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Impact and cause risks of creative accounting in small enterprises: evidence from the Czech Republic

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Annotation. Financial statements are a crucial source of information for decision-making, yet their reliability may be undermined by creative accounting, particularly in small enterprises that operate under limited regulation and weak internal controls. This paper examines the extent and causes of creative accounting risks in small enterprises in the Czech Republic, with a focus on discrepancies between earnings before tax and cash flows as indicators of accounting errors and fraud. The analysis is based on a dataset of small enterprises operating in the manufacturing, construction, and trade sectors during the period 2010–2024. Creative accounting risks are identified using the Beneish M-score methodology applied at all three analytical levels. To improve diagnostic precision, the analysis is complemented by six financial indicators and twelve accounting items. Inter-industry differences are assessed using the z-test for equality of proportions. The results reveal that significant earnings–cash flow discrepancies are widespread across all analysed sectors. While impact risks measured by the M-score do not differ substantially between industries, statistically significant differences are observed in cause risks, particularly in profitability-related and accrual-based indicators. Accruals, provisions, and selected revenue and cost items emerge as the most frequent sources of elevated risk, especially in the construction and manufacturing sectors. These findings are consistent with previous evidence for Czech publicly traded companies. The study extends the application of the M-score framework to small enterprises within a European accounting context and provides useful benchmarks for auditors, external users of financial statements, and financial managers aiming to strengthen internal controls and support faithful and fair financial reporting.

Keywords: accounting fraud, financial analysis, cash flows, earnings management.

JEL classification: G3.

Introduction

Accounting is often perceived as a mirror of all business activities that take place in enterprises. Financial statement which are its output, represent a crucial source of information for a wide range of internal and external users in their decision-making processes. The fundamental principle of financial reporting is to provide a true and fair view of a financial situation the structure of assets, financing sources, equity, and overall financial status. To achieve this goal, high qualification and expertise of the individuals manufacturing accounting records are essential.

The emphasis on a true a fair view in accounting created an inherent tension with the concept of creative accounting. While the purpose of standard accounting is to transparently and reliably report on a

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company´s report on a company´s financial reality, creative accounting, as will be described further, aims to distort this picture this distortion in not merely a technical deviation but directly undermines the fundamental principles and purpose of financial reporting. The trustworthiness and reliability of financial information are crucial for informed decision-making, and any disruption to them has far-reaching consequences for all stakeholders.

Although the goal of accounting is to faithfully represent financial reality, relevant accounting frameworks, such as Czech Accounting Standards (CAS), Generally Accepted Accounting Principles (US GAAP), and International Financial Reporting Standards (IAS/IFRS), provide a certain degree of flexibility. This flexibility, along with frequent changes and amendments to accounting standards, creates room that can be exploited for creative accounting and fraud.

The purpose of financial statements is to provide clear, reliable, and comparable information about a company´s financial position, performance, and cash flows. They serve primarily as a basis for decision-making by owners, investors, managers, creditors, government institutions, and other users. Manipulation of accounting data is carried out for various reasons, such as improving a company´s financial image, meeting investor expectations, tax optimization, or securing benefits for management (Andrejkovicova, Andrejovska, 2026). These practices can include manipulating the timing of cost and revenues or inflating assets and profits (Khatun, Sobhan, 2025). The consequences of such fraudulent conduct are often uncovered only in late stages, which can lead to criminal and insolvency proceedings or even company bankruptcy.

Flexibility in accounting standards in this context is not merely a neutral characteristic of the system but becomes a direct cause of creative accounting (Abed *et al.*, 2022). While standards allow for choices that are legitimate in themselves, these very choices can be exploited to achieve specific, often unethical, goals. This represents a fundamental problem, as the very structure of accounting, which is intended to ensure adaptability to various business models and situations, paradoxically opens the door to its misuse.

The aim of this paper is to explore the risks associated with creative accounting methods, with a particular focus on the risks of accounting errors and fraud. The analysis uncovers significant deviations between report cash flow and earnings before tax values from their true economic potential.

The report is structured to provide a comprehensive and systematic overview. Following the introduction, a theoretical background defines key concepts and summarizes previous research. Subsequently, the materials and methods used are described, including a detailed presentation of the M-score method. The main part of the report focuses on presenting and discussing the results of the analysis of impact risks and cause risks of accounting errors and fraud. The conclusion summarizes the main findings, discusses contributions, limitations, and outlines future research directions.

1. Theoretical Background

Creative accounting refers to a set of accounting practices that, while formally complying with accounting rules and standards, deliberately distort the economic reality of a business. These practices do not always fall clearly into the category of illegality. In many cases, they exist in a legal grey area, which makes them difficult to detect. It is important to distinguish creative accounting from mere accounting errors or poor bookkeeping. Creative accounting is characterized by an intentional and systematic effort to misrepresent financial information (Olojede, Erin, 2021).

The motivations behind the use of creative accounting are diverse. In addition to tax optimization or the desire to improve financial attractiveness, the literature also emphasizes psychological factors influencing managerial decision-making. Salehi *et al.* (2024) point out that a major role is played by incentive systems for managers whose bonuses are tied to accounting results, as well as pressure from shareholders or the need to maintain a stable cash flow in the eyes of financial institutions.

Hussain and Akbar (2022) argue that creative accounting rarely leads to the immediate detection of problems but rather contributes to their accumulation. For instance, if a company overtakes its assets, it creates an accounting bubble that can mask operational inefficiencies for an extended period. This leads to a false impression of stability, with real issues only becoming apparent during significant events such as ownership changes, regulatory audits, or accounting policy shifts (ALShanti *et al.* 2024).

The concept of ethical relativism in accounting, as discussed by Sevi *et al.* (2021), describes situations in which creative accounting is internally justified as a necessary evil for business survival especially in a volatile economic environment. From this perspective, creative accounting is perceived as a pragmatic risk management tool, albeit at the cost of transparency and trustworthiness.

Common techniques of creative accounting are described by Honková and Myšková (2024) and include: revenue recognition manipulation which means shifting revenues across accounting periods to present better performance, overstatement of inventory and receivables and delays cost recognition, “big bath” accounting when losses in one year are intentionally increased to show improvement in subsequent years, and manipulation of provisions depending on desired outcomes.

It is important to emphasize that creative accounting is not only a technical accounting issue but is closely linked to corporate culture, ethical climate, and governance structure. Preventing such practices requires not only a legislative framework but also strong internal controls, transparent communication, and accountability from senior management.

Although small enterprises form the backbone of the Czech and European economies, they face a unique set of challenges related to financial reporting. According to the European Union (2020), these firms employ approximately 50 % of the private-sector workforce and are key drivers of regional development. Despite their economic significance, their ability to produce transparent and reliable accounting information is often limited.

One of the major issues is the lack of institutional professionalization (Kuttner *et al.*, 2023). Small firms often do not employ a dedicated financial manager or internal auditor, and accounting is typically outsourced to external providers, whose interests may not align with the company´s long term goals. This results in an information gap between management and accounting reality (Latifah *et al.*, 2021).

Furthermore, there is often low motivation for precise and comprehensive reporting – due to the absence of mandatory audits, weak investor pressure, and limited financial literacy among owners or managers (Nartey, van der Poll, 2021). As a results, the quality of reporting ends to be more formal than substantive. In practice, companies may unknowingly or deliberately resort to practices that would be unacceptable in larger enterprises.

According to Edwards (2023) study, small businesses tend to use cash-based accounting instead of accrual-based methods, perform inconsistent or no physical inventory counts, underestimate the importance of internal controls and transaction documentation, and record transactions retroactively, often once per year.

The lack mandatory audit in Czech small businesses further reduces the likelihood of identifying accounting irregularities (Oka, Hromada, 2023). This creates a setting with ample opportunities for financial statement manipulation without the threat of oversight or consequences. Such conditions foster information asymmetry, which significantly affects relationships with creditors, suppliers, and potential investors (Michulek *et al.*, 2024).

Some countries, such as the Netherlands (Poradova, 2021) or Germany (Velte, 2019) have addressed this issue by tightening reporting requirements oven for small firms – for example, by requiring audits for public contracts or promoting standardized accounting software with built-in control features. The Czech regulatory environment (Kliestik *et al.*, 2020) in contrast, remains relatively lenient, unintentionally providing fertile ground for the development and persistence of creative accounting practices.

Therefore, it can be concluded that the combination of small business structure (Sánchez-Ballesta, Yagüe, 2021), limited regulation (Greusard, 2022), and weak control mechanisms (Remenarić *et al.*, 2018) creates a structural risk framework, making small enterprises more susceptible to accounting manipulation.

The issue of creative accounting and financial reporting in small enterprises is extensively covered in academic literature, both from a theoretical and practical perspective, for instance Abed *et al.* (2022), Putra (2019), Andarwatti *et al.* (2020), Lutfi *et al.* (2022). This research draws upon key works that explore the motivation behind accounting manipulation, the various method used, and their implications for business performance.

Karas and Režňáková (2017) highlight that small businesses are often overlooked in terms of regulatory oversight, which gives them greater freedom in financial reporting. Their work also shows that the risk of accounting fraud is directly proportional to the level of decentralization in accounting processes and the absence of routine internal controls.

An important contribution (Aldaamy, 2024) examines the influence of ethical leaderships on the prevalence of accounting manipulation. Their study finds that organizations with weak ethical climates and minimal supervision are significantly more prone to creative accounting. The authors recommend the adoption of ethical codes of conduct and the establishment of internal ethics committees even in small firms.

The literature also reflects new approaches, such as the application of behavioural economics in accounting. For example, cognitive biases like overconfidence (Semaniuk, Marchyshyn, 2025), illusion of control (Hanlon *et al.*, 2022), or confirmation bias can lead to systematic distortions in financial decision-making and reporting.

2. Research Methodology

This research builds upon these foundations and extends them by examining the specific conditions of Czech small enterprises. A key contribution is the application of the M-score methodology, which modifies the classical Fraud Triangle. The model is designed to identify three essential factors (Yusrianti *et al.*, 2020): conditions (organizational structure, regulatory context, presence or absence of audit), motivations (financial pressure, need for financing, personal incentives of management), and opportunities (lack of controls, low-quality accounting systems, external invisibility). M-score thus offers a comprehensive framework for understanding the interplay of factors that enable or encourage accounting manipulation in the small business environment. This model will be applied in the empirical section of the research to assess how these factors are present in Czech small enterprises and to what extent they contribute to the risk of creative accounting. Three hypotheses are tested: H1: There are significant differences in identified

impact risks at all M-score levels for small enterprises operating in manufacturing industry, construction industry, and trade. H2: There are significant differences in identified cause risks in six financial indicators among small enterprises operating in manufacturing industry, construction industry, and trade. H3: There are significant differences in identified cause risks in twelve accounting items among small enterprises operating in manufacturing industry, construction industry, and trade.

The basic dataset used in this study consists of data extracted from the annual financial statements of small enterprises in the Czech Republic over the different industries based on CZ-NACE from a commercial database MagnusWeb. This dataset serves as the foundation for constructing a proxy measure of creative accounting. The date sample includes a total of 3.869 companies in the manufacturing industry (Group C, No. 8-33), 1.990 accounting units operating in the construction industry (Group F, No. 41-43) and 3.569 units active in trade (Group G, No. 45-47) from the years (2010-2024).

For the analysis of creative accounting, the M-score method developed by Beneish (1993) was chosen. This method was adapted to six predictive ratios. The basic premise of the method lies in the hypothesis that, in the long term, changes in net cash flows and generated EBT should not differ significantly. Cash flow was a pre-computed value. The universality of the method, the interconnection between reported financial statements, and the availability of results from previous case studies were key factors the author´s decision to use the M-score method for this research. The M-score method is designed to systematically assess creative techniques that result from accounting adjustments and can distort the true and fair view of financial statements.

First step calculates the differences between CF and EBT is (Drábková, Pech, 2019):

$$\frac{\sum_{t=1}^{n} CF_t - \sum_{t=1}^{n} EBT_t}{\sum_{t=1}^{n} EBT_t} \times 100 \quad (1)$$

Where CF is cash flow, EBT is earnings before tax, t is observed period.

This level serves as an initial screening, which reveals whether there is a significant difference between reported profit and cash flow.

Second level M-score represents a deeper analysis for discrepancies, where CF and EBT are adjusted for future cash flows and non-monetary expenses, to approximate their economic substance. The formula is (Drábková, Pech, 2019):

$$\frac{\sum_{t=1}^{n} CF_{m,t} - \sum_{t=1}^{n} EBT_{m,t}}{\sum_{t=1}^{n} EBT_{m,t}} \times 100 \quad (2)$$

where $CF_{m,t}$ is increase in CF in the observed period t modified by reported future CF and $EBT_{m,t}$ is EBT generated during the observed period modified by non-monetary expenses.

Risk limits for this level are R->-10% and R+>10%. Creative accounting often manipulates non-cash items, such as accruals or depreciation. By modifying EBT and CF to their economic substance, this level helps isolate discrepancies that are not caused by legitimate non-cash differences and directly points to potential manipulation.

Third level M-score focuses on the relationships between earnings before tax adjusted for non-monetary expenses and generated operating cash flow. The formula is:

$$\frac{\sum_{t=1}^{n} CF_{o,m,t} - \sum_{t=1}^{n} EBT_{m,t}}{\sum_{t=1}^{n} EBT_{m,t}} \times 100 \quad (3)$$

Where $CF_{o,m,t}$ is rising in operating CF

Risk limits are R- >-30% and R+ >30 %. This level further refines the source of the discrepancy and indicates whether the problem lies in core operating activities or in financial and investments activities. This diagnostic advancement is a strong point of the methodology for determining the cause of the discrepancy. It allows narrowing down the type of creative accounting used, for example, whether it involves manipulating operating revenues or concealing financial costs.

To identify motives and reasons for manipulating financial statements, which may include efforts to obtain subsidies, loans, tax reductions, or personal gain for managers or owners, the occurrence of risks in six selected financial indicators: return on assets, cash flow return on assets, return on equity, cash flow return on equity, financial personnel productivity and total accruals to total assets and twelve accounting items: fixed assets , current assets , accrued assets, equity, liabilities, accruals, merchandise revenue, merchandise and services revenue, production consumption, personnel costs, provisions for operational activities and income taxes.

High risk was determined when certainty reached 5 – 10 %, and very high risk when certainty reached 10% and more.

For statistical testing of hypotheses concerning enterprises form different industries, the z-test for equality of proportions was used. This method allows assessing whether the proportions of risks between individual groups differ statistically significantly. The results are interpreted at an alpha level of 0.05, which is a standard threshold for statistical significance. In cases where significant differences were found between multiple industries, comparison between each pair of proportions was performed. This step allows precisely determining among which specific industries statistically significant differences are located. The use of these specific statistical tests indicates a robust analytical approach that goes beyond mere descriptive statistics. It is important for establishing the significance of observed differences, not just their existence. These methods add credibility to claims of significant differences, as they allow researchers to state with confidence that the observed differences are not due to chance but are statistically significant. This strengthens the report´s conclusions about industry-specific risks.

3. Results and Discussion

3.1 Impact Risk

The impact risk analysis is based on 3 threat elements in their interaction. The following table summarizes the results of the analysed risks at individual levels for the three main industries: manufacturing, construction, and trade.

At the 1st M-score level, it was found that discrepancies exceeding 50 % occur in a significant proportion of enterprises in all monitored industries: in manufacturing (78 %), in construction (76%), and in trade (79%).

At the 2nd M-score level, which modifies earnings before tax and cash flow to their economic substance, a score higher than 10% was found in manufacturing (96%), construction (95%), and trade (95%). Although these percentages are high, statistical tests showed that the differences between industries at this level were not statistically significant (p-value = 0.1039). This suggest that after adjusting for non-monetary

items which are common targets of manipulation across industries, the overall magnitude of the discrepancy becomes more uniform across sectors. This could mean that while the initial gross discrepancy (Level 1) differs, the underlying economic substance discrepancies (Level 2) are pervasive and less industry-specific risks.

At the 3rd level, the highest values were found in 20% of constructions enterprises, followed 15% in manufacturing, and 9% in trade.

All the results are summarized in the following *Tables 1* and *Table 2*.

Table 1: M-score – total risks (in thousands)

Industry	M-score 1st level	M-score 2nd level	M-score 3rd level
Manufacturing	3.08	3.77	0.56
Construction	1.50	1.88	0.38
Trade	2.88	3.46	0.32

Source: created by the author.

Table 2: M-score – in percents

Industry	M-score 1st level	M-score 2nd level	M-score 3rd level
Manufacturing	78%	96%	15%
Construction	76%	95%	20%
Trade	79%	95%	9%

Source: created by the author.

Table 3: The count of risks (%)

Industry	1st level R-	1st level R+	2nd level R-	2nd level R+	3rd level R-	3rd level R+
Manufacturing	70	10	78	15	10	2
Construction	62	13	81	19	18	3
Trade	74	9	80	16	5	1

Source: created by the author.

The analysis also showed that, overall, at all M-score levels, negative risks (R-) dominate over positive risks (R+) (*Table 3*). The prevailing negative risks (R-) mean that enterprises generated substantially lower cash flow. These findings are critical, as they directly indicate that companies are overstating their profits relative to their cash flow generation. The results indicate the use of creative accounting practices, particularly earnings management, aimed primarily at tax optimization and, secondarily, at meeting profitability targets. This finding is also presented in study from South Korea Jeong-Bon *et al.* (2025). Conversely, there are no authors who directly disagree with the assertion that earnings are overstated.

This presents a clear motive for creative accounting: to make the company appear more profitable than it is, likely for tax optimization, obtaining, or avoiding insolvency. Hypothesis H1, which assumed significant differences in identified impact risks at all M-score levels for small enterprises operating in manufacturing, construction, and trade, was not confirmed.

Difference at 3rd M-score level is important, as it suggests that after adjusting for non-monetary items (which are common targets of manipulation across industries), the overall magnitude of the discrepancy becomes more uniform across sectors. This could mean that while the initial gross discrepancy (Level 1)

differs, the underlying economic substance discrepancies (Level 2) are pervasive and less industry-specific risks.

3.2 Cause Risk – Financial Indicators

The investigation into exposure assesses how often vulnerabilities appear among 6 economic measures which were selected for comparing key ration measures and their relationship to net cash flow and profit after tax. The findings derived revealed a risk at least one of the M-score levels. The following *Table 4* and *Table 5* provides an overview of financial indicator risks (high and very high) for each industry. High risk is in the interval 5 - 10 % while very high risk reaches 10 % and more.

Table 4: Indicator Risks for given Industries – positive values

Risk	Indicator	1st level of M-score			2nd level of M-score	
Very high	**Return on Equity**	Manufacturing	Construction	Trade	Manufacturing	Trade
	Cash Flow Return on Equity	Manufacturing	Construction	Trade	Manufacturing	Trade
	Financial Personnel Productivity	Manufacturing	Construction	Trade	Manufacturing	Trade
	Expense Personnel Productivity		Construction	Trade		Trade
High	**Return on Equity**					Trade
	Cash Flow Return on Equity				Manufacturing	Trade

Source: created by the author.

Table 5: Indicator Risks for given Industries – negative values

Risk	Indicator	1st level of M-score			2nd level of M-score		3rd level of M-score		
Very high	**Return on Equity**							Construc-tion	
	Cash Flow Return on Equity							Construc-tion	Trade
	Total Accruals to Total Assets						Manufa-cturing		Trade
High	**Return on Equity**	Manufa-cturing	Construc-tion	Trade	Manufa-cturing	Trade			
	Cash Flow Return on Equity	Manufa-cturing	Construc-tion	Trade					
	Total Accruals to Total Assets			Trade					

Source: created by the author.

The results indicate that similar indicators, such as return on equity, cash flow return on equity, expense personnel productivity, financial personnel productivity, and total accruals to total assets, demonstrate

significant risk exposure at level one and two. At the level three, return on equity and cash flow return of equity indicators are qualified as very high risks. Prevailing risks in positive values were found for return on equity, cash flow on equity, financial personnel productivity, especially in trade and construction (*Table 4*). According to Alawadi and Rashid (2023), there is a significant relationship between financial ratios (e.g., profitability, leverage) and the practice of earnings management in Jordan Financial Landscape. Their study demonstrates that ratio analysis provides empirically measurable signals of management's intentions regarding creative accounting.

Prevailing risks in negative values (*Table 5*) were ascertained for return on equity, and cash flow return on equity (at the first and second levels), and total accruals to total assets (chiefly in trade).

Tables 6, 7 and 8 show number of significant financial indicators in each sector and these dates are used for confirmation of hypothesis H2, which assumed significant differences in identified cause risks in six financial indicators among enterprises operating in manufacturing, construction, and trade. This hypothesis was confirmed for almost all financial indicators (p-value<0.05) at the first and second M-score levels. The most significant variations are found across construction and trade sectors. Study Zachariah & Haninun from Indonesia (2025) confirms that earnings management occurs in the construction sector. The study by Bao (2020) shows that there are statistically significant differences in earnings management, although it does not focus specifically on the construction sector of China.

At the 3rd M-score level, differences were less significant and were identified only for total accruals to total assets and cash flow return on equity indicators.

Table 6: Number of Significant Financial Indicator Risks for Different Industries (First level of M-score)

Indicator	Manufacturing industry	Construction industry	Trade
Return on Assets+	4%	3%	5%
Return on Equity+	7%	6%	8%
Financial Personnel Productivity+	6%	7%	8%
Total Accruals to Total Assets-	-4%	-4%	-6%

Source: created by the author.

Table 7 Number of Significant Financial Indicator Risks for Different Industries (Second level of M-score)

	Manufacturing industry	Construction industry	Trade
Return on Assets+	4%	3%	5%
Return on Equity+	7%	6%	8%
Cash Flow Return on Equity+	8%	7%	9%
Financial Personnel Productivity+	5%	8%	8%
Total Accruals to Total Assets-	-4%	-5%	-6%

Source: created by the author.

Table 8: Number of Significant Financial Indicator Risks for Different Industries (Third level of M-score)

	Manufacturing industry	Construction industry	Trade
Cash Flow Return on Equity-	-11%	-6%	-9%
Total Accruals to Total Assets-	-6%	-3%	-7%

Source: created by the author.

The following *Table 9* contains statistically differences at M-score levels for financial indicators.

Table 9: Statistically significant differences at M-score levels for the financial indicators

Indicator	Finding	p-value at level		
		1st	2nd	3rd
Return on Assets	Significant differences for positive values of indicator at both of 1st and 2nd levels	0.0150	0.0123	
Cash Flow Return on Assets	Significant differences for positive values of indicator at both of 1st and 2nd levels	0.0129	0.0110	
Return on Equity	Significant differences for positive values of indicator at both of 1st and 2nd levels	0.0471	0.0076	
Cash Flow Return on Equity	Significant differences for positive values of indicator at 2nd level and for negative values at the 3rd level		0.0065	0.0417
Financial Personnel Productivity	Significant differences for positive values of indicator at both of 1st and 2nd levels	0.0343	0.0316	
Total Accruals to Total Assets	Significant differences for negative values of indicator at all of 1st, 2nd and 3rd levels	0.0454	0.0059	0.0334

Source: created by the author.

The assessment of potential threats across chosen accounting entities and financial measure offered key insights into sensitive accounting areas and risk elements typical for the sector. A focused evaluation of a particular accounting entity highlights risk items and financial metrics that deviate markedly from the benchmark representative of a group of similar enterprises. Numerous studies from Spain, China, Romania, (Laitinen *et al.*, 2023, Liu, 2023, Danci *et al.*, 2025) point out the constrained explanatory capacity of financial analysis and suggest that even sophisticated method, such as solvency and bankruptcy models, have their limitations, for example assumption of linear relationships between variables. Therefore, the use of economic measures is recommended to use only as a secondary tool for analyzing a particular accounting entity and the given timeframe.

3.3 Cause Risk – Accounting Items

Twelve accounting items were processed to identification risks. The results were obtained for the enterprises that exhibited a risk at one of the M-score levels. The risks were assessed based on the extent to which the ratio of a deviation to the standard deviation was exceeded, using the same method as in the analysis of the six financial indicators. The following table provides an overview of the evaluated risks of the sectors, namely the manufacturing industry, construction industry, and trade (*Table 10* and *Table 11*).

Table 10: Overview of Accounting Item Risks for Different Industries – positive values

	Risk	Manufacturing industry	Construction industry	Trade
1st level of M-score	Very high	Fixed Assets Current Assets Equity Liabilities Merchandise Revenue Personnel Costs Income Taxes	Fixed Assets Current Assets Equity Liabilities Merchandise Revenue Personnel Costs Income Taxes	Fixed Assets Current Assets Equity Liabilities Production Consumption Personnel Costs Income Taxes
	High	Accrued Assets Accruals	Accrued Assets Accruals	Accrued Assets, Accruals
2nd level of M-score	Very high	Fixed Assets Current Assets Equity Liabilities Merchandise Revenue Personnel Costs Income Taxes	Fixed Assets Current Assets Equity Liabilities Merchandise Revenue	C+, Cp+, Ti+ Fixed Assets Current Assets Equity Liabilities Production Consumption Personnel Costs Income Taxes
	High	Accrued Assets Accruals	Accrued Assets Accruals Income Taxes	Accrued Assets Accruals
3rd level of M-score	Very high	Accrued Assets Liabilities Accruals Provisions	Fixed Assets Current Assets Accrued Assets Liabilities Accruals Provisions	Fixed Assets Current Assets Accrued Assets Equity Liabilities Accruals Production Consumption Provisions
	High	Equity Production Consumption Income Taxes		Equity Production Consumption Personnel Costs

Source: created by the author.

Table 11: Overview of Accounting Item Risks for Different Industries – negative values

	Risk	Manufacturing industry	Construction industry	Trade
1st level of M-score	High	Provisions Merchandise Revenue	Provisions	Provisions Merchandise Revenue
2nd level of M-score	High	Provisions	Provisions	Provisions
3rd level of M-score	High	Provisions Merchandise Revenue	Provisions	Provisions Merchandise Revenue

Source: created by the author.

According to the previous findings M-score model 1st and 2nd level, also assets (fixed assets and current assets), equity, liabilities, cost (both production and personnel costs) and merchandise revenue are the items characterized by high risks while accrued assets, accruals and provisions by very high risk. At the third M-score level, risks are mostly qualified as very high, especially in fixed assets, current assets, accrued assets, liabilities, accruals. Prevailing risks for negative values were determined primarily for

items provisions and merchandise Revenues (*Table 11*). Positive values were found in the other observed accounting items (*Table 10*).

With regard to enterprises across all analyzed sectors, the results indicate that they predominantly utilize provisions and accruals. These findings are consistent with the results of research on Czech publicly traded companies reported in Honková, Myšková (2024). In trade enterprises, risk is present across nearly all balance sheet items. Furthermore, in the income statement, the trade sector also engages in manipulations of direct costs. In the other two sectors under study, such manipulations, with the exception of liabilities, are not observed. Consequently, the trade sector is considered to have the broadest risk exposure.Number of significant accounting items risks for different industries present *Tables 12, 13, and 14*.

Regarding the opinions of similar studies, Mlawu *et al*. (2025) summarize that accrual items and estimates (discretionary accruals) are commonly used tools to influence results — that is, one of the main means of creative accounting in South Africa. Remeneric *et al*. (2018) present a review article that deals directly with the motivational factors and specific techniques of creative accounting: overstating assets, adjusting inventory, reducing expenses by reporting higher revenue values, changing depreciation methods, and previous recognition of revenue in Croatia. Khatun and Sobhan (2025) concur that provisions are among the primary accounting items commonly manipulated in Bangladesh. Kafa and Almasri (2024) indicate that manipulation via accruals is a central aspect of earnings management in Jordan, and Adıgüzel (2018) highlights that it represents one of the three primary methods in Turkey.

Table 12: Number of Significant Accounting Items Risks for Different Industries (1st level of M-score)

1st level of M-score	Manufacturing industry	Construction industry	Trade
Income Taxes+	8%	10%	9%
Provisions+	17%	18%	21%
Production Consumption C+	4%	3%	9%
Production Consumption C-		-5%	
Merchandise and Services Revenues -	-9%	-8%	
Merchandise Revenues +	10%	10%	

Source: created by the author.

Table 13: Number of Significant Accounting Items Risks for Different Industries (2nd level of M-score)

2nd level of M-score	Manufacturing industry	Construction industry	Trade
Income Taxes+	8%	11%	8%
Provisions+	16%	17%	19%
Production Consumption+	3%	2%	8%
Production Consumption-		-4%	
Merchandise and Services Revenues-	-9%	-8%	
Merchandise Revenues +	9%	9%	

Source: created by the author.

Table 14: Number of Significant Accounting Items Risks for Different Industries (3rd level of M-score)

3rd level of M-score	Manufacturing industry	Construction industry	Trade
Income Taxes+	1%	3%	1%
Production Consumption+	1%	1%	2%
Production Consumption-		-1%	
Merchandise and Services Revenues-	-1%	-2%	
Merchandise Revenues+	1%	2%	

Source: created by the author.

Hypothesis H3, which assumed significant differences in the identified causes of risk across twelve accounting items among small enterprises operating in the manufacturing, construction, and trade sectors, was confirmed only for a few items, with the trade sector exhibiting the smallest differences. No specific level of enterprise appears to be extremely vulnerable, as risks across the various levels are roughly comparable in magnitude.Sadowski *et al.* (2025) find that there are significant differences between sectors, reflected in statistically distinct levels of discretionary accruals, supporting the notion that different accounting items carry varying risks of manipulation across industry categories in Poland.

However, in comparison with the results based on the six financial indicators, statistically significant differences for enterprises with identified risks were found evenly across all levels in twelve of the analyzed items (*Table 15*).

Table 15: Statistically significant differences at M-score levels for the accounting items

Accounting item	Finding	p-value at the 1st level	p-value at the 2nd level	p-value at the 3rd level
Income Taxes	Significant differences for positive values of item at all levels	0.0401	0.0003	0.0002
Provisions	Significant differences for positive values of item at both of 1st and 2nd levels	0.0001	0.0002	
Production Consumption	Significant differences for positive and negative values of item at all levels	0.0114	0.0049	0.0004
Carrying Value of Non-Current Assets Sold	Significant differences for positive values of item at 2nd level and for negative values at the 3rd level		0.0249	0.0045
Merchandise and Services Revenue	Significant differences for negative values of item at all levels	0.0000	0.0000	0.0001
Merchandise Revenue	Significant differences for positive values of item at all levels	0.0000	0.0000	0.0001

Source: created by the author.

Conclusions and Recommendations

The main finding is that in the monitored sectors of small businesses, negative values of the modified M-score prevail, indicating the use of creative accounting techniques, particularly for the purpose of

influencing profit to optimize taxes and meet profitability criteria. The study also confirms significant differences in the risks of creative accounting between individual sectors.

The most of detecting methods focus on the area of earnings management and accrual-based model. However, it is important to realize that most of these models were developed in the context of the American accounting system (US GAAP) and for listed enterprises. Their application in the conditions of Czech and European accounting standards can significantly reduce their effectiveness, or even render them unusable.

The primary objective of this paper, focused on small enterprises, was to provide information on the extent and causes of creative accounting across different industries. With regard to the M-score, which is designed to examine the relationship between earnings, and cash flows, it is appropriate to apply all defined levels of the model. For the identification of basic causes, the analysis should be complemented by additional financial indicators, as demonstrated in this study.

The findings of this research are intended primarily for auditors and creditors s to enhance decision-making based on accounting reports. This paper provides industry-level benchmarks that can be used for comparison with data from individual firms´ financial statements. Financial managers, who oppose the use of creative accounting techniques and who emphasize the faithful and fair representation of the reporting entity may use these benchmarks to establish internal rules and control frameworks.

Given the finding that accruals represent one of the most frequent areas of creative accounting, particularly in the construction and manufacturing industries, there exists a risk that specific accounting figures may be temporarily distorted. As a result, decision-making may be influenced predominantly in the short term, while the potential consequences may be significantly more severe in the longer term.

A limitation of this study lies in its exclusive focus on small enterprises. Small enterprises often have weaker internal controls and may apply creative accounting practices in less strictly regulated areas of national accounting standards, which can obscure the true economic substance of their financial statements and affect the accuracy of discrepancy-based analysis. On the other hand, small enterprises constitute most of all firms. Due to their distinct characteristics, it would not be meaningful to aggregate enterprises of all sizes into a single analysis: separate research designs are required. In this context a recent study Honková, Myšková (2024) has been published for the Czech Republic.

Future research could focus on the relationship between earnings and cash flows over a multi-year time series, albeit using a substantially smaller sample of enterprises.

Literature

Abed, I.A., Hussin, N., Ali, M.A., Haddad, H., Shehadeh, M., Hasan, E.F. (2022), “Creative accounting determinants and financial reporting quality: systematic literature review”, *Risks*, Vol. 10, No 4, p.76. https://doi.org/10.3390/risks10040076.

Adıgüzel, H. (2018), “Earnings Management Techniques in Accounting Literature”, *Journal of Accounting and Taxation Studies,* Vol. 11, No 1, pp.63-76. https://doi.org/10.29067/muvu.372874.

Alawadi, H., Rashid, N. (2023), “Unveiling Earnings Management Strategies Through Financial Ratios: A Comprehensive Investigation of Audit Quality’s Mediating Role in Jordan’s Financial Landscape”, *International Journal of Academic Research in Accounting Finance and Management Sciences*, Vol. 13, No 2, pp.286–299. https://doi.org/10.6007/IJARAFMS/v13-i2/17153.

Aldaamy, A. (2024), “The effect of legal-ethical and psychological factors in reducing accounting manipulations: A field study”, *Technium Business and Management*, Vol. 8, pp.55-70. https://doi.org/10.47577/business.v8i.11398.

ALShanti, A.M., Al-Azab, H.A.H., Humeedat, M.M., AlQudah, M.Z. (2024), “Exploring the evolution of creative accounting and external auditors: Bibliometric analysis”, *Cogent Business & Management*, Vol. 11, No 1, 2300500. https://doi.org/10.1080/23311975.2023.2300500.

Andarwati, M., Amrullah, F., Thamrin, E., Muslikh, A. (2020), "An analysis of point of sales (POS) information systems in SMEs with the black box testing and PIECES method", *IOSR Journal of Business and Management*, Vol. 22, pp.20-25. https://doi.org/10.9790/487X-2209052025.

Bao, X. (2020), "Real earnings management and industry differences: Based on empirical evidence from listed companies in China", *International Journal of Business Administration*, Vol. 11, No 4, pp.30-38. https://doi.org/10.5430/ijba.v11n4p30.

Andrejkovicova, I., Andrejovska, A. (2026), "The effect of corporate tax rates on foreign direct investment in the context of tax competition", *E&M Economics and Management*, Vol. 29, No 1, pp.1-15. https://doi.org/10.15240/tul/001/2025-5-026.

Beneish, M.D., Press, E. (1993), "Costs of technical violation of accounting based debt covenants", *The Accounting Review*, Vol. 68, No 2, pp.233-257.

Danci, A.R., Lazar, I.A., Mureșan, G.M. (2025), "Financial analysis in the era of uncertainty: A comprehensive examination", *Digital Finance*, Vol. 7, pp.971-995. https://doi.org/10.1007/s42521-025-00136-5.

Drábková, Z., Pech, M. (2019), "Financial statements risk: Case study of a small accounting unit", *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, Vol. 45, No 1, pp.41-52.

Drábková, Z., Pech, M. (2022), "Comparison of creative accounting risks in small enterprises: The different branches perspective", *E a M: Ekonomie a Management*, Vol. 25, pp.113-129. https://doi.org/10.15240/tul/001/2022-1-007.

Edwards, J.R. (2023), "Cash to accruals accounting in British central government: A journey through time", *Financial Accountability & Management*, Vol. 39, No 1, pp.40-59. https://doi.org/10.1111/faam.12295.

European Commission (2020), *Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, User guide to the SME definition*, Publications Office. https://doi.org/10.2873/255862.

Greusard, O. (2022), "Accrual-based earnings management and regulation: A literature review", *Accounting Perspectives*, Vol. 21, No 4, pp.539-580. https://doi.org/10.1111/1911-3838.12319.

Hanlon, M., Yeung, K., Zuo, L. (2022), "Behavioral economics of accounting: A review of archival research on individual decision makers", *Contemporary Accounting Research*, Vol. 39, No 2, pp.1150-1214. https://doi.org/10.1111/1911-3846.12739.

Honková, I., Myšková, R. (2024), "Techniques, objectives and motivations of creative accounting: Evidence from the Czech Republic", *National Accounting Review*, Vol. 6, No 3, pp.333-351.

Hussain, A., Akbar, M. (2022), "Dividend policy and earnings management: Do agency problem and financing constraints matter?", *Borsa Istanbul Review*, Vol. 22, No 5, pp.839-853. https://doi.org/10.1016/j.bir.2022.05.003.

Jeong-Bon, K., Junwoo, K., Jay Junghun, L. (2025), "Earnings versus cash flows in equity valuation: Evidence from the COVID-19 crisis", *Advances in Accounting*, Vol. 69, 100837. https://doi.org/10.1016/j.adiac.2025.100837.

Kafa, A., Almasri, I. (2024), "Accruals-based earnings management: Concept, origins, and evolution", *Journal of Service Innovation and Sustainable Development*, Vol. 5, No 28. https://doi.org/10.33168/SISD.2024.0104.

Karas, M., Reznakova, M. (2017), "Predicting the bankruptcy of construction companies: A CART-based model", *Engineering Economics*, Vol. 28, No 2, pp.145-154. https://doi.org/10.5755/j01.ee.28.2.16353.

Khatun, A., Sobhan, R. (2025), "Creative accounting practices and quality of financial reporting: perception analysis from an emerging economy", *Journal of Money and Business*, Vol. 5, No 2, pp.137-150. https://doi.org/10.1108/JMB-12-2024-0079.

Kliestik, T., Nica, E., Suler, P., Valášková, K. (2020), "Innovations in the company's earning management: The case for the Czech Republic and Slovakia", *Marketing and Management of Innovations*, pp.332-345. https://doi.org/10.21272/mmi.2020.3-24.

Kuttner, M., Mayr, S., Mitter, C., Duller, C. (2023), "Impact of accounting on reorganization success: empirical evidence from bankrupt SMEs", *Journal of Accounting & Organizational Change*, Vol. 19, No 6, pp.24-45. https://doi.org/10.1108/JAOC-06-2021-0080.

Laitinen, E.K., Camacho-Miñano, M., Muñoz-Izquierdo, N. (2023), "A review of the limitations of financial failure prediction research", *Revista de Contabilidad - Spanish Accounting Review*, Vol. 26, No 2, pp.255-273. https://doi.org/10.6018/rcsar.453041.

Latifah, L., Setiawan, D., Aryani, Y.A., Rahmawati, R. (2021), "Business strategy–MSMEs' performance relationship: innovation and accounting information system as mediators", *Journal of Small Business and Enterprise Development*, Vol. 28, No 1, pp.1-21. https://doi.org/10.1108/JSBED-04-2019-0116.

Liu, B. (2023), “Analysis of the limitations of Chinese enterprises' financial statements and countermeasures”, *BCP Business & Management*, Vol. 38, pp.1333-1338. https://doi.org/10.54691/bcpbm.v38i.3891.

Lutfi, A., Alkelani, S.N., Al-Khasawneh, M.A., Alshira’h, A.F., Alshirah, M.H., Almaiah, M.A., Ibrahim, N. (2022), “Influence of digital accounting system usage on SMEs performance: The moderating effect of COVID-19”, *Sustainability*, Vol. 14, No 22, 15048. https://doi.org/10.3390/su142215048.

Michulek, J., Gajanova, L., Krizanova, A., Blazek, R. (2024), “Why do companies cook the books? Empirical study of the motives of creative accounting of Slovak companies”, *Administrative Sciences*, Vol. 14, No 7, 158. https://doi.org/10.3390/admsci14070158.

Mlawu, L., Matenda, F.R., Sibanda, M. (2025), “Incentives for accrual-based earnings management in emerging economies—A systematic literature review with bibliometric analysis”, *Administrative Sciences*, Vol. 15, No 6, 209. https://doi.org/10.3390/admsci15060209.

Nartey, S.N., van der Poll, H.M. (2021), “Innovative management accounting practices for sustainability of manufacturing small and medium enterprises”, *Environment, Development and Sustainability*, Vol. 23, No 12, pp.18008-18039. https://doi.org/10.1007/s10668-021-01425-w.

Oka, M.E., Hromada, M. (2023), “The role of auditors in critical infrastructure protection: Case in Czech Republic”, *Transportation Research Procedia*, Vol. 74, pp.1239-1245. https://doi.org/10.1016/j.trpro.2023.11.267.

Olojede, P., Erin, O. (2021), “Corporate governance mechanisms and creative accounting practices: the role of accounting regulation”, *International Journal of Disclosure and Governance*, Vol. 18, No 3, pp.207-222. https://doi.org/10.1057/s41310-021-00106-4.

Poradova, M. (2021), “Creative accounting as one of the global tools for detecting fraud in Europe”, *SHS Web of Conferences*, Vol. 129, 03024. https://doi.org/10.1051/shsconf/202112903024.

Putra, Y. (2019), “Analysis of factors affecting the interests of SMEs using accounting applications”, *Journal of Economics and Business*, Vol. 2. https://doi.org/10.31014/aior.1992.02.03.129.

Remenarić, B., Kenfelja, I., Mijoč, I. (2018), “Creative accounting–motives, techniques and possibilities of prevention”, *Ekonomski Vjesnik: Review of Contemporary Entrepreneurship, Business, and Economic Issues*, Vol. 31, No 1, pp.193-199.

Sadowski, A., Comporek, M., Osinska, M., Walińska, E., Engelseth, P. (2025), “Earnings management among industries: between the old and new economies”, *Technological and Economic Development of Economy*, Vol. 31, pp.364-387. https://doi.org/10.3846/tede.2025.23117.

Salehi, M., Ahmed Jabbar, M., Orfizadeh, S. (2024), “Management psychological characteristics and earnings management”, *Journal of Facilities Management*, Vol. 22, No 4, pp.626-652. https://doi.org/10.1108/JFM-05-2022-0055.

Sánchez-Ballesta, J.P., Yagüe, J. (2021), “Financial reporting incentives, earnings management, and tax avoidance in SMEs”, *Journal of Business Finance & Accounting*, Vol. 48, No 7-8, pp.1404-1433. https://doi.org/10.1111/jbfa.12519.

Semaniuk, V., Marchyshyn, N. (2025), “The impact of behavioural economics concepts on accounting science”, *Accounting & Finance/Oblìk ì Finansi*, Vol. 107, No 1, pp.5-14. https://doi.org/10.33146/2307-9878-2025-1(107)-5-14.

Sevi, D., Mulyati, S., Kurniawan, A. (2021), “The effect of knowledge of ethics, religiosity, ethical sensitivity, ethical orientation to accounting students’ perception of creative accounting practices”, *ACCRUALS (Accounting Research Journal of Sutaatmadja)*, Vol. 5, No 1, pp.63-88. https://doi.org/10.35310/accruals.v5i01.685.

Velte, P. (2019), “The bidirectional relationship between ESG performance and earnings management–empirical evidence from Germany”, *Journal of Global Responsibility*, Vol. 10, No 4, pp.322-338. https://doi.org/10.1108/JGR-01-2019-0001.

Yusrianti, H., Ghozali, I., Etna, Y., Aryanto, A., Eka, M. (2020), “Financial statement fraud risk factors of fraud triangle: Evidence from Indonesia”, *International Journal of Financial Research*, Vol. 11, pp.18217-18217. https://doi.org/10.5430/ijfr.v11n4p36.

Zachariah, D., Haninun. (2025), “Earnings management in the construction sector: An empirical analysis of investment, distress, and asymmetry in Indonesia”, *International Journal of Accounting, Management, Economics and Social Sciences (IJAMESC)*, Vol. 3, pp.1805-1817. https://doi.org/10.61990/ijamesc.v3i5.619

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Regular paper

KŪRYBINĖ APSKAITA MAŽOSE ĮMONĖSE: POVEIKIO IR RIZIKOS ANALIZĖ ČEKIJOS KONTEKSTE

Irena Honková

Santrauka. Finansinės ataskaitos yra svarbus informacijos šaltinis priimant sprendimus, tačiau jų patikimumą gali sumažinti kūrybinė (manipuliacinė) apskaita, ypač mažose įmonėse, kurios dažnai veikia esant ribotam reguliavimui ir silpnesnei vidaus kontrolei. Straipsnyje nagrinėjamos kūrybinės apskaitos rizikos mastas ir priežastys mažose Čekijos įmonėse, daugiausia dėmesio skiriant neatitikimams tarp pelno prieš mokesčius ir pinigų srautų, kurie laikomi apskaitos klaidų ir sukčiavimo indikatoriais. Analizė paremta 2010–2024 m. laikotarpio mažų įmonių duomenų rinkiniu, apimančiu gamybos, statybos ir prekybos sektorius. Kūrybinės apskaitos rizika nustatyta taikant Beneish M-Score metodologiją visuose trijuose analizės lygmenyse. Siekiant padidinti diagnostinį tikslumą analizė papildyta šešiais finansiniais rodikliais ir dvylika apskaitos straipsnių. Tarpšakiniai skirtumai vertinti naudojant proporcijų lygybės Z-testą. Rezultatai atskleidė, kad reikšmingi pelno ir pinigų srautų neatitikimai yra plačiai paplitę visuose analizuotuose sektoriuose. Nors M-Score rodikliu matuojama poveikio rizika tarp sektorių reikšmingai nesiskiria, statistiškai reikšmingi skirtumai nustatyti priežastinės rizikos atvejais, ypač susijusiais su pelningumo ir kaupimo (angl. *accrual-based*) rodikliais. Sukauptos sąnaudos, atidėjiniai ir tam tikri pajamų ir sąnaudų straipsniai išsiskiria kaip dažniausi padidintos rizikos šaltiniai, ypač statybos ir gamybos sektoriuose. Šie rezultatai atitinka ankstesnius tyrimus, skirtus viešai kotiruojamoms įmonėms Čekijoje. Tyrimas praplėtė M-Score taikymą mažoms įmonėms Europos apskaitos kontekste ir leido pateikti naudingus orientyrus auditoriams, išorės finansinių ataskaitų vartotojams ir finansų vadovams, siekiantiems stiprinti vidaus kontrolę ir užtikrinti teisingą bei patikimą finansinę atskaitomybę.

Reikšminiai žodžiai: apskaitos sukčiavimas; finansinė analizė; pinigų srautai; pelno valdymas.