OECONOMIA COPERNICANA

VOLUME 10 ISSUE 1 MARCH 2019



p-ISSN 2083-1277, e-ISSN 2353-1827

www.oeconomia.pl

ORIGINAL ARTICLE

Citation: Paseková, M., Kramná, E., Svitáková, B., & Dolejšová, M. (2019). Relationship between legislation and accounting errors from the point of view of business representatives in the Czech Republic. *Oeconomia Copernicana*, *10*(1), 193–210. doi: 10.24136/oc.2019.010

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Received: 5.01.2019; Revised: 14.02.2019; Accepted: 21.02.2019; Published online: 15.03.2019

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Relationship between legislation and accounting errors from the point of view of business representatives in the Czech Republic

JEL Classification: M41

Keywords: accounting standards; financial statements; accounting errors and frauds; the Czech Republic

Abstract

Research background: Previous studies have demonstrated that providing relevant information to users is positively affected by higher quality of accounting standards and adhering to ethical rules and accounting principles by accounting professionals. On the other hand, there are a lot of cases when the law was broken. The most common reason for committing financial statement's fraud include increasing stock prices, getting loans from bank or avoiding payment of taxes. **Purpose of the article:** The aim of this paper is to evaluate both the relationship between using of

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creative accounting from the point of view of enterprises and non-profit organizations in the Czech Republic.

Methods: Among the quantitative research methods the questionnaire was used. The questionnaires were sent out to randomly 201 selected enterprises and non-profit organization. The survey was conducted from September 2017 to the end of January 2018. The data were analyzed by means of the tools of descriptive statistics and the chi-square goodness of fit test. The research questions sought to investigate whether Czech Accounting Standards helped in all areas of accounting and reporting and avoiding of errors in financial statements, and whether the respondents encountered fraudulent procedures in compiling financial statements.

Findings & Value added: The results indicated that using Czech Accounting Standards was perceived as a useful tool in solving all situations in areas of accounting and avoiding accounting errors. Moreover, it was proved that the volume and frequency of errors were not significant in financial statements.

Introduction

Accounting ensures information about the company's situation as well as passing this information to related individuals or organizations. Accounting information, for the majority of interest groups, has become among the crucial sources of information about the company (Otrusinová & Šteker, 2013, p. 436). Accounting realizes the reporting function through the financial statements. Financial statements are records of financial flows of a business. Generally, they include balance sheets, income statements, cash flow statements, statements of retained earnings (Ravisankar *et al.*, 2011, p. 491).

The International Accounting Standards Committee (IASC) has acknowledged that the purpose of financial statements is to provide information about the financial position and performance of the company. This information is valuable to a wide range of users in making economic decisions (Elliott & Elliott, 2011, p. 22). According to the Türkmen (2016, p. 77), the users of accounting information are managers, employees, shareholders, lenders and investors.

Shareholders require periodic information about the company. They need to be sure that managers are working properly for the resources under their control. On the basis of this information, they are able to evaluate the performance of managers (Elliott & Elliott, 2011, pp. 3–4). The bank also needs the financial statements in order to decide whether to grant loans to companies (Ravisankar *et al.*, 2011, p. 491). The quality of accounting information affects also the interests of creditors and decision-making of investors (Li *et al.*, 2017, p. 1).

Porter and Norton (2015, pp. 52–56) add that external users such as investors and creditors often do not have access to detailed business records. They make decisions on the basis of financial statements. It is, therefore,

evident that accountancy can fulfill its informative function only if the accounting data is processed at a high level of quality. They summarize the qualitative characteristics of accounting information. In their opinion, the information should be understandable, relevant, faithfully representative, comparable and consistent. Similarly, Puican *et al.* (2011, p. 54) have presented that relevance, credibility and comparability are the main accounting quality characteristics.

The paper aims at testing both the relationship between using legislation and accounting errors rate in the financial statements, as well as the possible using of creative accounting from the point of view of enterprises and non-profit organizations. The authors focused on this issue because they wanted to complete a comprehensive view of accounting practices by the context relating to the occurrence of accounting errors and application of creative accounting. This research is conducted as part of a broader research focusing on the quality of accounting information in the Czech Republic.

The research is based on a questionnaire investigation. A survey was conducted among 201 enterprises and non-profit organizations from the Czech Republic. The research was carried out from September 2017 to the end of January 2018. The questions in the questionnaire were aimed at characteristics such as the category and size of the organization, internally or externally processing of bookkeeping and relationship between using of legislation and accounting errors rate in the financial statements and the possibility of using of creative accounting. The data were evaluated by means of the tools of descriptive statistics. We applied simultaneously the chi-square goodness of fit test to evaluate the first statistical hypothesis at the significance level 5 %. This chi-square goodness of fit test was chosen to verify that the answers were equally distributed.

The paper is organized as follows. The first section of the paper reviews the empirical literature related to the issue concerning detection of accounting errors and frauds. In the second section the authors present the description of methods and data used. The third section consists of the presentation and discussion of the results. The paper ends with concluding remarks.

Accounting principles and detection of accounting errors

The quality of the accounting information of each company is diverse because the professional ability of accountants and professional ethics differ greatly within companies (Adali & Kizil, 2017, p. 54). In order to provide relevant information, the accountant should follow the rules and principles on which accounting data processing is based (Puican *et al.*, 2011, pp. 52).

Accounting Law in the Czech Republic defines the basis principles that have to be fulfilled in accounting. According to the Accounting Law, accounting should provide a true and fair view of the economic activity and financial position of an enterprise so that an external user can make economic decisions on the basis of the financial statements.

International Financial Reporting Standards (IFRS) are also based on the principles that impose greater demands on the professional quality of accountants. US GAAPs are based on customary law. US GAAP informed about the content of financial statements from the objective point of view and the details of the individual information.

Accounting professionals are responsible to their colleagues, customers and the public, since they are obliged to comply with ethical rules during their work. Adali and Kizil (2017, p. 54) add that great majority of accounting professionals believe that the condition of being honest, trustworthy and impartial is the basis of accounting profession. According to their study, the high population agrees that professional accountants must adhere to the ethical rules. The authors agree with this opinion.

Accounting error can be specified as error committed by person responsible for recording and maintaining accounts of the company in the accounting process. It can be in the form of omitting the transaction to record, selecting wrong account or wrong books, etc. (Mamo, 2014, p. 494). Accounting error is unsuitable behavior against accounting principles but it is not intentional and not repeatable.

Accounting errors are further transferred into financial statements. Chaney *et al.* (2011, p. 59) assert that some companies require only a mechanical application of accounting rules while others types rely on the judgment of the company's management and accountants. These decisions represent errors — both intentional and unintentional.

Mamo (2014, p. 495) divides accounting errors into two following types: clerical errors committed by accounting clerks and errors of principle that occur by violating the principles of accounting. According to the research findings of Adali and Kizil (2017, p. 63) errors mostly occurred due to incorrect data which was received from clients. The results also showed that lot of errors also occur during the recording process. On the other hand, errors occurring due to the inadequacy of technology that professionals were using and errors occurring due to accounting software were low.

Türkmen (2016, p. 80–82) has mentioned that general mistakes are usually made, especially in accounting areas such as financial accounts, e.g. cash and bank accounts, cheques, bank loans and trade payables and receivables.

There is a difference between error and fraud in the formation of the spiritual element of the crime (Adali & Kizil, 2017, p. 54). Financial fraud is a broad term with various potential meanings. It can be explained as the intentional use of illegal methods or practices for the purpose of obtaining financial gain (Zhou & Kapoor, 2011, p. 570).

The motivation for creative accounting is the gap between the actual performance and the expectations of the enterprise regarding the favorable results. The variance will lead to manipulation of profit to tie in to forecasts (Mamo, 2014, p. 495).

Ravisankar *et al.* (2011, p. 492) stress that opportunities for fraud arise in case of ineffective accounting internal audit or high turnover or oversight over financial reporting.

There are many different types of financial fraud. West and Bhattacharya (2016, p. 50) describe some major types: bank fraud (credit card fraud, mortgage fraud, money laundering), corporate fraud (financial statement fraud, security commodities fraud) and insurance fraud (automobile insurance fraud, health care fraud). Another classification uses Association of Certified Fraud Examiners. They sort three primary categories of fraud: corruption, asset misappropriation and financial statements fraud (Kopun, 2018, p. 2).

Financial statement fraud involves doctoring financial statements to make the company appear more profitable. Financial statement fraud may be perpetrated to improve stock performance or reduce tax obligations (Ravinsankar *et al*, 2011, p. 492).

Ramos (2003, p. 32) confirms that reasons for committing financial statement fraud include increasing stock prices or getting loans from bank or avoiding payment of taxes. He claims that a number of companies make fraudulent financial statements in order to cover up their true financial statements and make selfish gains at the expense of stockholders. Another important finding of research was made by Adali and Kizil (2017, p. 63). The results indicate that fraud is mostly made in order to get credit from banks or to provide benefits to the company by not showing the real situation of the company. On the other hand, based on the study findings, fraud is not generally comitted to hide the corruption of businessman. Accounting misrepresentation of data has been confirmed by other authors such as Türkmen (2016, p. 83). Türkmen (2016, p. 83) states that firms may intentionally manipulate accounting data in order to present financial statements that are more than standardly credible in the interests of acquiring more and cheaper credit facilities.

The probability of financial reporting fraud depends on three factors as pointed by Ramos (2003, p. 30): pressures, opportunities and rationalization of financial statement fraud.

The research focused on financial statement fraud with financial items from a selection of public Chinese companies was made by Ravisankar *et al.* (2011, p. 491). They highlight the use of data mining for solving frauds. From the perspective of USA companies, the computational fraud detection model was proposed by Glancy and Yadav (2011, pp. 595–601). They analysed section of 10-K documents for American companies known to be fraudulent.

Supervision of the companies is carried out by auditors. Financial statements fraud is hard to identify because it is often made by knowledge-able people in their field so they are able to mask it well.

Traditional approaches, such as auditing, are inefficient and unreliable because they are based on manual techniques. On the other hand, approaches based on data mining have been shown to be beneficial because of their ability to identify small anomalies in large data (Ngai *et al.*, 2011, pp. 559–560). The advantage of data mining approaches is their application to fraud detection for their efficiency at processing large datasets and their ability to work without requiring knowledge of the input variables (Ravisankar *et al.*, 2011, p. 493).

There exist a variety of data techniques for detection of fraud. West and Bhattacharya (2016, pp. 51–52) described the relative strengths and limitations of the statistical and computation techniques that have been applied to data mining problems in recent years. The methods are neural network, logistic model, support vector machine, decision trees, forest and CART, genetic algorithm (programming), text mining, self-organising map, Bayesian belief network, process mining, artificial immune system, and hybrid methods.

By classifying the existing practices on the type of fraud, West and Bhattacharya (2016, p. 59) identified the techniques more suitable and more commonly used for financial statement fraud. They mentioned Bayesian belief networks, support vector machine, genetic programming, group method of data handling, and some hybrid methods based on text mining with success rate more than 90% (West & Bhattacharya, 2016, p. 59).

Kopun (2018, p. 13) summarized previous research on the application of data mining methods in the detection of financial statement fraud, focusing on financial analysis indicators that can detect fraud in financial statements.

Financial ratios help managers to interpret the numbers found in financial statements. They are a valuable tool to inform about the measure of indebtedness, payment ability of the customers, the volume of operating expenses and proper using of company assets to generate income. The financial ratios explain the numbers from the areas such as liquidity (current and quick ratio), profitability (gross profit margin, return on assets, return on equity), safety (debt to equity), etc. (Ravisankar *et al.*, 2011, p. 492). In general, both accounting errors and creative accounting violate the basic accounting principle — to provide a true and fair view of the economic activity of an enterprise — and thus affecting the quality of accounting information.

Research methodology

The aim of this paper is to investigate the relationship between using of legislation and accounting errors rate in the financial statements as well as the possible using of creative accounting from the point of view of enterprises and non-profit organizations.

When working on this paper, four research questions were established and the corresponding statistical hypotheses were identified in relation to these research questions:

RQ1. Can Czech Accounting Standards help solving issues in all areas of accounting and reporting and avoiding of errors in financial statements?

 H_0 : Czech Accounting Standards have no statistically significant impact on the prevention of errors in financial statements.

 H_1 : Czech Accounting Standards have a statistically significant impact on the prevention of errors in financial statements.

RQ2. Did the respondents encounter the fraudulent procedures in compiling financial statements?

 H_0 : The respondents did not encounter the fraudulent procedures in compiling financial statements and this relationship is not statistically significant.

 H_1 : The respondents did encounter the fraudulent procedures in compiling financial statements and this relationship is statistically significant.

RQ3. Can the volume and frequency of errors have a significant impact on the quality of financial statements?

 H_0 : The volume of errors has no statistically significant effect on the quality of financial statements.

 H_1 : The volume of accounting errors has a statistically significant effect on the quality of financial statements.

RQ4. Can the frequency of errors have a significant impact on the quality of financial statements?

 H_0 : The frequency of errors has no statistically significant effect on the quality of financial statements.

 H_1 : The frequency of errors has a statistically significant effect on the quality of financial statements.

The research is based on a questionnaire investigation (Table 1), in which 201 respondents from the Czech Republic participated. This research was conducted with the help of students of the Faculty of Management and Economics of Tomas Bata University in Zlín. These students conducted a questionnaire survey with the enterprises or the non-profit organizations in all regions in the Czech Republic.

We tried to make such a sample of respondents that would correspond to the structure of enterprises and non-profit organizations in the population, but we have not succeeded fully. The research survey was conducted from September 2017 to the end of January 2018. The questionnaire contained the closed questions. For some questions, the respondents could choose one answer from a Likert scale. The questions in the questionnaire were aimed at characteristics such as the category and size of the organization, internally or externally processing of bookkeeping and relationship between using of legislation and accounting errors rate in the financial statements and the possibility of using of creative accounting.

All statistical hypotheses were evaluated by means of the tools of descriptive statistics. We applied simultaneously the chi-square goodness of fit test to evaluate the first statistical hypothesis at the significance level 5 %. This chi-square goodness of fit test was chosen to verify that the answers were equally represented. All calculations were performed in SPSS statistical program and in Microsoft Excel. The weakness of the research relates to the fact that the questionnaire answers may be affected by the experience of accountants with the analyzed issue by the questionnaire. The implementation of a questionnaire survey is always associated with a certain degree of subjectivity when providing data. The respondent's false answers can significantly influence both the factual and statistical interpretation of results. The number of respondents plays an important role in the questionnaire survey, and the respondents are not always willing to answer the questionnaire. When we perform the chi-square goodness of fit test, it depends on whether the hypothesized proportions will be the same or a certain value will be set for each possible answer. The advantage of this test is that it will allow us to assess what answers the respondents prefer the most.

Results

The introductory questions of the questionnaire were focused on the size of the organization according to the number of employees and category of organization (Figure 1). Micro businesses formed the largest proportion in the monitored sample; their number exceeded 30% of the total research sample. The proportion of small and medium-sized was approximately the same — 27% (small) and 29% (medium). The proportion of large organization was only 11%. It is evident that the largest number of businesses in the research sample is non-profit organizations.

The questionnaire follows by the examination whether the bookkeeping is being processed internally or externally (Figure 2). It is evident from Figure 2 that 80% of organizations process their accounting by their own strengths and 20% make it externally. The results showed that large organizations have their own accountants for bookkeeping while small organizations more often outsource these services.

The graph (Figure 3) provides information of the relationship between using Czech Accounting Standards and avoiding of accounting errors or influencing the profit of the organization. More than 60% of respondents think the Czech Accounting Standards solve situation in all areas of accounting. According to their opinion, the Czech Accounting Standards help to avoid errors in preparation of financial statements (80% of respondents). Generally, the Czech Accounting Standards are perceived as useful.

These four questions were also verified through the chi-square goodness of fit test. We assumed that the hypothesized proportion of all answers was equal. We found that the hypothesized proportion of all answers were not equal in all four answers (see Table 2–5).

Our test statistics in Table 2 is statistically significant: $\chi^2(3) = 78.7$, p-value < 0.005. Therefore, we can reject the null hypothesis and conclude that there are statistical significant differences in the preference of answers whether CZ GAAP can solve all situations in all areas of accounting and reporting, with more respondents preferring the answers "rather yes" (N = 102) compared to either the answers "rather no" (N = 49) or "definite-ly yes" (N = 26) or "definitely no" (N = 24).

Our test statistics in Table 3 is statistically significant: $\chi^2(3) = 161.37$, p-value < 0.005. Therefore, we can reject the null hypothesis and conclude that there are statistical significant differences in the preference of answers whether the correct observance of CZ GAAP is a guarantee of avoiding errors, with more respondents preferring the answers "rather yes" (N = 126) compared to either the answers "rather no" (N = 30) or "definitely yes" (N = 37) or "definitely no" (N = 8).

Our test statistics in Table 4 is statistically significant: $\chi^2(3) = 135.89$, p-value < 0.005. Therefore, we can reject the null hypothesis and conclude that there are statistical significant differences in the preference of answers whether CZ GAAP are the usual cause of errors, with more respondents preferring the answers "rather no" (N = 117) compared to either the answers "rather yes" (N = 48) or "definitely yes" (N = 6) or "definitely no" (N = 30).

Our test statistics in Table 5 is statistically significant: $\chi^2(3) = 113.37$, p-value < 0.005. Therefore, we can reject the null hypothesis and conclude that there are statistical significant differences in the preference of answers whether CZ GAAP can have a significant impact on the financial statements, with more respondents preferring the answers "rather no" (N = 112) compared to either the answers "rather yes" (N = 47) or "definitely yes" (N = 12) or "definitely no" (N = 30).

The next part of the questionnaire was concentrated on the volume and frequency of accounting errors. From the point of view of business representatives, surveyed enterprises do not make regular mistakes (97%). Only a negligible percentage (3%) of enterprises admitted that they make mistakes, especially micro and small businesses that keep their books internally. The respondents (94%) agree that in most cases these mistakes almost will not have affect to the financial statements. These mistakes are insignificant errors — difference in crowns (79% of respondents), minor errors — 0.1 to 0.9 percent of the enterprise's assets (21%) and they occurred only once (see Figure 4). As part of the questionnaire survey, we were wondering what the quality of the annual reports was and if the enterprises published financial statements in the Commercial Register.

The majority of respondents (61%) prepare precise annual reports with good reporting ability while other respondents make only formal annual reports without informative ability (39%). Nearly the same percentage of respondents (62%) published these annual reports in the Commercial Register.

The results of the analysis showed that respondents almost did not encounter with fraudulent process (90%) or pressures to improve financial statements. Only a small part admitted that they had been experienced with a pressure in the accounting department to make changes in financial statements. Most often it was the influencing of the value of the assets or liabilities of the enterprise (85%) or minimization of tax burden (12%) (see Figure 5).

Financial statements fraud or accounting mistakes are hard to identify. Data mining have been shown to be beneficial because of their ability to identify financial frauds. Less precise but also used tool are financial ratios that can help managers to find financial errors or fraud in financial statements.

Figure 6 contains the usage of financial ratios in financial statements. The results showed that managers use in particular indebtedness, liquidity, profitability and activity for the controlling of the enterprise. For monitoring of profit for business managers seems to be significant indicator such EBITDA. Comprehensive performance measurement was not applied too often in the surveyed companies.

Discussion

The realized survey confirmed the expectation that Czech Accounting Standards were useful tool to avoid accounting errors. According to the Zicke and Kiy (2017, p. 216), higher quality accounting standards are supposed to affect positively the companies' reporting quality and to be of greater value to users of financial statements. Most of the enterprises stated that their annual reports have good reporting quality and provide relevant information (61%). This information is not surprising to us, because almost the same percentage has published their reports in the commercial register. From our point of view, these financial statements represent the enterprise which also affects the effort to create them properly.

It should be stressed that our research is based on subjective assessments by business representatives on accounting errors and frauds. The respondents have to admit that they make accounting errors that can be understood as incorrectly executed work or even fraud that breach the true and fair view of accounting.

Conclusions

Creative accounting and accounting errors and frauds are the issues that has been published by many authors. Creative bookkeeping can affect the view to the company's financial situation. The basic requirement of accounting statements is to faithfully and truthfully portray reality. Accounting information is still one of the company's core sources of information for most of the interest groups. Providing of relevant information to users is positively affected by higher quality of accounting standards and principles.

Our survey attempts to assess the relationship between using of legislation and accounting errors rate in the financial statements as well as the possible using of creative accounting from the subjective attitude of organizations. Business representatives were required to assess using Czech Accounting Standards from the point of view of risk of unintentional accounting errors. Organizations were further questioned about their experience with fraudulent process or pressures to improve financial statements. The results indicated that using of Czech Accounting Standards was perceived as useful tool in solving all situations in areas of accounting and avoiding of accounting errors. Moreover, it was proved that that the volume and frequency of errors was not significant in financial statements. Therefore, the authors of this article recommend using Czech Accounting Standards in practice to solve issues in all areas of accounting and reporting and to avoid the errors in financial statements.

According to the results of the questionnaire, respondents almost did not encounter fraudulent processes or pressures to improve financial statements. On the other hand, they do not have to admit to fraudulent process because they would confirm that they breach the true and fair view of accounting.

The results of the study are limited by the number of the respondents in the sample. A significant enlargement of the research range to another countries and involvement of tax consultants, auditors and tax authorities would make it possible to find out the opinion both from the one who caused the error and from the control authorities. The research is valid for the current legislative accounting standards. The possibility of comparisons over a long period of time could eliminate possible changes in current standards. Therefore, the authors of the paper will continue their research with tax consultants, auditors and tax authorities as other entities influencing accounting errors.

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Acknowledgments

The authors are thankful to the Internal Grant Agency of University No.: IGA/FaME/2018/014 "Influence of the specific risk factors of the financial statements on the company's competitiveness with an impact on the tax area" for financial support to carry out this research.

Annex

Research		The relationship between legislation and accounting errors	
Data collection processing	and	2017, enterprises or non-profit organization of the Czech Republic	
Form of collection	data	Questionnaire survey, interviews with respondents	
Number questionnaires	of	201	

Table 1. Main characteristics of the questionnaire survey

Table 2. Can CZ GAAP solve all situations in all areas of accounting and reporting?

Response	Observed Frequency	Hypothesized Frequency	Residuals
Definitely yes	26	50.25	-24.25
Rather yes	102	50.25	51.75
Rather no	49	50.25	-1.25
Definitely no	24	50.25	-26.25

Table 3. Is the correct observance of CZ GAAP a guarantee of avoiding errors?

Response	Observed Frequency	Hypothesized Frequency	Residuals
Definitely yes	37	50.25	-13.25
Rather yes	126	50.25	75.75
Rather no	30	50.25	-20.25
Definitely no	8	50.25	-42.25

Table 4. Are CZ GAAP the usual cause of errors?

Response	Observed Frequency	Hypothesized Frequency	Residuals
Definitely yes	6	50.25	-44.25
Rather yes	48	50.25	-2.25
Rather no	117	50.25	66.75
Definitely no	30	50.25	-20.25

Table 5. Can CZ GAAP have a significant impact on the financial statements?

Response	Observed Frequency	Hypothesized Frequency	Residuals
Definitely yes	12	50.25	-38.25
Rather yes	47	50.25	-3.25
Rather no	112	50.25	61.75
Definitely no	30	50.25	-20.25

Figure 1. Relative representation of businesses according to size and category of organization (share of respondents in %)

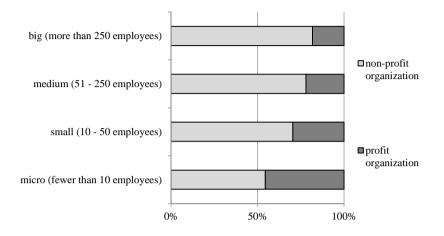


Figure 2. Relative representation of businesses according to size and processing of accounting (share of respondents in %)

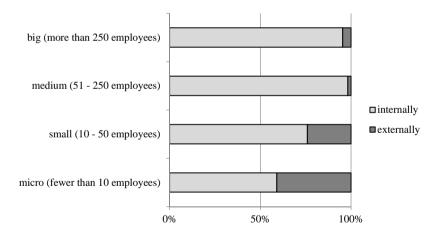


Figure 3. Usage of Czech Accounting Standards and possibility of accounting errors (share of respondents in %)

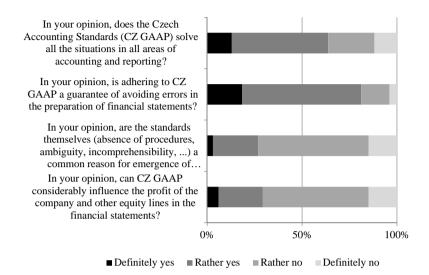


Figure 4. Regularity of accounting errors and their impact on financial statements (share of respondents in %)

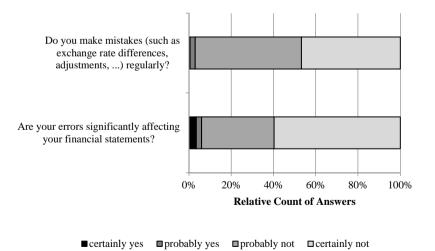
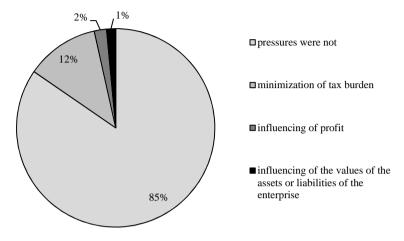


Figure 5. Area of pressures in the accounting department (share of respondents in %)



In which area were pressures in the accounting department?

Figure 6. Financial ratios used by managers (share of respondents in %)

