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ASSESSING THE IMPACT OF COUNTRY RISK ON NON-BANK FINANCIAL INTERMEDIATION AND TRADITIONAL BANKING CREDIT IN AFRICAN COUNTRIES: A COMPARATIVE ANALYSIS

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Abstrak

This study examines the impact of country risk on Non-Bank Financial Intermediaries (NBFIs) in Sub-Saharan Africa and their role in credit intermediation between 2000 and 2022. NBFIs, crucial to emerging economies, provide credit to individuals and businesses, especially where formal institutions fall short. Using a fixed effects model with corrected standard errors on panel data from 30 Sub-Saharan African countries, the study compares the effects of country risk on NBFIs and traditional banks. Findings show that while country risk negatively affects NBFI lending, the impact is insignificant, contrasting with its significant negative effect on traditional bank credit. Financial development has a divergent effect, boosting traditional banks credit but hindering NBFIs. Furthermore, regulatory quality positively influences credit growth in both sectors, while the banking sector enhances NBFI activities and vice versa. These findings offer valuable insights for policymakers and regulators, highlighting NBFIs' vital role in sustaining credit flow amid rising country risk in Africa's evolving financial landscape.

Keywords: *country risk, shadow banking, traditional banking, risk management, regulatory policy.*

INTRODUCTION

NBFI has grown significantly across Africa, influencing financial stability and economic development. During periods of economic uncertainty, investors initially turn to NBFIs for liquidity creation, increasing their lending capacity (Isayev, Irani, & Attarzadeh, 2024). However, as uncertainty prolongs, trust in NBFIs diminishes, causing a reduction in money supply and higher lending rates, leading to a contraction in credit. This dynamic creates a "shadow banking cycle" of boom and bust, where NBFIs initially thrive but struggle as risky asset prices fall (Hodula, Škrabić Perić, & Sorić, 2023). Country risk is generally higher in African countries compared to developed nations (Muzindutsi, Jamile, Zibani, & Obalade, 2021). It may affect flow of capital from investors; therefore, the dynamic of shadow banking cycle may differ in Africa.

Unlike in developed countries, where NBFIs complement traditional banks with specialized financial services such as securitization and financial engineering in debt markets, African NBFIs often assume core banking functions such providing credit, particularly to individuals and small businesses excluded from traditional banking channels (Mabote, 2017; Zhang, Bi, Hu, & Meng, 2023). In this regard, NBFIs play an essential role in emerging and developing countries' financial systems.

Country risk arise when a sovereign state cannot honor its debt obligations, it increases country risk, which directly affects the financial sector (Brůha & Kočenda, 2018; Montes, Valladares, & de Moraes, 2021). A country facing high inflation, exchange rate volatility, among others, these indicators affects the speed of investments and the financial markets, hence, affect the NBFI (Rahman, Faisal, Ali, Sulimany, & Bazhair, 2023). Also, NBFIs operate without full regulatory oversight, which can increase country risk and pose challenges for policymakers.

Downgrades in country risk ratings severely affect traditional banks, including NBFIs, as they depend on capital inflows from international investors to finance their lending activities (Fong, Sze, & Ho, 2021; Zhang et al., 2023). When a country's risk rating is downgraded, investor confidence diminishes, often leading to a sudden halt in capital inflows or mass withdrawals (Ahuja, Wiseman, & Syed, 2017). This makes African NBFIs highly vulnerable to the volatility of international capital markets, potentially disrupting their lending activities. Thus, it is vital to determine the impact of country risk on NBFI credit intermediation in Africa.

The present study complements the different strands of empirical literature (Mabote, 2017; Rahman et al., 2023; Zhang et al., 2023) on informal finance. However, very few empirical studies have examined country risk characteristics from this perspective. Therefore, these findings open a new debate in banking literature. This study helps to determine the systemic importance of NBFI in Africa financial system.

This study explores the impact of country risk on NBFI in Africa, focusing on how it influences their lending activities. Given the prevalence of high interest rates, fragile financial systems, political instability, economic volatility, and poor regulatory environments in many African countries, how country risk affects NBFIs remains unclear. This study aims to examine the impact of country risk on NBFI lending in Africa, addressing a gap in the literature. It offers insights for policymakers and stakeholders to formulate policies that enhance NBFI resilience and financial inclusion. The findings will contribute to a broader understanding of the financial landscape in Africa by comparing the effects of country risk on both NBFIs and traditional banks..

METODHOLOGY

The credit intermediation data was sourced from World Bank, Global Financial Development Database. Annual financial data of traditional banks are obtained from the Bloomberg online database terminal. The country risk data for African countries are obtained from Countryrisk.io, which provides global and country-level data for over 190 countries. This study uses country risk score (CSR) in line with studies such as Oyetade and Muzindutsi (2023).

RESULT AND DISSCUSSION

Sample selection

The selection of African countries was based on countries with available panel data from 2000 to 2022. The sample period covers major event periods such as the 2008 global financial crisis, the COVID-19 pandemic, and the Ukrainian-Russia war in 2022. The final sample included 30 African countries with available data on the dependent and explanatory variables, resulting in a balanced panel of data over 22 years for the period of 2000 to 2022, sufficient to capture varying country risk. The sample size is representative of the overall African financial sector across the Sub-Saharan African region.

Estimation model

Following similar studies such as Athari, Isayev, and Irani (2024), this study examine the impact of country risk on NBFI credit using the equation 1:

$$\text{NBFI\_credit}_{it} = a + \beta_1 \text{CRS}_{it+y} \text{Control}_{it} + \epsilon_{it} \quad (1)$$

Where i is the individual country in year t. There are different measures of NBFI, this study employed a performance-based approach using different performance ratios to ascertain NBFI credit intermediation relevance in Africa. Therefore, all the key variables employed are a percentage of GDP. The dependent variable: NBFI_creditit is the proxy for ratio of NBFI credit to GDP (%). Credit provided by other financial intermediaries, pension funds, insurance, investment funds, and FinTech are accounted for in NBFI_creditit . The main explanatory variable is CRS proxy for country risk score. Control represents control variables: macroeconomic variables: GDP_growth, Repo_rate proxy for central bank interest rate and Inflation. Other macroeconomic indicators are controlled for Fin_Dev proxy for the level of financial development, Reg_quality proxy for regulatory quality, an indicator for financial soundness, Bank_asset proxy for banking sector development according to Bose, Capasso, and Andreas Wurm (2012).

Similarly, Athari et al. (2024) also identify that banking sector may influence NBFI. Traditional banks participate in NBFI banking activities through banking channels (Zhang et al., 2023). Also, NBFI uses

formal banking channels to conduct business. Thus, this study controls for banking sector influence using the total financial assets of commercial banks. This study expects the control variables to affect Africa's country risk- NBFI lending relationship. The variables used in the study are considered in more detail in Table 1.

Equation 1 controls for year effects in line with studies such as Phan et al. (2021). Year effects are included to control for time-fixed effects, unobserved heterogeneity, and business cycles across the country over time (Bond & Eberhardt, 2013). Equation 1 is estimated using the fixed effects model (FEM) since it is panel data with cross-sectional characteristics, and the time- fixed effects are not random. Thus, fixed effects become appropriate for this study.

Table 1: Definition of the variables

Variable	Definition	Formula	Expected sign
$NBFI\_credit_{it}$	Private credit by NBFI to GDP (%)	NBFI total credit/GDP	Dependent variable
CB_credit	Private credit by commercial banks to GDP (%)	Commercial banks total credit/GDP	Dependent variable
CRS	Country risk score	Index	Positive/Negative
Bank_asset	Total financial assets of commercial banks	Total assets of commercial banks/GDP	Positive
Fin_Dev	Financial Development	Ratio of liquid liabilities to GDP	Positive
Reg_quality	Regulatory quality	Level of bank regulatory quality using capital regulatory index	Positive
Repo_rate	Central bank policy rate to banks		Negative
Inflation			Negative
Gdpgrowth	Real Gdpgrowth	Gdpgrowth rate	Positive

Country risk effect and traditional banks

Country risk is expected to affect the lending behaviour of deposit banks. CB_credit represents the private credit by deposit banks as a percentage of GDP. This is introduced to test the second hypothesis of "There is an inverse relationship between country risk and deposit bank credit" using Equation 2

$$CB\_\text{credit}_{it} = a + \beta_1 CRS_{it} + {}_y\text{Control}_{it} + \epsilon_{it} \quad (2)$$

Equations (1) and (2) are estimated using the fixed effects model (FEM) since the study is a panel data with cross-sectional characteristics, and the time effects are not random. Thus, fixed effects become appropriate for this study. Specification tests were conducted to test the reliability of the study estimation models and the findings. The Hausman test supported the fixed effect model as a reliable and effective estimator for the study. Furthermore, diagnostic tests, namely the Modified Wald and Woolridge tests carried out indicate the presence of both heteroskedasticity and autocorrelation. This implies that the OLS assumptions are violated, leading to biased coefficient estimates. Therefore, this study corrects for these issues by reporting robust standard errors in the regression.

RESULT

Descriptive statistics

Table 2 presents the descriptive statistics of key variables for the study. The average NBFI credit of 3.7 percent, although low, but with some countries boasting of impressive credit to private sector as high as 72 percent highlight NBFIs' importance to economic growth in Africa.The growth of NBFI in African countries is similar to the average growth of NBFI in other emerging economies, similar findings by Zhang et al. (2023) for NBFI in China.

However, the average country risk score (CRS) of 58 percent suggests high risks, making lending expensive and potentially limiting financial inclusion. On the other hand, it may further enhance the growth of NBFI as investors look for alternative markets to invest, thus enhancing the deepening and growth of NBFI in credit intermediation according to Bashir (2023); Zhang et al. (2023)

Regulatory quality is low, averaging -0.5, indicating African countries challenges in implementing policies for private sector development. Although the standard deviation of regulatory quality is at 0.58, it shows that some African governments have sound regulatory quality, which may further enhance the innovative growth of NBFI in competition with deposit banks. Meanwhile, traditional bank credit intermediation to the private sector averages 17.8 percent further emphasizing the role of NBFIs in filling the credit gap left by traditional banks in African economies.

Table 2: Descriptive statistics of key variables

Key Variable	Obs	Mean	Std. Dev.	Min	Max
NBFI_credit	660	3.790	11.436	0,000	72.257
Bank_asset	610	24.515	20.129	0.037	104.790
CRS	660	58.954	14.241	16.952	98.035
Fin_Dev	609	28.361	18.649	.089	124.702
Reg_quality	460	-0.541	0.576	-2.202	0.900
GDP_growth	504	4.174	4.401	-20.491	26.524

Inflation	477	10.64	40.08	-16.86	557.201
Repo_rate	370	6.9	11.083	-81.13	34.954
CB_credit	610	17.808	15.04	0.025	75.992
NBFI_assets	660	6.690	22.146	0,000	154.545

Table 2 examines whether different country risk levels influence the lending behaviour of NBFI and deposit banks. F-test and KW-test results reported in Table 4 show that there is a significant difference in credit contribution to the private sector the higher the country risk levels at a 1 percent significant level. In this scenario, country risk affects both NBFI and traditional banks in Africa.

Table 2: ANOVA F-test and KW-test for African countries

	F-test	**P-value**	**Equal variance**	**KW-test**
Total credit to private sector	40,46	0,000	0,000	0,0001
NBFI_credit	26,94	0,000	0,000	0,0033
Credit_dep banks	63,73	0,000	0,000	0,0001

Empirical results

This study investigates the impact of country risk on NBFI credit in Africa, employing a fixed effects model with corrected standard errors. Table 3 reports the model estimation results based on equations (1) & (2). This study investigates the impact of country risk on NBFI credit in Africa using a fixed effects model. The results show that while country risk negatively affects NBFI lending, the impact is insignificant. In contrast, it significantly reduces traditional bank credit at a 1 percent level of significance. Contrary findings by Rahman et al. (2023), that found that country risk has a moderate positive effect on NBFI in Pakistan.

The banking sector positively influences NBFI credit intermediation at a 1 percent significance level indicating possible engagement in shadow banking by traditional banks, which could expose traditional banks to systemic risk. Our finding is consistent with Zhang et al. (2023), who found that banking sector positively influence NBFI in China.

Financial development negatively and significantly hinders NBFI credit at a 1 percent significance level. This implies that the level of financial development negatively affects NBFI credit provision, reducing NBFI's role in filling credit gaps. Level of financial development can potentially crowd out NBFI lending activities in African countries while it positively impacts traditional banks by improving access to cheaper funds. Our findings is inconsistent with Rahman et al. (2023) who found that financial development increases NBFI activities in the presence of country risk.

Since most NBFI is not specially regulated, access to funding channels at lower interest rates may not be feasible. It may possibly prevent NBFI access to liquidity and investment in the financial markets. This may cause NBFI lending rates to be more expensive and less appealing. Therefore, financial development in Africa negatively affects NBFI growth. Regulatory quality positively impacts both NBFI and traditional banks, enhancing investor confidence and credit provision in countries with strong regulatory frameworks.

Table 3: Country risk impact on NBFI and traditional banks

	NBFI_credit	CB_credit
Bank_asset	0.661***	
	(0.095)	
CRS	-0.052	-0.175***
	(0.036)	(0.036)
Fin_Dev	-0.598***	0.447***
	(0.095)	(0.030)
Reg_quality	5.975***	10.396***
	(1.097)	(1.290)
GDP_growth	-0.078	-0.031
	(0.077)	(0.087)
Inflation	0.002	-0.000
	(0.007)	(0.009)
Repo_rate	-0.031	-0.007
	(0.020)	(0.028)
NBFI_asset		0.134***
		(0.022)
_cons	0.000	20.730***
	(.)	(2.773)
N	295	295
Adjusted R-squared	0.4516	0.8291

Note: Standard errors are in parentheses * p<0.1, ** p<0.05, *** p<0.001. *,**,*** indicates significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

Disscussion

This study finds that NBFIs in Africa demonstrate greater resilience to macroeconomic shocks compared to traditional banks, as country risk has an insignificant impact on NBFI credit intermediation. This resilience may stem from NBFIs reduced reliance on foreign capital inflows, which typically expose traditional banks to greater vulnerabilities. In addition, NBFIs tend to serve local markets, thus, they may employ alternative funding sources that act as buffers against macroeconomic shocks like country risk. In contrast, traditional banks are significantly affected by country risk, which constrains their credit intermediation and profitability. While financial development positively influences traditional banks by improving access to funds, it hinders NBFI growth by increasing competition from traditional banks.

Regulatory quality benefits both NBFIs and traditional banks, underscoring the need for stronger regulatory frameworks to boost investor confidence for NBFIs growth. Also, the findings highlight the positive influence of the banking sector on NBFIs lending activities and vice versa. This positive relationship between NBFIs and traditional banks highlights their interconnectedness, with banks sometimes engaging in shadow banking activities. Our result is consistent with Bashir (2023) and Zhang et al. (2023) for Chinese banks. However, this is concerning, as noted by Bose et al. (2012), that improved banking sector development can reduce the size of NBFIs. Therefore, the positive relationship should give rise to potential collaboration for effective risk management to mitigate systemic vulnerability.

Rising country risk often makes traditional banks more risk-averse, reducing private sector credit and exacerbating economic hardships. NBFIs, however, continue to support financial inclusion, including to SMEs and economic development, filling the credit gap left by traditional banks because NBFIs generally operate outside the strict regulatory frameworks that traditional banks are subjected to. Despite their resilience, the lack of stringent regulation for NBFIs poses risks. Operating outside traditional regulatory frameworks increases their exposure to systemic risks, particularly during external shocks. Furthermore, as country risk rises, NBFI lending becomes more expensive, potentially limiting their affordability for borrowers. To address these challenges, African governments should prioritize reducing country risk, strengthening regulatory frameworks, and fostering collaboration between NBFIs and traditional banks to enhance financial innovation and inclusion and resilience across the financial sector, ensuring both institutions can sustainably support economic growth.

Variabel Pelatihan berpengaruh positif dan signifikan terhadap Kinerja Dosen Tetap pada Prodi Sarjana Manajemen Universitas Prima. Variabel Pelatihan memiliki nilai koefisien regresi sebesar 0,160 dan memiliki pengaruh yang searah, yang artinya apabila Pelatihan mengalami kenaikan sebesar 100%, maka akan meningkatkan Kinerja Dosen Tetap pada Prodi Sarjana Manajemen Universitas Prima 16,0%.

CONCLUSION

The study findings show that NBFI in Africa are more resilient to rising country risk than traditional banks, whose lending capacity is significantly hindered by economic volatility. NBFIs are critical in providing credit to small businesses and low-income borrowers, promoting financial inclusion where traditional banks fall short. These findings highlight the need for NBFIs to be integrated into broader financial systems to enhance economic stability.

Policy recommendations include reducing country risks, strengthening legal and regulatory frameworks, enhancing credit protection policies and fostering competition and technological innovation to lower NBFI transaction costs. Support for NBFIs will improve access to finance for underserved populations and foster sustainable development. However, the study's limitations stem from a lack of comprehensive data on NBFIs due to their informal nature and limited transparency.

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