional capabilities and regulatory frameworks. In Zambia, this means focusing on innovative product development, effective credit risk management, and regulatory oversight to ensure that financial inclusion contributes not just to accessibility, but also to institutional sustainability and long-term economic growth.

5. Conclusion and Recommendations

5.1. Conclusion

This study aimed to evaluate how financial inclusion, measured through Bank Account Penetration, Utilization of Financial Products, and Loan Accessibility, affects the financial performance of Non-Banking Financial Institutions in Zambia. Grounded in the Financial Intermediation Theory, the study hypothesized that enhanced inclusion would positively influence Return on Equity by improving efficiency, widening customer bases, and reducing transaction costs. The empirical findings revealed a significant positive relationship between UFP and ROE, confirming that the use of tailored financial products can enhance NBFIs' financial performance. However, BAP showed no significant effect, while LA had a significant but negative impact on ROE.

These results indicate that mere access to financial services—such as opening bank accounts—is insufficient to improve institutional performance unless accompanied by meaningful usage and effective management of financial products. The negative effect of loan accessibility on ROE highlights a critical concern: expanded credit access without robust risk management can harm institutional sustainability. This aligns with existing literature, suggesting that financial inclusion must be paired with well-regulated lending frameworks, customer risk profiling, and financial literacy programs. Furthermore, the positive influence of macroeconomic growth and institutional assets underlines the importance of economic stability and strong capital bases in improving NBFI performance.

From a policy perspective, these findings suggest a need to recalibrate Zambia's financial inclusion strategies. Policymakers should shift from a narrow focus on account ownership to promoting active usage of diverse financial products that reflect client needs and financial realities. Regulatory frameworks must enforce stricter credit assessment standards among NBFIs to curb default risks linked to excessive loan access. Financial sector policy should also incentivize innovation in digital financial services and strengthen consumer protection laws. Overall, policy efforts must support an enabling environment where financial inclusion drives not just access, but sustainable performance and long-term economic resilience.

5.2. Recommendations

The findings from this study provide several actionable recommendations for Non-Banking Financial Institutions (NBFIs), policymakers, and other stakeholders aiming to enhance financial inclusion and improve institutional performance.

i. Promoting Product Utilization: NBFIs should develop innovative financial products that cater to the specific needs of underserved populations, ensuring that customers actively engage with financial services.
ii. Enhancing Loan Management Practices: To mitigate the risks associated with LA, NBFIs should implement robust credit assessment and monitoring systems to ensure sustainable lending practices.
iii. Policy Support for Financial Inclusion: The government and regulatory bodies should continue to support financial inclusion initiatives by providing incentives for NBFIs to expand their reach, especially in rural areas.
iv. Capacity Building and Financial Literacy: Efforts to improve financial literacy among potential and existing customers can lead to better financial decision-making, thereby enhancing product utilization and reducing default rates.

Conflict of Interest
The authors declare that they have no conflicting interests

Funding
This research did not receive any specific grant from finding agencies in the public, commercial, or not-for-profit sectors.

Ethical considerations
The article followed all ethical standards appropriate for this kind of research.

References

Allen, F., Demirgüç-Kunt, A., Klapper, L., & Peria, M. S. M. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. Journal of Financial Intermediation, 27, 1–30.

Armendáriz, B., & Morduch, J. (2010). The economics of microfinance (2nd ed.). MIT Press.

Bank of Zambia. (2021). Financial Stability Report. Lusaka: Bank of Zambia.

Bank of Zambia. (2022). Annual Report 2022. Lusaka: Bank of Zambia.

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. Journal of Economic Growth, 12(1), 27–49.

Beck, T., Hoseini, M., & Nguyen, H. (2020). Measuring performance in the financial sector: A critical review. Journal of Financial Perspectives, 8(1), 31–49.

Beck, T., Senbet, L. W., & Simbanegavi, W. (2015). Financial inclusion and innovation in Africa: An overview. Journal of African Economies, 24(S1), i3–i11.

Chen, G., Rasmussen, S., & Reille, X. (2021). Financial literacy and savings behavior: Evidence from Southeast Asia. World Development, 136, 105-118.

Chikalipah, S. (2016). What determines microfinance repayment performance in Sub-Saharan Africa? Journal of African Business, 17(3), 308–327.

Cull, R., Demirgüç-Kunt, A., & Morduch, J. (2009). Microfinance meets the market. Journal of Economic Perspectives, 23(1), 167–192.

Cull, R., Demirgüç-Kunt, A., & Morduch, J. (2014). Banks and microbanks. Journal of Financial Services Research, 46(1), 1–53.

Cull, R., Demirgüç-Kunt, A., & Morduch, J. (2018). The microfinance business model: Enduring subsidy and modest profit. The World Bank Economic Review, 32(2), 221–244.

Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2015). The Global Findex Database 2014: Measuring financial inclusion around the world. World Bank Policy Research Working Paper No. 7255.

Diamond, D. W. (1984). Financial intermediation and delegated monitoring. The Review of Economic Studies, 51(3), 393–414.

FinScope Zambia. (2020). FinScope Zambia 2020 Survey Report. Lusaka: FSD Zambia.

Gurley, J. G., & Shaw, E. S. (1960). Money in a theory of finance. Brookings Institution Press.

Hu, Y., Stewart, F., & Yermo, J. (2021). Pension funds' role in financing infrastructure and sustainable investment. OECD Publishing.

Ifediora, S., Ogbuabor, J. E., & Iheduru, N. G. (2022). Financial inclusion and economic growth in developing countries: New evidence using system GMM. Journal of Economic Development, 47(1), 89–112.

Mersland, R., & Strøm, R. Ø. (2009). Performance and governance in microfinance institutions. Journal of Banking & Finance, 33(4), 662–669.

Musonda, L., & Phiri, T. (2023). Evaluating operational sustainability of NBFIs in Zambia: A post-financial inclusion perspective. Zambian Journal of Finance and Development, 11(1), 41–58.

Mwansa, M., Simatele, M., & Chanda, L. (2017). The impact of microfinance on rural communities in Zambia. Zambia Journal of Economic Studies, 5(1), 19–35.

Mwansa, M., Zulu, L., & Simatele, M. (2021). Non-bank financial institutions and financial inclusion in Zambia. Zambia Journal of Finance and Development, 9(2), 22–39.

Ng'andu, J., & Zulu, L. (2020). Microfinance and financial inclusion in urban Zambia: A longitudinal perspective. African Journal of Economics and Sustainable Development, 8(1), 75–91.

Ng'andu, J., Mwansa, M., & Zulu, L. (2019). Mobile money and urban financial inclusion in Zambia. Journal of Financial Technology, 6(2), 45–59.

Ngugi, P., & Mutiso, R. (2022). Financial sustainability of non-bank financial institutions in emerging economies: Evidence from Sub-Saharan Africa. Journal of Financial Inclusion and Development, 14(3), 112–129.

Sahay, R., Cihak, M., N'Diaye, P., Barajas, A., Mitra, S., Kyobe, A., ... & Saborowski, C. (2015). Financial inclusion: Can it meet multiple macroeconomic goals? IMF Staff Discussion Note No. 15/17.

Sharma, R., Singh, S., & Bhatia, R. (2020). The impact of mobile money on financial inclusion in rural India. Asian Journal of Research in Banking and Finance, 10(4), 1–15.

Tshuma, N., Moyo, P., & Mataruse, J. (2023). Digital financial inclusion and financial sector stability: Evidence from Southern Africa. African Finance Journal, 25(2), 32–48.

World Bank. (2014). Global Financial Development Report 2014: Financial Inclusion. Washington, DC: World Bank.

World Bank. (2020). The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. Washington, DC: World Bank.

World Bank. (2021). Zambia Economic Brief: Uneven recovery amid COVID-19. Washington, DC: World Bank.

World Bank. (2022). Financial Inclusion Overview. Retrieved from https://www.world-bank.org/en/topic/financialinclusion