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DIAGNOSTICS OF CORPORATE FRAUD AND COUNTERACTION MEASURES

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**Abstract.** The article is devoted to the problems of identifying, improving areas of prevention and combating corporate fraud. The article explores the dynamics of corporate fraud, and analyzes their classification. The article provides an analysis of the stages of development of international legal regulation of the specified subject area, which allowed to determine the composition and structure of information subject of economic control. In addition, the main methods of corporate fraud are identified. The research methodology was based on the main regulatory legal framework controlling the specified subject area. Based on the results of the study, a refined procedure for detecting fraud and distortion was developed and a model for detecting fraud was developed. A study conducted by the authors revealed that only the regulator and then the law enforcement agencies can give an unambiguous interpretation of actions on fraud and falsification of data in the financial statements of financial sector organizations. But at the same time, the presence of “stop factors” in the organization’s work, signaling signs of fraud and falsification of data in the financial statements, allows to quickly pause the production and business activities of investors and counterparties with this financial institution and avoid larger losses. It is concluded that in the current system of economic control, a number of areas that need significant changes are clearly distinguished.

**Keywords:** control; economic crime; corporate fraud; red flags; financial investigations; fraud triangle; forensic

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**JEL Classifications:** M 41, M 42, G22.

**Additional disciplines** economic.

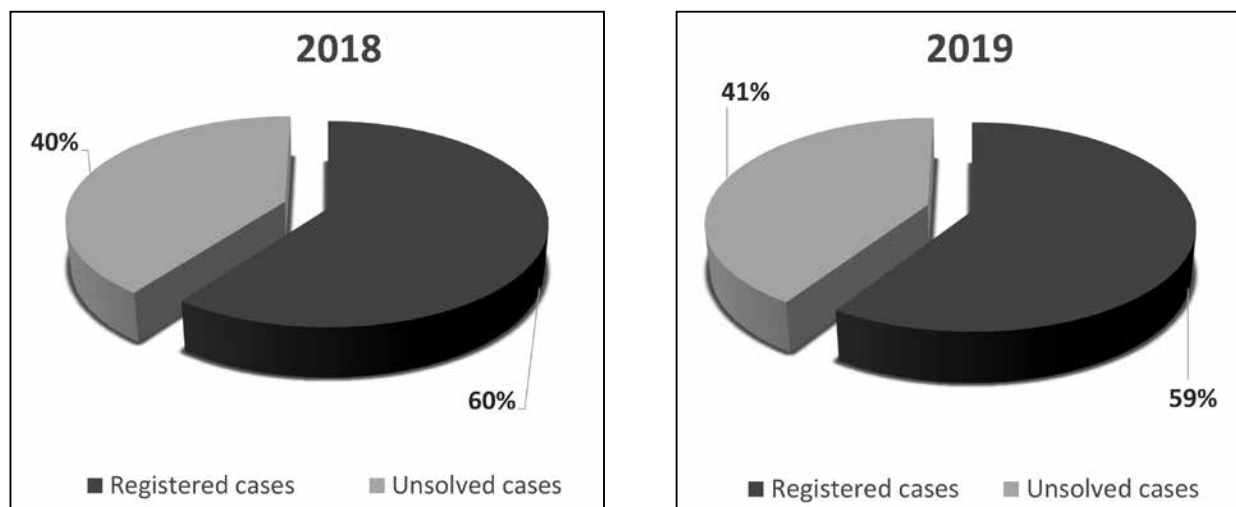
## 1. Introduction

Analysis of the dynamics of economic crime in Russia shows its significant changes. Crimes are being modified and improved simultaneously with the arising of new technologies and ways to protect them, as a result of which their growth is ahead of their prevention, and the damage they cause is estimated at billions of rubles. Thus, analyzing economic crimes in Russia, it can be noted that in 2019, compared with 2018, the number of crimes in the field of corporate fraud is increasing (table 1, Fig 1).

**Table 1.** The dynamics of corporate fraud in Russia for 2018-2019

| Indicators             | 2018 <sup>1</sup> | 2019 <sup>2</sup> | Growth rate, % |
|------------------------|-------------------|-------------------|----------------|
| Registered cases       | 215036            | 257187            | 119,6          |
| Pre-investigated cases | 57418             | 64378             | 112,1          |
| Unsolved cases         | 145686            | 175070            | 120,2          |

*Source:* 1. The state of crime in Russia for January-December 2018 (according to the data of the Ministry of Internal Affairs of the Russian Federation) URL: [https://liteks.pro/images/stat/crime\\_rf\\_12\\_2018.pdf](https://liteks.pro/images/stat/crime_rf_12_2018.pdf)  
 2. The state of crime in Russia for January-December 2019 (according to the data of the General Prosecutor’s Office of the Russian Federation) URL: <https://genproc.gov.ru/>



**Figure 1.** Diagrams of the ratio of the number of registered and solved corporate fraud cases

*Source:* authors’ research

Thus, the number of detected frauds increases in 2019 compared to 2018 by almost 20%, of which the number of unsolved crimes increases with the same progression. According to experts, most of the cases of fraud are connected with the use of electronic means of payment, their number increased by almost 8 times compared to the same period in 2018 (Dergachev, 2019).

The given analysis reveals only those economic crimes that “go beyond the frames” of the organizations and become the subject of inspections of the above mentioned authorities. In accordance with Article 159 of the Criminal Code of the Russian Federation (Criminal Code of the Russian Federation), fraud is defined as “the theft of another’s property or the acquisition of the right to another’s property by fraud or breach of trust.” Many of the actions that inherently relate to corporate fraud are defined in other articles of the Criminal Code (for example, commercial bribery or abuse of authority) or not defined at all (for example, distortions in the financial statements referred to in article 15.11 of the Administrative Code offenses of the Russian Federation) (Code of Administrative Offenses / Administrative Code of the Russian Federation, 2011).

Therefore, in this article we will rely on the definition given in international auditing standards (ISA). In accordance with ISA 240, “Auditor’s Responsibilities Conscientious in Conducting an Audit of Financial Statements,” “the intentional action of one or more persons among management, management personnel, employees, or third parties involving the use of fraud to obtain unlawful or illegal gain” refers to corporate fraud Such interpretation is broader and more applicable than the interpretation given in the Criminal Code of the Russian Federation.

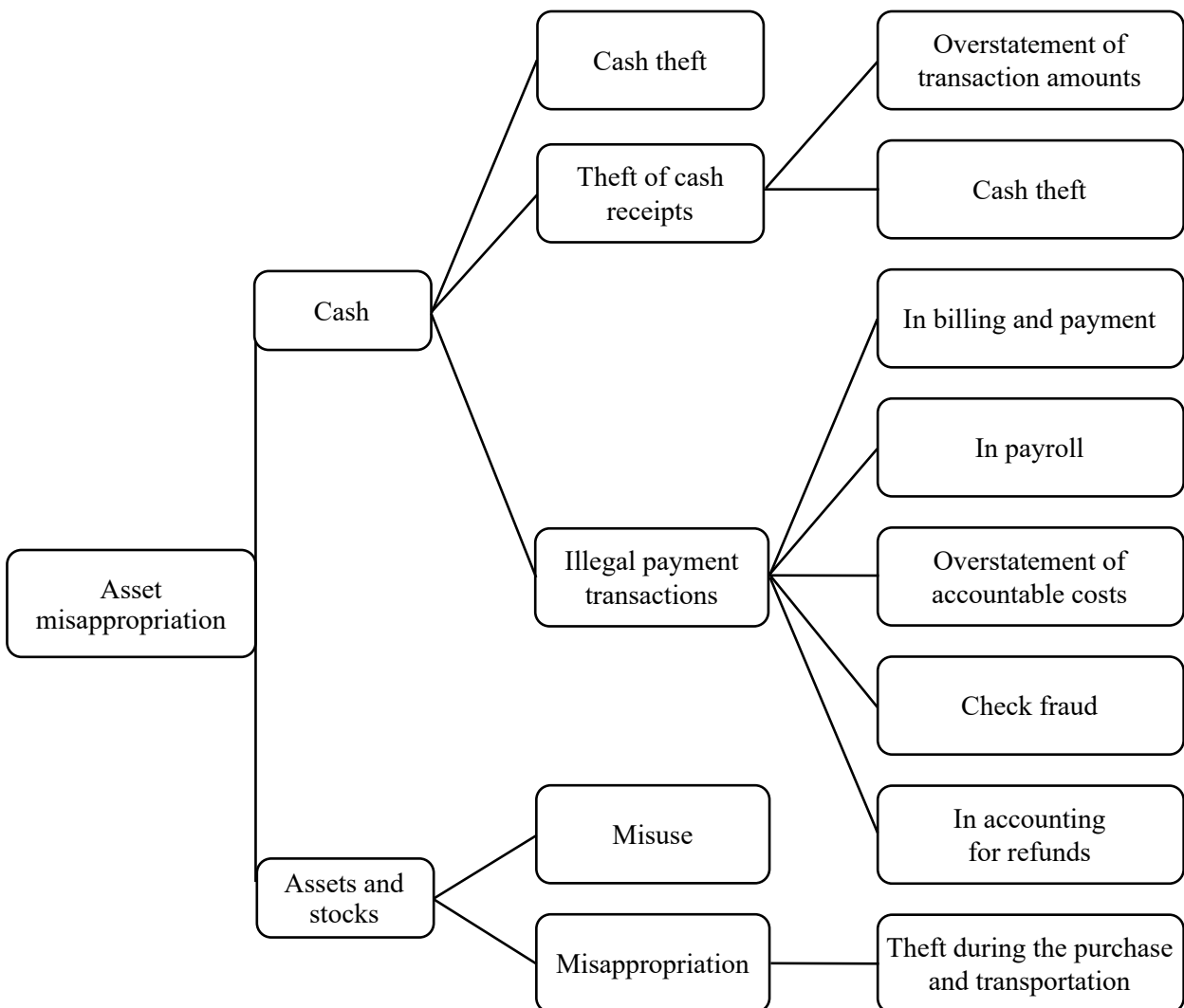
The phenomenon of corporate fraud and corruption in business within corporations was first brought to the attention by the American sociologist Edwin Harding Sutherland in 1939, calling the phenomenon “white-collar crime”. By this phenomenon, Sutherland meant “business-related crimes committed by respectable and high-ranking individuals of society.” Among the main features, the presence of a high intellectual component of

crimes was highlighted (Shengelia, 2017).

## 2. Methodology

Specialists in conducting financial investigations, the heads of enterprises, government entities and the regulator, as well as the media are interested in reliable information about the annual losses of the economy and business from cases of fraud. There are numerous methods for calculating the total amount of damage caused by unlawful actions of criminal persons. Firstly, it is practically not possible to accurately determine the number of undetected and undisclosed cases of corporate fraud. Secondly, statistics based on disclosed cases of fraudulent activities are underestimated, since often the affected parties (employers, organizations) do not disclose the actual amount of damage caused to them. Nevertheless, attempts to determine the damage from fraud are important, as awareness of the severity of the problem increases awareness of the impact of fraud, decision-making by managers in investing in internal controls and risk analysis procedures (ACFE: “Report to the nations 2016”, 2016).

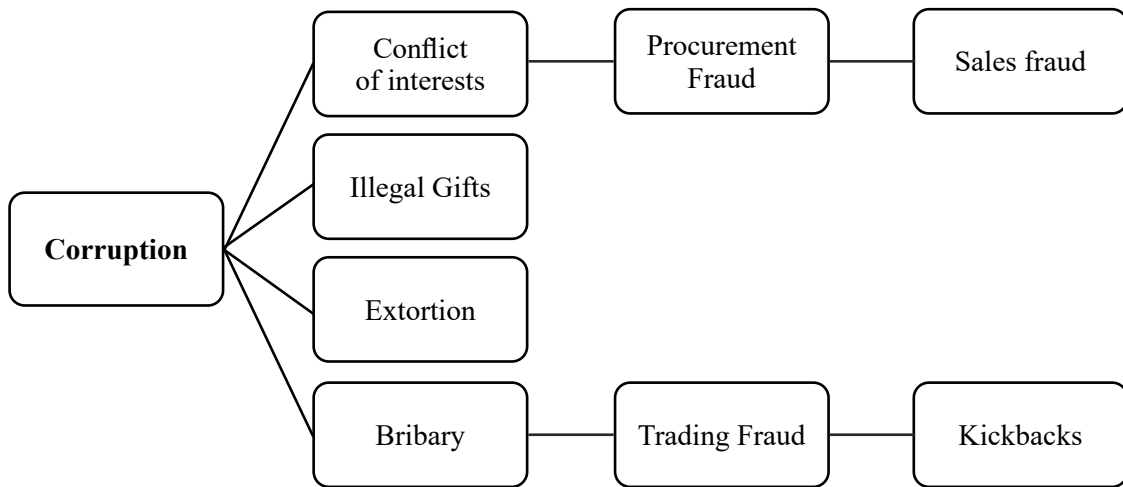
There are three main categories of corporate fraud: misappropriation of assets, corruption, and falsification of financial report. Each of these categories is divided into several subcategories (Figure 2-4).



**Figure 2.** Fraud tree “Asset misappropriation”

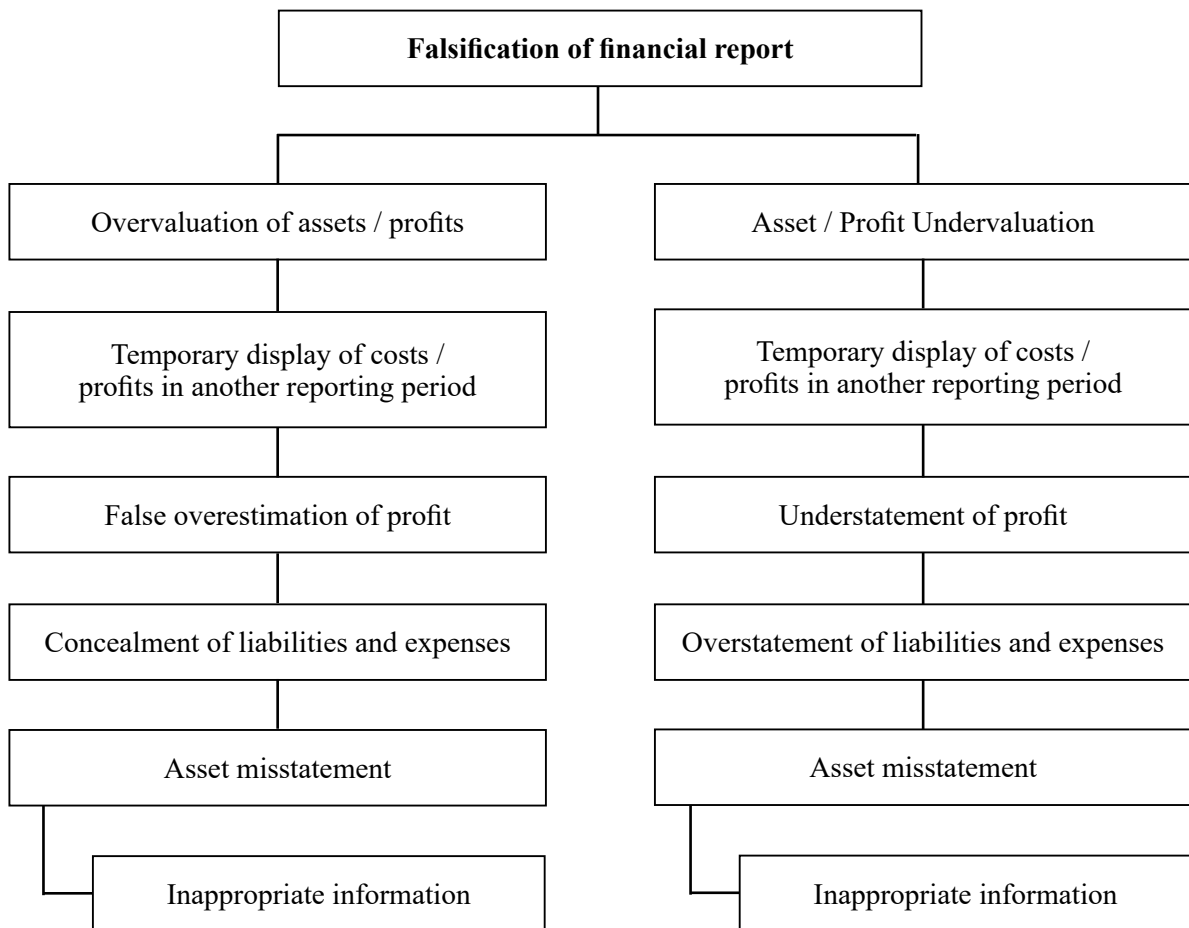
Source: made up by the author according to (ACFE: “Report to the nations 2016”, 2016)

Each of these categories has unique characteristics that distinguish it from other categories. This is important because comprehensive knowledge of the categories and their specific characteristics is a key point for the successful development of programs aimed at preventing and detecting fraud.



**Figure 3.** Fraud tree “Corruption”

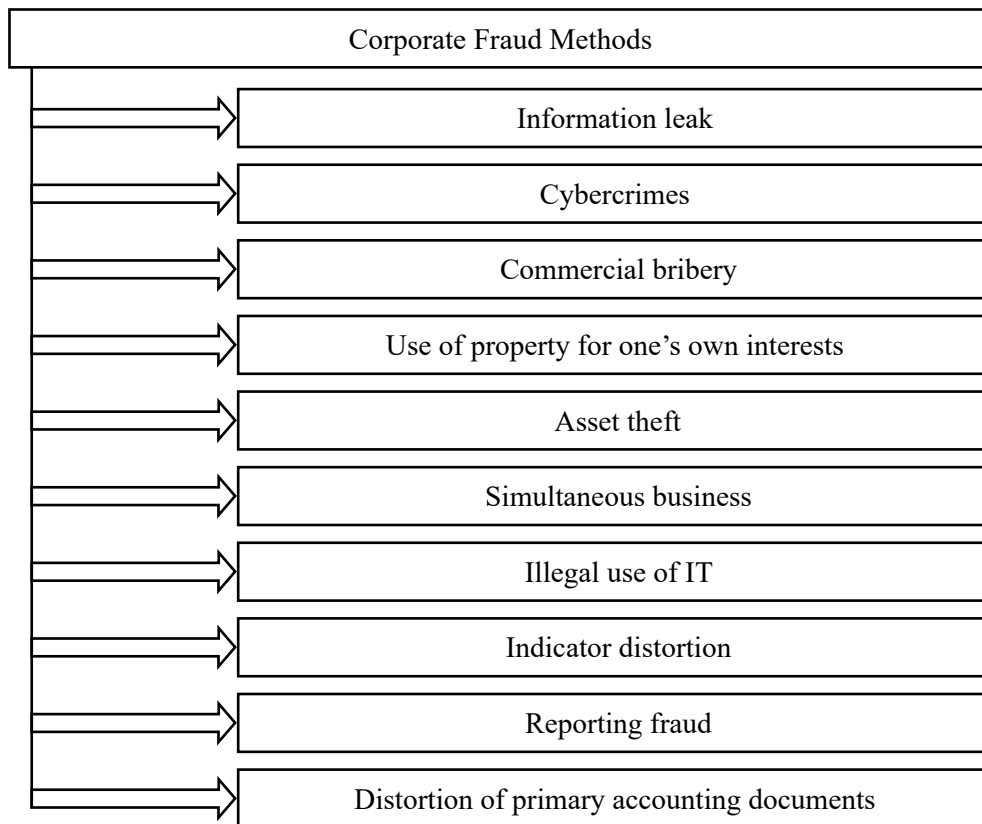
Source: made up by the author according to (ACFE: “Report to the nations 2016”, 2016)



**Figure 4.** Fraud tree “Falsification of financial report”

Source: made up by the author according to (ACFE: “Report to the nations 2016”, 2016)

Let us define the main methods of corporate fraud (Figure 5):



**Figure 5.** The main methods of corporate fraud

*Source:* authors' research

The most common way today is “commercial bribery.” This is due to a number of circumstances, namely: it is easily applicable and used in any industry and regardless of the form of ownership; it is difficult to identify and prove the fact of the commission of this action; considered the established “business rule” (Hilkevics and Semakina, 2019).

Most cases of internal corporate fraud are associated with misrepresentation of information, including in primary documents and financial report.

Thus, fraud in falsification of financial report can be divided into five types (table 2). Fraud that does not fall into one of five types and can be committed for purposes other than financial gain is simply marked as different fraud.

**Table 2.** Classification of types of fraud in falsification of financial record

| Types of Fraud                       | Victim  | Intruder  | Explanation  |
|--------------------------------------|---|---|--|
| Employee waste or professional fraud | Employers   | Employees   | Employees directly or indirectly steal from their employers, so they resort to falsification of financial statements to hide traces of a crime   |
| Management Fraud                     | Shareholders, lenders and others who rely on financial statements | Senior management   | Top management provides misleading company stakeholders, as a rule, in financial information, which serves to form a positive picture of the company   |
| Investment fraud                     | Investors   | Employees   | Falsification of financial statements is done to trick investors into investing in fraudulent investments  |
| Company financial services fraud     | Organization who buy financial services company                   | Employees who sell financial services or senior management of a financial company that is interested in increasing turnover | The company refuses to provide services, even if payment is made   |
| Customer fraud                       | Organizations that sell services to financial companies           | Clients of financial companies  | Clients (as a rule, these are also financial companies, for example, insurance, investment companies) are deceiving with their financial statements, creating a false impression of the cost of services and forcing to pay a higher price |

Source: authors' research

As indicated in the table, financial reporting fraud is intentional fraud committed in the management system, which damages the investor and creditor by providing substantially inaccurate financial record (Sarno et al., 2020;

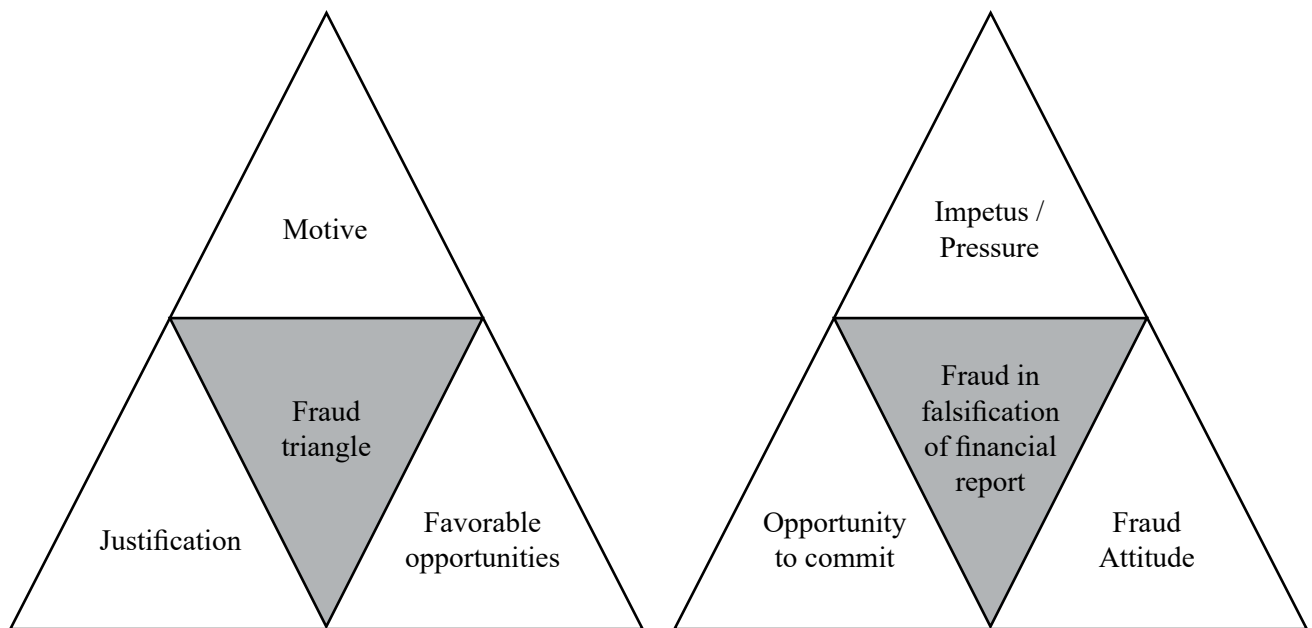
Schyff et al., 2020; Zhang et al., 2020). Fraud in financial record is, on the contrary, a deliberate act committed with the participation of employees of the financial company management system, which causes material damage to investors and creditors through the adoption of incorrect decisions under the influence of misleading financial record. Except investors and lenders, external auditors are among the victims of fraud in financial record. They may suffer financially, incurring financial losses (for example, loss of position in the ranking, fines, etc.) and / or have a loss of reputation (Frolova et al., 2019; Gerasimov et al., 2018).

Falsification of financial record can be committed by absolutely any employee at any level who has the ability to manipulate documents on the basis of which the financial statements of the company are built. There are two main groups, arranged in order of probability of participation in falsification schemes of financial record:

- Top management (chief executive officer, chief financial officer, etc.).
- Employees of middle and lower levels of management. These employees are responsible for subsidiaries, divisions, or other units, and they may commit financial reporting fraud to conceal their poor performance or earn bonuses based on higher performance.

In general, it should be noted that fraud, like other crimes, can best be explained by three factors: criminal motivation, the availability of suitable facilities and the lack of competent control.

Therefore, as a rule, fraud includes three characteristics that are known as the “fraud triangle” by D. Cressy; it represents an important understanding of motivation for committing illegal actions. This “triangle” is often used in criminal science and is a diagram that reflects the main components (factors) that create the conditions for internal corporate fraud (Figure 6).



**Figure 6.** The “Fraud tringle” by Donald Cressy<sup>1</sup> and the falsification of financial report<sup>2</sup>

*Source:* 1. Albrecht C., Albrecht C., Dolan S. & Malagueno R. Financial statement fraud: Learn from the mistakes of the U.S. or follow in the footsteps of its errors// Corporate Finance Review – 2008. - January/February – P. 5-13.

2. Made up by the author on the basis

Accounting data allows to find traces and signs of a crime based on an analysis of violations of the links between economic indicators (Timchenko, 2013). However, since there are fewer quantitative economic indicators than records on accounting accounts, it is advisable to start the detection of signs and traces of crime in accounting information precisely from the analysis of economic indicators (Korableva et al., 2018). This will allow you to search for signs and traces of a crime in accounting documents and records more purposefully and with less time.

In the scientific and professional literature, there are many variations of the definition of the term “financial investigations (Forensic)”. From the point of view of the professor of the department of accounting, analysis and audit of Lomonosov Moscow State University, Suits V.P., forensic is a set of independent initiative services provided by audit, consulting and specialized companies for owners, the board of directors of companies of various legal forms (Suits et al., 2015). However, this definition assumes that forensic is a service provided from outside that does not take into account the possibility of internal financial investigations.

According to the approach of the consulting company “Korpus Prava”, a financial investigation is a thorough examination, a detailed analysis of the financial and economic activities of the organization, aimed at a comprehensive study of circumstances in order to identify unlawful or malicious actions of employees or third parties connected with an infringement on the financial resources of the organization (International Law Firm “Korpus Prava”, 2015). The above given definition also does not fully reflect the essence of forensics, since it does not include the fact of conducting behavioral factors of employees, the use of information technologies.

The well-known forensic specialist George A. Manning, in the annotation to the publication of his book “Financial Investigations and Judicial Records”, notes that “Financial investigations and judicial records, revealing the mechanisms for committing financial crimes and the methods used to identify and investigate them, are an interdisciplinary concept, combining accounting, financial analysis and law enforcement” (Manning GA).

It should be noted that the content endowed by the experts of this sphere in the USA with the concept of “financial crimes” has more expanded semantic character in comparison with the usual in Russia. This includes not only crimes that occur in the financial sphere, but also crimes that use the financial sphere. So, in the practice of the Internal Revenue Service (IRS), a financial crime is the financial component of the drug business (Narcotics

Related Financial Crimes). At the same time, the director of the United States Financial Crimes Enforcement Network (FinCEN), William Fox, believes that the primary task of the financial analysts of the Network is to assist law enforcement agencies in identifying the financial component of “dirty” money (Lebedev and Efimov, 2008). Consequently, in Western countries, especially in the USA, the financial component of criminal activity is included in the subject of forensics as a specialized economic analysis.

Forensic in the CIS specializes exclusively in fraud issues. Corporate fraud, investigations, and asset recovery practices exist in many other law firms. The peculiarity is as follows: if a professional law firm employs accountants, engineers and other specialists to provide non-legal, but closely related services, this is forensic. If there are no such specialists in the law firm, we are talking about legal services in the field of combating fraud. Some projects that require forensic skills can be difficult to separate into legal and financial components, which is why good forensics are often universal specialists who are fluent in both legal and financial matters (Tleubaeva, 2015).

From our point of view, financial investigations (Forensic) are an independent financial investigation conducted both within the company and outside it, including various methods of processing information, including analysis of the company’s financial indicators and accounting data, identifying red flags (behavioral indicators), using IT auditing, conducting interviews with targeted individuals and others, in order to identify facts and factors of abuse, reduce risks and ensure economic security of the company.

In general, it should be noted that fraud, like other crimes, can best be explained by three factors: criminal motivation, the availability of suitable facilities and the lack of competent control.

### **3. Results**

The previously mentioned signs of the commission of economic crimes in accounting information are only information that may accept a status of evidence, or may not be accept it (Timchenko, 2013). This circumstance depends on the processing of this source of information by a special person (group of persons) with the use of special knowledge in the field of economics, accounting, forensics and more. This processing is advisable to carry out in stages.

Firstly, a comprehensive analysis of the production, economic and financial activities of the company should be carried out in dynamics over a number of reporting periods, broken down into quarters. Based on the results of this analysis, it will be possible to identify objects and business transactions of particular interest in terms of their negative impact on the company’s performance. The following is the identification of factors that have had the most significant impact on the deterioration of the most important performance indicators of the company. Among them, it is necessary to highlight those that could appear due to illegal actions. The use of red flags and fraud detection in financial reporting has also been widely developed in scientific literature and practice.

Red flags are defined as conditions or circumstances that indicate potential fraud in the financial statements. They can also be defined as a set of circumstances that are unusual in nature or deviate from ordinary activities. The use of red flags is also supported by audit standards in assessing the risks of fraud (ISA 240 and ISA 315). The use of red flags in the detection of fraud in financial statements is also supported in the scientific literature (Arzhenovskiy, 2016). Red flags are only indicators of possible fraud, but they do not automatically mean that fraud in a financial company is really happening, and red flags are too difficult to operationalize in empirical research. “The red flag” method is not considered to be effective because it focuses on specific features, which, in turn, encourage internal and external auditors to identify other causes that cause financial reporting fraud. The red flags are designed to assess the overall risk of fraud without assessing the possible schemes used by financial management to commit and conceal fraud. Actually, red flags are nothing more than a set of circumstances that are unusual in nature or signal a deviation from normal activities and require increased suspicion and attentiveness of the auditor. If the symptoms of fraud are often observed, then the presence of such problems is not necessarily an indicator of fraud, and the investigation of such anomalies usually leads to the conclusion that fraud was not the main cause. Due to the attempt by criminals to hide their actions, red flags can be relatively small in frequency and small in number, at least in the early stages of financial reporting fraud.



Secondly, an analysis is made of the conditions conducive to illegal actions. It should be borne in mind that the cause of economic crime is getting the material benefits, i.e. self-interest as a motive for committing a crime (Suits et al., 2015).

Thirdly, it is necessary to establish the circle of company employees who, in connection with their official rights, could use their position to commit a crime.

Fourth, a study is being made of the personal factors of established individuals on the basis of the “fraud triangle”, their lifestyle. With the help of the information received, the circle of persons possibly involved in the commission of unlawful acts is narrowed to the persons most involved.

The final stage is the analysis of accounting information (given earlier, as well as using a number of methods), to which the persons most involved in the commission of illegal actions could have access or influence.

#### 4. Discussion

Based on the studied approaches and methods for detecting fraud and falsification of financial organizations’ accounts, a refined procedure for detecting fraud and distortion was developed and a model for detecting fraud was developed (figure 7).

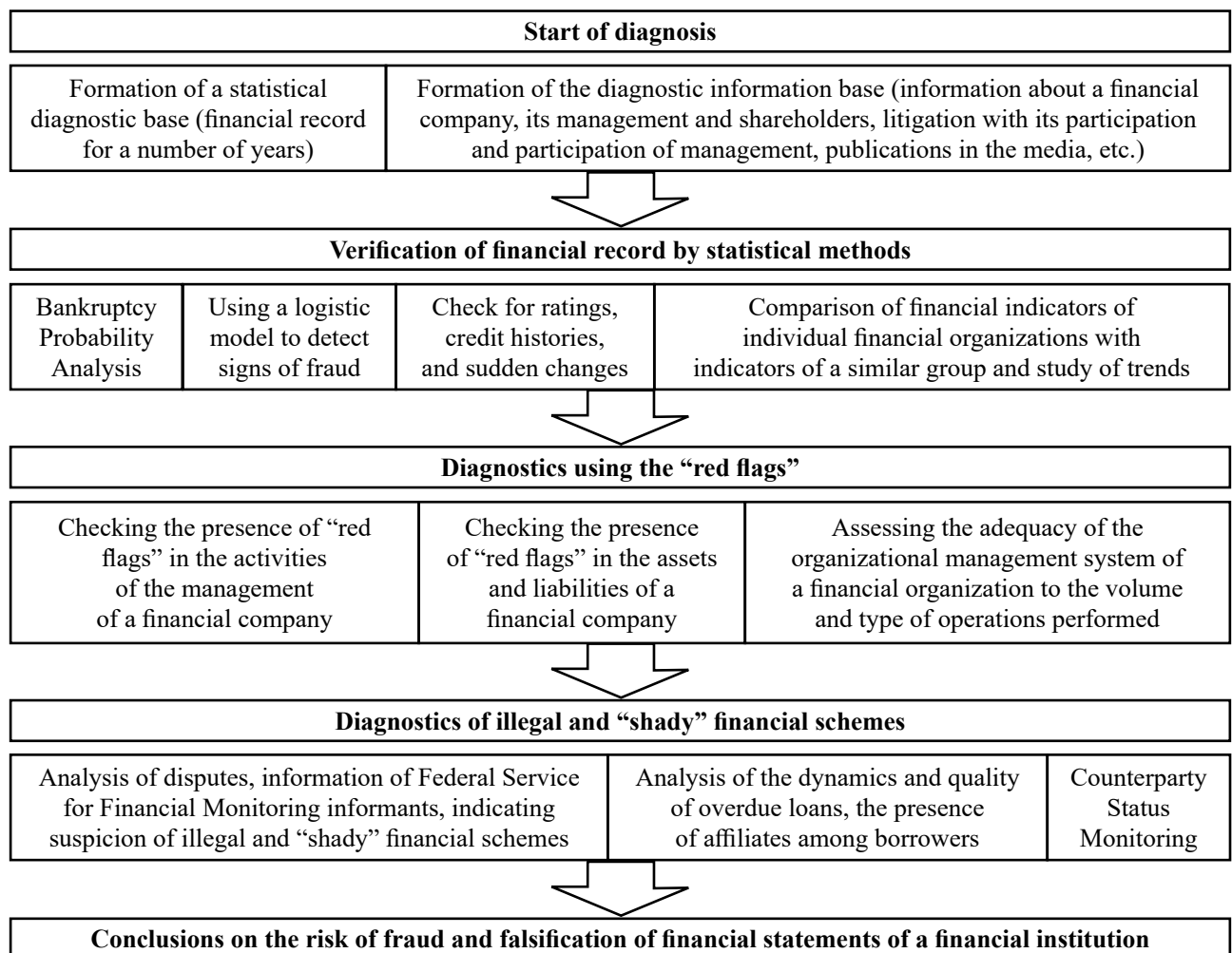
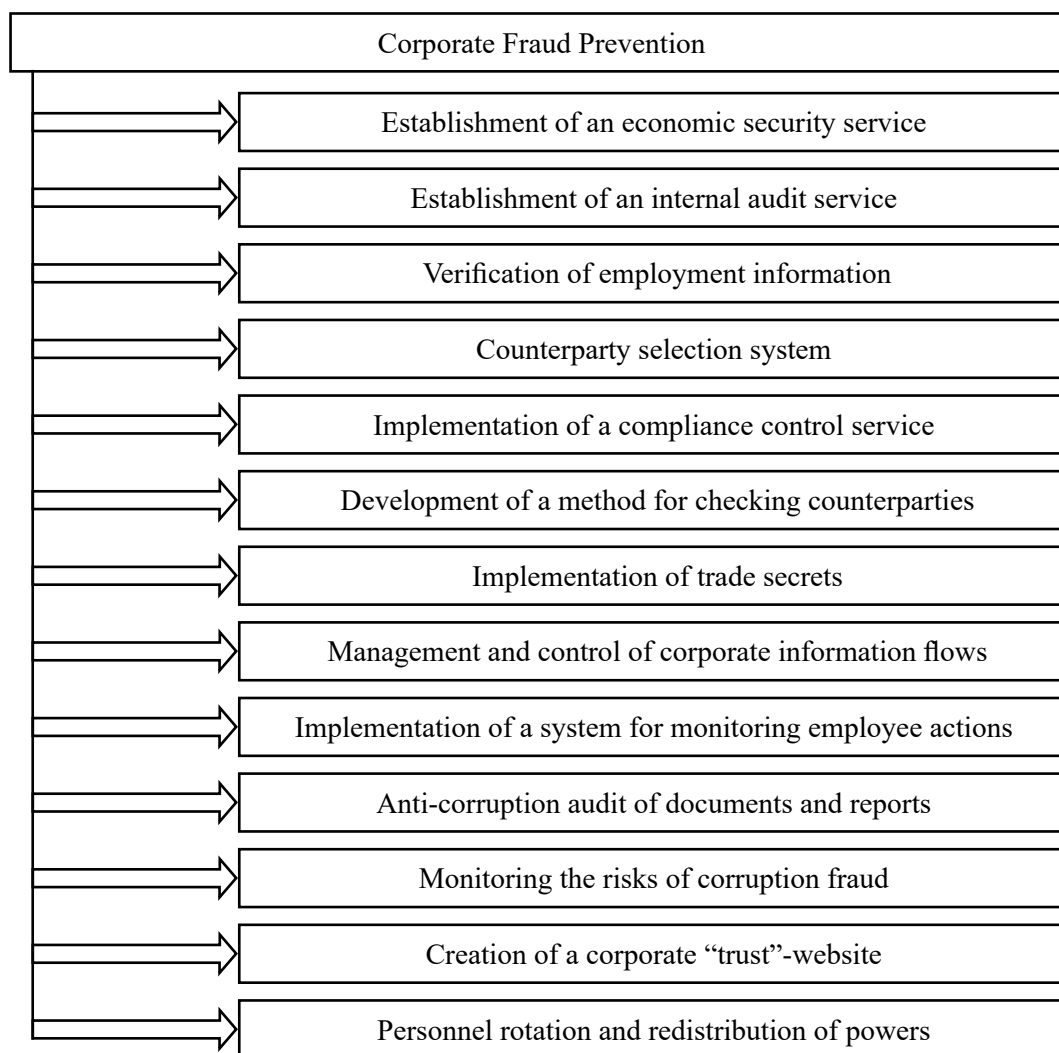


Figure 7. Model for the diagnosis of fraud and falsification of data in the financial record of a financial company

Source: authors’ research

Thus, let us offer measures to combat corporate fraud:



**Figure 8.** Corporate Fraud Prevention

*Source:* authors' research

## Conclusion

An unambiguous interpretation of actions on fraud and falsification of data in the financial record of financial sector organizations can only be given by the regulator, and then by law enforcement agencies. But the presence of “stop factors” in the organization’s work, signaling signs of fraud and falsification of data in the financial statements, allows to quickly suspend the production and business activities of investors and counterparties with this financial institution and avoid larger losses.

## References

- Arzhenovsky S. V. (2016). Journal of Economic Regulation. *Issues of regulation of the economy*, 4, 150-152.
- Dergachev V. (2019). The number of cases of fraud with electronic payments increased eight times, 2019. <https://www.rbc.ru/society>
- Code of Administrative Offenses. Administrative/ Code of the Russian Federation (2011). Dated December 30, 2001 No. 195-FZ. Access Mode: <http://www.consultant.ru>.

- Frolova, I., Voronkova, O., Alekhina, N., Kovaleva, I., Prodanova, N., & Kashirskaya, L. (2019). Corruption as an obstacle to sustainable development: A regional example. *Entrepreneurship and Sustainability Issues*, 7(1), 674-689. [https://doi.org/10.9770/jesi.2019.7.1\(48\)](https://doi.org/10.9770/jesi.2019.7.1(48))
- Gerasimov, V., Sharafutdinov, R., Kolmakov, V., Erzinkyan, E., Adamenko, A., & Vasilyeva, A. (2019). Control in the human capital management system in the strategy of innovative development of a region. *Entrepreneurship and Sustainability Issues*, 7(2), 1074-1088. [https://doi.org/10.9770/jesi.2019.7.2\(20\)](https://doi.org/10.9770/jesi.2019.7.2(20))
- Hilkevics, S.; & Semakina, V. (2019). The classification and comparison of business ratios analysis methods, *Insights into Regional Development* 1(1): 48-57. [https://doi.org/10.9770/ird.2019.1.1\(4\)](https://doi.org/10.9770/ird.2019.1.1(4))
- Korableva, O. N., Kalimullina, O. V., & Mityakova, V. N. (2018). Innovation activity data processing and aggregation based on ontological modelling. Paper presented at the *2018 4th International Conference on Information Management, ICIM 2018*, 1-4. <https://doi:10.1109/INFOMAN.2018.8392659>
- Lebedev I.A., & Efimov S.V. (2008). Financial Investigations: Russian Practice and Foreign Experience. *Audit statements*, 10.
- Manning G.A. (2011). Financial investigation and forensic accounting. Second edition. *Broken Sound Pkwy NW Boca Raton*. CRC Press, 601
- International law firm “Korpus Prava” (2015) <http://www.korpusprava.com>
- Sarno, R., Sinaga, F., & Sungkono, K.R. (2020). Anomaly detection in business processes using process mining and fuzzy association rule learning. *Journal of Big Data* 7(1),5
- Schiff, K.V.D., Flowerday, S., & Furnell, S. (2020). Duplicitous social media and data surveillance: An evaluation of privacy risk. *Computers and Security*, 94,101822
- Suits V.P, Khorin A.N, & Kozeltseva E. A. (2015). Forensic service: vocational training and regulation in foreign countries. *Audit and Financial Analysis*, 200.
- Timchenko V. A. (2013). The concept of forensic diagnosis of crimes based on accounting information. *Dissertation*, 289.
- Tleubaeva S. A. (2015). Theoretical foundations of financial investigations to detect fraud. *Bulletin of the University “Turan”*, 146.
- Tokaeva Yu.V. (2017). Methods for identifying and preventing falsification of financial statements. *Economics and Entrepreneurship*, 4-2 (81-2), 846-850.
- The Criminal Code of the Russian Federation of June 13, 1996 No. 63-FZ (2011). <http://www.consultant.ru>.
- Zhang, J., Wang, J., & Kong, D. (2020). Employee treatment and corporate fraud. *Economic Modelling*, 85, pp. 325-334

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