

Factors Affecting the Adoption of Financial Derivative Products among Small and Medium Enterprises in Lusaka, Zambia

Zere Phiri

Graduate School of Business, University of Zambia, Lusaka, Zambia

DOI: <https://doi.org/10.47772/IJRISS.2026.100801104>

Received: 09 September 2026; Accepted: 14 September 2026; Published: 24 September 2026

ABSTRACT

Small and Medium Enterprises (SMEs) play a critical role in Zambia's economic development through employment creation, innovation, and contribution to gross domestic product (GDP). Despite operating in an increasingly volatile business environment characterized by exchange rate fluctuations, inflationary pressures, commodity price volatility and broader economic uncertainty, most SMEs in Zambia do not utilize financial derivative products as risk management instruments. Despite the potential benefits of derivative products, their adoption among SMEs in Zambia remains limited. This study investigated factors affecting the adoption of financial derivative products among SMEs operating in Lusaka Central Business District (CBD). A quantitative research design grounded in the positivist paradigm was adopted. Data were collected from 130 SME owners and managers registered with the Patents and Companies Registration Agency (PACRA) using structured questionnaires selected through cluster sampling. The study was guided by the Technology Acceptance Model (TAM), Institutional Theory (IT), and Diffusion of Innovation (DOI) which jointly provided a comprehensive framework for understanding the adoption of financial derivative products among SMEs in Zambia. Data analysis was conducted using SPSS Version 26, employing descriptive statistics and multiple regression analysis. The regression model was statistically significant ($R = 0.873$, $R^2 = 0.763$, Adjusted $R^2 = 0.747$; $F = 48.672$, $p < 0.001$), indicating that the predictor variables explained 76.3% of the variation in financial derivative adoption. The findings revealed low levels of awareness and understanding of financial derivative products among SMEs. Corporate governance, growth opportunities, and management incentives significantly influenced adoption, while limited knowledge, restricted access to derivative markets, product complexity, and high costs emerged as major barriers. The study concludes that derivative adoption among SMEs remains constrained by informational, institutional, and structural challenges. The study recommends enhanced financial literacy programs, simplified derivative products tailored for SMEs, increased financial institution support, and improved regulatory frameworks and policies to facilitate greater adoption.

Keywords: Adoption, Financial Derivatives, Small and Medium Enterprises (SMEs), Risk Management.

INTRODUCTION

Small and Medium Enterprises (SMEs) represent a significant component of the Zambian economy and form the backbone of many economies worldwide and contribute significantly to employment creation, innovation, poverty reduction, and economic development. The World Bank estimates that SMEs account for approximately 90% of businesses globally and contribute more than 50% of total employment, particularly in developing economies. Despite their contribution to economic growth, SMEs often face significant financial risks that threaten their sustainability and competitiveness. These risks include exchange rate fluctuations, interest rate volatility, commodity price movements, and inflationary pressures (World Bank 2024).

Financial derivatives are financial instruments whose value is derived from an underlying asset, benchmark, or market variable. Common derivative instruments include futures, options, forwards, and swaps (ISDA, 2024). These products enable firms to hedge against adverse market movements and enhance financial stability. Large corporations extensively use derivatives as part of enterprise risk management; however, SME adoption remains relatively low, particularly in developing countries.

Despite these benefits, adoption of derivative products among SMEs in Zambia remains considerably low. Many SMEs continue to rely on traditional risk management practices that provide limited protection against complex financial risks. Existing studies have largely focused on derivative usage among large corporations and financial institutions, leaving a significant knowledge gap regarding SME adoption behavior in Zambia.

The increasing uncertainty in global and domestic markets has heightened the need for effective risk management strategies among SMEs. Exchange rate depreciation, inflation, and commodity market instability continue to expose SMEs to substantial financial uncertainty. Given the critical role SMEs play in economic development, understanding the factors influencing derivative adoption is essential.

This study therefore examined factors affecting the adoption of financial derivative products among SMEs operating in Lusaka Central Business District. Specifically, the study assessed awareness levels, determinants of adoption, and barriers preventing SMEs from utilizing derivative products.

Problem Statement

Despite efforts by the Zambian government to strengthen and modernize the financial sector through initiatives such as the National Financial Sector Development Policy (2017-2024), the adoption and utilization of financial derivative instruments among Small and Medium Enterprises (SMEs) remain remarkably low. Financial derivatives are important risk management tools that enable businesses to hedge against adverse fluctuations in exchange rates, interest rates, and commodity prices. However, many SMEs in Zambia continue to operate without utilizing these instruments, thereby exposing themselves to significant financial risks and uncertainties.

The limited use of derivatives restricts SMEs' ability to manage market volatility effectively, threatening their sustainability, profitability, competitiveness, and long-term growth prospects. Consequently, many SMEs remain vulnerable to unpredictable economic shocks that can negatively affect their access to credit, investment opportunities, and overall business performance. This situation contributes to financial exclusion and hampers private sector development in a high-risk and emerging economy such as Zambia.

Empirical evidence from the International Monetary Fund (2023) indicates that derivative market activity in Zambia remains low and inconsistent, with only a marginal contribution to gross domestic product (GDP). Although financial sector reforms have sought to encourage the development and use of sophisticated financial instruments, there is limited empirical evidence explaining the factors influencing derivative adoption among SMEs in Zambia. The problem is compounded by the fact that SMEs are particularly vulnerable to financial shocks and market disruptions. Wagner (2015) observed that many SMEs lack the necessary financial expertise, resources, and risk management capabilities required to effectively utilize derivative instruments. Furthermore, existing literature on derivative usage has predominantly focused on developed economies, with relatively limited research conducted in developing countries, particularly in sub-Saharan Africa and Zambia (Asai, 2021).

As a result, there remains a significant knowledge gap regarding the barriers preventing SMEs from adopting financial derivatives and the factors that could facilitate their uptake. Understanding these factors is essential for designing effective policies and interventions aimed at increasing derivative adoption, strengthening SME resilience to financial risks, promoting financial inclusion, and enhancing economic growth. Therefore, this study seeks to investigate the determinants of financial derivative adoption among SMEs in Lusaka, Zambia, with particular emphasis on the challenges hindering adoption and the opportunities that may promote greater utilization of these risk management instruments.

Research Objectives

The study sought to:

1. Assess the level of awareness of financial derivative products among SMEs.
2. Examine factors influencing adoption of derivative products among SMEs.
3. Identify barriers affecting derivative product adoption among SMEs

Research Questions

1. What is the level of awareness of financial derivative products among SMEs in Lusaka, Zambia?
2. What determinants influence the adoption of financial derivative products among SMEs?
3. What barriers hinder the adoption of financial derivative products among SMEs?

Significance of Study

Small and Medium Enterprises (SMEs) are exposed to a variety of financial risks that often differ from those faced by large corporate organizations. As a result, financial derivatives can serve as valuable risk management tools for SMEs by helping them hedge against uncertainties such as exchange rate fluctuations, interest rate volatility, and commodity price changes. Traditional sources of financing, including bank loans, overdrafts, and credit facilities, may not always be appropriate for newer, innovative, and rapidly growing businesses due to their higher risk-return profiles and limited access to collateral. Consequently, understanding the factors that influence the adoption and use of financial derivatives among SMEs is essential.

This study is significant because it seeks to promote awareness and adoption of financial derivatives among SMEs in Zambia. The findings will provide valuable insights into the current level of derivative use, the determinants influencing adoption, and the barriers preventing wider utilization. Such information can assist SME owners, managers, and other business stakeholders in making informed financial decisions and strengthening their risk management practices.

The study is also important for policymakers, regulators, and government institutions responsible for SME development and financial sector regulation. Given the critical role that SMEs play in economic growth, employment creation, and innovation, access to evidence on the adoption and use of financial derivatives can inform the design of policies, educational programs, and financial market interventions aimed at enhancing SME resilience against financial risks. The findings may further support the development of frameworks that increase SMEs' access to derivative products and related financial services.

Additionally, this research contributes to the existing body of knowledge in finance by providing empirical evidence from the Zambian context, where studies on SME adoption of financial derivatives remain limited. The study therefore addresses an important research gap and serves as a reference point for future scholars, researchers, and practitioners interested in financial risk management, derivative usage, and SME financial performance in developing economies.

Definition of Key Words

A derivative is a financial contract between two parties whose value is derived from the performance of an underlying asset, index, or benchmark. According to Martinkutė-Kaulienė (2014), a derivative is a contract between a buyer and a seller entered into today, with settlement or fulfillment occurring at a future date.

The four common types of derivatives are:

Forward Contracts- A forward contract is a customized agreement between two counterparties to buy or sell an asset at a predetermined price on a specified future date. These contracts are traded over-the-counter and are not standardized.

Futures Contracts- A futures contract is an agreement between two parties to buy or sell an asset at a predetermined price at a future date. Unlike forward contracts, futures are standardized and traded on regulated exchanges (Hull, 2019).

Swap Contracts- The International Swaps and Derivatives Association (ISDA, 2010) defines a swap as a derivative contract in which two counterparties exchange streams of cash flows based on agreed terms and conditions.

Option Contracts- An option is a derivative contract that gives the holder the right, but not the obligation, to buy (call option) or sell (put option) an underlying asset at a specified price on or before a predetermined date (Hull, 2012).

Derivative products- are financial instruments whose values are derived from the value of one or more underlying assets or indices (Martinkutė-Kaulienė, 2014). These products, including forwards, futures, options, and swaps, are widely used by firms to manage risks associated with fluctuations in interest rates, foreign exchange rates, commodity prices, and other market variables.

Small and Medium Enterprises (SMEs) are businesses categorized according to their investment levels, annual turnover, and number of employees. In Zambia, SMEs are classified into micro, small, and medium enterprises as defined by the Ministry of Commerce, Trade and Industry (MCTI, 2008). For this study, all three categories were considered.

Risk Management- For this study, risk management is defined as the process by which SMEs identify, assess, and mitigate financial risks through the use of appropriate strategies and financial instruments, including financial derivative products, to safeguard business performance and support long-term growth. Such risks may include foreign exchange risk, interest rate risk, credit risk, liquidity risk, and price volatility

Uptake refers to the extent to which individuals or organizations make use of, utilize, or adopt a product, service, or innovation that is available to them. According to the Oxford Advanced Learner's Dictionary (2022), uptake is the action of taking up or making use of something that is available.

Adoption- In the context of this study, adoption refers to the acceptance and utilization of an innovation or new product. It involves the decision by SMEs to embrace and use financial derivative products as part of their financial risk management practices (Oxford Advanced Learner's Dictionary, 2022).

Theoretical Framework

Technology Acceptance Model (TAM)

The Technology Acceptance Model developed by Davis (1989) suggests that adoption of new technologies depends primarily on perceived usefulness and perceived ease of use. In the context of financial derivatives, SMEs are more likely to adopt derivative products when they perceive them as beneficial to effectively manage risk and easy to understand. Low levels of technical knowledge and perceived complexity may negatively affect adoption decisions.

Institutional Theory

Institutional Theory explains how organizations are influenced by social, regulatory, and environmental pressures. According to DiMaggio and Powell (1983), firms tend to conform to established norms and practices within their environment. Derivative adoption among SMEs may therefore depend on support from regulators, financial institutions, professional associations, and industry peers.

Diffusion of Innovation Theory

Rogers (2003) proposed that innovations spread through social systems over time. Adoption depends on characteristics such as relative advantage, compatibility, complexity, observability, and trialability. Financial derivatives may experience low uptake among SMEs if they are perceived as complex or incompatible with existing business practices.

The three theories complement each other by explaining different dimensions of the adoption of financial derivative products among SMEs in Zambia. The study tested variables such as corporate governance, management incentives, growth opportunities, knowledge and awareness, and risk management considerations as factors influencing the adoption of financial derivatives. TAM explains how knowledge, awareness, perceived usefulness, and complexity affect adoption. Institutional Theory explains how corporate governance,

management incentives, regulatory frameworks, and institutional support influence adoption. DOI Theory explains how growth opportunities, awareness, communication, relative advantage, compatibility, and complexity encourage or discourage adoption. Collectively, these theories suggest that SMEs are more likely to adopt financial derivative products when they: Understand their benefits and find them easy to use (TAM); Operate within supportive institutional and regulatory environments (IT); and Perceive derivatives as beneficial, compatible, and advantageous innovations (DOI).

Conceptual Framework

In this study, the conceptual framework was developed based on the literature reviewed and the research objectives. It illustrates the relationship between factors affecting the adoption of financial derivative products among SMEs in Zambia and the level of derivative adoption. The framework assumes that the adoption of financial derivatives is influenced by several factors, namely financial literacy, awareness of derivative products, perceived risk, cost of implementation, regulatory environment, and access to financial institutions. These factors constitute the independent variables, while the adoption of financial derivative products represents the dependent variable. The framework provides a basis for examining how the identified determinants influence SMEs' decisions to use derivative instruments for managing financial risks. Figure 1 illustrates the conceptual framework for the study.

Independent Variables

Dependent Variable

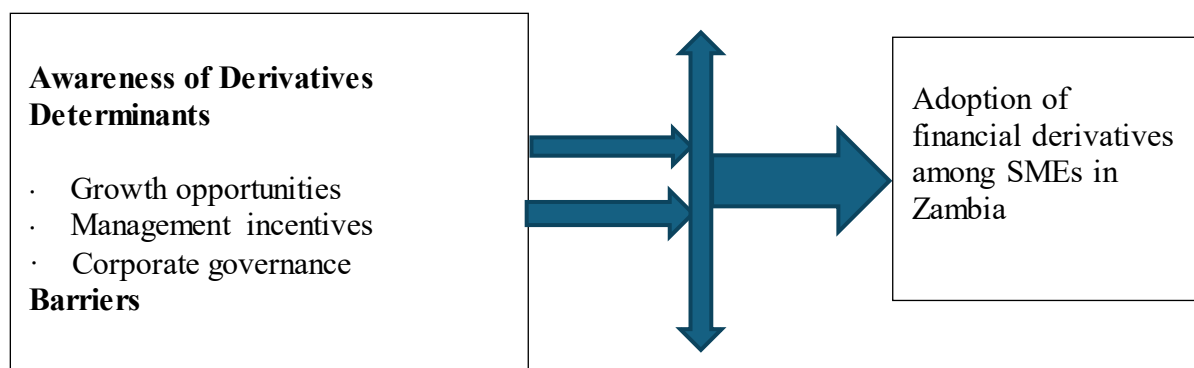


Figure 1: Tested on the Zambian market on factors affecting Financial Derivative Adoption

LITERATURE REVIEWED

Several empirical studies have examined derivative usage across various economies. Bartram et al. (2009) found that firms use derivatives primarily to reduce exposure to financial risks and improve firm value. Similarly, Pennings and Garcia (2004) observed that managerial knowledge and risk perception significantly influence adoption decisions.

Global Review

For instance, Asai Y. (2021) examined the use of financial derivatives among 909 Japanese SMEs using a quantitative probit model. The study found that firms with weaker bank relationships, those engaged in import and export activities, and those located in urban areas were more likely to use derivatives. However, firm growth, assets, and credit scores were not consistently significant determinants. While the study provides useful insights from a developed economy, its applicability to Zambia is limited because it assumes the existence of mature financial markets, accessible derivative products, strong regulatory frameworks, and financially sophisticated SMEs. These conditions are largely absent in Zambia, where derivative markets remain underdeveloped and SME financial literacy is relatively low. The study also relied solely on quantitative methods, leaving limited room to explore underlying motivations and barriers to derivative adoption.

Nawaz, Harif, and Azhari (2018) investigated non-financial determinants of derivative usage among Pakistani SMEs using a qualitative exploratory approach. Data collected from 19 CFOs identified twelve key determinants, including risk reduction, management incentives, corporate governance, risk attitude, risk perception, lack of awareness, lack of expertise, growth opportunities, absence of established markets, and time horizon. The study highlighted the importance of behavioral and organizational factors in influencing derivative adoption. However, its relevance to Zambia is constrained by differences in market structure, as Pakistan has greater derivative market availability than Zambia. Furthermore, the study focused only on medium-sized manufacturing firms, limiting its applicability to Zambia, where most SMEs are micro and small enterprises operating in trade, agriculture, and service sectors.

Studies from China, India, and Vietnam demonstrate that the use of financial derivatives among SMEs is influenced by factors such as financial literacy, firm characteristics, risk perception, managerial preferences, and regulatory support. However, the relevance of these findings to Zambia is limited by significant differences in financial market development and institutional capacity.

Li and Wang (2022) found that derivative usage among Chinese SMEs was driven by financial exposure, managerial risk preferences, and existing risk management strategies. China's advanced capital markets, developed banking sector, and supportive financial infrastructure facilitate SME access to derivative products. In contrast, Zambia's financial markets remain underdeveloped, and derivative instruments are largely unavailable to SMEs, limiting the direct applicability of these findings.

Singh and Kumar (2021) examined barriers to derivative adoption among Indian SMEs and identified lack of expertise, low awareness, and regulatory complexities as key constraints. Although these factors are also relevant in Zambia, the challenges faced by Zambian SMEs are more severe due to lower levels of financial inclusion, limited banking penetration, and the absence of institutional mechanisms that promote financial education and derivative products.

Similarly, Nguyen and Nguyen (2021) found that firm size, financial literacy, and risk perception significantly influenced derivative usage among Vietnamese SMEs. While Vietnam shares some characteristics with Zambia as an emerging economy, its stronger integration into global trade and greater regulatory support for financial innovation have created a more functional derivatives market. By comparison, Zambia lacks both a mature regulatory framework and operational derivative markets, reducing SMEs' incentives and opportunities to adopt such instruments.

Overall, global literature highlights the importance of financial literacy, firm-specific characteristics, and regulatory support in promoting derivative adoption. However, these studies largely assume the existence of functioning derivative markets and adequate financial infrastructure. A major gap is their limited consideration of contexts where derivative products are largely unavailable. Consequently, this study seeks to address that gap by examining not only the factors influencing derivative uptake among Zambian SMEs but also the extent to which the current financial and regulatory environment supports or constrains their adoption. This approach provides a more comprehensive understanding of derivative usage within Zambia's unique economic and institutional context.

Regional Review

Several studies conducted in Kenya, Zimbabwe, Botswana, South Africa, and Ghana provide valuable insights into the development and adoption of financial derivatives. However, they collectively reveal that derivative markets remain underdeveloped across much of Africa, particularly among SMEs.

Muthine (2021) examined the relationship between financial derivatives and the financial performance of Kenyan listed commercial banks. Using descriptive research design and regression analysis, the study found a positive relationship between derivative usage and financial performance. However, banks faced significant challenges, including inadequate infrastructure, insufficient expertise, and limited operational capacity to effectively manage derivative products. These findings suggest that if commercial banks themselves struggle to implement derivatives, adoption among SMEs is likely to be even lower. The study further indicates that Kenya's

derivatives market remains at an early stage of development. Methodologically, the study relied heavily on quantitative techniques, whereas a qualitative exploratory approach might have provided deeper insights into the practical challenges surrounding derivative use.

The Capital Markets Authority (2018) study in Kenya investigated the low uptake of capital market products and services. The findings identified several constraints, including low market liquidity, regulatory obstacles, macroeconomic instability, competition from alternative investment instruments, limited investor knowledge, weak market strategies, and reluctance among market intermediaries. These challenges contributed to the slow development of financial products, including derivatives. The study suggests that even in relatively advanced African financial markets such as Kenya, derivative adoption remains constrained by structural and institutional barriers, implying even greater challenges for countries such as Zambia.

Chidaushe (2018) explored derivative market development in Zimbabwe, Botswana, and South Africa. The study found significant differences among the three countries. South Africa had the most developed derivatives market, with futures, options, swaps, and forward contracts widely used to manage financial and foreign exchange risks. Botswana had limited derivative activity, mainly involving forwards, swaps, and currency options, but faced constraints such as inadequate expertise, weak regulatory frameworks, and negative perceptions of derivatives. Zimbabwe's derivatives market was largely dormant, with only simple forward contracts being used due to economic instability and governance challenges. While the study provides important regional insights, it does not adequately address derivative usage among SMEs, leaving a significant knowledge gap regarding how smaller businesses engage with these financial instruments.

Research from Ghana highlights the importance of financial literacy and corporate governance in financial product adoption. Osei and Kim (2022) found that SMEs generally did not actively use derivatives, but higher levels of financial literacy were positively associated with the adoption of financial products, including derivatives. Similarly, Musah and Adutwumwaa (2021) and Puni and Anlesinya (2019) demonstrated that stronger corporate governance structures improved organizational performance and financial decision-making. Their findings suggest that SMEs with effective governance mechanisms may be more likely to adopt sophisticated financial tools such as derivatives for risk management purposes.

Karanja and Mwangi (2021) further examined derivative adoption among Kenyan SMEs and found that usage levels remained low. The study identified numerous barriers to adoption, including limited awareness, inadequate expertise, and unfavorable market conditions.

The reviewed African literature demonstrates that derivative adoption is influenced by financial literacy, corporate governance, institutional support, market infrastructure, and regulatory frameworks. However, most studies focus on commercial banks, capital markets, or large firms, with limited attention given to SMEs. Furthermore, many African countries continue to face underdeveloped derivative markets, inadequate expertise, and weak regulatory support.

Local Review

Because empirical research on SME use of financial derivatives in Zambia is limited, existing studies on SME growth and challenges provide important contextual insights.

Muchoka (2019) examined factors influencing SME growth in Kabwata, Lusaka, and found that limited access to finance, inadequate managerial skills, lack of business information, poor infrastructure, and unfavorable government policies significantly constrained SME growth. These challenges suggest that many SMEs lack the capacity and expertise required to adopt sophisticated risk management tools such as financial derivatives. The study highlights the importance of managerial competence and access to information in promoting business sustainability and risk management practices.

Nuwagaba (2015) investigated the state of SMEs in Zambia through a case study of the Entrepreneurs Financial Centre (EFC). The findings revealed that SMEs faced significant financing difficulties due to cumbersome lending procedures, collateral requirements, and a high level of informality within the sector. Although SMEs

contributed substantially to employment and economic activity, their limited access to financial services restricted growth opportunities. The study did not address financial derivatives, thereby creating a research gap regarding alternative risk management and financing mechanisms available to SMEs.

Similarly, Musonda (2017) assessed the contribution of SMEs to sustainable development in Kasama District. The study identified numerous challenges, including inadequate start-up capital, poor business knowledge, liquidity constraints, difficulties in accessing loans, lack of collateral, weak technological capacity, poor infrastructure, and limited market access. These findings demonstrate that SMEs operate in a highly constrained environment, raising questions about their ability to adopt advanced financial instruments such as derivatives. The study did not examine whether SMEs use derivatives to manage business risks, leaving an important area for further investigation.

Banda (2018) explored the effect of financial derivatives on the financial performance of commercial banks in Zambia. Using secondary data and regression analysis, the study found an insignificant and negative relationship between derivative usage and bank financial performance. The findings suggest that derivative markets in Zambia remain underdeveloped, even within the banking sector. Since commercial banks are expected to be key facilitators of derivative markets, their limited involvement indicates that SMEs are likely to have even lower levels of participation in derivative activities.

More directly related to SME derivative adoption, Mwanaumo and Chisumbe (2023) examined barriers to financial product adoption among Zambian SMEs, focusing on derivative products. The study found that lack of awareness, perceived complexity, and limited access to information were major obstacles preventing SMEs from adopting derivatives. These findings provide evidence of low derivative uptake among SMEs and suggest that knowledge and accessibility challenges are significant determinants of adoption.

The reviewed Zambian studies consistently show that SMEs face numerous challenges, including limited access to finance, weak managerial capacity, inadequate business information, poor infrastructure, low financial literacy, and restricted access to formal financial services. Furthermore, evidence suggests that Zambia's financial and derivative markets remain underdeveloped, even among commercial banks.

While previous studies have extensively examined SME growth constraints and financial sector challenges, very few have specifically investigated the adoption of financial derivatives by SMEs. Existing research has largely overlooked how SMEs perceive derivatives, whether they use them, what barriers prevent adoption, and how institutional and regulatory factors influence their uptake. Therefore, a significant knowledge gap remains regarding the factors affecting the adoption of financial derivative products among SMEs in Zambia, which the current study seeks to address.

METHODOLOGY

Research Design

The study adopted a quantitative research design guided by the positivist research philosophy. This approach was selected because it allows objective measurement of relationships between variables and facilitates statistical testing of hypotheses.

Study Area

The study was conducted among SMEs operating within Lusaka Central Business District, Zambia's primary commercial center.

Population and Sample

The target population comprised SMEs operating between 2017 and 2024 and registered under Patents and Companies Registration Agency in Lusaka Business Centre. A sample of 130 SME respondents (owners and

managers) was drawn using cluster sampling techniques. Participants were selected because they were directly involved in business decision-making and financial management.

Data Collection

Primary data were collected using structured questionnaires. The questionnaire consisted of closed-ended questions measuring awareness levels, adoption factors, and barriers to derivative usage.

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 26. Analytical techniques included:

Descriptive statistics

Correlation analysis

Multiple regression analysis

Analysis of Variance (ANOVA)

The regression model used was:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Financial Derivatives (Y_i)

β_0 = intercept;

$\beta_1 - \beta_4$ = coefficients;

$X_1 - X_4$ = Awareness (x1); Management Incentives (x2); Growth Opportunities (x3); corporate governance (x4)

ε = error term

Ethical consideration

The study adhered to all applicable ethical principles and guidelines to safeguard the rights, dignity, and welfare of the participants and to maintain the integrity of the research process. Participation in the study was entirely voluntary with confidentiality and anonymity strictly maintained throughout the study. The participants, who comprised SME owners and managers, were informed of the purpose, objectives, and significance of the study before their involvement. By adhering to these ethical standards, the study ensured the protection of participants' rights while enhancing the credibility, reliability, and integrity of the research findings.

RESULTS

Awareness of Financial Derivative Products

The study found generally low levels of awareness regarding financial derivative products among SMEs. Although some respondents had heard about derivatives, most lacked detailed knowledge regarding their functions and applications.

Table 1: Awareness of the Benefits of Financial Derivative Products

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly Disagree	56	43.1	43.1	43.1
	Disagree	63	48.5	48.5	91.6
	Neutral	11	8.5	8.5	100
	Agree	0	0	0	
1 Strongly Disagree 2 Disagree 3 Neutral 4 Agree & 5 Strongly Agree					

The findings indicate that the majority of SMEs have limited awareness of the benefits associated with financial derivatives. Out of the 130 respondents surveyed, 56 respondents (43.1%) strongly disagreed that they were aware of the benefits of financial derivative products, while 63 respondents (48.5%) disagreed. Together, these categories account for 91.6% of the respondents, demonstrating a very low level of awareness among SMEs. Only 11 respondents (8.5%) were neutral, suggesting uncertainty or limited knowledge regarding the benefits of derivative products. Notably, none of the respondents agreed or strongly agreed that they were aware of the benefits of financial derivatives.

Table 2: Descriptive Statistics on Level of Awareness

Descriptive Statistics

	N	Min	Max	Mean	Std. Dev
The business is aware of the benefits of financial derivative products.	130	1.00	3.00	1.3462	.6313
Limited knowledge about derivatives does not deter their adoption.	130	3.00	5.00	4.3154	.5710
Awareness programs could enhance our understanding of derivatives.	130	1.00	5.00	4.6077	.6139
There is sufficient information available on financial derivatives.	130	2.00	5.00	1.1077	.9502
Valid N (listwise)	130				
1 Strongly Disagree 2 Disagree 3 Neutral 4 Agree & 5 Strongly Agree					

A majority of respondents indicated that they had never received formal training on derivative products. Most SME owners and managers expressed uncertainty regarding how derivatives could be used to manage exchange rate, commodity price, or interest rate risks and their applications in risk management.

However, respondents acknowledged that awareness campaigns and financial education initiatives could improve understanding and encourage adoption.

Determinants of Derivative Adoption

Multiple regression analysis was conducted to determine factors influencing derivative adoption among SMEs.

The results revealed that corporate governance, growth opportunities, and management incentives significantly influenced adoption decisions.

Corporate Governance

Corporate governance emerged as the strongest determinant of derivative adoption. This supports recent literature indicating that effective governance structures improve strategic decision-making and facilitate the adoption of advanced financial management tools. Organizations with clear accountability systems, financial oversight mechanisms, and structured management processes are more capable of evaluating and implementing risk management strategies. Strong governance enhances organizational readiness for innovation and financial sustainability.

Growth Opportunities

The positive relationship between growth opportunities and derivative adoption aligns with recent evidence that expanding firms are more likely to seek sophisticated risk mitigation mechanisms to protect investments and future cash flows. As SMEs scale operations, their exposure to exchange rate, liquidity, and market risks increases, creating a stronger incentive to adopt hedging instruments. The World Bank emphasizes that improving SME financial capability and access to financial products is critical for enterprise growth and resilience.

Management Incentives

Management incentives were also found to significantly influence adoption behavior. Managers who perceived clear benefits from risk management initiatives demonstrated greater support for derivative implementation. These findings suggest that internal organizational factors play a crucial role in determining adoption outcomes.

Barriers to Derivative Adoption

The study identified four major barriers affecting derivative adoption among SMEs.

Lack of Knowledge

The findings revealed low awareness levels, lack of sufficient understanding, their benefits, and practical applications of financial derivative products among SMEs in Lusaka. This finding is consistent with recent studies showing that limited financial literacy remains one of the most significant barriers to effective financial risk management among SMEs in emerging economies. SMEs often lack specialized financial expertise and are therefore less likely to adopt sophisticated risk management instruments such as derivatives. Recent evidence suggests that businesses owned by financially literate entrepreneurs demonstrate stronger resilience to economic shocks and greater adoption of risk management practices.

Limited Access to Derivative Markets

Many SMEs reported difficulties accessing derivative markets and financial institutions offering derivative products. Limited market infrastructure creates significant barriers to adoption.

Product Complexity

Many respondents perceived derivative products as highly complex, technical and difficult to understand. Recent studies similarly observe that SMEs frequently consider risk management frameworks and derivative products too technical, costly, and resource-intensive. Complexity reduces confidence in the utilization of these financial instruments. Simplification of derivative products and targeted capacity-building programs have been identified as effective strategies for increasing adoption among smaller enterprises.

High Cost

Some SMEs indicated that transaction costs, advisory fees, and implementation expenses discouraged derivative adoption, particularly among smaller firms with limited financial resources.

Model Significance and Fit

The multiple regression model was statistically significant ($R = 0.873$, $R^2 = 0.763$, Adjusted $R^2 = 0.747$; $F = 48.672$, $p < 0.001$), indicating a strong relationship between the predictor variables and financial derivative adoption. The model explained 76.3% of the variation in derivative adoption, while the Adjusted R^2 confirmed its robustness. These results suggest that awareness, management incentives, growth opportunities, corporate governance, and demographic factors collectively have a significant influence on the adoption of financial derivatives among SMEs in Zambia.

DISCUSSION

The findings demonstrate that adoption of financial derivative products among SMEs in Lusaka remains relatively low despite growing exposure to financial risks.

The low awareness levels observed in this study are consistent with previous research which aligns with the assertions of Mwanaumo and Chisumbe (2023), who identified lack of awareness, complexity, and poor access to information as barriers, yet still observed cases of uptake. Similarly, Karanja and Mwangi (2021) found that despite limited use of derivatives among Kenyan SMEs, other motivators, such as risk exposure and environmental pressures, played a significant role in influencing adoption decisions. Therefore, the finding reflects a convergence of behavioral, institutional, and social influences that override mere technical knowledge, suggesting that financial literacy is a critical determinant of derivative adoption. SMEs with limited knowledge of financial products often struggle to appreciate the benefits associated with sophisticated risk management strategies and are less likely to adopt sophisticated financial instruments despite their potential benefits.

The significant relationship between corporate governance and derivative adoption confirms findings from previous studies that emphasize the role of organizational structures in financial decision-making. Firms with stronger governance practices are typically better positioned to evaluate risks and adopt appropriate mitigation strategies.

Similarly, growth opportunities positively influenced derivative adoption. As firms expand operations, they become increasingly exposed to uncertainty and financial volatility. Consequently, they are more likely to seek mechanisms that protect profitability and support sustainable growth. Similar observations have been reported by the World Bank, which emphasizes the role of financial products in supporting SME growth and resilience (world bank, 2024)

Management incentives also emerged as an important predictor. Managers who recognize the strategic value of derivatives are more likely to champion their adoption within organizations. This finding supports the Technology Acceptance Model, which emphasizes perceived usefulness as a key determinant of adoption behavior.

Institutional factors further contributed significantly to low adoption levels. Limited access and availability of derivative products, insufficient regulatory guidance, restricted access to financial advisory services and inadequate financial infrastructure reduce opportunities for SME participation. Policymakers and financial institutions therefore have an important role in addressing these barriers.

The findings also support the Diffusion of Innovation Theory, which suggests that complexity can slow adoption of innovations. Many respondents considered derivatives too technical and difficult to understand, highlighting the need for simplified and SME-focused financial products. Financial derivatives have not yet reached widespread acceptance among SMEs due to perceived complexity and limited observability of benefits. Increased exposure, demonstration effects, and education programs may improve adoption rates over time.

The barriers identified provide additional insight into the challenges facing SMEs. Lack of knowledge remains the most significant obstacle. Without adequate understanding, SMEs may perceive derivatives as speculative rather than protective instruments. The comparative insights from Nawaz et al. in Pakistan and Chidaushe (2018)

across southern Africa reinforce this pattern. In both contexts, derivative usage remained minimal due to a lack of expertise, awareness, and a structured communication strategy, issues mirrored in the Zambian context.

Our findings are in line with many authors globally in that, barriers influencing the adoption of derivative products among SMEs. Globally, the uptake of financial Derivative Products among SMEs still has challenges and constraints. In Japan, Asai Y(2021) and Nawaz, Harif, & Azhari (2018) in Pakistan found challenges like lack of established financial derivative markets, meaning high cost of doing business. Marcelino-Sádaba et al., (2014) observed reasons why SMEs fail to use risk management techniques effectively, mostly due to many constraints as they cannot afford to rededicate resources.

This result is consistent with the findings of many authors regionally in that there are barriers influencing the adoption of derivative products among SMEs. In the regional literature review, the use of Financial Derivative Products still has many challenges and constraints such as lack of knowledge, limited access to derivative markets, the complexity of products and high costs among the many challenges in the use of financial derivatives. Among these authors are; Muthine (2021) in Kenya; Capital Market Authority (2018) in Kenya; and in Zimbabwe, Botswana and South Africa by Chidaushe (2018).

This result is consistent with the findings of many authors locally in that there are barriers influencing the adoption of derivative products among SMEs. Though information on financial derivatives is still lacking among the SMEs in Zambia, literature review revealed that high risks of doing business is highly recognized in most cases as they are the same across the continent that the state of growth in SMEs is not very impressive due to many challenges and high risks of doing business. This implies that financial derivatives are not incorporated among the SMEs businesses. Among the literature reviewed who observed the challenges and constraints that go with high risks are researches by Nuwagaba (2015), Muchoka (2019); Musonda (2017) and Banda (2018).

Overall, the study highlights the importance of combining financial literacy initiatives, institutional support, and product innovation to encourage broader utilization of derivatives among SMEs in Zambia.

CONCLUSION

This study examined the factors affecting the adoption of financial derivative products among SMEs operating in Lusaka Central Business District, Zambia. The findings revealed that the adoption of derivative products remains low despite the increasing exposure of SMEs to various financial risks.

The study found that awareness of derivative products among SMEs is generally limited, which constrains their understanding and utilization of these financial instruments. The results further showed that corporate governance, growth opportunities, and management incentives significantly influence the adoption of derivative products. Conversely, lack of knowledge, limited market access, product complexity, and high implementation costs were identified as major barriers to adoption.

The study therefore concludes that the adoption of financial derivatives by SMEs in Zambia is constrained by a combination of internal organizational factors and external institutional challenges. Overcoming these barriers requires coordinated efforts among policymakers, regulators, financial institutions, educational institutions, and SME support organizations to enhance awareness, improve accessibility, and build the capacity of SMEs to utilize derivative products effectively.

By promoting the adoption of appropriate derivative instruments, SMEs can strengthen their risk management practices, improve financial resilience, and support sustainable business growth. Furthermore, this study contributes to the limited empirical literature on financial derivative adoption among SMEs in Zambia by demonstrating the significant role of corporate governance, growth opportunities, and management incentives in shaping adoption decisions.

Recommendations

Based on the findings of the study, the following recommendations are proposed to enhance the adoption of financial derivative products among SMEs in Zambia:

- Financial Institutions should conduct regular awareness campaigns and training workshops on financial derivative products to improve SMEs' understanding of their benefits and applications. They should also provide financial advisory services to assist SMEs in identifying, assessing, and managing financial risks. Additionally, user-friendly educational materials and digital platforms should be developed to simplify derivative concepts and promote informed decision-making among SME owners and managers.
- Regulatory Authorities should establish clear and supportive regulatory frameworks governing derivative transactions to foster confidence and participation in derivative markets. Regulators should also introduce incentives that encourage SMEs to adopt risk management instruments and promote market transparency and investor protection to enhance trust in financial markets.
- Commercial Banks should develop affordable, simplified, and SME-specific derivative products that align with the needs and financial capacities of small and medium enterprises. Furthermore, banks should integrate derivative solutions into existing SME banking services and provide technical support and guidance to facilitate the effective use of derivatives for risk management purposes.
- SME Owners and Managers should strengthen corporate governance practices and establish robust internal risk management systems to improve financial decision-making. They should also invest in financial literacy and capacity-building initiatives, regularly assess business risks, and consider the strategic use of derivative products as part of their overall risk management framework.
- Universities and Training Institutions should incorporate financial derivatives, risk management, and financial innovation into business, entrepreneurship, and finance curricula. They should also undertake research on SME financial practices and organize seminars, workshops, and outreach programs to bridge the gap between theoretical knowledge and practical application.
- Professional Bodies and Business Associations should offer continuous professional development programs focused on financial risk management and derivative products. They should facilitate knowledge-sharing platforms where SMEs can learn from industry experts and peers, while also advocating for policies and initiatives that improve SME access to financial markets and risk management instruments.
- Further Studies may employ qualitative or mixed method approaches to gain deeper insights into the challenges and motivations underlying financial derivative adoption among SMEs in Zambia and other developing economies.

SUMMARY OF RECOMMENDATIONS

The study recommends a collaborative approach involving financial institutions, regulators, commercial banks, SME owners and managers, universities, and professional bodies to improve awareness, accessibility, affordability, and understanding of financial derivative products. Such coordinated efforts would strengthen SME risk management capabilities, enhance financial resilience, and promote sustainable business growth in Zambia.

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