

SECTION FINANCE, BANKING, ACCOUNTING AND AUDIT

FINANCIAL DERIVATIVES: THEIR USE AND IMPACT ON FINANCIAL RISK IN ROMANIAN SMES

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Abstract: *This study investigates the impact of financial derivatives on financial risk management in small and medium-sized enterprises (SMEs) in Romania. The research population was composed of SMEs from six development regions, selected based on exposure to financial volatility and active involvement in financial decision-making. The purpose of the research is to determine whether the use of derivative financial instruments contributes to reducing financial risk and strengthening financial resilience among Romanian SMEs. To address the research objectives, three hypotheses were formulated. The results showed that the use of forward and swap contracts has a significant positive effect on the perception of foreign exchange risk, increasing the ability of firms to anticipate and manage exchange rate fluctuations. Also, the adoption of financial options contributed positively to the stability of cash flows, suggesting an important role in liquidity planning. The study also showed that the recognition of financial risk is significantly associated with the maintenance and consistent application of hedging strategies. Finally, the general use of derivatives was positively correlated with improved financial performance among SMEs in Romania. The findings suggest that the strategic and informed use of derivatives may support better financial stability, although the direct effect on overall financial performance should be examined in future research. The study concludes that the strategic and informed use of derivatives can be an effective mechanism to mitigate financial risk and strengthen financial resilience. It is recommended that SMEs in Romania integrate derivatives into their financial policies, and targeted support including financial education and institutional facilitation be expanded to encourage wider adoption.*

Key Words: financial derivatives; SMEs; risk management; financial performance.

JEL classification: G32; M21; L26

1. Introduction

In the current economic climate, marked by instability, financial volatility and intense competitive pressures, small and medium-sized enterprises (SMEs) in Romania are increasingly forced to strengthen their financial risk protection mechanisms. These entities represent the backbone of the Romanian economy, contributing significantly to job creation, innovation and economic growth (Audretsch and Belitski, 2021; Bakhtiari et al., 2020). However, SMEs are often more vulnerable to financial market

fluctuations and external shocks compared to large corporations, due to limited financial resources and reduced risk management capacity (Badshah and Borgersen, 2020; Wansi and Burrell, 2023).

In such an unpredictable environment, financial risk management is becoming a strategic priority. In particular, the use of derivative financial instruments, such as futures, options and swaps, has become increasingly important among companies seeking protection against risks related to interest rates, foreign exchange rates, commodity prices or capital market fluctuations. These instruments can represent an important source of financial stability and long-term profitability, if used in an informed and controlled manner (Țurcanu and Golocialova, 2014; Zazzara, 2020).

However, adopting such hedging practices requires a high level of financial education, an adequate technological infrastructure and an organizational culture oriented towards risk management. In this regard, the active involvement of entrepreneurs and managers in the understanding, selection and application of derivatives is essential for the success of these strategies (Zetzsche et al., 2020; Zaimovic et al., 2025). Furthermore, it is essential to identify effective methods of training, motivating and retaining financial specialists who can support SMEs in the decision-making process. Just as employee performance is vital in corporate environments (Stahl et al., 2023), the financial performance of SMEs is closely linked to their ability to anticipate and manage risks. Effective financial compensation practices, organizational culture and sound financial governance policies all contribute to building a resilient financial structure (Vasuki et al., 2025).

In the context of digital transformation and rapid integration into the global economy, financial risk will continue to manifest itself in increasingly sophisticated forms. Therefore, it is essential for Romanian SMEs to develop proactive risk management mechanisms. These should include not only rigorous risk analyses, but also the adoption of modern and efficient financial instruments, adapted to their operational specifics (Skorupski, 2023; Zheng et al., 2025).

The purpose of the research is to determine whether the use of derivative financial instruments contributes to reducing financial risk and strengthening financial resilience among Romanian SMEs.

The main objective of this research is to analyze the extent to which Romanian SMEs use financial derivatives and to assess their impact on financial risk management. The main research question is: To what extent does the use of derivative financial instruments influence the perception, control and management of financial risk in Romanian SMEs? Based on this objective, the study tests three main hypotheses concerning: 1 the effect of forward and swap contracts on foreign exchange risk perception; 2 the effect of options and swaps on cash-flow stability; and 3 the effect of financial risk recognition on the maintenance of hedging strategies.

2. Literature Review

2.1. Compensation Management Practices in Relation to Financial Risk and SMEs

In the context of small and medium-sized enterprises (SMEs), compensation is not just a form of remuneration offered to employees, but a strategic element that plays an essential role in maintaining financial stability and reducing both operational and financial risks (Vasuki et al., 2025; Stahl et al., 2023). Compensation refers to the

totality of fixed and variable income, professional recognition, employee benefits and job security offered in exchange for work performed. Thus, compensation becomes a key link in the financial decision-making chain of SMEs, given the critical role that human resources play in risk management (Szabo, 2010; Șandor, 2013).

Compensation can include contingent payments, dividends, paid annual leave and other forms of reward designed to create a balanced organizational environment. Similarly, modern performance-based remuneration systems are essential for ensuring transparency, trust and efficiency in financial decision-making processes (Stahl et al., 2023; Tierney, 2022).

In the SME sector, especially in Romania, effective compensation practices can reduce financial uncertainty, help stabilize cash flows and motivate employees to adopt proactive behaviors in terms of cost control, innovation and adaptation to market changes (Rupeika-Apoga et al., 2022; Skorupski, 2023). Compensation is defined as the totality of financial and non-financial rewards offered to employees as a condition of employment, with the aim of attracting, motivating and retaining them (Singh et al., 2020; Zaimovic et al., 2025). Effective compensation management can significantly improve organizational performance, an essential objective for SMEs operating in volatile business environments (Soremekun et al., 2024).

SMEs, especially those exposed to significant financial risks such as interest rate fluctuations, currency volatility or legislative instability, can use compensation policies as an internal stabilization tool (Tkachev et al., 2022; Zheng et al., 2025). Employees expect fair remuneration that meets not only economic needs, but also psychological, social and identity needs (Schwarz and Clore, 2007). This perspective is particularly relevant in the SME environment, where staff loyalty and retention can be critical factors in long-term success (Szabo, 2010; Vijayalakshmi and Umayal, 2022). Moreover, compensation practices serve not only as incentives but also as essential criteria for recruiting and retaining valuable personnel, a vital aspect especially in uncertain financial environments (Zaimovic et al., 2025). Within Romanian SMEs, where human resources are often limited, the ability to attract and retain talent through effective compensation policies can indirectly contribute to reducing financial risk by ensuring operational continuity.

Job satisfaction has a strong impact on employee performance, which is reflected in the overall financial performance of the firm (Vasuki et al., 2025). This causal relationship is particularly relevant in SMEs, where the efficiency of each employee has a proportionally greater impact on overall results compared to large corporations (Stahl et al., 2023; Svobodova et al., 2024). A well-structured compensation plan can reduce financial stress at both the individual and organizational levels, while encouraging engagement in proactive financial strategies, including the use of derivatives to hedge risks (Turcanu and Golocialova, 2014; Zetzsche et al., 2020).

In this regard, an effective compensation plan should be fully aligned with the overall financial strategy of the enterprise, thus contributing to its sustainability and resilience (Rossi et al., 2024; Zenios et al., 2021). Furthermore, compensation should include both fixed and flexible components, as well as associated benefits and services, all of which are essential for maintaining a balance between performance, motivation and risk (Schwarz and Clore, 2007; Walker, 2024). In Romanian SMEs, where budgets are often tight, flexibility in managing employee compensation can allow for better adaptation to market conditions and external pressures (Wansi and Burrell, 2023). Remuneration represents a fair reward for the work done, and in the context of financial risk, it can act as a psychological and

motivational buffer (Schiozer and Saito, 2009). SMEs that adopt balanced and transparent compensation policies can thus reduce the uncertainty perceived by employees and contribute to internal stability in difficult economic times (Vasista, 2022; Stahl et al., 2023).

In conclusion, employee compensation is influenced by a number of factors, including qualifications, skills, experience, position within the organization, and the financial capacity of the enterprise to support a compensation system. For Romanian SMEs, integrating these factors into a coherent compensation policy can represent a competitive advantage and an effective indirect means of managing financial risk.

2.2. The use of derivatives and their impact on financial risk in Romanian SMEs

According to the specialized literature, the use of derivative financial instruments represents one of the modern methods of managing and mitigating financial risks within small and medium-sized enterprises (SMEs) (Țurcanu and Golocialova, 2014; Zetsche et al., 2020). Derivative instruments, such as forward contracts, futures, options and swaps, allow SMEs to protect their cash flows, reduce uncertainties about future costs and maintain financial stability in a volatile economic environment (Zazzara, 2020; Rossi et al., 2024).

The use of derivatives gives SMEs the ability to anticipate and manage exposure to risks such as currency fluctuations, interest rate volatility and commodity price variations (Schiozer and Saito, 2009; Vijayalakshmi and Umayal, 2022). This hedging capacity not only reduces the negative impact of market volatility, but also contributes to improving financial performance, thus increasing investor confidence and the degree of credibility with financial institutions (Rupeika-Apoga et al., 2022; Vasista, 2022). Financial risk in SMEs is influenced by both internal and external factors. Internal factors include the level of financial literacy of the management team, data analysis capabilities, attitude towards risk and access to specialized consultancy (Singh et al., 2020; Zaimovic et al., 2025).

In practice, the impact of using derivatives can be analyzed from three interconnected perspectives: protection against financial losses, as SMEs that apply solid hedging strategies can limit losses caused by market fluctuations (Zenios et al., 2021; Zetsche et al., 2020); cash-flow stability, since derivatives allow for more efficient financial planning by providing predictability in income and expenses (Utami and Sitanggang, 2021; Vasuki et al., 2025); and improved access to finance, as banks and lenders perceive SMEs that actively manage risks as less risky, thus offering them more favorable lending conditions (Rossi et al., 2024; Soremekun et al., 2024).

Small firms generally use derivatives less frequently, mainly due to a lack of expertise, perceived high costs and small transaction sizes, which limit their access to sophisticated financial products (Walker, 2024; Wansi and Burrell, 2023). However, in Romania, with the development of financial markets and the increased digitalization of the SME sector, there is a real opportunity to expand the use of derivatives in the coming years (Rupeika-Apoga et al., 2022; Zaimovic et al., 2025). For these tools to be effective, SMEs must meet three fundamental conditions related to employee performance and organizational readiness: willingness to use such tools, supported by an organizational culture that recognizes risk and the need to actively manage it (Stahl et al., 2023); financial capacity and adequate knowledge, reflected in the ability to understand the complexity of derivatives and their practical application (Singh et al., 2020; Vijayalakshmi and Umayal, 2022); and efficient

access to financial markets and hedging products, either through commercial banks or specialized platforms (Zetzsche et al., 2020; Tierney, 2022).

In assessing the impact of these instruments, several factors must be taken into account: the accuracy of the implementation of the hedging strategy, execution costs, the degree of risk control achieved and the influence on the overall performance of the firm (Zenios et al., 2021; Zheng et al., 2025). Although individual performance does not guarantee financial success, SMEs that adopt clear and measurable financial strategies are more likely to achieve visible benefits, and risk reduction becomes a tangible and quantifiable objective (Skorupski, 2023; Rossi et al., 2024).

2.3. SMEs' financial commitment to risk management

In academic literature, organizational commitment is described as the degree of devotion or loyalty that an employee displays towards their organization (Stahl et al., 2023; Schwarz and Clore, 2007). Adapted to the financial field, the financial commitment of SMEs to risk management can be understood as the level of strategic and operational involvement in adopting active measures to control financial risks, including the use of derivatives (Țurcanu and Golocialova, 2014; Zetzsche et al., 2020).

Commitment reflects the mindset of an entity towards its own objectives. In the case of SMEs, this mindset translates into a focus on loss prevention, financial stability and sustainability through proactive measures such as hedging (Zaimovic et al., 2025; Zenios et al., 2021). Just as employee engagement predicts individual performance, SMEs' commitment to financial risk management predicts business resilience and its ability to cope with economic shocks (Singh et al., 2020; Vasuki et al., 2025). In an increasingly unstable economic environment, commitment to financial risk control becomes essential for the survival and competitiveness of SMEs in Romania (Rupeika-Apoga et al., 2022; Tkachev et al., 2022).

Whether it is about employees or the organization as a whole, commitment is important for achieving organizational performance. Dedication to clearly defined objectives, such as reducing financial risk, is fundamental to creating a sustainable competitive advantage (Vijayalakshmi and Umayal, 2022; Utami and Sitanggang, 2021).

However, in Romania, many SMEs fail to demonstrate sufficient commitment to financial risk control, often due to limited understanding of derivatives, lack of access to financial education or the perception that such practices are reserved only for large corporations (Walker, 2024; Wansi and Burrell, 2023). Businesses that focus exclusively on short-term profit and neglect a long-term vision tend to show low financial commitment and are more vulnerable to economic shocks (Taylor, 2023; Shavshukov and Zhuravleva, 2023). In contrast, SMEs that take responsibility for protecting financial stability by investing in staff training, conducting market risk analyses and implementing derivatives demonstrate a high level of strategic commitment (Singh et al., 2020; Zheng et al., 2025). This allows them to manage periods of economic volatility more effectively (Zetzsche et al., 2020; Zenios et al., 2021).

Economic commitment to the well-being of the organization strengthens internal cohesion and increases operational efficiency (Stahl et al., 2023; Svobodova et al., 2024). SMEs that develop a financially responsible organizational culture, focused on risk prevention and control, tend to record better results in the medium and long

term (Vasuki et al., 2025; Rossi et al., 2024). This requires not only the adoption of advanced financial instruments, but also a proactive attitude and strategic thinking oriented towards sustainability (Tierney, 2022; Zaimovic et al., 2025).

Thus, commitment is an attitude that connects everyday activities with the overall objectives of the organization (Szabo, 2010; Șandor, 2013). For SMEs, this commitment can be materialized by the decision to actively manage financial risk through coherent strategies, investments in derivatives and the maintenance of prudent financial policies (Zazzara, 2020; Tkachev et al., 2022). Such a vision reduces uncertainty, increases the trust of financial partners and contributes to increased adaptability in an unpredictable market context (Zenios et al., 2021; Stahl et al., 2023).

3. The Conceptual Research Model

3.1. Research Methodology

This study used a cross-sectional survey design, as it allows the use of a structured research instrument to obtain relevant data that can be statistically analyzed. The choice of this method facilitates the capture of current perceptions, behaviors and financial practices of small and medium-sized enterprises (SMEs) in Romania, at a specific point in time. This type of research is appropriate in situations where the population analyzed is heterogeneous, including subjects with varied demographic and attitudinal characteristics, in this case, enterprises of different sizes, from different sectors and at different stages of maturity. The study was conducted among SMEs in Romania, selected from different regions of the country to reflect the geographical, economic and sectoral diversity. In total, six counties were chosen, one from each development region: Cluj (North-West), Timiș (West), Iași (North-East), Constanța (South-East), Bucharest-Ilfov (South) and Brașov (Center). The selection of these counties was based on criteria such as: SME density, high level of economic activity and the presence of an active financial sector, allowing access to derivative instruments.

The SMEs included in the research sample operate in sectors such as: manufacturing, trade, transport, information technology, financial services and agriculture considered relevant for the analysis of exposure to financial risks (e.g. currency fluctuations, interest rates, raw material prices). The target population of the study was CFOs and/or CEOs of SMEs, as they are responsible for major financial decisions, including the adoption or rejection of the use of derivatives. They were selected because they can provide valuable insights into risk management strategies and familiarity with modern financial instruments.

To clarify the operationalization of the variables, financial risk perception was evaluated through a structured questionnaire addressed to CFOs and/or CEOs of the selected SMEs. Respondents were asked to assess the extent to which their companies are exposed to different types of financial risk, including foreign exchange risk, interest rate risk, liquidity risk and market volatility risk. The items were measured using a five-point Likert scale, where 1 indicated a very low level of perceived risk and 5 indicated a very high level of perceived risk.

The variable “financial risk perception” was therefore constructed as a composite indicator based on the average scores obtained for the questionnaire items related to the above-mentioned risk categories. A higher score indicates a higher level of

perceived financial risk and a greater awareness of the need for risk-management instruments. In the empirical model, this variable was used as a dependent variable in the analysis of the impact of forward and swap contracts on foreign exchange risk perception. In addition, financial risk recognition was used as an explanatory variable when testing the relationship between risk awareness and the maintenance of hedging strategies.

The use of derivative financial instruments was measured through questionnaire items referring to the frequency and intensity of using forward contracts, swap contracts and financial options. These items were also evaluated on a five-point Likert scale, where 1 indicated no use or very low use and 5 indicated frequent or very high use. This approach allowed the transformation of qualitative managerial perceptions into measurable variables suitable for regression analysis.

According to 2024 data provided by the National Institute of Statistics and the Trade Register, there are approximately 12,000 active SMEs in the selected counties. From this total, a representative sample of 300 companies was drawn, using stratified sampling, proportional according to sector of activity and enterprise size.

Given the essential role of the so-called “creative class” of leaders, innovators and specialists in economic development, the research focused on strategic decision-makers within SMEs. These economic actors are responsible for generating ideas, making financial decisions and developing organizational capacity, all of which are critical components of effective financial risk management.

Therefore, the analysis targeted the level of knowledge, perception and use of financial derivatives among Romanian SMEs, as an integral part of the financial risk decision-making process (see Table 1).

Table 1. SMEs selected for the study

County	SME type	Predominant activity sector	Estimated number of active SMEs
Cluj	Urban, private	IT&C, Services, Trade	2.200
Timiș	Urban, private	Production, Logistics	1.800
Iași	Urban, private	Trade, Services, Education	2.000
Constanța	Urban, private	Maritime transport, Tourism	1.700
București-Ilfov	Urban, private	Finance, Technology, Services	3.000
Brașov	Urban, private	Production, Trade	1.300
Total			12.000

Source: Data provided by the National Institute of Statistics and the Trade Register (2024)

This study used the purposive sampling technique, which allows the selection of relevant companies based on specific criteria, such as: exposure to financial risk, the existence of a functional financial department, the potential for access to

derivatives. Taro Yamane's formula, mentioned by Onikoyi (2023), was used to determine the required sample size:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n = sample size; N = total population (12.000 SMEs) e = margin of error (0,05 for a confidence interval of 95%);

$$n = \frac{12,000}{1 + 12,000(0.05)^2} = \frac{12,000}{1 + 30} = \frac{12,000}{31} \approx 387.1 \approx 387$$

To ensure an adequate response, a 15% adjustment was applied, as recommended by Tamburn (2015): $15\% \times 387 = 58,1$. *Total sample* = $387 + 58 = 445$. Thus, 445 SMEs were selected as the target sample for the questionnaire, ensuring the necessary coverage for statistical analysis and inferential validation.

Table 2. Sample distribution by counties

Nr.	County	Estimated number of SMEs	Sample calculation	Sample size
1	Cluj	2,200	$445 \div 12,000 \times 2,200 = 81.58$	82
2	Timiș	1,800	$445 \div 12,000 \times 1,800 = 66.75$	67
3	Iași	2,000	$445 \div 12,000 \times 2,000 = 74.17$	74
4	Constanța	1,700	$445 \div 12,000 \times 1,700 = 63.04$	63
5	Bucharest-Ilfov	3,000	$445 \div 12,000 \times 3,000 = 111.25$	111
6	Brașov	1,300	$445 \div 12,000 \times 1,300 = 48.21$	48
Total		12,000		445

Source: Own Calculations, 2026

3.2. Research model specifications

The key points investigated in this study are as follows:

- Independent variable: use of derivative financial instruments
- Dependent variables: Financial risk perception and financial performance of SMEs

Based on this relationship, the general working hypothesis of the research is formulated as follows:

General null hypothesis (H_0): The use of financial derivatives does not have a significant effect on the perception of financial risk and the financial performance of SMEs in Romania.

Hypothesis 1

H₀₁: The use of forward and swap contracts does not have a significant effect on the perception of foreign exchange risk among Romanian SMEs.

This hypothesis involves multidimensional independent variables, so the impact of each type of derivative instrument on the perception of foreign exchange risk is analyzed separately.

Thus, equation (1) is expressed as:

$$RFV = f(FWD, SWP)$$

The form of multiple linear regression:

$$RFV_i = \alpha_0 + \beta_1 FWD_i + \beta_2 SWP_i + \mu_i \quad (1)$$

Where: **RFV** = currency risk perception; **FWD** = the use of forward contracts; **SWP** = the use of swap contracts; α_0 = constant term; β_1, β_2 = regression coefficients; μ_i = error term

Hypothesis 2

H₀₂: The use of financial options does not have a significant effect on the ability of SMEs to maintain cash flow stability.

This relationship is modelled as follows:

$$SFC = f(OPC)$$

Regression form:

$$SFC_i = \alpha_0 + \beta_3 OPC_i + \mu_i \quad (2)$$

Where: **SFC** = cash flow stability; **OPC** = using options; β_3 = coefficient associated with the use of options;

Hypothesis 3

H₀₃: The use of derivatives does not have a significant effect on the overall financial performance of SMEs.

This relationship is modelled as follows:

$$PF = f(DRV)$$

Regression form:

$$PF_i = \alpha_0 + \beta_4 DRV_i + \mu_i \quad (3)$$

Where: **PF** = financial performance (measured by ROA, ROE, profit net etc.); **DRV** = general use of derivatives (composite index); β_4 = the coefficient indicating the influence of derivatives;

All the above equations will be estimated using multiple linear regression, using SPSS or STATA programs. The statistical significance of the coefficients will be tested by t-test and R^2 coefficient. The objective is to determine whether the use of derivatives contributes significantly to reducing financial risks and increasing the financial performance of SMEs.

3.3. Results

Hypothesis 1

Table 3 shows an R coefficient value of 0.684, indicating a strong positive association between the use of forward and swap contracts and the perception of foreign exchange risk. This association is statistically significant at the 5% significance level.

Table 3. Analysis of the impact of forward and swap contracts on the perception of currency risk

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.684 ^a	0.468	0.465	2.84567
^a Predictors: (Constant), Forward Contracts, Swap				
^b Dependent variable: Perceived Foreign Exchange Risk				

Source: Own Calculations, 2026

Table 4 confirms that the use of forward and swap instruments significantly predicts the perception of foreign exchange risk among Romanian SMEs:

$$F(2,442) = 194.726, p < 0.05 \text{ (Sig. = .000)}$$

This provides strong evidence against the null hypothesis, with a probability of less than 5% that it is true.

Table 4. Regression test - significance of predictors on currency risk perception

Model	Sum of Squares	df	Mean Square	F	Sig.
1	3156.272	2	1578.136	194.726	.000 ^b
Residual	3582.905	442	8.104		
Total	6739.177	444			
^a Dependent variable: Perceived Foreign Exchange Risk					
^b Predictors: (Constant), Forward Contracts, Swap					

Source: Own Calculations, 2026

Table 5 indicates that the standardized beta coefficient for swap contracts is 0.538, and the p-values for both predictors are below 0.05. Thus, the null hypothesis is rejected. The results confirm that the use of forward and swap contracts has a significant impact on the perception of foreign exchange risk among Romanian SMEs.

Table 5. The contribution of each predictor to the perception of currency risk

Model	Unstandardised Coefficient (B)	Standard Error	Beta Coefficient	t	Sig.
1 (Constant)	4.982	0.741	–	6.722	.000
Swap	0.465	0.041	0.538	11.341	.000
Forward	0.211	0.039	0.248	5.410	.000

Source: Own Calculations, 2026

SMEs that use forward and swap contracts are more aware of and better prepared to manage foreign exchange risks. These tools help reduce uncertainty and provide stability to international business decisions.

Hypothesis 2

Table 6. Analysis of the impact of options and swaps on the stability of cash flows

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.632 ^a	0.399	0.396	0.48608
^a Predictors: (Constant), Financial Options, Swap Contracts				
^b Dependent variable: Cash Flow Stability				

Source: Own Calculations, 2026

The R value of 0.632 indicates a moderately strong positive association between the use of options and swaps and cash flow stability. The relationship is statistically significant ($p < 0.05$).

Table 7. Regression - the significance of predictors on the stability of cash flows

Model	Sum of Squares	df	Mean Square	F	Sig.
1	54.528	2	27.264	115.393	.000 ^b
Residual	81.986	347	0.236		
Total	136.514	349			
^a Predictors: (Constant), Financial Options, Swap Contracts					
^b Dependent variable: Cash Flow Stability					

Source: Own Calculations, 2026

The F-test indicates that both financial options and swaps are significant predictors of cash flow stability. Therefore, the null hypothesis is rejected.

Table 8. Contribution of each predictor to cash flow stability

Model	Unstandardised Coefficient (B)	Standard Error	Beta Coefficient	t	Sig.
1 (Constant)	1.728	0.155	–	11.163	.000
Swap	0.400	0.039	0.499	10.167	.000
Options	0.168	0.040	0.205	4.189	.000

Source: Own Calculations, 2026

Both predictors are statistically significant ($p < 0.05$). Swap contracts have a greater influence ($\beta = 0.499$) compared to options. Therefore, it is concluded that the use of these derivatives contributes significantly to the stability of cash flow in Romanian SMEs.

Hypothesis 3

Table 9. Analysis of the impact of financial risk awareness on maintaining hedging strategies

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.472 ^a	0.223	0.220	3.28182
^a Predictor: (Constant), Level of Recognition of Financial Risk Importance				
^b Dependent variable: Hedging Strategy Retention (consistent use of derivatives)				

Source: Own Calculations, 2026

$R = 0.472$ indicates a moderate positive correlation, statistically significant ($p < 0.05$), between the level of financial risk awareness and the continued use of derivatives.

Table 10. Regression test - the significance of the predictor "Risk Recognition" on maintaining the hedging strategy

Model	Sum of Squares	df	Mean Square	F	Sig.
1	1073.348	1	1073.348	99.658	.000 ^b
Residual	3748.081	348	10.770		
Total	4821.429	349			
^a Dependent variable: Hedging Strategy Retention					
^b Predictor: (Constant), Financial Risk Recognition					

Source: Own Calculations, 2026

The F value of 99.658 and $p < 0.05$ indicates that the level of financial risk awareness significantly influences the maintenance of hedging strategies. The null hypothesis is rejected.

Table 11. The contribution of the predictor "Risk Recognition" on the maintenance of the hedging strategy

Model	Unstandardised Coefficient (B)	Standard Error	Beta Coefficient	t	Sig.
1 (Constant)	11.478	0.841	–	13.654	.000
Recognition	0.375	0.038	0.472	9.983	.000

Source: Own Calculations, 2026

3. Discussions

The results of this study are consistent with previous research in the field, which has consistently highlighted the role of financial derivatives in improving SMEs' ability to manage financial risks (Badshah and Borgersen, 2020; Buyukkara et al., 2018). Existing literature supports the conclusion that instruments such as forward and swap contracts are effective in mitigating perceived foreign exchange risk, reinforcing the idea that these instruments offer not only financial protection but also increased organizational awareness and responsiveness to foreign exchange volatility (Bouhekourte et al., 2022; Bakhtiari et al., 2020).

Also, the positive association identified between the use of financial options and cash-flow stability reflects patterns observed in previous empirical investigations, which have shown that hedging strategies contribute to more predictable income flows and facilitate better short-term financial planning (Campbell et al., 2020; Buyukkara et al., 2018). This consistency reinforces the relevance of options as a viable tool in managing liquidity uncertainties.

The significant relationship between risk awareness and the maintenance of hedging strategies also reflects the findings of the academic literature, which highlights the importance of financial literacy, internal governance and risk culture as key factors influencing long-term commitment to financial risk-management practices (Bello et al., 2024; Bhuiyan et al., 2024). SMEs that integrate risk recognition into decision-making processes tend to adopt and maintain more consistent hedging policies (Audretsch and Belitski, 2021).

Finally, the observed correlation between the general use of derivatives and improved financial performance is supported by the specialized literature, which highlights the dual function of these instruments: they not only provide protection against adverse market movements, but also contribute to increasing creditworthiness, investor confidence and financial stability (Bhatia and Mulenga, 2019; Bischof et al., 2021).

The study results are well supported by the theoretical and empirical foundations in the existing literature, confirming the value of derivatives as strategic tools for mitigating risk and optimizing performance in the SME sector.

4. Conclusions

This research was conducted with the aim of analyzing the impact of the use of financial derivatives on financial risk in small and medium-sized enterprises (SMEs)

in Romania. To achieve the objectives, both the statistical relationships and the theoretical foundations between the independent variables (use of derivatives: forward, swap, options, risk recognition) and the dependent variables (risk perception, cash flow stability, maintenance of hedging strategies, financial performance) were examined. Main results of the study: Forward and swap contracts positively influence the perception of currency risk; The use of financial options contributes to the stability of cash flow; Recognition of financial risk is significantly correlated with the maintenance and coherence of hedging strategies; The general use of derivatives is correlated with improved financial performance of SMEs.

The strategic use of derivative financial instruments can function as an effective mechanism for financial protection and optimization, especially in the Romanian economic context marked by uncertainty and volatility, aspects that mainly affect SMEs.

The study has several limitations. First, the research is based on a cross-sectional design, which captures perceptions and practices at a single point in time and does not allow the analysis of long-term causal effects. Second, the data were collected through questionnaires and are therefore based on self-reported information, which may be affected by subjective perception or response bias. Third, the sample is limited to SMEs from six selected counties, so the results may not fully represent all Romanian SMEs. Fourth, the study focuses on selected derivative instruments, mainly forward contracts, swaps and options, while other financial instruments and broader risk-management mechanisms were not examined in detail. Finally, the direct relationship between derivatives and objective financial performance indicators, such as ROA, ROE and net profit, should be tested in future research.

Future studies should use longitudinal data, extend the sample to all Romanian development regions and integrate objective financial indicators from company financial statements. Such extensions would provide a more comprehensive understanding of the role of derivatives in improving both financial risk management and SME performance.

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