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ACCOUNTING SHENANINGANS - CAUSES OF THEIR OCCURENCE AND METHODS OF DETECTION

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Abstract: The definition and adoption of accounting rules and procedures (general theories of accounting) whose acceptability would be universal (general), resulted in the involvement of the two most important accounting associations (International Accounting Standards Board - IASB and Financial Accounting Standards Board - FASB), as well as other interested individuals and associations, in the preparation and adoption of the so-called international professional accounting regulations (standards and/or GAAP) that would achieve this. However, the long-term work on developing standards did not result in the definition of unique rules and procedures for the bookkeeping treatment of all changes in the asset-financial and return position of accounting entities and the compilation of a set of financial reports. Namely, during the development of the standard, it was concluded that in certain situations prescribing only one procedure harms the quality of the standard, and alternative procedures are allowed for certain situations, which allow accountants to make subjective decisions, but also a certain degree of arbitrariness in their choice. The (un)ethical application of the basic or alternative procedure may result in the presentation of the desired asset-financial and return position of the accounting entity, which may deviate to a greater or lesser extent from what could be called true and fair. Such accounting is called creative (aggressive, manipulative), even illegal accounting, although in most cases it does not result in a mandatory violation of legal norms and/or accounting rules and procedures. The common understanding that the methods and techniques of creative accounting are in most cases used for manipulative purposes, resulted in the finding of adequate models, developed primarily by forensic accountants, which would limit its (mis)use and reveal "accounting shenanigans" in financial reports. The term "shenanigans" was first used by Howard Schilit, an international leader in detecting early warning signs of accounting fraud and corporate mismanagement. Beneish's M score model is one of the most commonly cited and tested models that can be used to assess with reasonable certainty whether the analyzed financial statements are true and fair, or they were compiled using basic and/or alternative procedures that aim to show the property-financial and return position that may or may not deviate from the actual one. We supported our presentations by analyzing the financial reports of several companies from the Manufacturing Industry sector in the Republic of Serbia, both those that showed a significant increase in net profit and those that showed a loss in the observed year 2023.

Keywords: accounting standards, creative accounting, forensic accounting, Beneish M-score model.
Field of the paper: Social sciences.

1. INTRODUCTION

Making business decisions by the most important groups of stakeholders (managers and institutional investors) is largely based on the information they use from financial reports, which companies are obliged to prepare. A dose of certainty in correctness of financial reports is given to menagers and investors, as well as other users (extern and/or intern) by the fact that they are made esteeming so-called international professional accounting regulations (IAS, IFRS and/or GAAP). In this way, a "satisfactory formal basis was created and was supposed to ensure a true and fair presentation of the financial position and earning capacity of the observed business entities" (Đorđević, Mitić, 2020, 22). However, the impossibility of defining universal rules through the processes of standardization, harmonization and convergence of accounting rules and procedures and allowing not only basic, but also alternative procedures for certain situations, resulted in the preparation and compilation of financial reports that are formally correct, but contain data that are a consequence of the unethical behavior of accountants and that distort the presented financial position and earning capacity of the observed accounting entity. The behavior of accountants that is "usually in accordance with the law and accounting standards, but contrary to their spirit" (Karapavlović, 2011. 157) was called creative accounting, while the discipline that should help in discovering accounting manipulations and snags was developed within forensic accounting. The Beneish M score model is one of the most frequently cited methods that help forensic accountants in detecting possible inconsistencies

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in the presented financial and financial position of the observed accounting entity. Therefore, the basic research question that we will try to answer through the analysis of specific financial reports of several companies in the Republic of Serbia is: Can Beneish's M score model help in detecting warning signals that can indicate with reasonable certainty that the analyzed financial reports are the result of (un)ethical and manipulative rules and procedures?

2. MATERIALS AND METHODS

The research is based on the analysis of the financial reports of several companies from the Manufacturing Industry sector in the Republic of Serbia and the comparison of the obtained results with the reference values obtained by calculating the necessary indices, as well as comparing the obtained results with the researches that were authored from the area of the so-called western Balkans obtained either by analyzing hypothetical or real examples from practice. The sample includes the financial statements of three companies that achieved the highest growth in net profit in 2023 and two companies that achieved a loss in the same year. We will present the results of the research in the following table, with a note that we have explained the procedure of calculating individual indices and Beneish's model with five and/or eight variables in more detail on the following pages of this article:

Table 1: Overview of index values and M-score companies

Companies / Index value	Farmina pet foods Inđija	Philip Morris Niš	Coca-Cola Srbija	Trayal Kruševac	Zastava oružje AD Kragujevac	Referential values	
DSRI	*1,0716*	0,9653	0,9285	*1,2138*	**5,84**	1,031	1,465
GMI	0,9947	1,0338	1,0014	0,9820	0,5024	1,041	1,193
AQI	0,9325	*1,1354*	**1,9461**	1,0318	0,0000	1,039	1,254
SGI	*1,3688*	1,1200	1,0379	1,1253	0,9697	1,134	1,607
DEPI	*1,0020*	**1,0781**	0,9972	0,9112	0,9932	1,001	1,077
SGAI	1,0000	0,9899	*1,1724*	0,9369	**2,1066**	1,134	1,607
LVGI	0,6015	*1,0410*	**1,6482**	0,9066	*1,0472*	1,037	1,111
TATA	**0,0615**	**0,0513**	*0,0194*	**0,0320**	**0,0507**	0,018	0,031
M (5)	-2,6403	-2,8036	-2,3886	-2,6108	**0,0077**	-	-
M (8)	**- 1,6969**	**-0,7532**	-2,2803	**-1,9873**	**1,3098**	-	-

Source: Authors

Indices whose value is between the reference values are shown in Table 1 in italics, while exceeding index values that indicate the existence of suspicion that there may be (un)intentional errors in the financial statements are bolded. Also, the amounts for the M-score value that are below the threshold value of -2.22 are bolded.

3. RESULTS

Farmina pet foods d.o.o. Indjija, a producer of pet food, represents the most successful company from the analyzed sample. The value of Beneish's M-score with five variables indicates that there are no indications that the financial statements of this company have been manipulated, but some indices indicate that their value is between the reference values. Finally, the TATA index and the M-score value with eight variables indicate the existence of a doubt that everything is not in perfect order.

Tobacco product manufacturer Philip Morris Operations a. d. In 2023, Niš achieved a net profit in the amount of 6,302 million dinars. The five-variable M-score model indicates that there should be no doubt about the correctness of the analyzed financial statements. However, several indexes are also between the reference values for this company, while the values of the DEPI, TATA and M-score indexes with eight variables are above the values that indicate that there may be irregularities in the analyzed financial statements.

Beverage manufacturer Coca-Cola HBC - Serbia, d. o. o. Zemun bottles, sells and distributes some of the most famous soft drinks in the world. For this company, both M-score values indicate that there are no indications in the financial statements that the presented state and success are the result of some manipulative actions. Nevertheless, there are also a couple of indices that are above the reference values (AQI and LVGI). The bad leverage index (LVGI) is the consequence, first of all, of the significant growth of current liabilities of this company (10,454 million in 2023 versus 5,791 million in 2022).

Trayal Kruševac and Zastava oružje AD Kragujevac represent two companies that reported a loss in 2023. The company Trayal Corporation Kruševac deals with the production of tires, protective equipment and commercial explosives. Despite the stated deficit, based on the individual indices and the M score model with five variables, it would not be possible to conclude that there was abuse in the use of accounting rules and procedures in the process of compiling financial statements. A positive conclusion about the consistent application of legal and international accounting regulations is somewhat spoiled by the values of the TATA index and the M score with eight variables.

The worst values are shown by indexes and M score models with five and eight variables at the company Zastava oružje AD Kragujevac. The bad indicators are the result, on the one hand, of a five-fold increase in receivables from customers and, on the other hand, a two-fold increase in administrative expenditure.

The general conclusion we could draw by analyzing the financial statements and calculating the corresponding indices and Beneish's model is that there are warning signals in the M score model with eight variables, which indicates the suspicion that the accruals and/or administrative expenses were possibly manipulated. Also, the values of the M score model with five variables, except for the company Zastava oužje AD Kragujevac, lead to the conclusion that there is no doubt that the analyzed companies tried to manage the result with the aim of deforming it and showing a financial result that could deviate to a greater or lesser extent from the actual one.

4. CREATIVE ACCOUNTING AND ITS IMPACT ON FINANCIAL STATEMENTS

Incorporation and consistent application of international professional accounting regulations should be an argument in the claim that "financial reports realistically and objectively present the financial position, business performance and cash flows of a business entity" (Budić, 2023. 81). Such financial reports, that are, the accounting that participated in their creation, can be called realistic, clean, consistent, conservative, legal, etc. (Đorđević, Mitić, 2020. 23).

On the other hand, the unethical application and (mis)intentional use of accounting rules and procedures, which we call creative accounting, represents "an accounting practice that may (or may not) adhere to accounting principles and standards, but deviates from what those principles and standards intend to achieve in order to present the desired business image" (Bhasin, 2016. 145).

If accounting rules and procedures are applied in a way that cannot be seen as unethical and malicious, but are basically the consequence of a subjective choice for a basic or alternative procedure, such accounting is called cosmetic, positive or "white" creative accounting. The consequences of the application of this accounting are "manipulation of accruals, without any consequences on the cash flows" of the accounting entity (Đorđević, Mitić, 2020. 23). In contrast to this, there is real, negative or "black" creative accounting, which is based on the subjective determination of accountants to apply techniques and methods that influence cash flows and indirectly manage the level of profit shown. Financial statements resulting from the application of "black" creative accounting may result in wrong business decisions being made by managers or (co)owners of the business entity under consideration.

The main features of creative accounting can be summarized as follows:

- adjustment of financial statements;
- using the legal possibilities of choosing flexible accounting methods, procedures and assessments;
- exploiting insufficiently defined and clear areas in accounting standards that make control and auditing difficult;
- emphasizing the importance of this information that correspond to the reporting subject, and hiding this information that are not favorable to him;
- abuses that significantly exceed the legal and professional frameworks of behavior (Belak, 2011., Budić, 2023. 82, Đorđević, Mitić, 2020. 23).

To conclude, the existence of a good intention to define more rules and procedures on the part of the relevant accounting associations for the inclusion of certain business changes, the assessment of certain balance positions, the method for calculating inventory costs, etc. it turned into a problem, because in most such situations new opportunities for accounting manipulations are created (Remenarić et al., 2018. 194).

5. BENEISH M SCORE MODEL – ANALYTICAL TOOL FOR FORENSIC ACCOUNTANTS

An opinion of independent external auditors stating with reasonable assurance that the financial statements of the analyzed accounting entity have been prepared with consistent application of legal and professional accounting regulations should be "evidence" that stakeholders can use as a tool for making business decisions. However, numerous financial scandals from the end of the 20th and beginning of the 21st century, in which globally known corporations (Enron, WorldCom, Parmalat, Maxwell Communication, etc.) were involved, reduced the role of independent external auditing and shifted the focus to forensic accounting, as a safer way to uncover possible "accounting shenanigans and various tricks and gimmicks"(Budić, 2023. 83-4) to a greater or lesser extent. Detecting accounting manipulations, obfuscation and falsification of financial statements is extremely important, given that "falsification of financial statements is the most sophisticated, rare (9.0%), but also the most damaging fraud (at least a million dollars in damage on average)" (Rajković, 2016. 38).

Forensic accounting is a relatively young scientific discipline. There are several attempts to define it comprehensively. That criterion should meet the definition of the Association of Certified Fraud Examiners (ACFE). The association defines forensic accounting as "the use of professional accounting skills in matters involving potential or actual civil or criminal litigation, including, but not limited to, generally acceptable accounting and audit principles; the determination of lost profits, income, assets, or damages; evaluation of internal controls; fraud; and any other matter involving accounting expertise in the legal system." (Dimitrijević, Danilović, 2017. 312-3). We will also mention the definition of Huber and DiGabriele, which also tries to cover all aspects of forensic accounting. According to their understanding „Forensic accounting is a multidisciplinary field that encompasses both a profession and an industry, where civil or criminal economic and financial claims, whether business or personal are contested within established political structures, recognized and accepted social parameters, and well defined legal jurisdictions, and informed by the theories, methods and procedures from the fields of law, auditing, accounting, finance, economics, psychology, sociology and criminology" (Huber, DiGabriele, 2014. 45).

The possibility of detecting accounting manipulations is determined by two groups of factors. On the one hand, there are a considerable number of motives that can force accountants to present a distorted financial position, results and/or cash flows. Classifications of motives are different, but they can be systematized as follows:

- maintaining the trust of existing investors and attracting new ones;
- personal motives (financial problems, hubris, bonus increase, low salary, narcissism, etc.);
- preparation for takeover or defense against takeover;
- increase in the market value and/or price of the company's shares;
- increasing or maintaining the existing level of capital;
- postponement of the payment of income tax for subsequent periods;
- refutation of pessimistic forecasts about the company's future performance), etc (Remenarić et al., 2018. 196, Jamiseon et al., 2019, 58, Đorđević, Mitić, 2020. 25).

The aforementioned statement that manipulative actions in accounting attempt to influence the company's profit and cash flow management implicitly indicates that the focus of the shenanigans is on expenses and income, by showing a higher or lower periodic result than actually achieved. Expressing more profits can be achieved by increasing income and gains (premature recognition of income, recognition of income of dubious quality, recognition of fictitious income), and/or by reducing expenses and losses (capitalization of expenses, underestimation of long-term provisions, underwriting of asset positions, changes in accounting policies related to the choice of methods for calculating depreciation, deleveraging of inventories, etc.). In contrast, the presentation of a less favorable financial result can be achieved by underestimating income (postponing the recognition of income) or overestimating expenses (excessive write-off of assets, overestimation of provisions, treatment of period expenses that have the ability to be capitalized, deferred and/or included in the value of inventory, reported expenses of future periods as expenses of the current period, etc.).

The variety of ways in which the result and cash flows can be influenced indicates that a tool for detecting accounting manipulations would necessarily have to contain more variables, with which financial statements could be analyzed and possible warning signals that the achieved result is not only a consequence of business activities. The method developed by Messod D. Beneish in 1999 is a method that takes into account more variables and focuses attention on three areas that are susceptible to manipulation: overestimation of profits by recording fictitious incomes; recording of non-existent stocks and improper capitalization of costs (Budić, 2023. 85).

Based on data on the part of assets and liabilities from the balance sheet and regular income and

expenses and administration costs from the income statement, Beneish developed a set of indicators, to which he assigned a specific weight. Based on them, he compiled two models, depending on whether the emphasis was placed on regular income and expenses (model with five variables), or whether he added the so-called accrual components (model with eight variables). The first relation for calculating Beneish's M-score model has the following form:

$$M = -4,84 + 0,92 \times DSRI + 0,528 \times GMI + 0,404 \times AQI + 0,892 \times SGI + 0,115 \times DEPI – 0,172 \times SGAI + 4,679 \ TATA – 0,327 \times LVGI$$

The five-variable model does not take into account the index of the leverage ratio, the ratio of accruals to total assets and the index of selling and administrative expenses and is represented by the following expression:

$$M = -6,065 + 0,82 \times DSRI + 0,906 \times GMI + 0,593 \times AQI + 0,717 \times SGI + 0,107 \times DEPI$$

The threshold value for both expressions should be equal to -2.22 or less. If, on the other hand, "the obtained value is greater than the limit, there are indications that there has been fraud in the financial statements" (Dimitrijević, Danilović, 2017. 319). The authors of research related to the application of Beneish's M score model used the aforementioned cut-off value as a benchmark for the (absence) of fraud in financial statements, although Beneish later modified the cut-off value to -1.78 (Knežević et al., 2021. 25).

The inidicators that Beneish uses in his model are as follows:

Days' Sales in Receivables Index - DSRI – measures changes in receivables relative to sales revenue over at least two consecutive periods. A claim index value less than or equal to 1.031 indicates no suspicion of fraud. If the index is above the control value of 1.465, it is assumed that there is a high probability of fraud in the financial statements, although the growth of this indicator can also be a consequence of perfectly legal activity, which is a consequence of the increase in sales on credit (Knežević et al., 2021. 24). A receivables index value between the lower and upper limits (1.031 to 1.465) "indicates the existence of suspected fraud, but this must be taken with a grain of salt, as it is possible that the index value was obtained due to the action of many factors unrelated to fraud" (Dimitrijević, Danilović, 2017. 317).

Gross Margin Index - GMI – it is calculated by comparing the gross margin of the previous period with the gross margin of the current period. The lower limit for this indicator is 1.14 (there is no suspicion of fraud), while its value of 1.193 and above indicates a high probability of fraud in financial statements.

Asset Quality Index - AQI – is calculated by comparing fixed (long-term) assets minus the value of real estate, plant and equipment with total assets. This index can be used to check whether there is an intention of the management to influence the achieved periodic result by improper capitalization of costs. If the asset quality index is greater than 1, it is a sign that the management is trying to transfer the costs of the current accounting period to the following accounting periods. Benchmark values for the asset quality index according to Beneish's model are 1.039 (no suspicion of fraud) and 1.254 and above (high probability of financial statement fraud).

Sales Growth Index - SGI – it is calculated by comparing the sales revenue in the current accounting period (year) with the sales revenue in the previous accounting period (year). Growth in sales revenue in itself is not evidence that financial statements have been manipulated. The reference values of this index according to Beneish are 1.134 (there is no doubt that fraud has been committed) and 1.607 and above (there is a high probability that there is fraud in financial statements).

Depreciation Index - DEPI – measures the change in the depreciation rate over two consecutive years. A value of this index of 1.001 or lower indicates that there is no suspicion of fraud in the financial statements, while its value above 1.077 indicates the likelihood that the financial statements have been manipulated.

Leverage Index - LVGI – it shows us the share or ratio of total debt (borrowed sources of financing) in total assets. A value of this indicator of 1.037 or lower means that the financial statements are objective, while a leverage value of 1.111 or more is considered an indicator that indicates suspicion that the analyzed financial statements have been manipulated.

Total Accruals to Total Assets - TATA – it is calculated by putting in "the ratio of total accruals to total assets. Total accruals (calculation base) are calculated as the change in net working capital (excluding cash) and less depreciation" (Radojević, Stanković, 2023. 242). The reference values of this index according to Beneish are 0.018 (there is no suspicion of fraud) and 0.031 and above (there is a high

probability of fraud in financial statements).

Sales, General and Administrative Expenses Index - SGAI – measures the ratio of administrative expenses to sales revenue in the current year compared to the previous year. The limit values of this variable are 1.054 (there is no suspicion of fraud) and 1.041 (the value of the index in the financial statements in which there is fraud). A disproportionate increase in administrative expenses in relation to the growth of sales revenue indicates a possible negative trend related to the company's long-term prosperity.

The fact is that Beneish's M-score model is a useful and widely used forensic accounting technique in detecting fraud in financial statements. Nevertheless, most authors in their conclusions state the expressions "assumption", "probability", "there are indications", "there is a real possibility", etc. which only indicates that this model can be a useful tool in detecting irregularities in financial reports, but without more detailed research and combining and comparing the results with other methods and techniques (for example, Altman's Z score) it cannot confirm with certainty the existence of manipulative actions when compiling a set of financial reports. An additional limitation is the fact that this "model is based on the foundations of American accounting standards (GAAP), which can create certain differences if the financial statements are compiled on the basis of International Financial Reporting Standards" (Dimitrijević and Danilović, 2017. 317). Also, "the power of the model decreases if, over a long period, some accounting entity manipulates the positions in the financial statements (Kušter, 2021. 34).

6. CONCLUSION

Accounting authorities (IASB and FASB) in the process of defining the standards for the recognition, measurement and valuation of individual balance positions prescribed alternative procedures in addition to the basic ones, in order to ensure their flexibility and enable the creativity of accountants. However, the good intention is anulled by the fact that the choice between the basic or alternative procedure often results in the creation of opportunities to manipulate accounting data by showing the financial result of the observed entity that deviates to a greater or lesser extent from what was actually achieved. Numerous financial scandals from the end of the 20th and the beginning of the 21st century affected theorists and practitioners involved in the analysis of financial statements and the so-called forensic accounting to try to develop models that would help detect signals that would indicate that the analyzed financial statements have been manipulated. Beneish's M score model is one of the most frequently analyzed and used analytical tools that can reveal warning signals of the existence of fraudulent actions when compiling financial statements. However, many analysts believe that the mentioned model is not perfect and that it needs to be supplemented with other analytical tools. The M score model should be the first step in the analysis of financial statements, and in order to "make a conclusion whether the financial statements contain fraudulent actions, more detailed research and assurances should be conducted that would be adequately documented" (Budić, 2023. 92). The values of individual indicators and Beneish's M score model, which we obtained by applying it to the analysis of the financial reports of five companies from the Manufacturing Industry sector in the Republic of Serbia, lead us to similar conclusions.

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