

# TRENDS IN BUSINESS FRAUDS : CASE OF CROATIA

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90<sup>th</sup> International Scientific Conference on Economic and Social Development –  
"Building Resilient Society: National and Corporate Security"

## Book of Proceedings

Editors:

**Robert Kopal, Ante Samodol, Domenico Buccella**



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## TRENDS IN BUSINESS FRAUDS: CASE OF CROATIA

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### **ABSTRACT**

*Business frauds and losses caused by fraud led to corporate scandals and the collapse of some of the world's largest corporations such as Enron and Satyam, and focused public attention on the problem of frauds and fraudulent financial reporting. The Association of Certified Fraud Examiners has been conducting global fraud research for years in order to familiarize the public with the main characteristics of business frauds and raise the level of fraud awareness. A comprehensive survey on fraud in the Republic of Croatia was conducted for the first time in 2021, and included 124 respondents from 16 different industrial sectors. The research related to frauds that occurred during 2021 and 2020, i.e. it covered the two years affected by the COVID-19 crisis. The research was conducted by the Association of Certified Fraud Examiners Croatia. This paper presents some of the main results of the research and provides a comparative presentation and analysis of trends in the Republic of Croatia with global trends in business frauds. According to the results presented by ACFE Croatia, total financial losses caused by business frauds amount to about HRK 165 million. Furthermore, according to estimates, about 13% of total annual income was lost due to fraud. The characteristics of frauds in the Republic of Croatia do not differ significantly from frauds on the global level, but certain specificities have been observed. The aim of this paper is to point out the basic characteristics and determinants of business frauds in the Republic of Croatia, to compare trends in the Republic of Croatia with the results of research at the global level, and to highlight the importance of anti-fraud controls and raising awareness about fraud at all levels of society.*

**Keywords:** *business frauds, fraud detection, fraud prevention, anti-fraud controls*

### **1. INTRODUCTION**

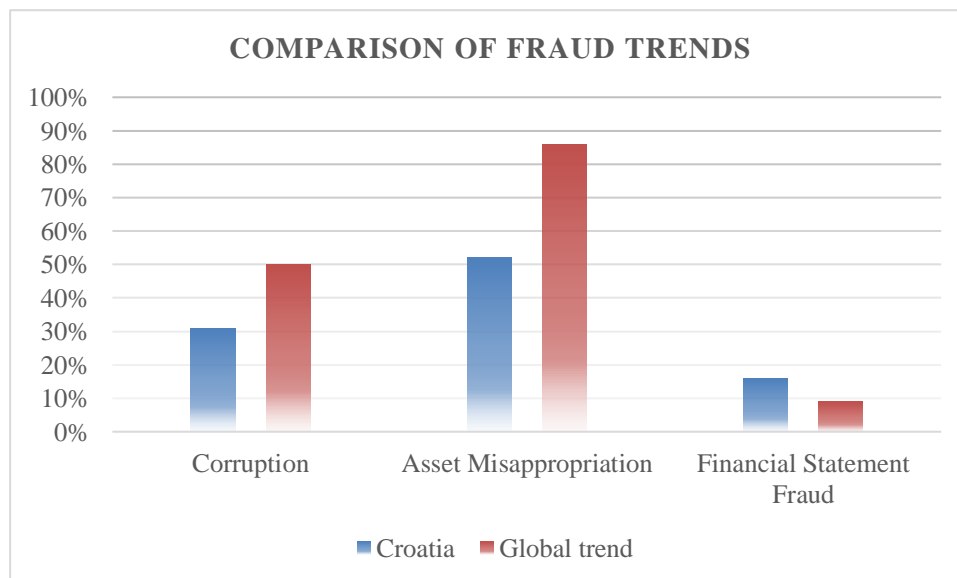
Business frauds present a global problem and practice has shown that no organization is immune and protected from various forms of business frauds. Major corporate scandals such as Enron, World-Com, Satyam and others have shaken investor confidence, put the accounting and auditing professions under a spotlight and highlighted the problem of fraud and fraudulent financial reporting. Enron and World-com are not isolated cases, and a whole series of corporate scandals have pointed to the unethical behavior of management, poor functioning of internal controls, and the failure of auditors to detect fraud in financial statements. All these events put the focus of the public, investors and regulators on analyzing fraud and developing mechanisms that will detect fraud in a timely manner as well as those that will act preventively and reduce the possibility of fraud to a minimum level.



In this sense, the Association of Certified Fraud Examiners (further on: ACFE) has been conducting research on business frauds for years, since 1996. Their annual reports on business frauds indicate trends in frauds, characteristics of perpetrators, effectiveness of supervisory mechanisms, etc. According to estimates, the average corporation annually loses about 5% of its revenue from various forms of fraud, i.e. fraud costs companies about 4.7 trillion dollars annually (ACFE, 2022, 8) and it should be emphasized that these are only estimated losses and that many frauds remain undetected. Fleming et al. point out that fraud, in addition to the financial cost for the company, generates losses for employees, customers and suppliers and society as a whole (Fleming et al, 2016, in Bekiaris & Papachristou, 2017, 467). Amiram et al. point out that "financial reporting fraud and other forms of financial reporting misconduct are a significant threat to the existence and efficiency of capital markets" (Amiram et al, 2018, 2). ACFE points out that "business fraud is probably the most expensive and most common form of financial crime in the world" (ACFE, 2022, 6), and business fraud itself is defined as "frauds that are committed by individuals against the organizations that employ them" (ACFE, 2022, 6). The turbulent business environment in which companies operate provides fertile ground for all kinds of misconduct, and companies are exposed to an increased risk of fraud. It is interesting to point out that according to the research conducted by ACFE and Grant Thornton on the impact of the COVID-19 pandemic on fraud and fraudulent reporting, as many as 71% of respondents believe that the level of fraud will increase in the future period as a result of the pandemic (ACFE, 2021, 4). Karpoff (2020) also states that the risk of business fraud is increased in the upcoming period as a result of the pandemic, and the current energy and economic crisis certainly further increases the risk of business fraud and the exposure of companies to business frauds. Soltani points out that "corporate fraud goes on at a deeper level within the company and the environment in which it operates" (Soltani, 2014, 252). Grandstaff & Solsma (2021, 421) point out that frauds last longer and longer, cause greater losses, and the number of listed companies involved in frauds increases over time. All of the above indicates the need for a stronger fight against fraud, but also the need to raise awareness about fraud and the losses it causes. The first line in the fight against frauds is represented by the system of internal controls. Rahim et al. state that a strong and well-designed system of internal controls increases business efficiency and compliance with laws, rules, policies and procedures (Rahim et al, 2017). On the other hand, weaknesses and deficiencies in the system of internal controls can contribute to committing fraud in the company. KPMG in conducted research also points out that weak internal controls encourage fraud and that empirical results show that anti-fraud controls in companies are not sufficiently developed (KPMG, 2016, 6). The Association of Certified Fraud Examiners Croatia (further on: ACFE Croatia) conducted the first comprehensive survey on frauds in the Republic of Croatia in 2021, and the sample included 124 respondents, i.e. companies in which fraud occurred during 2021 and 2020. In this work, the authors use the data collected by ACFE Croatia and the results presented within the report "How we steal? Research on Business Frauds in the Republic of Croatia". The aim of the paper is to conduct a comparative analysis of fraud trends and to compare the main characteristics of frauds in the Republic of Croatia with global trends. Within the framework of this work, special emphasis is on the analysis of controls aimed at preventing fraud. Namely, the research results show that in Croatian companies there is significant space for progress and improvement of control mechanisms in order to prevent and detect fraud in a timely manner. The paper consists of 4 chapters. After the introductory part of the paper, the second chapter presents the main features of business frauds in the Republic of Croatia and compares the results with global trends in fraud. In the third chapter, control mechanisms for fraud prevention are presented and compared, while the last, fourth part of the paper brings concluding considerations.

## 2. COMPARISON OF FRAUD TRENDS IN THE REPUBLIC OF CROATIA WITH GLOBAL TRENDS

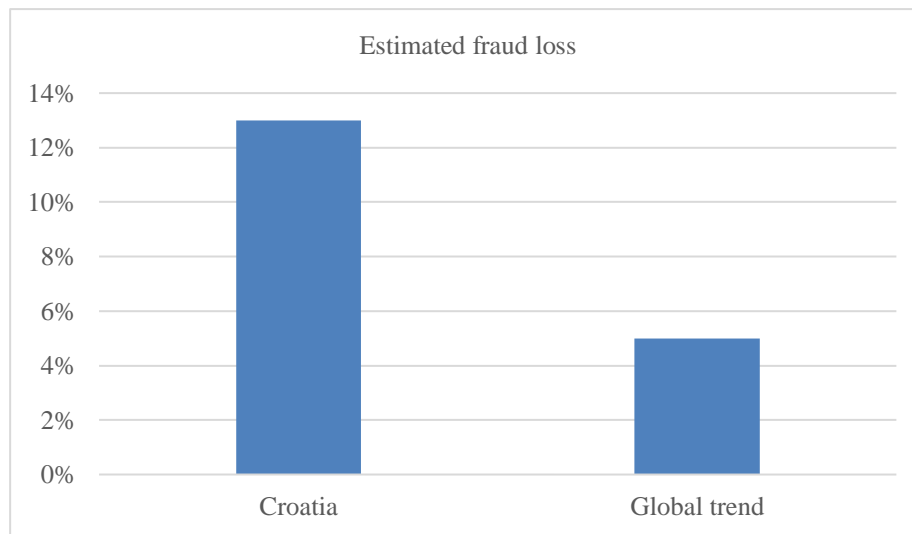
A comprehensive survey on frauds in the Republic of Croatia was conducted for the first time by ACFE Croatia in 2021. The survey included 124 respondents, i.e. companies from 16 different industrial sectors. The research related to frauds that occurred during 2021 and 2020, and the results of the conducted research are presented in the framework of report "How we steal? Research on Business Frauds in the Republic of Croatia" (ACFE Croatia, 2022). In this part of the work, the main results of research on business frauds in Croatia are presented and compared with global trends. Business frauds are usually classified into three basic categories: corruption, misappropriation of assets, and financial statement fraud (ACFE, 2022, 10). According to business fraud research that ACFE has been conducting for years, these three forms of business frauds dominate, although in recent years, trends towards digitization and, consequently, computer frauds have been observed. Misappropriation of assets, which includes the theft of money or other property (most often inventory and office supplies) from the employer, is the most common form of business frauds and is present in 86% of cases globally, while it is represented in 52% of fraud cases in Croatia. Corruption as the second most represented form of frauds was detected in 50% of fraud cases at the global level, and according to the Croatian results, corruption was present in 31% of fraud cases.



*Figure 1: Comparative overview of the most common forms of business fraud (Source: Editing by the author according to: ACFE 2022, ACFE Croatia 2022.)*

On a global level, financial statement frauds involving overestimating or underestimating of net worth and profit are represented in 9% of cases, while in Croatia this type of fraud is represented in 16% of cases. It should certainly be pointed out that in this sense we are not following world trends, because the third most common form of fraud in the Croatian sample is cybercrime, i.e. computer fraud. This form of frauds was detected in 22% of cases, and the most common form of computer fraud is phishing. This type of computer crime was detected in 65% of fraud cases, and this form of fraud refers to "a type of social engineering in which the perpetrator sends fake messages that are almost identical to those of legitimate services" (ACFE Croatia, 2022, 11). The perpetrator's intention is to reveal the user's confidential data, which is then misused in various ways. When the estimated fraud losses are analyzed, there is a difference in trends in Croatia compared to the global average. Namely, for years ACFE has stated in its reports that it is estimated that the average corporation annually loses around 5% of its revenue due to

various forms of fraud. In Croatia, these estimates are at a slightly higher level - it is assumed that as much as 13% of revenue is lost as a result of various fraudulent activities (ACFE Croatia, 2022, 5).



*Figure 2: Estimated losses from business frauds  
 (Source: Editing by the author according to: ACFE 2022, ACFE Croatia 2022.)*

In the Croatian sample, the largest number of companies that are victims of frauds come from the private sector (limited liability company or a privately owned joint stock company) - about 74% of them, while the rest of the companies belong to the public sector (25%), and a very small share (1%) is made up of organizations such as cooperatives and the like. In the global framework, private companies were victims of fraud in about 44% of cases, and public companies in 25% of cases. State-owned organizations were victims of fraud in about 18% of fraud cases. It is also interesting to point out the average duration of fraud, that is, the time that elapses from the commission of the fraud to its discovery. In the sample of Croatian companies that were victims of fraud, the average duration of fraud is 8 months, which is shorter than the global trend, according to which the duration of fraud is 12 months.

### 3. COMPARATIVE ANALYSIS OF CONTROL MECHANISMS FOR FRAUD DETECTION AND PREVENTION

At the global level, tips have been the dominant form of detection for years, and as many as 42% of all frauds are detected by tips. In Croatia, tips are also the most effective way to detect fraud, but they are represented in a smaller percentage (22%) compared to the global average.

	Croatia		Global trend	
	Detection method	%	Detection method	%
1	Tip	22%	Tip	42%
2	By accident	13%	Internal audit	16%
3	Document examination	13%	Management review	12%
4	Management review	9%	Document examination	6%
5	Automated transaction/data monitoring	7%	Account reconciliation	5%

*Table 1: The five most common methods of initial fraud detection  
 (Source: Adjusted according to ACFE 2022, ACFE Croatia 2022)*

It is interesting to point out that in Croatia as many as 13% of fraud cases were discovered by accident, while other fraud detection mechanisms refer to internal control mechanisms such as document review, managerial control mechanisms and monitoring of data and transactions. The main difference between the Croatian results and the global trends is the significantly lower share of tips than at the global level, but also the fact that only 6% of cases were discovered through internal audits, while at the global level this share amounts 16%. Also, although managerial control mechanisms are in fourth place in terms of fraud detection, it should be noted that only 9% of frauds were detected in this way, and that most of the surveyed organizations have not implemented this form of control at all. In this sense, there is a significant space for progress in the Republic of Croatia in the form of implementing basic control mechanisms for the prevention and detection of frauds. Proactive control mechanisms such as tips, reconciliation of accounts, document reviews, automatic monitoring of data and transactions, etc. are much more effective in fraud prevention and detection, and as a result, there is less loss from fraud. Exactly in this segment of business and improvement of internal control system companies should act more actively in order to reduce the possibility of committing business fraud to a minimum level. Within this research, the authors also analyzed whether there are differences in the detection of fraud depending on the form of company ownership. Namely, Fleming et al. (2016) point out that the losses from fraud in public companies are higher and it is expected that these frauds will in most cases be detected through formally designed control mechanisms rather than by accident. A total of 62 respondents answered the question related to the method of fraud detection, and the results of fraud detection depending on the form of ownership are shown in table 2. It is clear that tip is the most common form of fraud detection in both cases. It can be observed that more frauds are discovered accidentally in private than in state/public or local owned enterprises. Furthermore, it is interesting to point out that in state/public or local owned companies, in none of the cases managerial control mechanisms or automatic monitoring of data and transactions were highlighted as a form of fraud detection.

<b>Fraud detection method</b>	<b>Private ownership</b>	<b>State/public/local ownership</b>
1	10	5
2	7	2
3	6	2
4	6	0
5	5	0
6	12	7

*Table 2: Detection of fraud in relation to the form of ownership  
 (Source: Editing by the author)*

Fraud detection method:

- 1 - tip
- 2 - by accident
- 3 - document examination
- 4 - managerial control mechanisms
- 5 - automated transaction/data monitoring
- 6 - other forms of detection

A statistical analysis of the differences in the method of fraud detection depending on the form of ownership (private or state/public/local) was made using the Chi-square test. The results of the analysis showed that there is no statistically significant difference ( $\chi^2 = 5.542$ ,  $p\text{-value} = 0.3534$ ) in fraud detection with regard to the form of ownership.

In the context of the fight against fraud, various forms of internal controls specially designed and implemented to prevent fraud represent the first line of defense. Adopting a code of conduct, raising the level of fraud awareness through various employee educations, developing programs and policies for the prevention and detection of frauds are mechanisms that can contribute to the detection and prevention of frauds. At the global level, these mechanisms act as a cornerstone in the fight against frauds, because for example, as many as 82% of the companies that participated in the 2022 fraud survey had adopted a code of conduct. In this regard, companies in Croatia lag far behind global trends and, for example, only 33% of the companies in the Croatian sample had adopted a code of conduct. An overview of the most common control mechanisms detected in companies that were victims of fraud is shown in the following table.

No.	Type of anti-fraud control	Croatia (%)	Global (%)
1.	Management review	49%	69%
2.	Internal audit department	42%	77%
3.	External audit of financial statements	36%	82%
4.	Dedicated fraud department, function, or team	33%	48%
5.	Code of conduct	33%	82%
6.	Anti-fraud policy	27%	60%
7.	Fraud training for employees	25%	61%
8.	Proactive data monitoring/analysis	22%	45%
9.	Surprise audits	15%	42%
10.	Fraud training for managers/executives	13%	59%
11.	External audit of internal controls over financial reporting	11%	71%
12.	Formal fraud risk assessments	11%	46%
13.	Rewards for whistleblowers	9%	15%
14.	Hotline	7%	70%
15.	Job rotation/mandatory vacation	5%	25%
16.	Independent audit committee	5%	67%
17.	Management certification of financial statements	4%	74%
18.	Employee support programs	2%	56%

*Table 3: Anti-fraud controls  
 (Source: Adjusted according to ACFE Croatia 2022, 30.)*

From the data listed in Table 3, it is clear that Croatian companies lag behind global trends significantly in terms of the implementation of various controls for the prevention and detection of frauds. Management reviews were listed as the most prevalent form of anti-fraud control, and this form of control was implemented in only 49% of the companies in the sample. The internal audit department was established in 42% of cases, however, when analyzing the effectiveness of this form of control in fraud detection in the Republic of Croatia, it is observed that only 6% of frauds were detected by internal audit. Independent audit as a form of anti-fraud control was highlighted by 36% of respondents. In terms of external audit, it should be emphasized that the task of external audit is to assess the fairness and objectivity of the financial statements, not to detect fraud. In this sense, external auditors cannot be seen as the main actors in the fight against fraud. This is primarily the tasks and responsibility of internal forms of company supervision (primarily internal controls and internal audit). It should be noted that the fraud risk assessment procedure is adopted in only 11% of Croatian companies, while the global trend is around 46%. Fraud awareness programs are also significantly less prevalent compared to the global trend.

All of this indicates that all stakeholders in the anti-fraud chain should be more actively involved in raising awareness of the fraud issue and the challenges frauds pose, to which no organization is immune. In Croatian companies, there is certainly space for improvement of the internal control system and the introduction of controls aimed at the prevention and detection of fraud. It is necessary to continuously raise the level of awareness about fraud among the business community in order to improve the internal control system in terms of implementation of anti-fraud controls but also in terms of improving their efficiency. Namely, for an effective fight against fraud, the tone from the top and the environment in which controls are carried out are essential, because the integrity and behavior of key people in the company is a signal to all other employees. There is no doubt that in Croatian companies there is room for improvement of control mechanisms in the field of fraud prevention and detection, and the same can be observed from the following table.

No.	Fraud detection method	%	Type of anti-fraud control	
1	Tip	22%	Rewards for whistleblowers	9%
2	By accident	13%	Hotline	7%
3	Document examination	13%	Proactive data monitoring/analysis	22%
4	Management review	9%	Management review	49%
5	Automated transaction/data monitoring	7%		

*Table 4: Comparison of anti-fraud controls and fraud detection methods  
 (Source: Adjusted according to ACFE Croatia 2022, 30.)*

Table 4 shows a comparison of fraud detection methods and anti-fraud controls that existed in the company in the moment of fraud detection. The largest number of frauds was discovered by tip, and it should be noted how very few companies in the Republic of Croatia have controls related to this kind of fraud detection and prevention. Namely, only 9% of the respondents stated that there are certain rewards for whistleblowers, while the proportion (7%) of those who have an open line for reporting frauds is even smaller. It should be noted that in the global context, as many as 70% of companies declared that they have this form of anti-fraud control, which further confirms that there is a significant gap in the practice of Croatian companies in relation to world trends and the need for urgent action and the introduction of this form of anti-fraud control in Croatian companies. Based on these results, it is emphasized that "processes for collecting and thoroughly evaluating tips should be a priority for employees in charge of combating fraud" (ACFE Hrvatska, 2022, 16). Management reviews, as a form of anti-fraud controls, are represented in 49% of the companies in the sample, which makes them the most represented form of controls for combating fraud, and on the other hand, only 9% of committed frauds were detected by these controls. It is interesting to point out the factors that, according to the respondents involved in the research, contributed the most to the fraud to occur. Approximately 18% of respondents believe that the neglecting of existing internal controls is the main reason for committing fraud. When the lack of managerial control mechanisms is added (13% of cases) and the general lack of internal controls (9%), it can be concluded that the largest number of respondents pointed out the system of internal controls as the main opportunity for fraud. System of internal controls was not designed at all or was not designed in such a way that it could respond to fraud challenges and risks. Poor leadership or a poor environment and a poor tone from the top were highlighted as the main factors for committing fraud in 16% of cases, as well as a lack of employee education about fraud (ACFE, 2022, 33).

All of the above mentioned indicates that Croatian companies should work on the design of anti-fraud mechanisms, and the implementation of internal controls that will be able to respond to the challenges of fraud. Emphasizing the importance of ethical behavior, insisting on integrity, adopting a code of conduct, adopting a fraud prevention policy, anti-fraud training for employees and other forms of controls aimed at fraud prevention and detection represent the basics of anti-fraud behavior and the fight against fraud. All stakeholders involved in the anti-fraud chain should continuously work on promoting the importance of anti-fraud fight and raising fraud awareness so that ultimately companies could react proactively and raise their level of awareness and fight against fraud and the loss they bear.

#### **4. CONCLUSION**

In this paper, the authors present the main features of business frauds in the Republic of Croatia and compare Croatian experiences with global trends in fraud. The results of the research carried out by the Association of Certified Fraud Examiners in Croatia show that the total financial losses caused by business fraud on a sample of Croatian companies affected by the fraud amount to about HRK 165 million, and as a result of fraudulent activities, according to estimates, about 13% of the total annual revenue was lost. The characteristics of fraud in the Republic of Croatia do not differ significantly from fraud on a global level, but certain specificities have been observed. For example, as a specific feature of the research conducted in Croatia, the fact that the research showed that in more than 50% of damaged organizations there are no adequate control mechanisms at all, should be highlighted. Different control mechanisms present fraud detection and prevention measures, and are being imposed as an indispensable tool in the fight against fraud on a global level. Unfortunately, in the practice of Croatian companies and organizations included in the research, this form of fraud prevention and detection has proven to be insufficiently represented and ineffective. In this sense, in the fight against fraud and fraudulent behavior, it is necessary to continuously highlight the importance of various forms of internal supervision, the implementation of appropriate control mechanisms and their role in fraud risk management. This research contributes to a better understanding of the characteristics of business frauds in Croatia and points to the similarities and differences of business fraud in Croatia compared to global trends in fraud. It should certainly be pointed out that this work aims to contribute to raising awareness about fraud and developing a better dialogue at all levels of society regarding the detection and prevention of business frauds.

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