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Impact of Interest Rate Spread and Risk Premium on Lending on Domestic Credit to Private Sector in Kenya

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Abstract

The Kenya financial sector has been characterized by varying interest rate spreads and risk premiums, which may have impacted the flow of domestic credit to the private sector, but whose exact impact is inadequately understood. While banks maintain substantial interest spreads to cover operational costs and risks, these spreads combined with risk premiums could potentially constrain credit expansion to private sector. Despite the critical role of domestic credit in driving private investment and consumption, there is limited empirical evidence on how changes in interest spreads and lending risk premiums impact credit allocation to Kenya's private sector. The study employed autoregressive distributed lag modelling approach, using yearly time series data from 1990 to 2023, to establish the short and long run impacts that interest spread and risk premium on lending have on domestic credit to the private sector. Data was sourced from the World Bank website. The finding show that interest spread had a positive insignificant impact on domestic credit to private sector in the long run. However, in the short run interest rate spread exhibited negative and significant impact on domestic credit to private sector. On risk premium on lending, the findings show that it exerted negative significant impact on domestic credit to private sector both in long run and short run.

Keywords: Interest rate Spread; Risk Premium on Lending; Domestic Credit to Private Sector

Background of the Study

Financial intermediation efficiency, represented by the optimum channeling of funds from surplus to deficit units, is one of the basic cornerstones of economic development in emerging economies [1]. The financial sector development and economic growth relationship, particularly through the channel of domestic credit to the private sector, is well documented in modern economic literature [2-4]. This thus provides an interesting case study of the evolution of the financial sector in Kenya, relating the relationships between financial market frictions, intermediation costs, and efficiency in credit allocation. The structural transformation of Kenya's financial architecture from a government-directed paradigm to a market-oriented framework epitomizes the broader financial liberalization initiatives observed across developing economies since the 1990s [5]. However, despite substantial reforms to enhance market efficiency, there still exist rigidities, mainly manifest in high-interest rate spreads and risk premiums, which continue to influence adversely the effective allocation of credit resources to the private sector [6].

Interest rate spread, understood as the difference between lending and deposit rates, lies at the very core of an important measure

of financial intermediation efficiency. According, market-based determination of interest rates took effect in the early 1990s after the economy was liberalized. In 1990, financial institutions were permitted to factor in all lending-related fees and charges in the cost of credit, leading to increased effective rates on loans compared to the established ceilings. In July 1991, interest rates were liberalized. Nonetheless, the interest rate spreads continued to be elevated. In Kenya, the high cost of credit initiated a debate regarding interest rate capping. The debate on interest rate capping commenced in 2001 due to concerns regarding the elevated interest rate spreads and credit cost. As a result, a bill was put forward in parliament suggesting to peg interest rates of commercial banks to the 91-day Treasury bill rate, as the Central Bank of Kenya lacked a base rate at that point in time. Another attempt in 2013 proposed capping rates in alignment with the Central Bank Rate; however, both attempts were unsuccessful primarily due to the prevailing arguments favoring a free market interest rate structure. Furthermore, banks were provided the opportunity to self-regulate by implementing measures aimed at reducing the cost of credit. Evidence shows that Kenya's interest rate spreads have been markedly persistent, averaging 9.3% over the 1990-2023 period, well above the levels of 2-5% found in more advanced financial markets [7]. Such divergence from international benchmarks provokes the basic question of what structural barriers might exist to prevent efficient financial intermediation in the case of Kenya. Despite various governmental initiatives, the Banking Sector persisted in sustaining elevated credit costs, exhibiting significant disparities among different bank tiers. The interest rate spreads persisted at elevated levels, exhibiting variations across different bank tiers and loan types. Large banks (Tier 1) constantly exhibited higher interest rate spreads, while small banks (Tier 3) preserved the lowest and most predictable spreads on average, with medium-sized banks (Tier 2) positioned in between [8]. The differences in lending rates primarily indicate the pricing of perceived or actual risks associated with various borrower categories, whereas the variation among banks is attributed to the distinct funding constraints inherent to different bank tiers.

The risk premium paradigm in lending, which is theoretically grounded in information economics and agency theory, adds another layer of complexity to the credit market dynamics in Kenya. More recent studies have shown that, in Kenya's financial markets, risk premiums result from the intricate interaction between information asymmetry, institutional framework shortcomings, and macroeconomic volatility [9]. The resultant risk pricing mechanisms may embed overgenerous risk premiums that could lead to suboptimal credit rationing outcomes. The link between such characteristics of the financial markets and domestic credit to the private sector takes on special relevance in Kenya's development context. High-risk perception leads financial institutions to include risk premiums in the interest rates applied to loans, thereby increasing the borrowing fees for both companies and individuals seeking financing [10]. The risk premium serves as a protective buffer for lenders against possible losses, indicating the degree of perceived risk and uncertainty linked to the borrower. The Central Bank of Kenya (CBK) indicated that credit risk continues to be elevated, as evidenced by the Gross Non-Performing Loans to Gross Loans Ratio, which stood at 16.3% at the end of the second quarter of 2023. This represented a spike of 60 basis points from the 15.7 percent reported at the close of the first quarter in 2023 [11]. Recent data show that risk premium for Kenya averaged 6.0 between 1990 and 2023 reaching a high of 13% in 2003 and a low of -26% in 1993 [12]. The considerable disparity between these values (-26% to 13%) suggests notable fluctuations in the credit market conditions in Kenya with the volatility influencing lending practices, decisions regarding credit allocation, and, ultimately, the availability of credit for the private sector. The significant differences in risk premium probably affected the lending strategies of banks, the behavior of borrowers, and the dynamics of the overall credit market, potentially playing a role in the cycles of credit expansion and contraction within the Kenyan economy.

Financial resources flowing to private enterprises constitute a crucial element in productive economic systems. The circulation of credit serves as a vital force that energizes economic activity, enabling private sector entities to pursue both expansion and innovation. Business success is frequently correlated with the availability of capital resources. Consequently, the degree to which private enterprises can access banking facilities and credit instruments plays a determinative role in the sustainability and proliferation of commercial ventures and entrepreneurial initiatives within a country's economic framework. Analysis of World Bank development indicators reveals significant fluctuations in Kenya's ratio of private sector domestic credit to gross domestic product, keeping an average of about 27% between 1990 and 2023, similarly, over the past decade it averaged 31%. This is in sharp contrast to the 34% in peer lower middle-income economies, indicating possible structural constraints to credit market efficiency [13].

A number of theoretical and empirical issues drive the necessity for investigating the role of interest rate spreads and risk premiums in domestic credit allocation. First, according to endogenous growth theory, the private sector is viewed as the basic driving force behind technological progress and productivity enhancement [14]. Thus, credit constraints arising from market frictions can slowdown capital accumulation and the spread of technology, hence affecting the future growth paths [15]. The mechanism of transmission through which the interest rate spreads and risk premiums operate in affecting the availability of credit must be understood to optimize policy. Second, the development framework for Kenya Vision 2030 has explicitly recognized financial sector development as a key enabler of the country's economic transformation [16]. Persistence of high intermediation costs compromise these developmental objectives in the efficiency of credit allocation [17]. Empirical studies have established that countries with lower intermediation costs tend to exhibit better economic performance as a result of efficient resource allocation [18]. Thirdly, recent regulatory interventions in the Kenyan financial markets, especially the base-rate Cap and its subsequent repeal, underscore the complex policy trade-offs between financial sector efficiency versus credit availability. The policy experiments provide a unique opportunity to analyze dynamic relationships among regulatory frameworks, market structure, and credit allocation outcomes.

With contestability of the market increasing, technological innovation, and the arrival of alternative lending platforms, a rigor-

ous reexamination of traditional financial intermediation metrics has turned into a necessity. The rapid growth of mobile banking solutions and financial technology platforms has brought forth new dynamics in the operation of credit markets and possibly changed traditional relationships between intermediation costs and efficiency in credit allocation. Current empirical evidence shows that the link between financial market characteristics and credit allocation is highly heterogeneous across different institutional and market environments [19]. As a result, this study will contribute to the literature by empirically assessing, through interest rate spreads and risk premiums, the concrete mechanisms that explain the influence of domestic credit to the private sector within the peculiar institutional context of Kenya. The research employs a rigorous analytical framework to examine these relationships, potentially generating valuable insights for policy formulation aimed at optimizing financial intermediation efficiency. The findings of this study will be especially relevant to Kenya's aspirations to middle-income status and the country's ambition of establishing itself as a regional financial hub. By adopting a methodologically robust analysis of these crucial financial market characteristics and their influence on credit allocation, the present study aims at availing evidence-based insights to policy initiatives that seek to enhance the contribution of the financial sector to economic development.

Statement of Problem

The Kenya financial sector has been characterized by varying interest rate spreads and risk premiums, which may have affected the flow of domestic credit to the private sector, but whose exact effect is poorly understood. Although banks maintain sizable interest spreads to cover their operational costs and risks, these spreads combined with risk premiums could possibly limit credit expansion to the private sector. Analysis of World Bank development indicators reveals significant fluctuations in Kenya's ratio of private lending relative to gross domestic product, keeping an average of about 27% between 1990 and 2023, similarly, over the past decade it averaged 31%. This is in sharp contrast to the 34% in peer lower middle-income economies, indicating possible structural constraints to credit market efficiency. While domestic credit is an important driver of investment and consumption in the private sector, there remains scant empirical evidence on how changes in interest spread and lending risk premiums affect credit allocation to the private sector in Kenya. Interest spread and risk premium on lending are crucial factors that determine the size and direction of domestic credit to the private sector. The study attempts to use autoregressive distributed lag modeling in establishing the short and long-run impacts with data sourced from the World Bank. The core arguments addressed are the intricate interplay of banking sector efficiency with credit availability in the Kenyan financial system, particularly how high interest rate spreads may erect barriers in accessing credit by private sector borrowers, and how risk premiums based on informational asymmetry, market uncertainty, and institutional frameworks can impact lending decisions of banks and, consequently, the domestic credit expansion. The findings from this study on Kenya have resonance for other developing economies, faced with the same challenges of expanding access to credit while safeguarding banking sector health.

Study Objectives

Main Objective

To determine the impact of interest rate spread and risk premium on lending on domestic credit to private sector in Kenya

Specific Objectives

To determine the impact of interest rate spread on domestic credit to private sector.

To establish the impact of risk premium on lending on domestic credit to private sector.

Study Hypothesis

Interest rate spread has no significant impact on domestic credit to private sector.

Risk premium on lending has no significant impact on domestic credit to private sector.

Literature Review

Previous studies have investigated credit supply; however, few have analyzed the impact of interest rate spread and risk premium on lending and its implications for domestic credit to the private sector.

Interest Rate Spread and Domestic Credit to Private Sector

Explored the effects of the resource curse on the banking sector in countries that heavily rely on oil production, utilizing firm-level data for their analysis [20]. Their sample covered the period from the first quarter of 2001 to the fourth quarter of 2019, encompassing commercial banks from twelve oil-producing nations, each exhibiting an oil rent that constitutes twenty percent or more of their GDP. The researchers evaluated how the resource curse influences banking profit efficiency, asset quality, and solvency by examining interest rate spreads, probability of default, and credit infections, particularly during different fluctuations in oil prices. The findings indicate that during periods of price booms, there is a noticeable decline in banking efficiency, an increase in credit infection, and a heightened likelihood of default. Carried out a study to determine interest rate spread impact on Non-Performing Assets level in commercial banks in Kenya [21]. The research utilized a descriptive design, focusing on a sample of 43 commercial banks in Kenya that were operational in 2008. The research employed questionnaires to gather data from primary sources, supplemented by secondary data obtained from the Bank Supervision Report to enhance the findings from primary data. The study employed quantitative and qualitative methods for data analysis regarding the relationship between interest rate spread and loan non-performance. The study indicates that interest rate spreads influence performing assets in banks by raising the cost of loans for borrowers. Similarly, the study shows that regulations on interest rates significantly impact non-performing assets, as they establish the interest rate spread in banking institutions and assist in mitigating moral hazards associated with non-performing assets. The technique of credit risk management has a direct impact on the value of financial institution's interest rate spread, as interest rates are determined in relation to non-performing assets, which are linked to higher loan costs [22]. Investigated the relationship between the interest rate spread and conventional indicators of financial intermediation, utilizing a sample comprising 29 developed, 119 developing, and 22 transition economies from 1995 to 2014. The analysis indicated significant differences in the interest rate spread among transition, developing, and developed countries, with the transition economies exhibiting the largest spreads and the greatest variation. The authors compared the statistical sig-

nificance of spreads with other intermediation measures in an economic growth model by analyzing the interest rate spread and balance sheet measures through panel data regression analysis. The findings align with theoretical expectations, indicating a negative relationship between the spread and economic growth. The coefficient of the interest rate spread was negative and statistically significant in the economic growth regression for the whole period as well as in the sub-periods of 1995–2000 and 2008–2014.

Risk Premium on Lending and Domestic Credit to Private Sector Investigated the extent to which the risk premium required by the banking industry influences the finance–growth relationship using data from South Africa spanning 1970 to 2015 [24]. The research utilized the bounds testing methodology for cointegration analysis. The study confirmed that the link between risk premium and financial growth positively influences long-term growth, with the risk premium required by the banking sector serving as a crucial conduit for financial development to stimulate growth. The assertion that financial liberalization, which eliminates interest rate limitations and enables the banking sector to accurately assess risk, serves the best interests of the South African economy. Designed a dynamic stochastic general equilibrium framework for capturing significant macroeconomic and financial moments, utilizing Epstein-Zin preferences, third-order approximation, heterogeneous banking techniques that produce a time-dependent term premium influencing the real economy [25]. The results demonstrated that risk perception shock raises term premia, diminishes output, and constricts short-term credit in private sector due to increased lending rates and limited borrowers, as banks adjust their portfolios. An unfavorable credit boom, caused by investors misjudging risk, results in a more pronounced recession and is less conducive to economic growth than a favorable credit boom grounded in fundamentals. Investigated monetary policy effect on banking risk within the banking systems in specific MENA nations by examining the effect of various economic and credit factors on the risk level within the banking sector [26]. The study also integrated many elements that could influence banks' risk appetite, including macroeconomic conditions, the size of banks' credit portfolios, and loan growth. The research employed the dynamic panel threshold model developed. The findings indicate that the correlation between credit risk and monetary policy is both positive and significant up to a threshold of 6.3. An increase in the lending interest rate above 6.3 elevates credit risk within the banking industry, as higher rates put significant constraints on borrowers, hence raising the likelihood of nonperforming loans and bad loans. The analysis confirmed a positive association between monetary policy and credit risk when utilizing the risk premium and the squared term of the lending interest rate as a threshold. The risk premium exhibited a negative and significant association below the threshold [26].

Methodology

Research design

This study employed a correlational design utilizing time series data. Creswell contend that correlation research design offers a systematic and replicable approach for examining relationships, determining the existence and degree of association between quantifiable variables.

Source of Data

The data utilized in the study was sourced from the officially released data of the World Bank, specifically the World Development Indicators. The analysis utilized annual time series data on interest rate spread and risk premium on lending and loans to the domestic private sector, sourced from the World Development Indicators.

Model Specification

The theoretical framework for this analysis was grounded in the theory of financial intermediation. The constructed model incorporated variables that emerged from the systematic literature review. Within this framework, the dependent variable represented the projected value of domestic private sector lending. The study subsequently derived the coefficients through econometric estimation of the specified equations.

$$DCPS=f(IRS_t, RPL_t, \mu_t) \quad (3.1)$$

Where;

DCPS	Domestic Credit to Private Sector
IRS	Interest Rate Spread
RPL	Risk Premium on Lending
μ	Error term

Rewriting equation 3.1 and introducing logs to take the form below;

$$\ln DCPS\_t = \beta_0 + \beta_1 \ln IRSt + \beta_2 \ln RPLt + \mu t \quad (3.2)$$

Introducing lagged variables in equation (3.2) as;

$$\Delta \ln DCPSt = \beta_0 + \beta_1 \Delta \ln IRSt + \beta_2 \Delta \ln RPLt \quad (3.3)$$

The error correction model:

$$\Delta \ln DCPS_t = \beta_0 + \sum_{i=1}^{p} \alpha_i \Delta \ln DCPS_{t-1} + \sum_{i=1}^{r} \delta_i \Delta \ln IRS_{t-1} + \sum_{i=1}^{s} \eta_i \Delta \ln RPL_{t-1} + \beta\, ECT_{t-1} + \mu_t \quad (3.5)$$

$DCPS_t$	Domestic Credit to Private Sector at time t
IRS_t	Interest Rate Spread at time t
RPL_t	Risk Premium on Lending at time t
Δ	First difference operator
ln	Natural logarithm
β_0	Intercept
β_1, β_2	Coefficients of explanatory variables
$\alpha_i, \delta_i, \eta_i$	Coefficients for lagged variables ($DCPS_{t-i}$, IRS_{t-i}, RPL_{t-i})
p, r, s	Lag orders for respective variables
μ_t	Error term
t	Time period: 1990–2023

Data Analysis

Descriptive Statistics

The initial analysis employed descriptive statistical methods to evaluate the suitability and quality of the collected data. This preliminary examination was essential to assess whether the

dataset met the assumptions for parametric analytical approach. Furthermore, these descriptive measures facilitated the assessment of data normality, which was crucial for determining appropriate statistical testing procedures.

Unit Root Test

Augmented Dickey – Fuller Test

Statistical stationarity in a stochastic process is characterized by two key properties: first, its statistical moments - specifically the mean and variance - remain unchanging across the temporal dimension. Second, when examining any two points in the time series, their covariance is determined solely by the temporal distance (lag) separating them, rather than their absolute positions in time. To assess this property, the research methodology incorporated stationarity analysis through the application of the Augmented Dickey-Fuller (ADF) test. This statistical procedure was implemented using a three-model framework to encompass the full spectrum of potential scenarios.

$$\Delta Y_t = \delta Y_{t-1} + \sum_{i=1}^{m} a_1 \Delta Y_{t-1} + \varepsilon_t \quad (3.6)$$

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + \sum_{i=1}^{m} a_1 \Delta Y_{t-1} + \varepsilon_t \quad (3.7)$$

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i=1}^{m} a_1 \Delta Y_{t-1} + \varepsilon_t \quad (3.8)$$

The above equations imply the presence of deterministic elements δ and a (3.6), which involve an arbitrary random walk model, where (3.7) comprises an interception and (3.8) comprises a trend and intercept. m is the lag length.

Bound Test for Cointegration

To examine whether a long-term equilibrium relationship exists between interest rate spread and risk premium on lending on domestic credit to private sector, this study employed the bounds testing methodology developed for cointegration analysis. The below general structure equation was used to test for long run relationship.

ΔY_t	first difference of the dependent variable at time t
α_0	the intercept
α_1	lagged level coefficient of the dependent variable
ΔX_(t-1)	first difference of independent variable
α_2	independent variable coefficient lagged differences
α_3	independent variables' coefficient lagged levels difference
ε_t	error term

Results

Descriptive Statistics

Table 4. 1: Descriptive statistics

Statistic	Interest Rate Spread	Risk Premium on Lending	Domestic Credit to Private Sector (%GDP
Mean	9.33	5.98	26.62
p50	8.69	6.68	25.83
SD	3.84	6.23	4.84
IQR	6.45	3.95	8.08
Range	16.10	38.56	18.20
p25	5.99	5.14	23.04
p75	12.44	9.09	31.12
Min	4.42	-25.72	18.50
Max	20.52	12.84	36.70

The interest rate spread over the period of 1990 to 2023 had an average (mean) of 9.33%, indicating a moderate level of difference between lending and deposit rates. The median (p50) of 8.69%, slightly lower than the mean, suggested a distribution that may have a slight skew to the right. The standard deviation (SD) of 3.84% points to moderate variability around the mean, indicating that while some years have seen substantial deviations from the average, most observations fall within a reasonable range. The interquartile range (IQR) of 6.45% highlights that the middle 50% of the data is moderately spread out, while the range of 16.10 emphasizes significant differences between the lowest and highest observed spreads. The 25th percentile (p25) at 5.99% and 75th percentile (p75) at 12.44 underline the spread of typical values, with the minimum value being 4.42% and the maximum reaching 20.52%, suggesting substantial fluctuations over the period.

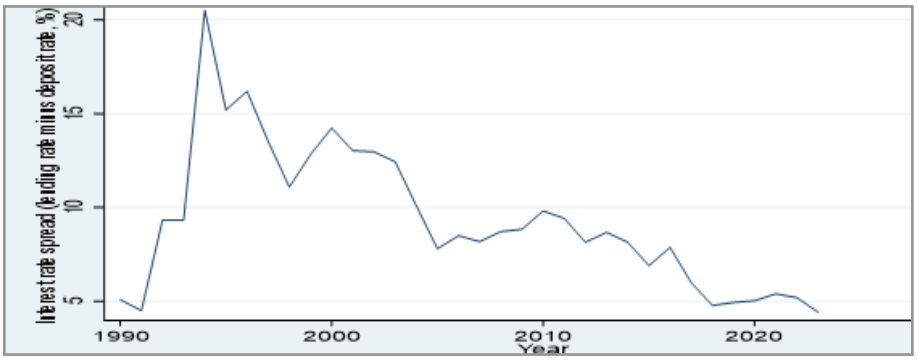

Figure 4. 1: Trend of interest rate spread

The risk premium on lending averaged 5.98% over the period, reflecting the typical additional cost over the risk-free rate required by lenders. The median value of 6.68% indicated a slightly higher central tendency compared to the mean, suggesting a potential left-skew in the distribution of the data. With a high standard deviation of 6.23%, the risk premium demonstrated considerable variability, implying that lenders have had differing levels of perceived risk across time. The IQR of 3.95% showed a moderately tight spread for the central half of the data, whereas the range of 38.56 is notable, emphasizing large disparities between extreme values. The distribution extends from a minimum of -25.72% (indicating an unusual instance of negative premium, potentially due to unique economic conditions or policy impacts) to a maximum of 12.84%. The 25th percentile at 5.14% and 75th percentile at 9.09% provide further context for the typical dispersion of data points within the observed timeframe.

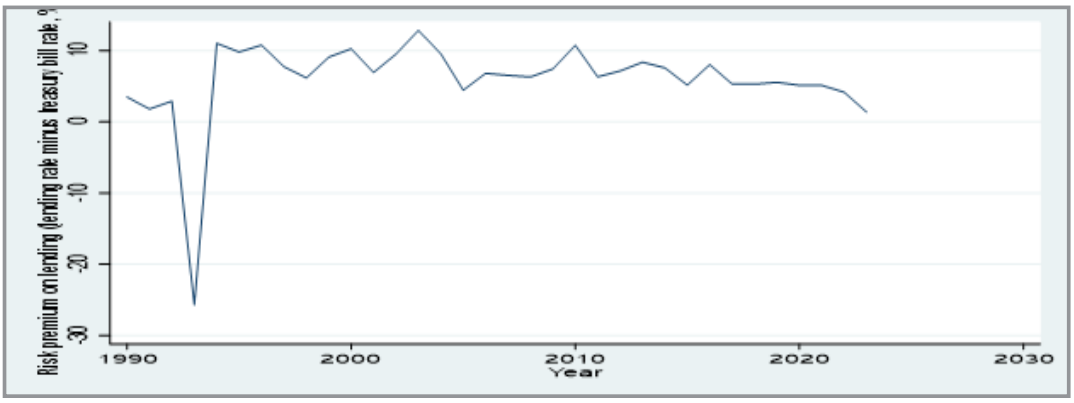

Figure 4. 2: Trend of risk premium on lending

The descriptive statistics for domestic credit to the private sector as a percentage of GDP indicated an average level of 26.62%, suggesting that, on average, credit provided by the financial sector accounted for just over a quarter of GDP. The median (p50) at 25.83% aligns closely with the mean, indicating a relatively symmetric distribution. The standard deviation of 4.84% denotes moderate variability around the mean, indicating some fluctuations in credit levels. The interquartile range of 8.08% pointed to a spread that reflects typical differences in credit distribution across the middle 50% of the data. The range of 18.20% highlighted notable variability between the minimum value of 18.50 and the maximum of 36.70, suggesting that while some periods saw higher or lower credit extensions relative to GDP, the general trend maintained a somewhat stable band. The 25th percentile at 23.04% and the 75th percentile at 31.12% indicate the bounds within which the central majority of data points fall, demonstrating a moderate distribution spread.

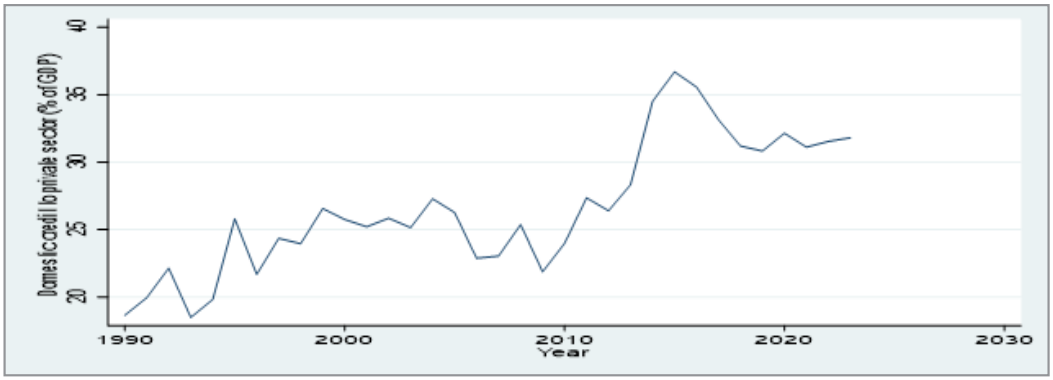

Figure 4. 3: Trend of domestic credit to private sector (% of GDP)

Unit root test (ADF test)

Table 4. 2: Unit Root AIC Values

Lags	$lnDCPS_t$	$lnIRS_t$	$lnRPL_t$
0	-1.7859*	-1.16101	.973619
1	-1.76569	-1.20351*	1.00331
2	-1.77988	-1.14289	.885437*
3	-1.74496	-1.08871	.956686
4	-1.67734	-1.0877	1.01801

Table 4. 3: Unit Root Results

		First Difference			
Variable	**No. Obs**	**H_0: δ<0**		**Lag length**	**Inference**
		Test Statistics	DF CRITICAL VALUE 5%		
$\Delta Y_t = \delta Y_t\text{-}1 + \sum_i\text{-}1^m a1\Delta Y_t\text{-}1 + \varepsilon_t$					
$lnDCPS_t$	32	-6.404	-1.950**	0	I (1)
$lnIRS_t$	28	-3.739	-1.950**	1	I (1)
$lnRPL_t$	32	-9.649	-1.950**	2	I (1)
$\Delta Y_t = \beta 1 + \delta Y_t\text{-}1 + \sum a1\Delta Y_t\text{-}1 + \varepsilon_t$					
$lnDCPS_t$	32	6.466** (0.0000)	-2.980	0	I (1)
$lnIRS_t$	28	-4.693** (0.0000)	-2.992	1	I (1)
$lnRPL_t$	32	-9.492** (0.0000)	-2.980	2	I (1)
$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i=1}^m a_1\Delta Y_{t-1} + \varepsilon_t$					
$lnDCPS_t$	32	6.373** (0.0000)	-3.572	0	I (1)
$lnIRS_t$	28	-4.639** (0.0000)	-3.588	1	I (1)
$lnRPL_t$	32	-9.376** (0.0000)	-3.572	2	I (1)

The stationarity test results, based on the Augmented Dickey-Fuller (ADF) test, show that all variables were stationary after first differencing. The null hypothesis (H_0: δ=0) of a unit root is rejected for each variable at the first difference level, as indicated by test statistics significantly lower than their respective critical values at the 5% significance level, confirming stationarity post-differencing.

Bound Test for Cointegration

Table 4. 4: Optimal lag matrix (AIC)

e(lags) [1, 3] ΔlnDCPS ΔlnIRS ΔlnRPL			
r1	1	0	2

The results of the optimal lag selection using the Akaike Information Criterion (AIC) for the bounds test indicate an optimal lag structure of (1, 0, 2) for the differenced series ΔlnDCPS , ΔlnIRS, and ΔlnRPL, respectively.

Table 4. 5: Pesaran/Shin/Smith (2001) ARDL Bounds Test
H0: no levels relationship F = 14.518
Critical Values (0.1-0.01), F-statistic, Case 3

| [I_0] [I_1] | [I_0] [I_1] | [I_0] [I_1] | [I_0] [I_1]
|L_1 L_1| L_05L_05|L_025 L_025| L_01 L_01

k_2 | 3.17 4.1 | 3.79 4.85| 4.41 5.5|5.15 6.36

accept if F < critical value for I (0) regressors

reject if F > critical value for I (1) regressors

Long Run and Short Run and Dynamics

Table 4. 6: Short run and long run dynamics

Long run results				
ΔlnDCPS		**Std. Error**	**t-Statistic**	**Prob.**
ΔlnDCPS		0.0264029	5.62	0.028
ΔlnIRS		0.1843285	1.09	0.290
ΔlnRPL	-0.1735665	0.0800247	2.17	0.042

In the long run, the coefficient for ΔlnDCPS (domestic credit to the private sector) was 0.1483845, implying that a 1% increase in domestic credit leads to an approximately 14% increase in the domestic credit to the private sector in the next period. This positive and statistically significant coefficient suggests a relatively elastic response, indicating that domestic credit has a noticeable impact on the domestic credit to the private sector in the next period. Similarly, the coefficient for ΔlnIRS (interest rate spread) in the long run was 0.200558, suggesting that a 1% increase in the interest rate spread results in a 20% increase in the domestic credit to the private sector (% of GDP). However, the p-value of 0.290 indicates this result is not statistically significant, implying that while the interest rate spread may suggest some level of elasticity, it lacks enough evidence to claim it meaningfully affects the domestic credit to the private sector (% of GDP) in the long run. In contrast, the short-run coefficient for ΔlnRPL (risk premium on lending) of -0.1735665, signify that a 1% rise in risk premium on lending leads to a 17% decrease in the domestic credit to the private sector (% of GDP) implying that increases in risk premium on lending contribute to a contractionary effect.

Accordingly, the short-run results from the ECM, the adjustment coefficient (ADJ) for ΔlnDCPS of -1.170509, which was significant with a p-value of 0.000 indicated a strong and rapid correction mechanism, as more than 100% of the deviation from the long-term equilibrium is corrected in the next period. This coefficient's magnitude implies that in response to any shock, the system not only returns to equilibrium but does so robustly, reflecting a highly elastic adjustment process. The short-run coefficient for ΔlnIRS (interest rate spread) was -0.1904332, with a significant p-value of 0.014. This elasticity indicates that a 1% increase in the interest rate spread results in a 19% decrease in the domestic credit to private sector (% of GDP). The negative elasticity highlights that higher spreads potentially lead to costlier borrowing, which in the short run constrains investment and economic growth. The negative response shows how financial conditions, specifically interest rate variations, play a dampening role on economic activities in a protracted timeframe. Additionally, the short-run coefficient for ΔlnRPL was -0.1399963, significant at the 5% level with a p-value of 0.005. This result suggests that a 1% increase in risk premium on lending results in a 13% decrease in the domestic credit to private sector (% of GDP) in the short run, consistent with the idea that higher risk premium on lending may eventually burden economic actors if accompanied by repayment pressures or ineffective credit allocation.

Discussion

In analyzing the empirical findings against the existing literature, the results reveal both consistencies and notable departures from previous research regarding the relationships between domestic credit to the private sector, interest rate spread, and risk premium on lending. The long-run positive coefficient for domestic credit aligns with fundamental banking sector dynamics, while the positive but statistically insignificant short-run effect of interest rate spread presents an interesting contrast to the findings, who documented more definitive negative relationships between interest rate spreads and banking sector performance. The long-run negative coefficient for risk premium on lending corresponds with findings regarding the constraining effects of high lending costs on credit availability. The short-run results present particularly compelling evidence, with the strong adjustment coefficient indicating a robust error correction mechanism that exceeds theoretical expectations, suggesting a more dynamic adjustment process than previously documented in the literature. The short-run negative impact of interest rate spread aligns with conclusions about the adverse effects of wider spreads on economic growth and financial intermediation, while also observations about banking efficiency decline during certain market conditions. The significant long-run negative coefficient for risk premium on lending partially contradicts findings of a positive relationship between risk premium and financial growth in South Africa, but aligns more closely with theoretical framework suggesting that elevated risk perceptions lead to credit contraction through increased lending rates, thereby establishing a more nuanced understanding of how risk premium dynamics influence private sector credit availability across different time horizons.

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