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INTEREST RATE VOLATILITY AND THE FINANCING AND INVESTMENT DECISIONS OF SMALL ENTERPRISES: EVIDENCE FROM LILONGWE'S CENTRAL BUSINESS DISTRICT, MALAWI

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ABSTRACT

Interest rate volatility, distinct from the level of interest rates, has emerged as a significant but under-researched threat to small enterprise financial decision-making in developing economies. This study examined the relationship between perceived interest rate volatility and the financing and investment decisions of small enterprises operating in Lilongwe Central Business District (CBD), Malawi, and evaluated whether firm size moderates this relationship. The study adopted a quantitative, descriptive-correlational design using a cross-sectional survey. Data were collected from 100 registered small enterprises drawn through stratified random sampling from a population of 135 firms, yielding a response rate of 90.9%. Data were analyzed using descriptive statistics, Pearson correlation, and multiple and moderated regression. The findings show that volatility significantly reduced reliance on bank-loan financing while increasing reliance on trade credit and informal sources, and significantly reduced the share of capital (long-term) investment relative to working-capital investment. Firm size significantly moderated the volatility-investment relationship: the smallest enterprises experienced investment effects more than five times larger than the largest small enterprises. The study concludes that interest rate volatility is a powerful, size-differentiated determinant of small enterprise financial behavior and recommends that monetary authorities and financial institutions prioritize rate predictability and size-targeted lending products.

KEYWORDS: Interest rate volatility; SME financing; investment decisions; firm size; moderation; Malawi.

1. INTRODUCTION

Small and medium enterprises (SMEs) are widely regarded as a central engine of economic growth, employment, and poverty reduction in Sub-Saharan Africa, where large industrial sectors remain comparatively underdeveloped. In Malawi, SMEs constitute over 90% of registered businesses and contribute approximately 40% of Gross Domestic Product while sustaining livelihoods for more than 60% of the non-agricultural workforce (Malawi Government, 2020). Despite this significance, small enterprises operate within a financial environment marked by considerable instability, of which interest rate volatility is among the most disruptive forces. Over the past five years, Malawi has experienced pronounced macroeconomic turbulence currency devaluation, inflationary pressure, and inconsistent monetary policy responses that has produced sharp, unpredictable swings in commercial lending rates (Reserve Bank of Malawi, 2022).

Much of the existing literature on interest rates and enterprise behavior has focused on the level of rates rather than their volatility. This distinction carries real practical weight a stable rate of 18% permits predictable financial planning, whereas a rate oscillating between 12% and 18% within a year introduces uncertainty that can paralyze decision-making even where the average rate is unchanged (Kalu & Nwankwo, 2020). For small enterprises with limited access to hedging instruments, treasury expertise, or international capital markets, this unpredictability directly raises the effective cost of debt and undermines medium- to long-term financial planning (Kalu & Nwankwo, 2020). Interest rate volatility is understood here as the degree of unpredictable variation in the cost of borrowing over time, and it is expected to affect two related but distinct managerial functions: financing decisions how a firm raises capital across bank loans, trade credit, and informal sources and investment decisions how a firm allocates capital between long-term (capital) assets and short-term (working-capital) needs (Mwangi & Ouma, 2021). Real options theory suggests that under volatility, rational managers delay or cancel irreversible, long-term investment commitments in favor of short-term, reversible allocations of capital (Baker, Bloom & Davis, 2019), while banks themselves tend to tighten lending standards during volatile periods, pushing small enterprises toward more expensive alternative financing sources (Phiri & Banda, 2022).

While the broad relationship between volatility, financing, and investment has been documented across several African markets including Nigeria (Kalu & Nwankwo, 2020),

Kenya (Mwangi & Ouma, 2021), Zimbabwe (Chikoko & Mpofu, 2022), Zambia (Musonda & Mwila, 2020), and South Africa (Oseifuah & Gyekye, 2020) empirical evidence from Malawi remains sparse. The only existing Malawian study, conducted by Phiri and Banda (2022), focused exclusively on manufacturing SMEs in Blantyre and did not examine the retail and service sectors that dominate commercial activity in Lilongwe, nor did it test firm size as a moderating factor. This leaves a clear empirical gap no study has yet quantitatively examined how interest rate volatility distinct from rate levels shapes financing and investment behavior among the retail, wholesale, and service enterprises that characterize Malawi's primary commercial district, or whether the severity of these effects differs systematically by firm size.

This gap matters both academically and practically. Academically, it limits the extent to which financing and investment theories developed largely in more developed financial markets can be assumed to generalize to Malawi's comparatively shallow financial system, where credit bureaus, collateral registries, and derivative markets for hedging interest rate risk remain underdeveloped relative to the North American, Western European, and East Asian markets in which much of the foundational literature was produced (Mkandawire, 2021). Practically, policymakers at the Reserve Bank of Malawi and commercial lenders cannot design evidence-based interventions for small enterprises without knowing which firms are most exposed and through which channels volatility operates. Preliminary qualitative evidence gathered from Lilongwe business associations suggests that owners increasingly cite unpredictable bank charges and changing lending terms as major obstacles to planning (Chisale, 2023), yet this concern has not, until now, been tested with representative quantitative data from the district.

This study addresses this gap by examining, using data collected from small enterprises in Lilongwe CBD: (i) the effect of interest rate volatility on debt financing choices, specifically the proportion of financing drawn from bank loans, trade credit, and informal sources; (ii) the effect of volatility on the allocation of investment expenditure between capital (long-term) and working-capital (short-term) assets; and (iii) whether firm size moderates the relationship between volatility and investment decisions. In doing so, the study contributes new, Malawi-specific empirical evidence to a literature that has so far relied heavily on manufacturing-sector and non-Malawian data, and it offers actionable guidance for regulators, lenders, and enterprise owners operating in similar Sub-Saharan African commercial environments. The remainder of the article proceeds as follows: Section 2 reviews the conceptual, theoretical, and empirical literature underpinning the study; Section 3 details the methodology; Section 4

presents the empirical results; Section 5 discusses these results in relation to theory and prior evidence; and Section 6 concludes with implications for policy, practice, and future research.

2. LITERATURE REVIEW

2.1 Conceptual Review

Interest rate volatility is conceptually distinct from the level of interest rates, it refers to the degree of unpredictable variation in the cost of borrowing over a given period, typically operationalized as the standard deviation of changes in the lending rate, rather than the absolute rate itself (Kalu & Nwankwo, 2020). This distinction is not merely academic: a stable rate of 18% permits confident financial planning, whereas a rate oscillating between 12% and 18% within a single year introduces uncertainty that can paralyze decision-making even where the average rate over the period is identical (Kalu & Nwankwo, 2020). Financing decisions concern the composition of a firm's liabilities specifically the proportion of funding drawn from bank loans, trade credit from suppliers, informal moneylenders, or internal funds and owner equity and directly shape a firm's cost of capital and vulnerability to external shocks (Mwangi & Ouma, 2021). Investment decisions concern the allocation of scarce resources between capital investment (long-term assets such as machinery, equipment, vehicles, buildings, or premises improvements, with useful lives exceeding one year) and working-capital investment (short-term assets such as inventory, raw materials, and accounts receivable that are typically converted to cash within the ordinary operating cycle) (Baker et al., 2019). These constructs jointly capture how uncertainty about borrowing costs feeds through into observable firm behavior, and their joint measurement rather than measurement of financing or investment alone is what allows this study to trace the full pathway from macroeconomic uncertainty to firm-level outcomes.

2.2 Theoretical Review

Two theoretical frameworks underpin this study. Real options theory, as applied to investment under uncertainty (Baker et al., 2019), holds that irreversible investment commitments carry an implicit option value in delay: because an investment, once made, typically cannot be costless reversed, the option to wait for better information has positive value whenever the future cost of capital is uncertain. When interest rate volatility rises, this option value rises with it, and rational managers respond by postponing or avoiding sunk-cost investments in favor of liquid, reversible allocations of capital such as inventory. Capital structure theory under uncertainty complements this by explaining the financing side of firm behavior: as lenders themselves become more risk-averse during volatile periods, they tighten

credit standards, demand more collateral, and shorten loan tenors, which constrains the supply of affordable formal credit available to small enterprises and prompts them to substitute toward trade credit and informal financing despite the higher effective costs typically associated with these alternative sources (Phiri & Banda, 2022). Agency-theory perspectives on lender-borrower information asymmetry reinforce this dynamic, since volatility amplifies the difficulty lenders face in pricing risk accurately for opaque small enterprise borrowers, further incentivizing caution on the supply side. Together, these frameworks predict that volatility should simultaneously depress the use of formal bank debt (the financing channel) and suppress long-term capital investment in favor of working-capital allocation (the investment channel) the two central relationships tested empirically in this study while firm size, through its association with collateral, bargaining power, and access to financial advice, is theorized to buffer firms against both effects (Oseifuah & Gyekye, 2020).

2.3 Empirical Review

Evidence on the financing channel is broadly consistent across the region. In Nigeria, Kalu and Nwankwo (2020) found that a one-standard-deviation increase in volatility was associated with a 22% reduction in the bank-debt share of small enterprise capital structures, with firms substituting toward trade credit and informal lenders. In Kenya, Mwangi and Ouma (2021) showed that higher perceived volatility reduced the probability of a formal loan application by 34%, with trade credit emerging as the primary substitute. In Zimbabwe's high-volatility environment, Chikoko and Mpofu (2022) documented that volatile rates weaken bank-borrower relationships in ways distinct from high but stable rates, pushing firms toward short-tenor facilities requiring constant renegotiation. Musonda and Mwila (2020), working in Zambia, found that volatility exerted a statistically stronger effect on financing choices than the level of rates itself a finding with direct policy relevance, as it implies that predictability, not merely the level of borrowing costs, should be a policy priority. Omondi and Wanyoike (2019), examining a multi-country East African panel, further showed that firms with greater tangible collateral were less sensitive to volatility, pointing to collateral access as a potential buffering mechanism.

On the investment channel, Baker et al. (2019), using a 43-country dataset, found that policy uncertainty (including interest rate volatility) reduced small enterprise capital investment by approximately 12% on average, providing cross-country grounding for real options theory. In Malawi specifically, Phiri and Banda (2022) found that volatility negatively affected capital investment among Blantyre manufacturing SMEs but had no significant effect on working-capital investment, which they characterised as non-deferrable. By contrast, Gumedze and

Ndlovu (2021), studying Eswatini retailers, found the opposite pattern retailers reduced inventory (working capital) rather than deferring capital projects a divergence attributed to differences in how inventory versus fixed assets are financed. Qualitative evidence from Mkandawire (2021), based on interviews with small enterprise owners in this same Lilongwe CBD setting, described a pattern of "short-termism" in which volatility discourages any investment commitment exceeding a six-month horizon, but did not quantify the magnitude of this effect or control for confounding firm characteristics.

On firm size as a moderator, Oseifuah and Gyekye (2020), studying South African small enterprises, found a statistically significant positive moderation effect: larger small enterprises were significantly less sensitive to volatility in their investment decisions, an effect attributed to superior access to financial advice, stronger bargaining power with lenders, and greater accumulated retained earnings. Because South Africa's financial sector is considerably more developed than Malawi's, however, it remains an open empirical question whether and how strongly this buffering effect operates in a shallower financial market such as Malawi's.

Taken together, this literature establishes a consistent regional pattern in which volatility discourages bank-debt reliance and, in most though not all contexts, suppresses capital investment, with firm size plausibly moderating the investment effect. Three specific gaps emerge from this synthesis. First, while the financing-substitution effect has been documented in Nigeria, Kenya, Zimbabwe, and Zambia, only one study (Phiri & Banda, 2022) has tested it in Malawi, and that study was confined to Blantyre's manufacturing sector, leaving the retail, wholesale, and service enterprises that dominate Lilongwe CBD entirely unexamined. Second, the investment findings across the region are not uniform capital investment is the variable most affected in some contexts (Baker et al., 2019; Phiri & Banda, 2022) while working capital is more affected in others (Gumedze & Ndlovu, 2021) suggesting that sectoral and institutional context shapes which type of investment absorbs the burden of volatility, a question that cannot be resolved without new, context-specific data from Lilongwe. Third, although Oseifuah and Gyekye (2020) established that firm size moderates the volatility-investment relationship in South Africa's comparatively developed financial market, no study has tested whether this moderation effect holds, and at what magnitude, in Malawi's markedly shallower financial system, where formal buffering mechanisms such as fixed-rate loans and interest rate caps remain largely unavailable even to larger small enterprises. This study is designed to address all three gaps using representative, quantitative data drawn directly from Lilongwe CBD.

3. METHODOLOGY

3.1 Research Design

The study adopted a quantitative, descriptive-correlational research design using a cross-sectional survey, appropriate given the objective of examining the direction, strength, and statistical significance of relationships among variables that cannot ethically or practically be experimentally manipulated (Creswell & Creswell, 2018). Data were collected from all participants within a single four-to-six-week window rather than longitudinally, consistent with comparable studies in this literature (Kalu & Nwankwo, 2020; Mwangi & Ouma, 2021; Phiri & Banda, 2022).

3.2 Setting, Population, and Sample

The study was conducted among small enterprises operating in Lilongwe Central Business District (CBD), Malawi's principal commercial hub, chosen for its high concentration of small enterprises, its representation of the retail, wholesale, and service sectors that dominate Malawian small-enterprise activity, and the absence of any prior empirical study on this topic in this specific setting. The target population comprised 135 registered small enterprises that had operated continuously for at least two years, drawn from retail trade, wholesale distribution, and service activities; financial institutions and money-lending businesses were excluded as their financing and investment behavior differs structurally from that of non-financial firms.

A proportionate stratified random sampling technique was used, with strata defined by business sector (retail, services, wholesale) to ensure representative coverage. The required sample size was calculated using Yamane's (1967) formula for finite populations at a 95% confidence level ($n = N / [1 + N(e^2)]$), yielding a minimum of 101 respondents. To allow for attrition, 110 questionnaires were distributed; 100 were returned complete and usable, representing a response rate of 90.9%.

3.3 Instrumentation and Measurement

Data were collected using a structured, self-administered questionnaire completed by the owner or manager of each sampled enterprise in approximately 15–20 minutes. The instrument comprised four sections. Section A collected firm characteristics: number of full-time-equivalent employees (used to operationalize firm size as a continuous variable), years in operation, primary business sector, and ownership structure. Section B measured the independent variable, perceived interest rate volatility, using a validated five-item, five-point Likert scale rather than relying solely on secondary macroeconomic data, since a uniform macro-level series would not capture the differential perceptions across firms that are

theorized to drive behavioral responses. Section C captured financing choices as the percentage of total financing drawn, over the preceding 12 months, from bank loans, trade credit, and informal sources. Section D captured investment decisions as the percentage of investment expenditure allocated to capital assets versus working-capital assets over the same period. A pilot study conducted with enterprises outside the main sampling frame assessed questionnaire clarity and preliminary reliability prior to full data collection, and the volatility scale went on to demonstrate excellent internal consistency in the main study (Cronbach's alpha = 0.867), exceeding the conventional 0.70 threshold for acceptable reliability.

3.4 Data Analysis

Data were screened for missing values, outliers, and violations of the assumptions underlying parametric tests (normality, linearity, homoscedasticity, and independence of errors) before analysis proceeded in SPSS across three sequential stages. First, descriptive statistics (means, standard deviations, frequencies, and percentages) summarized the demographic and firm-level characteristics of the sample and described the central tendency and dispersion of the key study variables. Second, Pearson product-moment correlation coefficients examined the direction and strength of bivariate relationships between perceived volatility and each dependent variable, providing preliminary evidence ahead of multivariate testing. Third, multiple linear regression estimated the predictive effect of volatility on each dependent variable while simultaneously controlling for potential confounding firm characteristics, namely firm size, firm age, and sector (entered as dummy variables, with retail as the reference category). For the third research objective, concerning the moderating role of firm size on the volatility–investment relationship, a moderated multiple regression model was estimated that added an interaction term (Volatility × Firm Size) to the additive model, followed by simple-slopes analysis to characterize the volatility–investment relationship at representative levels of firm size (one standard deviation below the mean, at the mean, and one standard deviation above the mean). All tests used a two-tailed alpha of 0.05, and effect sizes (standardized regression coefficients and model R^2) were reported alongside significance levels to indicate practical, and not merely statistical, significance.

3.5 Ethical Considerations

The study adhered to established ethical principles for research involving human participants, including informed consent, voluntary participation, and the right to withdraw without penalty. Prior to data collection, ethical clearance was obtained from the relevant university research ethics committee, and a research permit was secured to approach businesses within the CBD. No personally identifying information such as owner names, national identification

numbers, or business registration numbers was collected; each questionnaire was assigned a unique numeric code used solely for internal data management, and this code cannot be linked back to any individual respondent or enterprise. All data were stored securely, with paper questionnaires kept in restricted physical storage and electronic files password-protected and accessible only to the research team. Only aggregate statistical results are reported here and in the underlying study; no individual firm, owner, or respondent is identifiable in this article, and no enterprise name, location beyond the district level, or other identifying detail is disclosed, consistent with the confidentiality commitments made to participants at the point of data collection.

4. RESULTS

4.1 Response Rate and Sample Profile

Of 110 questionnaires distributed across the retail, services, and wholesale strata, 100 were returned complete and usable, yielding a response rate of 90.9% well above the 50% threshold Mugenda and Mugenda (2003) consider adequate for survey-based social science research, and attributable to the drop-and-collect delivery mode, short completion time, and direct in-person engagement with owners within the compact CBD area. The achieved sample was reasonably distributed across employee-size categories, with 56% of firms employing between 5 and 20 workers and 44% employing between 21 and 50 workers, providing sufficient variation to meaningfully test firm-size moderation. Most firms (66%) had operated for four years or more, and all respondents met the two-year minimum operational requirement, indicating a sample with substantial first-hand experience of interest rate fluctuations rather than newly established enterprises unfamiliar with credit markets. Respondents reported a moderately high mean perceived volatility score of 3.36 (SD = 0.83) on the five-point scale, indicating that small enterprises in Lilongwe CBD generally experience lending rates as unpredictable rather than stable. The volatility scale demonstrated excellent internal reliability (Cronbach's alpha = 0.867).

4.2 Interest Rate Volatility and Debt Financing Choices

On average, bank loans constituted the largest share of financing (mean 47.7%, SD 11.8), followed by trade credit (mean 28.1%, SD 7.6) and informal sources (mean 24.3%, SD 9.5), though considerable variation existed across firms. Regarding the single largest financing source used over the preceding 12 months, 81% of respondents identified bank loans, 12% identified informal sources, and 7% identified trade credit even though trade credit represented a larger average share overall than informal financing once all sources were

considered jointly, suggesting that a sizeable minority of firms rely on a blend of non-bank sources rather than any single dominant channel.

Correlation analysis revealed a strong, significant negative relationship between perceived volatility and bank-loan share ($r = -0.821$, $p < 0.001$), and significant positive relationships between volatility and both trade credit ($r = 0.717$, $p < 0.001$) and informal financing ($r = 0.446$, $p < 0.001$). Multiple regression confirmed that volatility remained the dominant predictor of bank-loan financing after controlling for firm size, age, and sector: a one-unit increase in the volatility score was associated with an 11.8 percentage-point reduction in bank-loan share ($\beta = -11.816$, $p < 0.001$), with the model explaining 70.1% of variance in bank-loan financing ($R^2 = 0.701$, Adjusted $R^2 = 0.685$). Service-sector firms relied significantly more on bank loans than retail firms ($\beta = 3.372$, $p = 0.028$), while firm size, age, and wholesale status showed no significant independent effect. Parallel models showed volatility significantly increased reliance on trade credit ($\beta = 6.692$, $p < 0.001$, $R^2 = 0.520$) and informal financing ($\beta = 5.124$, $p < 0.001$, $R^2 = 0.249$). A supplementary logistic model found that the odds of a firm reporting reduced bank borrowing more than doubled (odds ratio = 2.06, $p = 0.009$) for each unit increase in perceived volatility, corroborating the percentage-based results using an independent binary measure.

4.3 Interest Rate Volatility and Investment Decisions

Respondents allocated a slightly larger average share of investment expenditure to capital assets (mean 53.4%, SD 12.4) than to working capital (mean 46.6%, SD 12.4), with 66% identifying capital investment as their dominant investment type over the preceding 12 months. Correlation analysis showed a strong, significant negative relationship between volatility and capital-investment share ($r = -0.687$, $p < 0.001$). After controlling for firm characteristics, regression analysis confirmed that volatility remained a highly significant negative predictor of capital investment: each one-unit increase in perceived volatility was associated with a 9.3 percentage-point reduction in capital-investment share ($\beta = -9.321$, $p < 0.001$, $R^2 = 0.588$, Adjusted $R^2 = 0.567$). Firm size ($\beta = 0.299$, $p < 0.001$) and years of operation ($\beta = 1.860$, $p = 0.033$) were independently and positively associated with capital investment, foreshadowing the moderation results below. These findings were corroborated by a supplementary logistic model (odds ratio = 1.88, $p = 0.017$ for reporting reduced long-term investment) and a model of stated short-term investment preference ($\beta = 0.503$, $p < 0.001$), with longer-established firms showing a slightly weaker preference for short-termism ($\beta = -0.140$, $p = 0.036$).

4.4 The Moderating Role of Firm Size

Moderated regression revealed a positive, large, and highly significant interaction between volatility and firm size in predicting capital investment ($\beta = 5.637$, $p < 0.001$), with the moderated model explaining substantially more variance ($R^2 = 0.785$, Adjusted $R^2 = 0.771$) than the non-moderated model ($R^2 = 0.588$) an increase of nearly 20 percentage points in explained variance. Simple-slopes analysis showed that among the smallest enterprises (5–20 employees, one standard deviation below the mean), a one-unit increase in perceived volatility was associated with a 13.7 percentage-point reduction in capital-investment share; among average-sized firms the reduction was 8.1 percentage points; and among the largest small enterprises (41–50 employees, one standard deviation above the mean), the reduction was only 2.4 percentage points a more than five-fold difference in vulnerability between the smallest and largest firms in the sample.

5. DISCUSSION

The financing results are consistent with, and extend, regional evidence from Nigeria, Kenya, Zimbabwe, and Zambia showing that volatility drives systematic substitution away from formal bank debt toward trade credit and informal sources (Chikoko & Mpofu, 2022; Kalu & Nwankwo, 2020; Musonda & Mwila, 2020; Mwangi & Ouma, 2021). The magnitude observed here an 11.8 percentage-point reduction in bank-loan share per unit of volatility sits within the range reported in comparable Sub-Saharan African studies, and the strength of the effect ($R^2 = 0.701$) suggests that, at least in Lilongwe CBD, volatility rather than firm characteristics is the dominant driver of financing composition. This lends empirical weight to Musonda and Mwila's (2020) argument that policymakers should prioritize rate predictability as an explicit objective, since the level of rates alone appears to explain markedly less of the variation in small-enterprise financing behavior than its volatility.

On investment, the findings provide strong empirical support, in the Malawian context, for real options theory (Baker et al., 2019) and are broadly consistent with Phiri and Banda's (2022) Blantyre manufacturing evidence, extending it for the first time to the retail, wholesale, and service enterprises that dominate Lilongwe CBD. The results diverge, however, from Gumedze and Ndlovu's (2021) Eswatini retail finding that volatility primarily depresses working capital rather than capital investment; in the Lilongwe sample, capital investment not working capital is the variable most directly suppressed, which may reflect differences in how short-term trade credit partially insulates working-capital needs in the Malawian context even as access to longer-tenor capital financing tightens. The findings also

lend strong quantitative confirmation to Mkandawire's (2021) qualitative observation, based on interviews with owners in this same Lilongwe CBD setting, that volatility produces a pattern of "short-termism" in which managers avoid investment commitments beyond a short payback horizon.

The moderation finding is, arguably, the study's most policy-relevant contribution. It closely mirrors Oseifuah and Gyekye's (2020) South African evidence and extends it to a markedly less developed financial market context, suggesting that firm size operates as a powerful buffer against volatility even where or perhaps especially where formal alternatives such as fixed-rate loan products or interest rate caps remain largely unavailable to the smallest firms. It also helps reconcile the somewhat fragmented earlier Malawian evidence: Phiri and Banda (2022) and Mkandawire (2021) each documented average negative volatility–investment relationships without examining firm-size heterogeneity, while the present results suggest that those average effects likely mask a much wider range of underlying vulnerability, concentrated among the smallest, least-resourced enterprises. From a policy perspective, this identifies a clearly defined and targetable subgroup small enterprises with fewer than approximately 20 employees that warrants priority attention in any intervention designed to mitigate the adverse effects of interest rate volatility on SME investment in Malawi.

Taken as a whole, the three sets of results tell a coherent, internally consistent story: volatility raises the effective cost and uncertainty of formal credit, prompting firms to substitute toward less stable but more accessible financing sources; this substitution, combined with the direct option-value effect of uncertainty on irreversible commitments, suppresses long-term capital investment; and the severity of this suppression is not uniform but is concentrated among the smallest enterprises, which lack the collateral, bargaining power, and accumulated reserves that appear to insulate their larger counterparts. This pattern is consistent with the theoretical expectation, grounded jointly in real options theory and capital structure theory under uncertainty, that macroeconomic unpredictability translates into firm-level behavior through both a demand-side channel (managers deferring investment) and a supply-side channel (lenders tightening credit), with firm size determining each firm's capacity to absorb the resulting shock.

6. CONCLUSION AND IMPLICATIONS

This study examined the relationship between interest rate volatility and the financing and investment decisions of small enterprises in Lilongwe CBD, Malawi, and the moderating role of firm size. The findings demonstrate that interest rate volatility, distinct from the level of

interest rates, is a powerful and statistically robust determinant of small enterprise financing behaviour, systematically pushing firms away from formal bank credit toward trade credit and informal sources that, while more accessible, typically carry higher effective costs and weaker borrower protections. Volatility also significantly suppresses long-term capital investment, with real consequences for the productive capacity and growth trajectory of the small enterprise sector rather than merely its short-term liquidity management. Critically, firm size significantly moderates this relationship, meaning the burden of volatility falls disproportionately on the smallest, least-resourced enterprises a pattern with clear implications for how interventions should be targeted.

For monetary policymakers, these findings suggest that interest rate predictability, not merely the level of rates, should be an explicit policy objective, since volatility independently drives adverse financing and investment substitution even after accounting for firm characteristics. For financial institutions, the results support developing predictable, size-appropriate lending products including fixed-rate or rate-capped facilities and relaxed collateral requirements for the smallest borrowers targeted specifically at the smallest small enterprises, who are shown here to be several times more vulnerable than their larger counterparts. For small enterprise owners and managers, the findings underscore the practical value of diversifying financing sources and strengthening financial planning capacity to reduce exposure to rate fluctuations. For researchers and development stakeholders, this study demonstrates the value of measuring volatility as distinct from rate levels and of explicitly testing firm-size heterogeneity, an approach that could usefully be extended to other Malawian commercial center and other Sub-Saharan African contexts.

The study's cross-sectional, single-district design and reliance on a perception-based volatility measure point to clear directions for future research: a longitudinal design tracking the same enterprises across volatile and stable rate regimes would permit stronger causal inference; replication in other Malawian commercial center such as Blantyre and Mzuzu would test whether the firm-size moderation effect generalizes nationally; and complementing perception-based volatility with objective Reserve Bank of Malawi lending-rate data would clarify the extent to which perceived and objective volatility diverge. Future studies might also examine additional moderating variables not tested here, such as collateral access, owner financial literacy, and the strength of existing bank-borrower relationships, and could usefully combine this study's quantitative approach with in-depth qualitative interviews to more fully understand how small enterprise owners in Lilongwe CBD navigate periods of high interest rate volatility.

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