Creative Accounting Detection Methods: Foreign Experience

Yana Ustinova[1], Chander Mohan Gupta[2], Alexandr Shaposhnikov[1]

[1] *Novosibirsk State University of Economics and Management, Novosibirsk, Russia,*
[2] *Shoolini University of Biotechnology and Management Sciences, Bajhol, PO Sultanpur, Distt. Solan – 173229 (HP), India*
Corresponding author. Email:Ustinova_pr@mail.ru

ABSTRACT

The article is devoted to the consideration of methods for identifying creative accounting that provide the ability for users of statements to assess the ability to rely on financial statements as an information basis for making economic decisions. At the same time, the initial assumptions for the use of various methods are substantiated, a classification of the methods used is given, an analysis of their strengths and weaknesses is carried out on the basis of the experience of foreign researchers. General recommendations are formulated for adapting the methods used abroad to Russian practice.

Keywords: Creative accounting, methods for identifying creative accounting, detection model reporting distortion

1. INTRODUCTION

Considering financial statements as a source of information for making economic decisions, users of financial statements are interested in reducing the risks of making inadequate decisions on the basis of inaccurate reporting influenced by negative manifestations of creative accounting, including fraud. One of the most successful definitions of creative accounting in its negative aspect was given by K. Nasser (Naser, 1993) [[5], p. 2, 59]. "Creative accounting is:

1) the process of changing the FS figures in such a way that they present the picture required by the management taking into account the advantages of loopholes in the existing rules or ignoring some of them.

2) the process of manipulating accounting figures, using the weak links of the rules and taking advantage of the same in its favor as required by the management;

3) the process by which transactions are structured so as to produce the required".

Thus, the negative impact of creative accounting on financial statements represents deliberate and consistent steps to distort financial indicators in the direction needed by preparers, both by manipulating accounting techniques used and by manipulating transactions.

However, as noted by K. Naser (Naser, 1993) [5, p. 7], a reasonable, well-informed user of reporting is able to analyze and recognize signs of creative accounting, and therefore will not be misled by the reporting indicators. Recognition of the ability for users to avoid the negative consequences of misstatements in reporting has stimulated the development of various methodologies for identifying creative accounting.

In foreign literature, the development, testing, and modification of techniques have been covered since the beginning of the 80s of the twentieth century. At the same time, the main emphasis is placed on the use of math models for revealing creative accounting. Though during the COVID-19 Pandemic these cases and the way to pull these cases have changes and the number of bank frauds as well as email frauds have risen. (https://www.bbc.com/news/business-53573408 accessed on 7th Dec 2021.) Deloitte (2020) report talks about the increase in financial statement frauds during COVID-19. These models make it possible to restrict we to external reporting data that is placed in the public domain, and simplify the procedure for interpreting the results obtained. The variety of techniques, their strengths, and weaknesses, general guidelines for adapting these techniques for use in the Russian economy became the subject of this study.

2. RESULTS

The methods used today for identifying creative accounting can be classified as follows:

1) Single account methods.

This methodology considers the fact of a change in accounting policy (refusal of its consistent application) in relation to a specific accounting procedure as a sign of possible distortion of reporting due to the use of creative accounting. Especially if such a change provides the required level of the corresponding accounting indicator that meets the objectives of management. The approach under consideration is focused on studying the information disclosed in the notes to the financial statements, in particular, a summary of the accounting policies.

As examples of the use of this approach, we can consider the research results of A. Sweeney (Sweeney, 1994), K. Aljifri (Aljifri, 2007), who analyzed the application of the LIFO and FIFO methods in order to influence the company's profit); R. Holthausen (Holthausen, 1981), P. Healy (Healy, 1985), D. Skinner (Skinner, 1993), who analyzed the application of depreciation methods and their revision in order to influence profitability), etc. (Almahrog and Lasyoud, 2021 [1, pp. 93-94]).

The advantages of this technique include the simplicity of its application. However, it should be recognized that the user has an objective lack of data to qualify the introduction of changes in the accounting policy as manipulation, abuse of the flexibility of accounting standards leading to Earning Management(Jiang, 2020).

2) Real transactions and accounting structures.

This methodology is based on identifying real business transactions that have been reflected in accounting in accordance with the preferences of the company's management or accounts that are not based on real transactions. The approach under consideration is focused on additional disclosures in the notes to the statements.

As examples of revealing this practice, one can mention the works of C. Mulford and E. Comiskey (Mulford and Comiskey, 2005), who analyzed the overestimation of sales through increased discounts and increased loan terms; P. Dechow and R. Sloan (Dechow and Sloan, 1991), who investigated the overestimation of income through the recognition of R&D expenditures as assets; E. Bartov (Bartov, 1993), who analyzed the overestimation of income by manipulating the moment of recognition of the sale of non-current assets, etc. (Almahrog and Lasyoud, 2021 [1, p. 94]).

The advantage of this technique is the obviousness of the detected distortions. Its objective disadvantage is the absolute impossibility of detecting distortions in the event of a deficiency of information disclosed in the financial statements or violation of the procedure for such disclosure, the need for a consistent analysis of financial indicators in dynamics, and the use of alternative sources of information(Cao, Luo, & Zhang, 2020).

3) Math models for creative accounting detection.

These models are based on the use of regression equations (usually linear) and a comparison of the results obtained in dynamics, at least for the reporting period and the previous one. Initial assumption: managing account data is significantly easier than manipulating cash flows and indicators of company growth.

Math models include:

A) total accruals.

As a sign of report misstatement, is considered "unexpected, abnormal" deviations between accruals and cash flows, which are not related to accounting rules but are explained by adjustments made by management to distort financial indicators. In this case, the growth rates of indicators due to accounting rules are assumed to be unchanged. Adjustments made in the framework of creative accounting can be aimed at both overstating and understating the accounting indicators.

Examples of pioneering studies in this area are the works of P. Healy (Healy , 1985), L. DeAngelo (DeAngelo, 1986), who analyzed the differences between accrued income and cash flows from operating activities for reporting periods and the reasons for their occurrence (Almahrog and Lasyoud, 2021 [1, p. 94]). However, these models did not take into account the dynamics of the company's financial position, which caused differences that were not related to accounting rules, but also did not indicate distortions in the reporting. This reduces the efficiency of the models.

The linear regression model developed by J. Jones (1991) was aimed at overcoming these shortcomings. The analysis is carried out in two stages: before and after the reporting period. Neutral indicators, free from the distorting influence of management, are recognized: revenue and property, plant and equipment. At the same time, the revenue indicator, according to the developer's idea, reflects the financial position of the company and the effect of the economic environment surrounding it, while the indicator of fixed assets reflects the depreciation (impairment) of assets (Almahrog and Lasyoud, 2021 [1, p. 95]; (Dokas, 2021 [3, p. 27]) In addition, indicators of the previous period are recognized as neutral (Strakova and Svabova, 2021 [6, p. 3]). These assumptions are a limitation of the model. In addition, the model requires long-term observations in order to estimate effective valuation coefficients. The

model is focused on a specific firm and does not take into account the dynamics of financial indicators in the industry and the economy as a whole. At the same time, the model allows in some cases to successfully identify distortion of reporting.

As a means of overcoming the weakness of the Jones model, P.M. Dechow (Dechow, 1995) presented a modified version of the model. Revenue is excluded from neutral indicators as changes in accounts receivable (especially on credit sales) may be due to manipulation (Dokas, 2021 [3, p. 27]). The preceding period is recognized as free from distortions, which is the bottleneck of the model (Almahrog and Lasyoud, 2021 [1, p. 95]). The model is focused on long-term observations and weakly reflects the relationship between changes in the financial performance of a firm with the dynamics of economic processes in the industry and in the economy as a whole.

K. Peasnell (Peasnell, 2000), based on the Jones and Dechow models, proposed a "margin model" for identifying reporting distortions. Neutral indicator - accruals in terms of working capital. At the same time, total revenue and sales receivables were recognized as free from the distorting effects of management. The accruals for impairment of non-current assets are ignored. Changes in the amount of revenue are divided into two parts by replacing the last year's indicator with actual cash receipts (Dokas, 2021 [3, p. 27]).

The model proposed by S. Kothari (Kothari, 2005) is focused on "assessing the financial situation," including taking into account the industry specifics, both for a year and for a number of years. An independent indicator is a return on assets, which makes it possible to take into account the agreed and non-agreed changes in indicators, including due to adjustments not provided for by accounting standards (Dokas, 2021 [3, p. 27]). The model excludes taking into account the influence of interrelated indicators on the calculation model, reduces the required observation period for a particular company (Almahrog and Lasyoud, 2021 [1, p. 96]).

The nonlinear model proposed by R. Ball & L. Shivakumar (Ball and Shivakumar, 2006) takes into account the asymmetry in the recognition of losses. This model is focused more on the timely recognition of losses by the company (conservatism), and therefore explains more variations in charges than linear models (Verbruggen, 2008 [7, pp. 15-16]).

B) specific accruals.

Specialized accrual models are aimed at the specifics of individual financial indicators, individual industries (types of activities), individual economic situations, or individual accounting standards (for example, adjustments for bad debts, deferred tax assets, reserves to cover losses on loans provided in banks and losses of insurers) and suggest an extended analysis of the

differences that are detected. Attention is focused on "suspicious articles" that contain space for accounting choices and can be used to distort reporting indicators (Verbruggen, 2008 [7, p. 8]).

In the literature, two versions of the considered models have been studied: based on a single indicator and on a set of indicators. An example of the first option is the models of M. McNichols & G.P. Wilson, (McNichols and Wilson, 1988), based on the analysis of changes in the reserve for doubtful debts, in comparison with the dynamics of material balances; as well as models based on the indicators of the bank's loss reserves for loans issued by W. Beaver and E. Engel (Beaver and Engel, 1996), the indicators of the reserve for losses of insurance companies by K. Petroni (Petroni, 1992) (Almahrog and Lasyoud, 2021 [1, p. 96]).

An example of a model based on a set of financial indicators is the model proposed by M. Beneish (Beneish, 1997) for companies experiencing serious financial difficulties. At the same time, the study is carried out taking into account a number of factors: market position in previous periods, ownership and capital structure, listing, sales growth, and other indicators that could serve as incentives for management to deviate from accounting standards.

C) Cost allocation or income shifting.

This model is based on the presumption that managers are focused on certain target indicators, for example, avoiding losses and reducing revenue, including through the smoothing (distribution) of income (expenses) over time (in particular, due to the high frequency of reflection of small distortions and rare use distortions of large amounts). Distortion sign: significant deviations of the dynamics of income (expenses) from the expected growth rate. The distribution of expenses, for example, on types of activities that are positively assessed by the public, or involving the use of special tax regimes, can also be considered a variant of the model (Verbruggen, 2008 [7, p. 9]) the same was found in Satyam Case in India 2009(Mansour, Ahmi, & Popoola, 2020).

Among the pioneering studies in this direction is the model proposed by D. Bergstahler and I. Dichev (Burgstahler and Dichev, 1997), which focuses on comparing the dynamics of cash flow from operating activities with changes in working capital; proposed by F. Degeorge (Degeorge, 1999), which analyzes the three main motives for distributing income over periods: avoiding losses, presenting a stable financial position and meeting the expectations of financial analysts; proposed by A. Beatty (Beatty, 1999), examining the frequency of detecting such distortions in state and commercial banks (Almahrog and Lasyoud, 2021 [1, p. 96]).

Summing up the analysis of the methods for identifying creative accounting described above, it should be noted that models of total accruals are the most popular since they are focused not only on identifying "unexpected" deviations due to changes in the accounting policy of the company but also changes in accounting estimates and the time of income recognition and costs (Khaneja and Bhargava, 2016-2017 [4, p. 10]; Verbruggen, 2008 [7, p. 8, 14]). Moreover, to identify the risk of reporting misstatements in organizations with government participation, a modified Dechow model is often used (to include in the study a potential misstatement of revenue) (Bisogno and Donatella, 2021[2, p. 13]).

At the same time, models of specific accruals are more often used for researching companies at the international level (Bisogno and Donatella, 2021 [2, p. 13]), in order to exclude the influence of indicators, which can be subject to various effects from the national economies in which the structural units of the corporation are located.

In general, the models of total accruals are reduced to using the Jones model as a basis, but using a number of ideas to improve it: using a "cross-section" toolkit instead of a "time series method", involving financial ratios, using a cash flow statement instead of an accounting one, using a cash flow statement instead of a balance sheet to calculate accruals (deviations), the transition to nonlinear forecasting models (Dokas, 2021 [3, p. 29]; Verbruggen, 2008 [7, p. 16]).

Thus, the main disadvantages of the models for identifying creative accounting include:

- relative helplessness in the absence of adequate disclosures in financial statements,

- lack of consideration of the factor of unstable development of the financial position of the company, weak correlation with changes in the industry and the economy,

- using initial assumptions about the presence of neutral indicators, free from distorting effects,

- identifying with a certain degree of certainty the probable misstatement of the reporting, but not the very fact of misstatement,

- limited possibilities of interpretation of the results obtained.

- a decrease in the effectiveness of methods in a situation when the company is in a financial crisis,

- incomplete coverage of factors, and in some cases - the need to predict a limited number of factors that can stimulate the appropriate behavior of management.

- differences between the methods according to the used initial assumptions and signs of creative accounting, which complicate their comparative analysis and the choice of the optimal toolkit.

Though above are the major ways that can be used to identify creative accounting in financial statements but in the current situation of COVID-19 we have to be more cautious and take, a) more care while examining financial statements and proper validation should be done, b) separate independent report need to sought from professional so that we can have a clear picture, c) more emphasis on auditors role, d) directors should be answerable for any discrepancies, and e) continuous evaluation to make red flags work more effectively.

3. CONCLUSION

The use of models for identifying creative accounting requires predicting the risk factors for misstatement of reporting that stimulate the opportunistic behavior of the company's management. Therefore, it is necessary to continue researching these factors, motives, and techniques of creative accounting, including in the context of reforming accounting regulation.

Methods for identifying creative accounting can be helpful:

- for users of financial statements, including researchers (in order to anticipate the likelihood of exposure of the company's statements to risks of misstatement, in order to be selected for further research);

- for the regulator (in order to effectively predict the use of possible imperfections in accounting standards);

- for auditors (to assess risks and develop audit procedures in response to risks).

REFERENCES

[1] Y.E. Almahrog, A.A. Lasyoud, An overview of earning management detection approaches. Journal of critical reviews. 08(02) (2021) pp. 92-101.

[2] M. Bisogno, P. Donatella, Earning management in public sector organizations: a structured literature review, Journal of Public Budgeting, Accounting & Financial Management Emerald Publishing Limited, June, 1-25 (2021) pp. 1096-3367. DOI: 10.1108/JPBAFM-03-2021-0035.

[3] I. Dokas, Ch. Leontidis, N. Eriotis, K. Hazakis, Earning management. An overview of the relative literature, Bulletin of Applied Economics. 8(2) (2021) pp. 25-55.

[4] S. Khaneja, V. Bhargava, A comprehensive review of literature on creative accounting, International Journal of Business Insights and Transformation. 10(1) (2016-2017) pp. 6-20.

[5] K. Naser, Creative Financial Accounting: Its Nature and Use. London, Hemel Hempstead, Prentice Hall, 1993, p. 205.

[6] L. Strakova, L. Svabova, Jones' model and its modifications in the conditions of the Slovak Republic, SHS Web of Conference 91 (2021) IES2020. pp. 1-13.

[7] S. Verbruggen, J. Christaens, K. Milis, Earnings management: a literature review, HUB Research Paper 2008, pp. 27.

[8] J. Cao, X. Luo, W. Zhang, Corporate employment, red flags, and audit effort. Journal of Accounting and Public Policy, 39(1) (2020) pp. 106710. DOI: https://doi.org/10.1016/j.jaccpubpol.2019.106710

[9] Y. Jiang, Meanings, Motivations and Techniques of Earnings Management. 496(Ichess) (2020) pp. 141–146.   DOI: https://doi.org/10.2991/assehr.k.201214.483

[10] A. Z. Mansour, A. Ahmi, O. M. J. Popoola, The personality factor of conscientiousness on skills requirement and fraud risk assessment performance. International Journal of Financial Research, 11(2) (2020) pp. 405–415. DOI: https://doi.org/10.5430/ijfr.v11n2p405

[11] Delloitte 2020 the risk of Financial Statement fraud in the wake of COVID-19.