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# EFFECT OF CSR IMPLEMENTATION AND CRISIS EVENTS IN BUSINESS ON THE FINANCIAL MANAGEMENT OF SMES

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Abstract. The financial management of a business is an integral part of strategic management. Small and medium-sized enterprises (SMEs) are vulnerable to the presence of crisis events in the business environment. In this context, senior managers and owners need to react promptly to emerging changes in a given business segment. The aim of the article is to quantify the effect of crisis events in business and firm's CSR implementation in business on the financial performance in the SMEs. The empirical research incorporated 1,090 SMEs in the business environment of four Central European countries. The research hypotheses were evaluated using structural equation modelling. The empirical findings confirmed the positive impact of CSR implementation in the enterprise on its financial management. The research results did not confirm the negative effects of crisis events in business on the financial management. Crisis phenomena have direct effects on the sustainability of the enterprise; the organizational activities of the enterprise; the functioning of the enterprise in the market and the management of the enterprise. The findings are used as a basis for the preparation of strategic projects of national and international policies helping to cope with crisis phenomena in the business environment of the SME segment.

**Keywords:** financial management, SMEs, crisis events, corporate social responsibility, sustainability, business environment, economic growth.

JEL Classification: C43, C61, D81.

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## Introduction

The role of SMEs in sense of productivity measured by gross domestic product, improvement in innovation and also in social and environmental issues is indisputable (Karadag, 2017; Bartolacci et al., 2020; Gupta & Gregoriu, 2018). The influence of SMEs on environment from the environmental and social view is overwhelming (Johnson, 2015; Civelek et al., 2021; Ključnikov et al., 2021). The strategic role of SMEs requires them to follow and support decisions made by larger companies (Kriemadis et al., 2022). At the same time, it should be emphasized that SMEs also face many other challenges and issues, including the lack of effective financial management (Karadag, 2017; Barłożewski & Trapczyński, 2021; Małkowska & Uhruska, 2022). Pressing environmental and social issues related to business performance, such as rising energy and raw material prices, elimination of waste and harmful substances in production processes, excessive resource consumption, environmental degradation, ensuring health and safety in the workplace, etc., pose both major challenges and significant opportunities for business (Johnson, 2015; Jones & de Zubielqui, 2017). These factors force also SMEs to react and to incorporate not only economic but also environmental and social responsibility practices in their business practices, which increase their competitive advantage (León-Gómez et al., 2022).

The crisis triggered by the COVID-19 pandemic and the ongoing military conflict in Ukraine have affected most industries and businesses. This is a different situation unlike the recession at the end of the 21st century, which affected the financial sector in particular. In light of these new developments and given the underestimation of systematic risk, the implementation and operation of a holistic entrepreneurial risk management in SMEs is of the importance (Syrová & Špička, 2023).

The COVID-19 pandemic has created a lot of constraints for SMEs, but it has also created new opportunities (Suder et al., 2022; Zadeh, 2022). To cope with the new opportunities and constraints, SMEs are trying to use their ingenuity and strategy. Growth-oriented SMEs can use competitive mindsets such as flexibility, speed and innovation to identify and exploit opportunities arising from the crisis (Purnomo et al., 2021). Korsgaard et al. (2020) sees the crisis as an opportunity to rethink the role of entrepreneurship as an essential component of efforts to build resilient, especially local, economies.

The above-mentioned crises and the overall challenges of the contemporary world related to environmental and societal changes necessarily affect SMEs and their financial performance. In this context Torugsa et al. (2013), Rao et al. (2023) enhance that for a sustainable long-term financial performance SMEs must implement CSR in its all three dimensions, the economic, social and environmental. They must monitor CSR practices to identify potential opportunities for collaboration with suppliers and customers and the sustainability of their business. Sustainability of business practices is therefore a prerequisite for the survival of SMEs and their growth (Looser & Wehrmeyer, 2016). The positive effects of CSR on competitiveness and financial performance are described also by Lopez-Perez et al. (2017), Bartolacci et al. (2020). Amankwah-Amoah et al. (2021) warn that ignoring extreme environmental shocks and the impacts of global crises, including the COVID-19 pandemic, can accelerate business failures and corporate bankruptcies. Johnson and Schaltegger (2016) note that environmental and social sustainability must be operationalized in everyday life of a firm.

The aim of using sustainability management tools is to support managers and entrepreneurs in finding ways to reduce the negative environmental and social impacts of their business, and to use the positive impacts to remain competitive (Johnson & Schaltegger, 2016). However, SMEs are often discouraged from implementing CSR due to problems such as too bureaucratic, expensive, time-consuming and complex (Gelbmann, 2010).

With regard to the position of SMEs in the business environment, the desire to remain competitive, to maintain a sustainable business while respecting CSR, the immediate as well as mediated impact of crisis events, all these are facts that in their effect raise a number of questions related to both the implementation of CSR elements and the impact on the financial performance of SMEs, but also the question of the impact of awareness of the existence and consequences of crisis events on the financial performance of SMEs. Concluded, this research bridges this knowledge gap by addressing the following two research questions:

- **RQ1:** Does owner's/manager's perception of CSR implementation in the SME have a positive effect on the financial performance of SME?
- **RQ2:** Does owner's/manager's perception of the crisis events in business have a negative effect on the financial performance of SME?

Through answering these questions, this research produces results that can be used by individual SMEs to improve their financial performance facing crisis events or implementing CSR. It also can be useful for policy makers to find ways how to help SMEs during crisis or how to support them when trying to be environmentally and socially responsible.

The structure of the article is as follows. The introduction is followed by a critical look at outlining the need for effective financial management, the implementation of CSR and the need for awareness of the impact of crisis events on the lives of SMEs. The following section features a methodology, a summary of the findings and a discussion of the associated implications. Finally, the last part focuses on summary, implications and the potential future research interests.

In the introduction, context of the research should be established, the purpose and/or hypothesis that was investigated should be stated. The information on previous research on the subject can be included either in Introduction, or in the following section. Also, the main idea, importance, novelty, etc. can be indicated in this section.

# 1. Theoretical background

According to Bawono et al. (2022), Gupta and Gregoriu (2018) include financial management of SMEs, in particular the availability of the necessary amount of capital due to factors such as insufficient collateral, poor creditworthiness, short/no credit history, underdeveloped bank-borrower relationships, high transaction costs, and information asymmetry among the key problem areas they face, which cannot be separated from their sustainable development.

It is supported by Illmeyer et al. (2017) who state that the role of financial management and controlling is indisputable for SME's overall performance. Bad decisions regarding the capital sources, their allocation and bad risk assessment can have major impacts on SMEs financial performance (e. g. Ključnikov et al., 2022; Hoque, 2017). According to Sardo et al. (2022) SMEs exposed to a high risk of financial distress increase the ratio of external resourc-

es in the capital structure by seeking to raise additional short-term debt more quickly and by further increasing financial risk. McGuinness and Hogan (2016) state that financially "vulnerable" SMEs with less liquidity, high reliance on short-term bank loans and higher levels of intangible assets tend to focus on trade credit financing in times of crisis.

Financial risk is considered to be one of the key risks in the SMEs business. The availability of capital for financing the SMEs business is one of the most common manifestation of their financial risk. The consequences can then manifest themselves in the form of rising operating costs, increasing debt, problems with repayment of liabilities and resulting in even higher financial risk (Ślusarczyk & Grondys, 2019). As a result, a high level of financial risk can lead to the bankruptcy of the company (Kljucnikov et al., 2018). Financial risk is indisputably considered to be one of the key SMEs risks and it is connected with exposure to a variety of external and internal factors of a financial nature (funding risk, liquidity risk, credit risk, interest rate risk and currency risk (Belás et al., 2018). According to Agostino et al. (2012), this risk increases significantly when SMEs borrow from one main bank and do not diversify their debt across multiple banks.

Rao et al. (2023) enhances the need to concentrate the focus rather on long-term performance of SMEs for their survival and growth. Compared to Hoque (2017) or Mazzarol (2014) who state that for financial management of SMEs short-term cash flow management, more precisely the cash conversion cycle, is crucial. It can protect them from liquidity problems and help them to run the business effectively. In addition, Sardo and Serrasqueiro (2022) and Karas and Režňáková (2021) add that, in view of the high volatility of sales, liquidity and cash that SMEs face, SMEs are trying to apply a conservative working capital management strategy in their operational management in order to avoid defaulting on creditors. In order to increase the efficiency, working capital management strategies also recommend the use of long-term external resources on favourable terms.

However, except for the capital structure and working capital management strategy, there are different factors influencing the financial performance. In this context Bartolacci et al. (2020) as well as Gallardo-Vázquez and Lizcano-Álvarez (2020) enhance enhances CSR of SMEs to be a very important factor positively influencing SME's performance and competitiveness, compared to Kriemadis et al. (2022) who enhance total quality management implementation as an important factor for good financial performance. Quality-oriented SMEs showed to be much more financially sustainable compared to those with no total quality management orientation, especially in the two financial measures such as solvency and efficiency. Syrová and Špička (2022) searched the financial performance of SMEs related to enterprise risk management (ERM) and found that this relation was fully and positively influenced by organizational culture (mission dimension) and strategic risk management performance. Karadag (2017) considers education level of SMEs owner/managers to be a strong and positively influencing factor of financial performance. He also searched company age that seems to have an important meaning for SMEs older than five years. It supports the importance of having experienced owner/managers for the company and its financial growth. Rao et al. (2023) also highlight the role of the owner/manager as critical in overcoming obstacles such as limited access to finance, workforce skills and digitalization, promoting financial growth and managing crisis. Compared to Mayr et al. (2017) who suggest strategic relocation of the company's operations to be important to overcome economic crisis and to achieve sustainable turnover.

Bawono et al. (2022) note that SMEs lack the resources and knowledge to use technology to help them increase efficiency in their production processes, conduct further analysis and measure their performance. They operate in socialized and networking environments (Colovic et al., 2019). However, improving the performance of SMEs is not always solved by obtaining resources in the form of loans. SMEs must be able to manage and use these resources effectively (Bawono et al., 2022).

The problems of today's global world accompanied by climate change, soil, water and air pollution, and ecosystem change are affecting SMEs on both the cause and effect side, forcing them to seek new ways of production and consumption in order to achieve a sustainable business environment (Bartolacci et al., 2020). The dynamic environment puts pressure on SMEs to be able to act promptly and appropriately to market pressures and meet changing customer demands in the face of increasing competition (Illmeyer et al., 2017).

Corporate social responsibility (CSR) is now considered a key part of business. Most companies therefore issue CSR reports to highlight their contribution to society in financial, environmental and social terms (Hosoda, 2020; Balcerzak et al., 2023). Due to the fact of incorporating CSR practices into the global business operations of large enterprises, there is a risk that smaller enterprises as their suppliers could run into problems in trying to meet their CSR requirements (Perry & Towers, 2009) and realize their need to engage in CSR practices.

The goal of CSR implementation is for businesses to generate profits with minimal environmental and social damage, thereby contributing to social improvement (Metzker & Zvarikova, 2021; Coppa & Sriramesh, 2013; Balcerzak & MacGregor Pelikánová, 2020). CSR implementation can reduce labour turnover, attract better quality workers and increase productivity (Perry & Towers, 2009; Annan-Diab & Jensen, 2017). In the same time it can help to improve employer brand and value proposition based on CSR principles (Samoliuk et al., 2022).

SMEs need to effectively incorporate both CSR and their ethical values into their corporate policies to ensure long-term sustainability (Lee-Wong & More, 2016; Liu et al., 2020). Once customers perceive that SMEs behave in an economically, socially and environmentally responsible manner, they tend to trust them, and this trust strengthens the firm's position in the market (Liu et al., 2020; Vo et al., 2020; León-Gómez et al., 2022).

Despite the differences related to the size, industry and others, firms realize the necessary need to legitimize their activities using the CSR practices to stay competitive (Lopez-Perez et al., 2017). Implementing CSR in the strategy of SMEs can help them to increase their competitive advantage, which can contribute to their overall sustainability, but only if they adopt a dynamic approach to CSR compatible with their strategy (Gelbmann, 2010).

According to Torugsa et al. (2013), it highlights the need for a proactive approach to CSR, which entails business strategies and practices that firms voluntarily adopt that go beyond regulatory requirements in order to manage social responsibilities. Grimstad et al. (2020) show that firms' intrinsic motivation, e. g. voluntary engagement through free will without coercion, drives CSR more than extrinsic motivation. Zastempowski and Cyfert (2021) suggest that the implementation of the CSR increases the possibility and ability to introduce

innovations. It can motivate SMEs managers to implement CSR in their business and to be interested in socially responsible projects and may help reduce the risks associated with implementing product and process innovations.

León-Gómez et al. (2022) confirm it suggesting that innovation positively influences the link between CSR and performance. They interestingly notice that there is a pressure from customers on SMEs to create new products and services, hence the pressure on their innovation and notice this relationship between CSR represented by customers' requirements and firms' innovation. Similar findings are obtained by Oliinyk et al. (2023) with emphasis on the positive influence of social responsibility in the institutional environment of business on the innovativeness and performance of SMEs.

CSR implementation is significantly influenced by SMEs' specifics in comparison with big corporations such as the amount of resources available, strategies, drivers, importance of managerial values, level of involvement and stakeholder prioritization (Coppa & Sriramesh, 2013; Rosińska-Bukowska, 2022). Baumann-Pauly et al. (2013) suggest that SMEs should not be viewed worse in comparison with large firms in implementing CSR. However, due to SMEs specifics and problems such as lack of financial and human sources, the CSR implementation in SMEs can be seen more complicated in comparison with their large counterparts (Perry & Towers, 2009).

When implementing CSR activities there are several factors that it is needed to be taken into account. These are especially managers' perception, attitude, and behaviour. E. g. Çera et al. (2022) found that female entrepreneurs and managers were more likely to agree with CSR concept than male and owners. Lee et al. (2016) found a heavy dependence of CSR on the owner's personal value and initiative. Colovic et al. (2019) suggest that the motivation by SMEs values and beliefs, relationships with local community, regulations and business motives are important for adopting and implementing CSR.

SMEs often implement CSR practices without formalising it in their strategies or benefiting from it (Gelbmann, 2010). Similarly, Coppa and Sriramesh (2013) found the Italian SMEs practiced CSR rather in an informal way than in a systematic strategic conception and they do not use CSR as a strategic tool. Inside relationships and towards the customers and suppliers are managed rather informally and are based on personal networks. Similarly, Nielsen and Thomsen (2009) note that it is primarily unsystematic, informal and is based especially on personal relation. However, Lee-Wong and More (2016) adds that despite an informal way of involving CSR practices into SMEs strategy, it should be perceived by their stakeholders. To strengthen the perception of SMEs informal practices Lee-Wong and More (2016) recommend to focus on the strengthening of internal communication in relation to the external environment and support it by updating the website and using social media. Lee at al. (2016) and Nielsen and Thomsen (2009) also note that communication of CSR activities in SMEs is insufficient and must be reconsidered facing challenges of the global economy. Park et al. (2017) emphasises that appropriate formulation and communication of CSR practices within a company and its wide acceptance leads to a higher probability of achieving better corporate performance. In this context Hetze (2016) enhances that a CSR report can influence the CSR reputation positively only when it is evaluated to be credible. To strengthen internal communication, it is important for companies to provide more opportunities for employees to

communicate their ideas, feelings and strengthen employee involvement in CSR (Lee-Wong & More, 2016; Hur et al., 2021). Coppa and Sriramesh (2013) consider employees to be the most important stakeholders for CSR. Lee et al. (2016) adds that when communicating CSR activities there are often problems related to the lack of sources or insufficient managerial skills. However, before planning future CSR activities, it is also important to evaluate past ones for feedback.

There is a criticism that "CSR in business" makes social responsibility conditional on making a profit, thereby limiting the scope of CSR activities that can be done profitably (Looser & Wehrmeyer, 2016). SMEs owners choose the "profit-seeking CSR" path rather than the "profit-sacrificing CSR" attitude (Lee et al., 2016). For clarification, it is necessary to distinguish "profit-seeking CSR" when a company is engaged in CSR activities to increase its financial performance (Hillman & Keim, 2001; Lee et al., 2016) from the "profit-sacrificing CSR" when a company engages in CSR activities due to its "pro-social" approach (Joyner & Payne, 2002; Lee et al., 2016). Looser and Wehrmeyer (2016) in this context talk about "extrinsic CSR" related to the financial motive aimed at increasing financial performance in comparison with "intrinsic CSR" related to ethical and altruistic motives, firm's social values. They find that regardless a primarily extrinsic or intrinsic approach, SMEs can be very successful related to CSR.

H1: Corporate social responsibility has a positive effect on the financial management of SMEs.

"Economic crises, natural disasters, armed conflict and infectious disease outbreaks, amongst others, present interlinked challenges for SMEs and have generated a recent wealth of research across varied fields" (Miklian & Hoelscher, 2022, p. 178).

On the other hand, critical situations in the life of a business can create learning and self-growth processes and are key in the change process (Saunders et al., 2014); it can be an opportunity for some businesses if they have contact with the right actors (Miklian & Hoelscher, 2022). Each crisis is unique and its occurrence forces businesses to a different extent of constraints and opens up different opportunities (Purnomo et al., 2021). Each has some economic impact, but their scale and magnitude can vary significantly in the impact on the business (disruption or closure) and in the time required to return to normal (Miklian & Hoelscher, 2022). According to Herbane (2019), decisions regarding long-term direction and decisions about how to respond to short-term and sudden unexpected crises are among the critical ones.

The global economic crisis of 2008–2009 and the COVID-19 pandemic exposed the high vulnerability of SMEs. They see the main cause as frequent problems with a lack of capital (Syrová & Špička, 2022, 2023). Rao et al. (2023) then see SMEs' limited access to finance not only as a cause of vulnerability, but also as a major obstacle to resilience in crisis situations, alongside other factors such as lack of skilled human resources and lack of digitalisation. According to Brown et al. (2020), the level of vulnerability is also influenced by the stage of the business. Vulnerabilities are relatively highest for start-ups in the early stage of their business, which is characterised by the highest level of information opacity. McGuinness and Hogan (2016) suggest that the financial position of SMEs entering the crisis is important in determining the impact of the financial crisis.

Armed conflict and political violence are also a major risk to SMEs in terms of disrupting their physical security. They deteriorate local political and economic stability, degrade human capital and limit access to finance (Miklian & Hoelscher, 2022); war destroys lives, health and living standards directly and indirectly through increased disease. it destroys physical infrastructure (Bove et al., 2016). Very young businesses are most vulnerable to these conflicts, as in other crises, as well as very old businesses (Miklian & Hoelscher, 2022). Invasions are likely to disrupt financial intermediation and trade, raising concerns of slower economic growth and faster inflation around the world. As a result, the impact of this crisis is much broader and deeper than the impact of previous political events (Ahmed et al., 2023). Amankwah-Amoah et al. (2021) draw attention to the danger of underestimating the negative consequences of crisis such as numerous cases of foreclosures, massive unemployment, company bankruptcies.

The COVID-19 pandemic is considered one of the greatest crises of modern times, simultaneously affecting public health and national economies (Kramarova et al., 2022; Wenzel et al., 2020); from a spatial perspective, COVID-19 is a brutal, unprecedented disruption of the movement of people, resources and capital (Korsgaard et al., 2020). Rao et al. (2023) states that the damage caused by COVID-19 is extremely large and the recovery rate is slow. The COVID-19 pandemic caused a large exogenous shock with a major impact on the competitive environment of SMEs and large firms (Wenzel et al., 2020). Many firms, although avoiding bankruptcy, have had to implement cost-saving measures in the form of reduced working hours, telecommuting, laying off some employees, etc. (Amankwah-Amoah et al., 2021). Pandemie COVID-19 has revealed the importance of strategic management in SMEs in order them to be able to withstand unexpected events. Digitalisation and innovation are the most important factors to be solved by crisis management (Rao et al., 2023). Similarly, Saunders et al. (2014) enhances that innovative SMEs are more likely to learn and overcome crises. Li et al. (2022) states that due to the decline in performance of many SMEs as a result of COVID-19, SMEs were forced to upgrade equipment, thus COVID-19 indirectly promotes organisational resilience through innovation.

According to Kriemadis et al. (2022), SMEs can face crises and improve their financial performance by focusing on the quality of their products and services and minimizing their exposure to operational and financial risk.

Research of Brunelli et al. (2022) showed that only changes in the value proposition can help to better manage the crisis consequences caused by COVID-19. They verified their positive and significant impact on the performance of SMEs. However, this effect is reduced when the target market changes. León-Gómez et al. (2022) or Vavrova (2022) even enhance the importance of CSR implementation in SMEs to be able to survive the difficult moments such as those arrised due to COVID-19 pandemic or Russia-Ukraine conflict and economic-financial crisis.

Ciasullo et al. (2022) recommend to build effective and efficient strategic resilience and to consider the COVID-19 to be an opportunity to reconsider and to reorganize strategies and plans. It sees resilience as an adaptive process and an organisation's ability to address major strategic challenges by harnessing its ability to respond and reinvent. It is considered to be the

key strategic agility for business (Herbane, 2019). The management must build a data-driven culture and a digital preparedness to overcome crisis events and their consequences. By leveraging the capabilities acquired during the pandemic, SMEs can increase their resilience and strengthen other functional areas of the business to apply these new capabilities (Ciasullo et al., 2022). Businesses experiencing a crisis, report that they lack formalization of business resilience in adopting crisis response (Herbane, 2019).

H2: Crises events in business has a negative effect on the financial management of SMEs.

## 2. Aim, methodology and data

The aim of the article is to quantify the effect of the crisis events in business and firm's CSR implementation in business on the financial management in the small and medium-sized enterprises.

## 2.1. Data collection and questionnaire

The data collection was carried out in four Central European countries (V4 countries: Czech Republic; Slovak Republic, Poland, Hungary). The questionnaire was designed to evaluate the subjective perception of selected factors (financial management of SME (FMS), corporate social responsibility (CSR) and crisis events in business (CEB)) in the SME segment in the business environment in Central Europe. The questionnaire could only be completed by the owner or top manager of a SME (less than 250 employees; respondent). Data collection was conducted between December 2022 and January 2023. Computer-Assisted Web Interviewing (CAWI Research Method) was used with the support of an external agency. The main criterion for the selection of the respondent pool was to ensure stratified even selection of respondents by enterprise size in comparison with the percentage of enterprises in the business environment at the national level.

The questionnaire was completed by 1,103 respondents – 26 (2.3%) of respondents did not give consent for their views to be published in scientific publications. These respondents were excluded from the statistical evaluation. The sample size consisted of 1,090 SMEs. As a result of the sample size analysis, the sample of SMEs must contain a minimum of 664 respondents (confidence level – 99%; estimated proportion – 50%). The sample of SMEs (n = 1,090) exceeds the minimum number of respondents by more than 1.5 times.

The respondent had to answer all the questions in the questionnaire. A Likert scale (5-point scale; e. g. Belas et al., 2023) was applied to determine the respondent's attitudes towards the selected statements (1 – strongly agree, ..., 5 – strongly disagree). Questionnaire structure: demographic questions on the enterprise; demographic questions on the respondent; respondent's attitudes on the defined statements. The questionnaire was designed in the national language of the respondent. The questionnaire included a control question to check the consistency of the respondent's answers. The statements were generated randomly when the respondent filled in the questionnaire.

## 2.2. Variables definition and their descriptive analysis

The questionnaire included the following statements. SMEs' financial management (FMS): FMS1: There is enough profit for our business. FMS2: The company has a sufficient amount of debt (not a high share of debt). FMS3: I am capable of handling our company's financial risks effectively. FMS4: Our business has no issues with obligations that can be paid (insolvency).

CSR: Corporate Social Responsibility CSR1: In our company, the idea of corporate social responsibility (CSR) is significant. CSR2: The future of SMEs will benefit from the use of the CSR idea. CSR3: CSR aides in the discovery of new business associates. CSR4: CSR has a beneficial effect on a company's financial performance.

Business crisis events (CEB) CEB1: The COVID-19 pandemic and the Russian-Ukrainian conflict and its effects have not altered my opinion on the company's sustainability. CEB2: The administration of the corporation was not greatly impacted by the COVID-19 epidemic. CEB3: The crisis between Russia and Ukraine has no detrimental effects on how our company operates in the market. CEB4: The crisis between Russia and Ukraine has no adverse effects on how our company's activities are organized. Uncertainty is not currently the primary issue facing Businesses, according to CEB5.

ı	CSR			FMS				CEB					
1	CSR1	CSR2	CSR3	CSR4	FMS1	FMS2	FMS3	FMS4	CEB1	CEB2	CEB3	CEB4	CEB5
M	2.276	2.331	2.522	2.572	2.390	2.244	2.030	1.981	2.238	2.455	3.101	2.927	2.861
SD	0.942	0.854	1.010	1.022	1.092	1.029	0.831	0.944	1.030	1.175	1.309	1.259	1.250
S	0.050	0.279	0.331	0.325	0.394	0.210	1.199	1.063	0.084	0.789	1.163	1.078	1.014
K	0.502	0.321	0.304	0.287	0.605	0.750	0.848	1.042	0.674	0.469	0.091	0.130	0.152

Table 1. Descriptive statistics of items (source: own data collection)

Note: I – Item; M – Mean; SD – Standard Deviation; S – Skewness; K – Kurtosis.

The results of descriptive characteristics (skewness and kurtosis) of items confirmed, that the variables have the multivariate normality distribution (each value of S and K are less than critical ratio for variance). The highest level of agreement is for the FMS statement among respondents (M = 2.161) and the lowest level of agreement is for the CEB statement among respondents (M = 2.716). The least variability in ratings is among respondents in perceptions of the CSR factor (SD = 0.957) and conversely, the greatest heterogeneity in ratings is among respondents in perceptions of CEB (SD = 1.205).

#### 2.3. Statistical methods

To evaluate the formulated hypotheses, the mathematical-statistical method SEM (Structural equation modelling) was used. In the first step, the assumption of multiple normal distribution of the defined variables (items, see Table 1) was verified with the application of selected

descriptive characteristics (skewness, kurtosis). In the second step, factor analysis (EFA, CFA) was applied to verify the reliability and validity of the questionnaire (see Table 2).

If the values of the selected characteristics are higher than critical ratio (CRA) (Cronbach's Alpha (CA – CRA = 0.7); Corrected Item-Total Correlation (CITC – CRA = 0.5); Composite Reliability (CR – CRA = 0.7); Average Variance Extracted (AVE – CRA = 0.5); Factor Loading (FL); Communalities (COM – CRA = 0.5); Bartlett's Test of Sphericity (BTS; p-value less than level of significance); Kaiser-Meyer-Olkin test (KMO – CRA = 0.5); e.g. Hu and Bentler, 1999), then the relationships between claims and factors are accepted. The SEM method is applied to quantify, visualize and verify the causal relationships between factors. In the third step, the SEM method is applied. SEM method is very often used to evaluate quantitative researches in a given issue e.g. (Teran-Yepez et al., 2022; Chang et al., 2022; Maloku et al., 2021). The structured equation modelling was used for quantification, verification and visualisation relationship between factors (FMS, CEB, CSR).

The visualization of the causal relationships: i. between claims and factors; ii. between factors, is the subject of the final model (see Figure 1). The final model of the relationships between the variables was verified using the Fit model summary with the following characteristics (e. g. Hair et al., 2020): Goodness-of-fit (GFT); CMIN / DF – The minimum discrepancy; Comparative Fit index (CFI); Roat Mean Square Error of Approximation (RMSEA); Normed fit index (NFI). All presented results were calculated using the statistical-analytical software IBM SPSS Statistics ver. 28 and graphical visualization of relationships IBM SPSS AMOS ver. 28.

# 2.4. Structure of respondents

The demographic characteristics of owners/managers and SMEs (n = 1,090 SMEs) were as follows.

Structure according to the characteristics of SMEs: i. size of enterprise: 64.6% micro-enterprises, 24.2% small enterprises, 11.2% medium enterprises; ii. legal form: 54.0% sole trader, 37.2% limited liability company, 6.4% join-stock company, 2.4% another form of business; iii. time period in business: 21.9% less than or equal to 3 years; 24.1% more than 3 years and less than to 5; 20.5% more than 5 years and less than to 10; 33.5% more than 10 years; iv. position of SMEs in business environment: 90.2% domestic market; 9.8% foreign market.

Structure according to the characteristics of owners/manager: i. nationality of respondent: 27.6% Polish respondent, 33.2% Czech respondent, 14.9% Slovak respondent, 24.3% Hungarian respondent; ii. gender of respondent: 44.9% women, 55.1% man; iii. age of respondent: 33.9% to or equal 35 years; 29.7% from 36 to 45 years; 24.0% from 46 to 55 years, 12.4% more than 55 years; iv. respondent position in SME: 78.8% I am the business owner, 21.2% I am the top manager; v. level of education of respondent: 7.6% elementary school or comprehensive college, 41.2% high school, 17.3% bachelor's degree, 31.8% master's degree, 2.1% doctoral degree; vi. main motivation doing business: 64.6% money, 25.5% mission, 9.9% another motivation.

#### 3. Results

The results of verifying the reliability and validity of the statements and their relationships to the defined background factors in the questionnaire are presented in Table 2.

CSR: CA = 0.883; CR = 0.921; AVE = 0.744, KMO = 0.788				FMS: CA = 0.789; CR = 0.869; AVE = 0.624; KMO = 0.751				CEB: CA = 0.692; CR = 0.794; AVE = 0.457; KMO = 0.620			
I	CITC	FL	COM	OM I CITC FL COM				I	CITC	FL	COM
CSR1	0.685	0.822	0.706	FMS1	0.530	0.721	0.520	CEB1	0.305	0.401	0.160
CSR2	0.770	0.876	0.768	FMS2	0.595	0.775	0.601	CEB2	0.306	0.422	0.178
CSR3	0.793	0.889	0.790	FMS3	0.679	0.846	0.716	CEB3	0.602	0.838	0.703
CSR4 0.750 0.862 0.743 FMS4 0.615 0.812 0.659							CEB4	0.573	0.842	0.709	
CSR: BTS: Sig.= 0.001**; FMS: BTS: Sig.= 0.001**; CEB: BTS: Sig.= 0.031*							CEB5	0.455	0.731	0.535	

Table 2. Reliability and validity of items in the questionnaire (source: own data collection)

*Note:* CA – Cronbach's Alpha; CR – Composite Reliability; AVE – Average Variance Extracted; KMO – Kaiser-Meyer-Olkin test; CITC – Corrected Item-Total Correlation; FL – Factor loading; COM – Communality; Sig. – Significance; \*  $\alpha = 0.05$ ; \*\*  $\alpha = 0.01$ .

The results (see Table 2) show that the internal consistency between the statements and the defined factors is acceptable for the factors: CSR and FMS. On the other hand, the results for the CEB factor are not acceptable. The values of several characteristics of items (CEB1 and CEB2; see CITC and COM) and factor (CEB; CA and AVE) do not meet the required minimum values (CRA). From the proposed CEB factor with assertions (CEB1, ..., CEB5), two separate factors CEBe (variables: CEB1 and CEB2) and CEBs (CEB1, CEB2 and CEB3) were created with the following characteristics: CEBs (variables: CEB3, CEB4, CEB5): CA = 0.804, CR = 0.885, AVE = 0.720; KMO = 0.720; BTS: Sig. = 0.001 (CEB3: COM = 0.716, FL = 0.846, CITC = 0.640; CEB4: COM = 0.826, FL = 0.909, CITC = 0.759; CEB5: COM = 0.719, FL = 0.801, CITC = 0.671) and CEBe: CA = 0.719, CR = 0.885, AVE = 0.720; KMO = 0.500; BTS: Sig. = 0.001 (CEB1-CEB2: COM = 0.783, FL = 0.885, CITC = 0.698).

Results of the final model with four factors defined (FMS, CSR, CEBe, CEBs): KMO = 0.808; BTS = 6342.7, Degrees of freedom (DF) = 78; Sig. = 0.000. Table 3 and Table 4 present the results rotation component matrix (FL > 0.40) and Total variance explained (TVE).

The results (see Table 3) and also the COM results (COM > 0.5 for each item) of the above items confirmed the relationships (consistency) between the items and the factors. Table 4 showed that the factors identified above explained 71.85% of the total variability of the SEM model. Our proposed factor Crisis Events in Business (CEB) was divided into two factors based on the results of factor analysis (CFA, EFA), which can be characterized as follows: CEBe – the effect of CEB on the owner/manager (perception of the sustainability of the business; the owner/manager's management of the business); CEBs – owner/manager's attitudes towards strategic management of the business in the context of crisis phenomena.

The validation of the significance of the final model is subject to Table 5 with the following parameters: number of distinct sample moments = 91; number of distinct parameters to be estimated = 28; DF = 63; Chi-square = 116.18; Sig. = 0.000.

I/F	CSR	FMS	CEBs	CEBe
CSR1	0.709			
CSR2	0.844			
CSR3	0.854			
CSR4	0.826			
FMS1		0.621		
FMS2		0.752		
FMS3		0.833		
FMS4		0.838		
CEB1				0.867
CEB2				0.855
CEB3			0.825	
CEB4			0.902	
CEB5			0.736	
F	CSR	FMS	CEBs	CEBe
CSR	0.701			
FMS	0.398	0.745		
CEBs	0.336	0.317	0.886	
CEBe	0.487	0.318	0.036	0.812

Table 3. Rotated component matrix and factor transformation matrix (source: own data collection)

*Note*: I – Indicator; F – Factor; Extraction Method – Principal Component analysis; Rotation: Varimax with Kaiser Normalization; Rotation converged in 5 iterations.

Table 4. Results of the total variance explained of SEM model (source: own data collection)

F	Initi	ial Eigenva	lues		Loading		Rotation Sums of SL.			
	Tot.	%Var.	Cum. %	Tot.	% Var.	Cum. %	Tot.	% Var.	Cum. %	
CSR	4.545	34.962	34.962	4.545	34.962	34.962	3.007	23.132	23.132	
FMS	2.047	15.744	50.706	2.047	15.744	50.706	2.518	19.368	42.500	
CEBs	1.620	12.460	63.166	1.620	12.460	63.166	2.222	17.093	59.593	
CEBe	1.129	8.685	71.851	1.129	8.685	71.851	1.594	12.258	71.851	

Note: Tot. – Total; Var. – Variance; Cum. – Cumulative; SL – Squared Loading; F – Factor; Extraction Method – Principal Component analysis; Rotation: Varimax; Rotation converged in 10 iterations.

Table 5. Verification of final SEM model (source: own data collection)

SFCH	DF	CMIN	CMIN/Df	RMSEA	CFI	NFI	GFI
Final model	63	116.18	1.844	0.032	0.952	0.914	0.945
Accepted value of the			<-2.0; 2.0>	<0; 0.08>	>0.95	>0.90	>0.95

Note: SFCH - Summary Fit Characteristics.

The results confirmed the statistical significance of the final model with respect to the achieved values of the selected Summary Fit Characteristics (SFCH; see Table 5). We now proceed to the graphical visualization of the final model, which is the subject of Figure 1.

The graphical visualization (see Figure 1) shows that there are causal relationships between the independent variables (CSR, CEBe, CEBs) and the dependent variable (FMS). The following Table 6 presents the results of path coefficients (PC) of independent factors (using Maximum Likelihood Estimates method), verification of PC and evaluation of formulated hypotheses.

Results (see Table 6) confirmed the statistical significance of the formulated hypotheses because the p-values of the causal relationships between the independent factors (CSR, CEBe, CEBs) and the dependent factor (FMS) are lower than the significance level ( $\alpha$ ) of 0.01. The independent factors positively determine the FMS because all the calculated PCs (Unstand., Stand.; see Table 6) are positive values. The findings confirmed the validity of hypothesis H1 on the one hand, and rejected hypothesis H2 on the other hand.

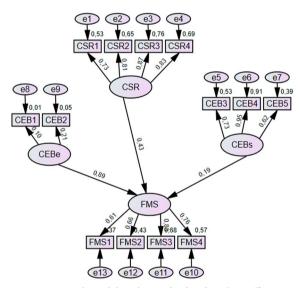


Figure 1. Final model with standardised path coefficients

Table 6. Verification of statistical hypotheses of research (source: own data collection)

Н	CR	1	PC	SE	CRA	Sig.	E.H.
11	CK	Unstand.	Stand.	SE	CKA	p-value	ь.п.
H1	CSR >> FMS	0.449	0.426	0.042	10.581	0.0001	S
H2	CEBs >> FMS	0.140	0.185	0.026	5.501	0.0001	R
	CEBe >> FMS	0.757	0.885	0.062	12.209	0.0001	R

Note: H. – Hypotheses; CR – Causal relationship; PC – Path Coefficient; Unstand. – Unstandardized; Stand. – Standardised; SE – Standard Error; CRA – Critical ratio; E.H. – Evaluation of hypotheses; S – Supported; R – Rejected.

#### 4. Discussion

The research led to the finding that the implementation of CSR in SMEs as well as the presence of crisis phenomena in business (CEBe, CEBs) are factors that determine the financial management of SMEs. The relatively stronger positive relationship between CSR implementation and financial performance of SMEs (PC = 0.43) found in the research supports the acceptance of hypothesis H1. It also supports the understanding of CSR as an inherent and key component of contemporary business that positively affects the financial performance of SMEs and their competitiveness, thus confirming the views of Hosoda (2020); Bartolacci et al. (2020). Luo et al. (2022) concluded that proactive CSR in all three components (social, environmental and economic) has a positive impact on the financial performance of SMEs and their sustainable development. As this relationship is influenced by the attitude of SME owners/managers, the ideas of Karadag (2017) or Rao et al. (2023) highlighting the need for representation of experienced owners/managers for good financial performance, not only short-term but more importantly long-term performance and healthy financial growth of SMEs are thus supported. The positive effects of CSR implementation on the financial performance of SMEs in an overall perspective, in a more detailed definition, can lead to lower employee turnover, bring more skilled and loyal employees to the firm, and increase labour productivity (Perry & Towers, 2009; Annan-Diab & Jensen, 2017), which, however, requires that CSR objectives are well articulated, further communicated and, above all, widely accepted in SMEs (Park et al., 2017; Hetze, 2016). Managers should consider and implement appropriate ability, motivation, and opportunity policies for employees because it increases SME performance (Sánchez-Marín et al., 2022). Chaudhary (2017) state that the implementation of CSR in SMEs is significantly linked to the positive attitude of employees and their work commitment. SME entrepreneurs who take a positive approach to CSR implementation, consider people as the company's core capital. They take a more optimistic approach to assessing the personnel risks and error rates of their employees and also better evaluate their efforts to improve their performance (Rozsa et al., 2021).

Given the close interdependence of the CSR concept and business sustainability, Hypothesis 1 is supported by the findings of a very strong positive effect of the owner's or top manager's perception of business sustainability and the management of the business itself on the financial performance of the business (PC = 0.88). This confirms the findings of Lee-Wong and More (2016) or Liu et al. (2020) on the need to implement CSR including ethical values in corporate policies to ensure the long-term sustainability of the business, which Liu et al. (2020) and León-Gómez et al. (2022) explain as a consequence of higher business credibility perceived by customers and, as a result, the strengthening of market position. Similarly, the views of Gelbmann (2010); Torugsa et al. (2013) are confirmed, who emphasize the need to implement CSR to ensure business sustainability and long-term competitiveness in the market.

Moreover, Valdez-Juárez et al. (2021) sees CSR as one of the two business strategies currently being adopted to maintain and increase the competitiveness of SMEs. They consider entrepreneurial orientation (EO) as the other key business strategy that has a significant impact on CSR as well as on the business performance of SMEs. Conversely, they consider CSR as a mediating variable between EO and business performance. It confirms that SMEs im-

plementing EO and CSR can lead them to permanently adopt sustainable business practices and improve their business performance. Uzhegova et al. (2019) found CSR to be the mediate factor of the relationship between network competence and competitive performance.

The role of the owner or the top manager, based on the proven strong positive effect of their management attitudes on the financial management of the company, is crucial not only in the implementation of CSR, but also in the context of managing crisis phenomena in business. In addition to supporting the findings of Karadag (2017), Rao et al. (2023), these findings are also supported by the findings of Cera et al. (2022) or Lee et al. (2016), who agree that initiative, personal values, attitude, behaviour, perceptions of owners/managers are important factors in CSR implementation and crisis management and should be taken into account.

On the other hand, the attitudes of owners/managers to the actual crisis phenomena in the business in the context of strategic management (CEBs) proved to be a factor that positively influences financial management, but to a relatively lesser extent (PC = 0.19). Thus, these findings do not support e. g. Herbane (2019), who finds it necessary to include policy settings for coping with and responding to unexpected sudden crises in the fundamental strategic long-term direction of corporate policies. Thus, the role of managers/owners appears to be crucial in managing crisis situations rather than viewing them in the context of SMEs' strategic development.

Other research findings did not lead to confirmation of Hypothesis 2. Crisis phenomena in business were not perceived negatively in relation to their impact on the financial management of SMEs. Thus, we cannot confirm the views of authors such as Syrová and Špička (2022, 2023); Rao et al. (2023), who, given the high vulnerability of SMEs seen mainly in the context of their specificities such as lack of necessary capital, skilled workforce, lack of digitalization, see crisis events as a high risk and perceive them rather negatively in relation to performance. Brown et al. (2020) add to these factors the need to respect the stage of the business, McGuinness and Hogan (2016) additionally highlight the financial position of SMEs when entering a crisis.

Failure to confirm Hypothesis 2 leads to support for views that see new opportunities rather than threats in crisis situations. This supports, for example, the findings of Saunders et al. (2014) who see crises as crucial in the process of business change, according to Miklian and Hoelscher (2022) using the right contacts as a business opportunity, similarly Korsgaard et al. (2020) as an opportunity to rethink the role of entrepreneurship with an emphasis on strengthening local economies.

Concluded, the research findings showed that financial management is determined by the implementation of CSR as well as the existence of crisis phenomena, while the implementation of CSR and its application in the daily life of SMEs has a relatively significant positive impact on financial management. The implementation of CSR is also an important factor of sustainable business ensuring competitiveness through the perception of SMEs as a trustworthy, conscious market entity that sees its business not only in the context of economic sustainability but also in the broader context of socially and environmentally sustainable development.

The undeniable role of owners/managers in CSR implementation cannot be overlooked as well as the significantly related factors of motivation for implementation CSR. Overall, the motivations for implementing CSR in SMEs encompass both intrinsic factors such as values,

beliefs, and societal contribution, as well as extrinsic factors such as economic incentives, brand reputation, and customer differentiation (Grimstad et al., 2020; Colovic et al., 2019). Fjortoft et al. (2020) found that the type of motivation can be differentiated according to which part of CSR it supports. While intrinsic motivation is relatively strongly associated with the social component associated with interest groups such as employees and stakeholders, extrinsic motivation tends to be limited to the environmental component and suppliers.

In the context of keeping pace with technological developments and the dynamic approach typical of today's global world, it is appropriate to highlight the importance of innovation for business sustainability and the link to CSR. Innovation is considered to be a significant requirement for business development and growth (Ruiz-Palomo et al., 2022), confirmed by Zastempowski and Cyfert (2021), León-Gómez et al. (2022), Zheng et al. (2021) the implementation of CSR practices significantly increases the opportunities and ability to innovate and support the performance and sustainability of SMEs, which clearly increases the motivation to implement these practices. Bahta et al. (2020) confirms that CSR positively and significantly affects the financial performance and innovation capabilities of SMEs, as well as their business performance. The results of the study by Ruiz-Palomo et al. (2022) for innovation in SMEs show the following important facts. First, that financing barriers have a negative impact on innovation in business, which is reflected in technological innovation as well as management innovation. Furthermore, the fact that women are represented in the management of SMEs, has a very positive effect on innovative output regardless of the business sector, age or size of the SMEs, confirmed by Tran et al. (2023).

Given the importance of financial management in the management of SMEs, the proven positive impact of CSR practices and the perception of sustainability on the financial management of SMEs, the related context including the need for innovation supported by CSR practices, there is a need to look for ways to support these factories and to remove the main barriers to their implementation, of which the much discussed limited access to finance (Rozsa et al., 2022; Baumann-Pauly et al., 2013; Lee et al., 2016) of business ventures, including innovative ones, clearly emerges as the most critical.

## **Conclusions**

The aim of the article was to quantify the effect of the crisis events and firm's CSR implementation in business on the financial management in the small and medium-sized enterprises.

The research findings suggest that the implementation of CSR activities, as well as the presence of crisis phenomena in business (such as the COVID-19 pandemic and the Russia-Ukraine conflict) have a significant impact on the financial management of SMEs. On the one hand, the implementation of CSR positively determines the financial management of the enterprise, on the other hand, what is quite surprising, the negative direct effects of the presence of crisis phenomena in the business environment on the current financial management have not been confirmed. From the perspective of the common "wisdom" and dominating empirical research this last factor is especially interesting. As a result, findings of the study suggest that the important gain to positive financial performance of SMEs is related to implementation of CSR. In the same time, the additional direct empirical novelty of the current

research relates to the fact that negative effect of crisis events in business environment on the financial performance was not confirmed in the Visegrad countries, which can indicate the improving economic resilience of SMEs sector in the region, and its relatively good adjustment to operating in turbulent environment. This factor can be considered as an important confirmation of growing microeconomic competitive potential of the analysed countries.

The results of the research present significant practical findings for the SMEs themselves. Research findings can support their competitiveness and extend managerial knowledge of CSR including barriers and benefits associated with its implementation. Identifying the positive impact of CSR on the financial performance of SMEs should encourage owners and senior managers to develop CSR competencies. The study has also policy implications regarding the desirability of support for socially responsible SMEs from national and international organizations that are engaged in supporting the SME segment in the business environment of Central Europe. Investment support is a key prerequisite for the implementation of measures to contribute to meeting the energy and climate objectives. These measures are often economically recoverable only in long term, which is far beyond the investment capacity of SMEs. Therefore, it is important to ensure sufficient appropriate financing instruments and to set the systematic and legislative conditions at the same time. Therefore, the findings can serve as a basis for various national and international institutions to increase support (e.g. financial assistance) to SMEs. The findings can also serve to improve the quality of upcoming documents (or projects) and activities to support start-ups and the education of owners and senior managers.

The research was carried out in four Central European countries that are very close to the Russia-Ukraine conflict. Data collection was carried out using the CAWI methodology based on the subjective views of owners or top managers of SMEs. The data collection was carried out at a time of increasing cost of living for businesses (energy, inflation) and uncertainty associated with the unpredictable development of the Russia-Ukraine conflict.

In the next phase, the authors' research activities will focus on the verification of the obtained results on another sample of respondents from the V4 countries. Also, the deepening of knowledge between the application and implementation of CSR activities, crisis phenomena in business in relation to the sustainability of SMEs in the business environment will be investigated.

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## **Author contributions**

Abstract: Ilona Švihlíková Introduction: Katarína Frajtová Michalíková Theoretical review: Ludmila Kozubíková, Katarína Frajtová Michalíková, Adam P. Balcerzak Methodology: Ján Dvorský Results: Ján Dvorský Discussion: Ludmila Kozubíková, Ilona Švihlíková, Adam P. Balcerzak Conclusion: Ilona Švihlíková, Ľudmila Kozubíková, Adam P. Balcerzak References: Ludmila Kozubíková, Ján Dvorský, Adam P. Balcerzak.

#### Disclosure statement

Authors declare that have not competing financial, professional, or personal interests from other parties.

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