LOOK ACADEMIC PUBLISHERS	INTERNATIONAL JOURNAL OF ENVIRONMENTAL & SCIENCE EDUCATION 2016, VOL. 11, NO. 17, 10163-10176
OPEN ACCESS	

Issues of Falsifying Financial Statements in terms of Economic Security

Olga G. Zhitlukhina, Svetlana Y. Rakutko, Elena I. Berezhnova, Elena Y. Selezneva, Elena V. Belik, Nina I. Shalaeva, Elena I. Denisevich, Natalia V. Belik, Zhanna E. Saenko, and Alina A. Sultanova

Far Eastern Federal University, Vladivostok, RUSSIA.

ABSTRACT

The paper deals with problems of the country's economic security and entities, timely resolution of which influences directly the country's national security. The cornerstone of successful existence of any country, especially the Russian Federation, during such complicated period is the presence of effective national economic security system. Analysis of the phenomena connected with using accounting information giving information about financial and economic activity of companies to investors and entrepreneurs in terms of economic security is particularly important in the global market conditions. The paper's purpose is showing the interrelation between economic security and financial statement falsification. In this article, falsification of financial statements is considered within a framework of system and comprehensive approaches as one of possible internal and external threats to financial security of particular economic entities and country as a whole under global market conditions. Using the complex and systematic general-research approaches allows to consider the financial statement falsification problem in the global context as a criminogenic phenomenon similar to international crime. At the present moment, the research in this field is common in the research and professional environment. Analysis of the current situation allows identifying the basic information channel of interaction between the business and society: financial statements, whose authenticity determines the reliability of potential contractors and efficiency of contractual relationships in many aspects.

> KEYWORDS Economic security; financial statements; financial security, global market; management fraud

ARTICLE HISTORY Received 11 May 2016 Revised 1 August 2016 Accepted 17 August 2016

Introduction

Nowadays the issue of legalization of illicit income (money laundering) is of particular importance for both Russia and the rest of the world, while the public hazard of this phenomenon has gained new features during the last decade, having demonstrated its strong connection with terrorism financing. The enter

CORRESPONDENCE Elena I. Selezneva 🖂 SeleznevaEY@yandex.ru

© 2016 Selezneva et al. Open Accessterms of the Creative Commons Attribution 4.0International License (http://creativecommons.org/licenses/by/4.0/) apply. The license permits unrestricted use, distribution, andreproduction in any medium, on the condition that users give exact credit to the original author(s) and the source, provide a link tothe Creative Commons license, and indicate ifthey made any changes.

of illicit income into the national economy of any state, no matter how developed its social, economic and legal systems are, leads to establishment of crime syndicates' control over particular economic sectors; spreading corruptions, as well as means and methods of unfair competition; redirection of activity of economic subjects to serve the interests of criminal groups and, as result, threat to the integrity of economic security and significant deformation of economic system as a whole. Legalization of illicit income is such that it may turn out to be the source of financial and economic shocks for any state or even particular regions. According to the estimates by the International Monetary Fund, the annual amount of money laundering is 2- 5% of the global GDP. One of the popular methods of legalizing illicit income is falsifying accounting (financial) statements. Empirical studies have shown that financial resources are invested as result of decision made on the basis of available data. At present the most complete data is disclosed using company's financial statements. Unfortunately, financial statements are not perfect, and the submission of financial data which differ from analytics forecasts may cause the decrease in company's capitalization. This fact determines the importance and the urgency of this issue for both economic subjects and national economy as a whole. The submission of data that are more positive comparing to analytics forecasts may lead to the increase in share prices and, subsequently, the reduction of borrowing costs and other positive results. If such improvements have been achieved "artificially", sooner or later the fact of falsifying statements will become publicly known, and the company will face the hard times (Rakutko & Selezneva, 2015a; 2015b).

The financial falsification problem is a phenomenon not less criminogenic than international crime. Economic security provides for the country's national security. Financial security is an essential component of economic security of commercial entities (Rakutko & Selezneva, 2015; Tambovtsev, 1995). This problem is urgent at the current moment, too. Successful existence of any country, and, what is more, Russian Federation during such a difficult period, can be guaranteed by maintaining the state's efficient economic security system. At the present moment, virtually all human activity branches are involved in the financial sphere. Achieving competitive advantages by natural methods in the global market conditions is complicated by deficit of production factors. In connection with this, analysis of the phenomena connected with using accounting information giving information about financial and economic activity of specific companies to investors and entrepreneurs gains in importance. Authenticity of financial reporting determines the reliability of potential contractors and efficiency of contractual relationships in many aspects. Fraud (and falsification, as a consequence) in financial reporting when choosing a contractor and the further transaction performance threatens the interests of investors, creditors and specific business persons. Despite the diversity of schemes of falsifying financial statements, all of them are aimed at the overstatement of sales revenue, income and balance-sheet total. That is why even generally accessible data allow to detect the signs of falsifying statements and form opinion of the credibility of data they contain. At the same time, such techniques as inventory procedures, accounting statements analysis, arithmetical-logicalare used for detecting errors (Lemeshenko & Temchenko, 2012). At the present moment, research in this field is performed in the research and professional environment.

Literature Review

Economic security and financial statement falsification is an under researched issue in accounting. The economic security term has many interpretations in research literature. For instance, in opinion of V. Tambovtsev (1995), "the economic security of a given system means the aggregate of condition properties of its production subsystem providing for attaining the entire system's goals". V.A. Savin (1995) believes that "economic security represents the protection system of Russia's vital interests". The following can be named among protection objects: national economic in general, specific regions of the country, separate fields and branches of economy, corporations and individuals as economic entities. In the opinion of L.I. Abalkin (1994), economic security is the condition of economic system allowing it to develop dynamically and efficiently, to solve social tasks and enabling the government to develop and implement independent economic policy. A number of scholars assume that economic, or financial, security is the condition of an economic entity characterized by stable income and other resources allowing it to maintain the living standards at present and in the foreseeable future. Papers by Russian and foreign economists (Sotnikova, 2011; Rakutko & Denishevich, 2015; Moraes & Nagano, 2012) research the nature and methods of financial reporting falsification. Researcher L.I. Kulikova (2011) was among the first to discover the problem's historic and evolution aspect and analyze professional views of Russian and foreign experts regarding the nature of financial reporting falsification. The author came to a conclusion about difference in understanding of the nature of financial statement hiding and falsification in representatives of the Russian and foreign school of thought. Thus, for instance, professor N.S. Arinushkin (1912) narrowed down the problem of falsification to balance falsification and corrupted balance item figures. Kulikova (2015) considered the statement falsification to be a consequence of different approaches to asset valuation. N.R. Veitsman (1962) interpreted falsification as the attempt to hide commercial information. According to I.F. Sherr (1925), the purpose of reporting falsification is distorting the company's property state and dimension and profitability level. According to Sherr (1925) a company's administration performs reporting falsification on purpose. Therefore, the question about the nature of the phenomenon researched and variety of its forms remains controversial. Analysis of international practices of financial statements falsification in contemporary US companies performed by researchers L.I. Kulikova (2015), J. Eichern (2014) confirm the issue's urgency. The authors review the cases of financial results distortion found out by Securities and Exchange Commission (USA). The researchers show the methods of financial results falsification on specific examples and give evidence of such manipulations so as to identify and prevent financial statements corruption. To develop set of measures, methods and means for protection of economic interests of state, corporate entities, as well as financial activity of economic entities, it is necessary to study the nature of falsification of financial statements and estimate its impact of finances and relevant fields, such as monetary, economic, social and international financial.

Aim of the Study

To demonstrate the interconnection between economic security and falsification of financial statements.

Research questions

How to detect falsification of financial statements?

Method

In this paper, fraud and financial statement falsification is considered to be a possible threat to economic security of specific economic entities and the country in general in conditions of globalization. Using the dialectic tandem (analysis and synthesis) within the limits of complex and systematic approaches allows to explore the nature of financial statement falsification for developing the package of measures, methods and means for protection of the state's national interests, corporate structures and financial activity of economic entities. Its influence on finances and on social and economic policy in general should be studied. The company's financial reporting whose authenticity determines the reliability of potential contractors and efficiency of contractual relationships in many aspects remains the key acknowledged information channel for interaction of business and society.

This issue is most urgent for countries with transitional economy in conditions of reforming the national accounting and financial reporting system and conversion to international financial reporting standards. The main objective of preparing financial statements using IFRS is attracting additional financing by share flotation on leading stock exchanges. It is financial reporting submitted by companies on the basis of which many corporations evaluate the contractor's reliability level when establishing relationships with foreign partners. But there is a chance that statements prepared in accordance with international standards may contain distorted data, i. e. the data misleading its users who can make incorrect management decisions based on unreliable information.

Data, Analysis and Results

Creating an economic security system is a complex multilevel process providing for solving global tasks and requiring participation of high-quality experts in many fields. In the majority of research sources, the essence of security today is interpreted as internal contents of protecting the object's vital interests from external and internal threats expressed in unity of all manifold and controversial forms of security's existence and the aggregate of its essential properties. Internal threats are a result of, mainly, inefficient financial and economic policy, miscalculations of authorities and management bodies, mistakes, misuses and other deviations (mismanagement, economic crime, etc.). In modern conditions, external threats including the world economy's globalization play a discrete role. Here, financial statement falsification means purposeful corruption or hiding information about the company's financial standing so as to influence the decisions made by the statements' users (investors, borrowers, regulation organizations).

Financial reporting falsification, depending on the reports' users, includes operating and management falsification. Operating falsification is predominantly connected with purposeful distortion of operating accounting data. Management falsification is connected with accounting fraud of the company's management, namely, using off-balance financing schemes. All schemes of falsification are aimed at the overstatement of sales revenue, income and balance-sheet total (Sotnikova, 2011). Although the appearance of various

10166

fraud signs in the statements is not yet an evidence of their falsification, a particular attention should be paid to such entities, since there are particular hazard factors such as:

- Corporate governance system and organizational structure. It is necessary to pay attention to frequent change in organizational structure, decentralized governing structure and absence of audit committee and internal control system;
- Staff and reputation of company executives. Signs of possible fraud include frequent replacements of top managers, as well as family and friendship ties between them, and also negative reputation of company executives.
- Accounting «anomalies». Decrease in share of sales revenue in the company's income that remains stable; significant amount of uncovered loss; high level of accounts receivable, large profit accompanied by the deficit of own funds;
- Cooperation with external auditors, frequent rotation of auditors, location of business units in the regions, which are poorly accessible to auditors. Nevertheless, such techniques as inventory procedures, accounting statements analysis, arithmetical-logical control and informers are used for detecting errors. The search for new methods of falsification detection of the financial statements is very important right now.

According to Clause 24 of the Federal Standards of Auditing Activity 5/2010 «Auditor Responsibilities Regarding Consideration of Unfair Actions During Audit», «An auditor shall consider unusual or unexpected interrelations, which have been detected in the course of carrying out analytical auditing procedures, including those of revenue accounts, and may confirm the presence of the risk of significant falsification resulted from unfair actions». This statement is described in the Annex to this standard, which mentions conditions pointing to the presence of unfair actions such as «controversial and insufficient evidences, including unusual changes in accounting balance data or changes in the key ratio curves or inconsistency between interrelations of indices reflected in the accounting statements» as examples. At the same time, unfair actions mean actions fraudulently taken by one or more owner representatives, executives, entity staff and (or) other persons for the purpose of obtaining illicit benefits (Federal Standards of Auditing Activity, 2010).

The initial stage is to test the relationship of various forms of accounting financial statements, which increases the level of credibility and financial details of the company. The accounting reporting is a set of interrelated indicators of financial and economic activity for the period. When filling out the balance, the indicators should be checked in other ways to meet their reporting data.

Reporting indicators are combined in the appropriate forms, each of which has independent meaning and, at the same time, linked to other forms of reporting. In addition to general relations at the level of balance, there are also sections of the relationship between its individual articles.

In practice, the use of conventional analytical procedures, such as horizontal and vertical analyses of accounting statement indices or calculation of financial ratios (profitability, liquidity and the like) does not necessarily allow to detect falsified statements (Rakutko & Denishevich, 2015). There are calculating methods to account the possible net losses of the investor when placing money in the project (Moraes & Nagano, 2012).

The following is procedures developed exactly for these purposes. They take into account the interrelations between the elements of financial and nonfinancial data of an entity and also their change in the course of time. The first procedure is related to the use of cash-flow report data. It is obvious that the net profit (loss) reflected in the financial statements and the balance of cash flow generated by current transactions must be closely interrelated: if the profit increases or falls, so do balanced cash flows generated by current operations. Thus, the inconsistency between «behavior» of cash flows and that of financial performance is a quite reliable sign of the presence of profit manipulations (Selezneva & Rakutko, 2012).

To illustrate the interrelation between the net profit (loss) and the balance of cash flow generated by current transactions, the ratio of cash generated by current operations (RCGCO) can be used as follows:

$$RCGCO = (Balance of current cash flows) / (Net profit(loss))$$
 (1)

Noteworthy, if entity executives undertake measures to conceal falsifying statements by redistribution of cash flows between cash-flow report sections and indication of false values, the above-mentioned analytical procedure may not bring expected results.

The second procedure is related to the ratio analysis based on the data of accounting balance and financial performance report.

Beneish's studies have shown that the value of consolidated M-score index of entities that have manipulated the profit exceeds minus 2.22. The procedure of calculating the consolidated M-score index is shown in Table 1 (Gordeeva, 2014).

For the purpose of detecting the interrelations between the indices of accounting balance and financial performance report, an auditor can use so-called «Beneish model» (or - «M-score»), suggested by professor Messod D. Beneish in 1999.

«Beneish model» (or - «M-score») is established on the basis of studying financial data of entities alleged of manipulating financial statements and includes the calculation of eight indices shown in Table 1 and deriving the consolidated M-score index on their basis by the following formula:

 $M - score = -4.48 + DSRI \ge 0.920 + GMI \ge 0.528 + AQI \ge 0.404 + SGI \ge 0.892 + DEPI \ge 0.115 - SGAI \ge 0.172 + TATA \ge 4.679 - LVGI \ge 0.327$ (2)

M.L. Roxas (2011) published her study of Beneish mode. The results she obtained 1 allow to cut the number of intermediate indices to five when calculating the consolidated M-score index:

 $M - score = -6.065 + DSRI \ge 0.823 + GMI \ge 0.906 + AQI \ge 0.593 + SGI \ge 0.717 + DEP \ge 0.107$ (3)

Index	Calculation formula		
Days Sales in	<u>R1/S1</u>		
Receivables (DSR)	R0/S0		
GrossMarginIndex (GMI)	(S0 - C0)/S0		
	(S1 – C1)/S1		
AssetQualityIndex	$\frac{(A1 - TA1 - OC1)/A1}{}$		
(AQI	(AO - TAO - OCO)/AO		
Sales Growth Index (SGI)	<u>S1</u>		
	SO		
Depreciation Index (DI or DEPI)	A0/OCint		
	A1/OCint		
Sales General and Administrative Expenses Index (SGAI or SGAE)			
	General expenses1 + Administrative expenses1		
	General expenses0 + Administrative expenses0		
Leverage Index (LI or LVGI)	Credits and loans1/Assets1		
	Credits and loans0/Assets0		
Total Accruals to Total Assets (TATA)	Current assets – Shortterm debt – Cash – taxes – Depriciation		
	Assets		
M-score - fraud index	-4.84+0,92DSRI+0,528GMI+0,404AQI+		
	+0,892SGI+0,115DEPI-0,172SGAI+		
	+4,679TATA-0.327LVGI		

 Table 1. Indices for calculating consolidated M-score index and procedure of their calculation

The value of consolidated M-score index of companies manipulating their profit exceeds minus 2.76 under five-factor model. The indices of this model are also of applied significance and can point to the areas of potential manipulations. They have calculated «standard» values, which may vary depending on the industry or other characteristics of the entities under consideration.

In practice, the following approach to the estimation of index values is used. Any calculated index value exceeding one confirms the fact of potential manipulations of the following indices:

- Days Sales in Receivables Index (DSRI);
- Gross Margin Index (GMI);
- Asset Quality Index (AQI);
- Sales Growth Index (SGI);
- Depreciation Index (DI or DEPI);
- Sales General and Administrative Expenses Index (SGAI or SGAEI).

Calculated index value, which is less than one, confirms the fact of potential manipulation of the Leverage Index (LI or LVGI). Calculated index value exceeding zero confirms the fact of potential manipulation of the Total Accruals to Total Assets (TATA).

Due to the fact that this method has been tested on the statements of listed American companies overstating their accounting profit, it cannot provide a reliable result in Russian business environment, as well as for non-listed companies and in case of manipulations aiming at profit understatement. Yet, despite the above-mentioned limitations, the indices that the consolidated Mscore index show the interrelation between key performance parameters of a given entity in with a significant level of reliability.

The third procedure is related to the analysis of applying non-financial indices.

When carrying out analytical procedures, it is important not to be confined to the comparison between the revenue over the accounting period and that of previous periods, as well as its target values and studying its structure. Relating accounting data on the increase in revenue to the non-financial indices (hereinafter referred to as NFI), which have a direct impact on revenue increase, plays a crucial role. For example, a potential NFI for a supermarket chain may be the number of stores or salesroom area; for a telecommunications company – the number of service users or area coverage and the like. In practice, auditors need study the industry where the audited person operates, which will allow to determine the NFI having the biggest impact on the revenue, and also whether it is appropriate to choose one index or mean value of several of them.

Modern studies confirm that the difference between the increase in revenue and that in NFI calculated in percentage points against the previous period for the entities involved into revenue manipulations substantially exceeds the same parameter of the entities that do not manipulate their profit.

Two following incises can be used for the analysis: revenue increase by the NFI (RINFI) and revenue increase by staff (RI_{staff}):

$$RI_{NFI} = REVENUE INCREASEt - NFI INCREASEt$$
(4)

$$RI_{staff} = REVENUE INCREASEt - STAFF INCREASEt$$
 (5)

where the revenue value is taken as per financial performance report;

NFI – non-financial index chosen by auditor;

STAFF - number of employees; t - accounting period, for which falsifying statement is suspected.

The analysis of American companies' statements has provided estimated standard values of chosen indices that are shown in Table 2. At the same time, just like in case of the above-mentioned procedures, graphical presentation of the indices is appropriate. The limitations of using this method may be related to incorrectly chosen non-financial indices and their possible falsification by company executives. Noteworthy, just like in case of the consolidated M-score index, caution should be used when applying «standard» values obtained from the American practice to Russian business environment.

Table 2. Comparison between indices of the companies that manipulate statements and those of «clean» ones

Index	Value of the companies that manipulate statements	Value of the companies that do not manipulate statements
RI _{NFI}	0.30	0.11
RI _{staff}	0.20	0.04

10170

Despite the limitation specific to the described methods, these methods can be successfully used for detecting potential falsification of accounting statements. To achieve this, primary attention should be paid not to the numeric values of calculated ratios, but to their changes in the course of time.

Based on the foregoing, it can be concluded that nowadays there are a large number of methods and schemes of detecting the signs of data fraud or falsifying financial statements, yet not all of the models have a clear sequence of actions or strict algorithm that would help financial statement user to detect any signs of fraud.

Classification indices of financial statement falsification (fraud) are manifold. For instance, L.V. Sotnikova (2011) classifies this phenomenon depending on the following indices: fraud objects and actors; purposes, methods and results of committing fraud. The process of financial statement preparation presumes information analysis, strict observance of regulation procedures, meeting the legislation requirements and standards. In practice of Russian companies, information about revenue and earnings amounts, company's assets and liabilities are distorted most frequently; besides, phantom accounts receivable are included into the statements and confirmed with falsified reconciliation reports and presence of fictitious buyers. Therefore, there is a variety of financial statement distortion methods. Even obligatory audits cannot guarantee prevention of statement data falsification. But analysis of the researched problem in retrospective proves that "improving" accounting indicators "artificially" goes public before long threatening the company, resulting in loss of its market position and ruining its goodwill.

Up-to-date methods of fighting financial reporting fraud in foreign practices are various. There is no accurate statistical data in Russia on financial statements manipulations and corruption detection methods. However, methods of fraud fighting abroad differ from the measures common in Russian practice. Encouraging and protecting denouncers is traditionally considered to be the most efficient method of fighting fraud abroad. This method is not wide-spread in Russian practice. Implementing the system of controlling the financial statement preparation is an efficient method of fighting fraud used abroad (Gordeeva, 2013). These measures are mandatory by law in many countries. Specific methods for fighting financial statement fraud are not legislated in Russia. Nevertheless, there are some recommendations for corruption detection. Adhering to them helps improve the financial security of economic entities. They include, above all, internal control measures (Selezneva, Temchenko & Belik, 2012). It is reasonable to arrange internal audit services in organizations involving their own personnel possessing the corresponding practical skills and better knowledge of business organization methods than the knowledge of outsourced consultants.

External and internal audit measures are efficient enough in the field of financial statement manipulation (Selezneva & Belik, 2012). Traditionally, external audit is considered to be a more efficient tool for fighting financial statement manipulation in Russia than abroad. No Russian auditing standards have been adopted yet in the field of financial reporting fraud. But provisions of international auditing standards MCA (ISA) 240 (The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements) and US auditing standards (SAS 99) establishing the auditors' responsibilities on detecting distortions in financial reporting are used in international statement auditing prepared by Russian companies.

Discussion and Conclusion

The search for new methods of falsification detection of the financial statements is very important right now. Statement data manipulations are easier to prevent than to detect (Gordeeva, 2013; 2014). In this respect, the role of internal audit is important. Internal audit is performed more frequently, significantly increasing the probability of detecting and preventing accounting errors and diverse corruptions. Performing internal audits helps preventing and detecting cases of financial statement fraud, if the internal audit service in the company is efficiently managed.

We believe the models for detecting falsified accounting (financial) statements are imperfect despite the fact that all of them are focused on detecting overstatements of revenue, profit and balance sheet total. Yet, a systematic approach, not just the analysis of financial performance, is necessary for the full confirmation of the reliability of certain data. We propose an algorithm for detecting falsified accounting (financial) statements (Figure 1).

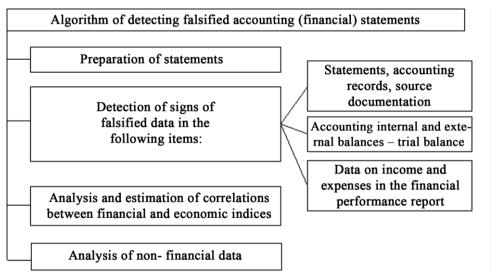


Figure 1. Algorithm for detecting falsified accounting (financial) statements

At operating level and statements preparation level an effective control system and continuous monitoring of the operating environment should be established for detecting falsifications. This phase can be indicated as prevention.

Then, at detection level, the analytical signs of studied actions that go beyond the boundaries of established practice should be checked. In this case, two subjects of the analysis, i.e. financial and non-financial dates, which help conclude the falsification of financial statements. In the course of financial data analysis, the following «signs» of falsification, to which the primary attention should be drawn, may be detected:

- Unjustified overstatement or understatement of financial indices comparing with those of the previous period or other comparable data;

- 00 INTERNATIONAL JOURNAL OF ENVIRONMENTAL & SCIENCE EDUCATION
 - Decrease in the amount of cash receipts under significant increase in income;
 - Increase in sales volume under the decrease in accounts payable;
 - Incommensurable increase in income and decrease in inventories;
 - Detection of excessive procurements;
 - Decrease in accounts payable under apparent increase in stocks.

In advance of carrying out this analysis, which aims at detecting «signs» of falsifying financial statements, the criteria shall be established, with their distortions considered as anomaly, which, in turn, requires considering the specific nature of a company's business activity.

Choosing and creating models necessary for accounting survey in each particular case imply impeccable knowledge and use of methodological principles of keeping accounting records, as well as ability to see and estimate the features of account record, which allow to judge about the nature of falsifying economic data. As professional practice shows, such features include:

- Absence of required records in the analytical accounting sheets, cumulative and turnover balance lists, ledgers, general ledger or audit log. If the sums recorded in the turnover balance lists exceed totals stated in the analytical accounting sheets, it means a certain transaction has not been reflected in accounting records;
- Absence of analytical accounting of the relevant bank accounts, which can be witnessed not only during unsatisfactory record keeping, but also when trying to conceal accounting abuses. If balances and statements are not supported with the indices of analytical accounting, they cannot be recognized as true ones;
- Presence of the credit balance of active accounts and debit balance of passive accounts, which confirms the incorrect statement of assets during their spending;
- Unjustified curtailing balances of active and passive accounts, which creates room for eliminating a certain sum in the accounting records;
- Opening and keeping accounts, which are not envisaged by the plan of accounts and are frequently accompanied by the violation of their correspondence;
- Presence of the records not supported by the documents, which may be due to the incorrect recoding of the sums;
- Falsifying transactions in the account records in cases an accountant tries to conceal the abuse or illegal write-down of cash and other assets;
- Errors in totals calculations and transitions from the one side of the register to another;
- Discrepancy between the records of analytical accounting sheets, turnover balance lists or audit log that usually appear when backdating corrections in the account registers;
- Unspecified corrections in the account registers and presence of corrected accounting records without authorizing document of actual necessity;

- Presence of the one-way cancellation. In this case, an abused record is cancelled in one of the account registers with the red line to transfer the sums to the register of another account where it is concealed.
- After falsified accounting statements have been detected, the following analytical procedures can be carried out:
- Horizontal analysis, which is focused on analyzing the trend and distortion of the value of a certain item from that of the previous period;
- Vertical or correlation analysis, which allows to analyze the change in the relative share of statement item in the generalized index and compare structural changes in the balance, financial performance report and cash flow and capital shift report against previous periods or other relevant comparable data;
- Financial analysis of indices and coefficients. In this case, such indices as turnover, liquidity, financial leverage, rate of marginal profit decrease, improvement of asset quality and the like should be calculated.

Choosing the method of detection depends, above all, on detected falsification or falsifying scheme. It is possible to use several methods at the same time. For example, in case of recording false sales, the effective solution would be to apply horizontal and vertical analysis, since false accounts payable are likely to be recognized in the end of accounting period, due to the fact that recording unsettled accounts payable in the accounting balance for a longer period may lead to the necessity of their write-downs or creation of the underperforming debt reserve.

The analysis of financial indices and coefficients should be carried out using Messod D. Beneish method and his «map of standard distortions of financial indicators », since the use of such indicators in practice allows to almost halve the risk of a company's own loss.

A significant role in detecting falsified financial statements could be played by the analysis of non-financial data, notably the check of contracting parties and relations with business partners. «Informers» are an effective method of fraud detection.

Implications and Recommendations

Summarizing the study, it is worth noting that the issue of falsifying financial statements, just like any other serious economic issue, requires comprehensive approach. Understanding the motives and reduction of «potential room for falsifying» within the framework of structural and operational functioning of a company are the best way of reducing the risks of fraud and falsifying financial data. And the support at state level (i.e. legislative control) and social level (i.e. public control) are, by no doubt, necessary to address this issue.

At the present moment, availability and functioning of internal audit services are not a must for management or economic entities. It should be noted that there are many unsolved problems in the internal audit organization at Russian enterprises not allowing to use the advantages of this tool preventing financial statement manipulations. Implementing internal audit systems will allow economic entities to improve the reliability and quality of financial statements and provide for taking measures of economic security.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Olga G. Zhitlukhina holds a PhD, Professor of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Svetlana Y. Rakutko holds a PhD, Associate Professor of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Elena I. Berezhnova holds a PhD, Associate Professor of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Elena Y. Selezneva holds a PhD, Associate Professor of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Elena V. Belik holds a PhD, Associate Professor of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Nina I. Shalaeva holds a PhD, Associate Professor of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Elena I. Denisevich holds a PhD, Associate Professor of Department of Management, Far Eastern Federal University, Vladivostok, Russia;

Natalia V. Belik Research of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Zhanna E. Saenko Research of Department of Accounting, Analysis and Audit, Far Eastern Federal University, Vladivostok, Russia;

Alina A. Sultanova Research of Department of Management, Far Eastern Federal University, Vladivostok, Russia.

References

- Abalkin, L. (1994). Economic Security of Russia: Threats and Their Solutions. Voprosy Economiki, 12, 4–14.
- Arinushkin, N.S. (1912). Balance Sheets of Joint-Stock Companies. Legal and Accounting Nature of Balance Sheet in Terms of Russian Financial Assessment Standards. Moscow: Pravovedenie.
- Eichern, J., Kulikova, L.I., Gafieva, G.M. (2014). Methods of Financial Results Falsification Used by Contemporary US Companies. *Mezhdunarodny Bukhgaltersky Uchet*, 16 (310), 58-62.
- Federal Standards of Auditing Activity 5. (2010). Auditor Responsibilities Regarding Consideration of Unfair Actions During Auditing.
- Gordeeva, A. A. (2013). Methodology of Revealing Distortions in Accounting (Financial) Statements. PhD thesis in economics. Russian University of Cooperation.
- Gordeeva, A.A. (2014). Methodology of Detecting Frauds in Accounting (Financial) Statements. Moscow: Vershina.
- Komekbayeva, L.S., Legostayeva, A.A., Tyan, O.A., & Orynbassarova, Y.D. (2016). Government Measures for Economic Support in the Conditions of a Floating Exchange Rate of the National Currency. *IEJME-Mathematics Education*. 11(7), 2227-2237
- Kulikova, L.I. (2011). Hiding and Falsification of Financial Statements: Historic and Evolution Aspect. *Mezhdunarodny Bukhgaltersky Uchet*, 14(164), 56-68.
- Kulikova, L.I. (2015). Historical Aspect of Emergence and Development of Accounting Science. Bulletin of Adygea State University. *Economy Series*, 3(165), 130-139.
- Lemeshenko, G.L., & Temchenko, O.S. (2012). Correction of errors in accounting and financial statements of organization. *International accounting*, 14, 16-22.
- Moraes, M.B.C., & Nagano, M.S. (2012). Cash balance management: A comparison between genetic algorithms and particle swarm optimization. Acta Scientiarum Technology, 34(4), 373-379.
- Rakutko, S.Y., & Selezneva, E.Y. (2015a). Falsifying Financial Statements in Terms of Global Market. *Economics and entrepreneurship*, 4, 581-584.
- Rakutko, S.Y., & Selezneva, E.Y. (2015b). Financial Security in Terms of Integration of National Market into the Economy of APEC countries. The 2nd International Academic and Research

Conference. Modern Tendencies and Perspectives of Economic and Management Development Vladivostok: Russian Presidential Academy of National Economy and Public Administration.

- Rakutko. S.Y., & Denishevich E.I. (2015). Study of Regulatory and Methodological Basis of Estimating Credibility of Accounting (Financial) Statements. *Economics and entrepreneurship*, 6, 623-627.
- Roxas, M. L. (2011). Financial statement fraud detection using ratio and digital analysis. Journal of Leadership, Accountability and Ethics. Certain Aspects of Economic Security of the Russian Economy. *Ural Agricultural Journal*, 9, 14.
- Selezneva, E.Y. & Rakutko, S.Y. (2012). Russian Legal Acts and International Standards of Disclosure for Cash Generation Data. *Innovative science*, 4, 47-50.
- Selezneva, E.Y., & Belik, N.V. (2012). Internal Audit: Term, Types and Functions within Internal Supervision System. Modern State and Development Perspectives of Accounting, Economic Analysis and Audit: Proceedings of All-Russian Research and Practice Conference. Irkutsk: Baikal National University of Economics and Law.
- Selezneva, E.Y., Temchenko, O.S., & Belik, N.V. (2012). Experience of Audit Activity Development in China. Modern State and Development Perspectives of Accounting, Economic Analysis and Audit. Proceedings of All-Russian Research and Practice Conference. Irkutsk: Baikal National University of Economics and Law.
- Sher, I.F. (1925). Accounting and Balance Sheet. Moscow: Economic life.
- Sotnikova, L.V. 2011. Financial Statement Fraud: Revealing and Prevention. Moscow: Accounting.
- Tambovtsev, B.L. (1995). Economic Security of Economic Systems: Structure and Issues. Bulletin of Moscow State University. Economy, 3, 3-9.
- Veitsman, N.R. (1962). Balance Sheets of Capitalistic Enterprises and Their Analysis. Moscow: Vneshtorgizdat.