ANALYSIS OF POSSIBILITIES OF DETECTING THE MANIPULATION OF FINANCIAL STATEMENTS IN TERMS OF THE IFRS AND CZECH ACCOUNTING STANDARDS

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Abstract


The main objective of financial statements is to give information. The diversity of interests and objectives of individual groups of users and creators of financial statements presents the risk of manipulation of financial statements in the context of true and fair view as defined in the national accounting legislation. The paper is concerned with the different possibilities of detecting the manipulation of financial statements in terms of the Czech Accounting Standards and IFRS. The paper analyzes the selected risk detection models of the manipulation of financial statements using creative accounting methods, off-balance sheet financing methods and accounting frauds in specific case studies of selected accounting unit in terms of Czech accounting standards. Based on the analysis and comparison of the results thereof, the paper presents and evaluates the alternatives of users of financial statements to evaluate the risk of manipulation of financial statements beyond the scope of a fair and true view. The evaluation further includes a comparison of uses of these models with respect to the International Financial Reporting Standards.

Keywords: financial statements, detection of the risk of manipulating financial statements

INTRODUCTION

The most important requirement of financial statements is to give a true and fair view of the reality. For the most interest groups, the financial statements are still one of the most important sources of information about an enterprise as they report the information about the financial health of an enterprise. Presentation of financial statements is influenced by national legislation, the interests and objectives, and the quality of accounting information reported in the accounting system of the entity. To reduce the information asymmetry of a broad group of users of financial statements and their decisions on the basis of submitted financial statements, it is important to know to what extent the users can rely on the true and fair view of the financial statements and whether the financial statements present their financial information in accordance with accounting regulations to which it refers and that records transactions and activity of an enterprise as close to reality as possible. For the above-mentioned reasons, enterprises seek anti-fraud programs and they use them in their control systems. Such programs allow detecting the risk of manipulated financial statements. Also, the national accounting legislatures include obligations for an entity to invite independent qualified persons, auditors, who should assess that the financial statements really give a true and fair view. External auditors have to comply with legislative regulations. In the Czech Republic, they are bound by the Act 93/2009 Coll., On Auditors, by the Code of Ethics and by international accounting standards and related regulations, including the internal regulations of the Czech Chamber of Auditors. The auditors are also obliged to evaluate the risk of accounting fraud in compliance with ISA 240 standard. On the other
hand, decisions made by users on the basis of trust in the financial statements have been increasingly becoming a complicated problem. A wide range of financial indicators, rating and default models is available, but these often provide conflicting results in comparison. In addition, methods of accounting data manipulation are becoming more and more original and imaginative and financial statements' creators use methods of creative accounting, designing of ongoing transactions reflexes into the accounting statements. Similarly, the pressures of the market, the owners and the importance to finance necessary activities have been increasing.

The paper deals with possibilities to identify and assess the risk of financial statement manipulation above the true and fair accounting and the risk of accounting fraud and methods of creative accounting used on purpose to manipulate important accounting information. The following paper analyzes and evaluates the options of sample models to assess the risk of manipulated financial statements within Czech accounting standards and IFRSs.

**MATERIALS AND METHODS**

National research studies around the world (Amat, Blake, 2006; Brennan, McGrath, 2007; Murphy 2011; or Henselmann, Hofmann, 2010; and Jones, 2010) show that there is a growing pressure in enforcing transparency and business ethics, which is true not only for publicly traded companies, but also for example the misuse of subsidies by prominent entities, substantiation in accounting. Demands are namely imposed on administrative bodies whose responsibility is to guarantee the development of corporate culture and to promote shared values inside the company.

These issues have been addressed by a number of prominent authors. However, this has been done much less often than, for example, as regards creative management related to the explanatory power of accounting statements.

Managers often try to “adjust” the amount of the reported profit in which they are financially involved, either towards the maximum or to extend their loss, and thus reach a higher profit in the following accounting periods. A bad management attempts to postpone the firm bankruptcy by distorting the real profit. Another possible reason is investors’ pressure or concealing a financial risk of the respective company, an effort to be awarded subsidies or loans or an effort to reduce the tax liability. You can also find more information in studies of Global Economic Crime Survey of the major auditing companies (Ernst & Young, 2012; PricewaterhouseCoopers, 2014), that draw attention to the growing problem of crime in the economy, which relates to fraud and corruption inside corporations. Chartered Institute of Management Accountants published a guidebook of risk management where the importance of issuing a plan of reactions after a fraud is detected and fraud prevention is highlighted. The guidebook also lists risk areas of fraud, its definition followed by case studies in reporting fraud (CIMA, 2009).

Prevention and detection of accounting fraud is also engaged in Dave Tate’s publication. Tate lists typical operation, through which accounting fraud can be committed in 15 major risk areas such as liabilities, expenses, assets of increase, cost of goods sold, equity (Tate, 2011).

Pamela S. Manton in the book called Using Analytics to Detect Possible Fraud provides case studies of four companies. The financial statements of the selected companies subjected examination of via the individual tools and techniques appointed to examine the accounting fraud. These case studies include the following techniques: Liquidity ratios, profitability ratios, horizontal analysis, vertical analysis, cash realized form operations, analyzing cash realized from operations to net income from operations, the Beneish M-Score model, Dechow-Dichev Accrual Quality, Sloan's Accruals, Jones Non discretionary Accruals, The Piotroski F-Score model, Lev-Thiagarajan's 12 Signals, Benford's Law, Z-score analysis, Correlation, Regressions analysis (Mantone, 2013).

Within the Czech accounting legislation, an accounting entity is regulated by Act No. 563/1991 Coll., on Accounting, its implementing decrees, by the Czech accounting standards, and by Act No. 253/2008 Coll. on legalization the proceeds of crime and terrorism financing (the “Act against money laundering”) and by Act 40/2009 Coll. of the Criminal Code. The following foreign regulations are also important: Sarbanes-Oxley Act (Dodwell, 2008), which was released in the US in 2002, Data Protection Act released by the EU in 1998 and the Basel Capital Accord released in 2006. These standards make representatives of organizations responsible for the accuracy of corporate financial statements and their aim is to improve risk and asset management.

Due to the endless range of intent of the creators' of accounting in relation to real life, a wide group of users of financial statements, increasing intensity is needed to identify increased risk of manipulation of financial statements (accounting fraud) at a significant level of financial information that could change the user's decision on the basis of the presented financial statements. Using technology to detect risk of manipulated financial statements i.e. detection of the risk of accounting fraud is not an easy decision and requires sophisticated professional qualification of people who analyze the financial statements. A wide range of ratios, bankruptcy and credibility models, which often provide users with conflicting results, often complicates decisions on the financial health of a company. Based on previous research of the possibility of detection of manipulated financial statements CFEBT model was designed and based on the hypothesis of a relation between a loss and
an increase in cash flow in the period of five years i.e. whether the sum of their value in five years with minor variations lead to a similar result. After that the CFEBT model was tested to identify possible risks of manipulated financial statements in case studies of creative accounting for the conditions of Czech Accounting Standards. Furthermore, the results of case studies detecting risk of manipulated financial statements are compared with the results of the Beneish model that tests the risk within the US GAAP accounting system and IFRS (Drábková, 2013). At the same time the CFEBT model has been studied on case studies of sample areas of creative accounting techniques and the intensity detection of risk of manipulated financial statements beyond the true and fair view of accounting (Drábková, 2013). The CFEBT model was designed as one of possible tests of detection of risk of accounting fraud as one of the auditors' test in relation to the ISA 240 international standard on auditing. The paper analyses the different possibilities of detecting the manipulation of financial statements in terms of the Czech Accounting Standards and IFRS. A sample accounting item (corporation) meets the condition of a loss of more than five million CZK in the first accounting period and its financial statements provided within the Czech accounting standards for six accounting periods between 2008 and 2013 are available and at the same time the corporation's liquidation took place in the year after the analyzed period, i.e. in 2014. The case study analysed the financial statements of the sample entity by the Beneish model, the Jones Non discretionary Accruals model and by the Altman entity by the Beneish model, the Jones Non discretionary Accruals model and by the Altman model, which is the model of bankruptcy prediction. The paper analyses the results of the case study in relation the results of the financial statements in time and explains the specifics of risk assessment of manipulated financial statements of accounting data in a sample of financial statements in 2008–2013 based on the results of the models (Mantone, 2013; Bell, 2009; Singleton, Singleton, 2010; Drábková, 2013; Vochozka, 2011). The paper also summarises the possibilities of financial statements' users to detect increased risk of financial statements manipulation in time. It also discusses the most important ways of assessment in case of conflicting results of different models, which are often found in financial statements' analyses.

RESULTS

In order to find answers to defined questions, a case study of an accounting entity, which is risky in terms of the financial health, was designed. The entity's liquidation took place immediately after the period of the research. Also, the entity was in the loss of more than five million CZK. The financial statements of the sample entity were subjected to analysis of different models in order to evaluate the possibility of users (auditors) to detect the risk of accounting fraud and the manipulation of financial statements beyond the true and fair view of accounting.

The Beneish M-Score Model

The Beneish M-Score Model is a mathematical model based on eight variables. It was designed by Professor Beneish to evaluate the motivation to manipulate earnings. The M-Score is calculated as follows:

\[ M = -4.84 + 0.92 \times DSRI + 0.528 \times GMI + 0.404 \times AQI + 0.892 \times SGI + 0.115 \times DEPI - 0.172 \times \times SGAI + 4.679 \times TATA - 0.327 \times \times LVGI, \]

where

- **DSRI**: Days' sales in receivable index in the \( t \) and \( t-1 \) period.
- **GMI**: Gross margin index as the ratio of gross margin and sales in the \( t \) and \( t-1 \).
- **AQI**: Asset quality index.
- **SGI**: Sales growth index.
- **DEPI**: Depreciation index.
- **SGAI**: Sales and general and administrative expenses index.
- **LVGI**: Leverage index of total debts to total assets in the \( t \) and \( t-1 \).
- **TATA**: Total accruals to total assets in the \( t \)-period.

If \( M > -2.22 \), a firm is likely to be a manipulator. (Beneish, 2001)

Tab. I reveals the entity's results of the Beneish M-score between 2008–2013. In 2010 and 2011, the M-scores were reported at the level of more than \(-2.22\) and the years were assessed as risky with a possibly earnings manipulation. The M-scores detected high risk of manipulation. The period of 2008 was not possible to be assessed as a result of the calculation method of the model in the first year of testing.

The results can be assessed in details using the Beneish indices – fraud indicator (Bell, 2009):

1. Asset Quality Index (AQI): \( \geq 1.254 \) Improper capitalization of expenses.
2. Days Sales in Receivable Index (DSRI): \( \geq 1.465 \) Asset overstatement: inflating the value of receivables.
3. Depreciation Index (DEPI): \( \geq 1.077 \) Earning manipulation: inflating the useful life of assets and increasing income.
5. Leverage Index (LVGI): \( \geq 1.111 \) Earning manipulation.
6. Sales General & Administrative Expense Index (SGAI): \( \leq 1.041 \) Earning manipulation.
7. Sales Growth Index (SGI): \( \geq 1.607 \) Revenue recognition: fictitious revenue.
8. Total Accruals (TATA): \( \geq 0.031 \) Revenue recognition.

As seen in Tab. I; in terms of the risk of accounting fraud, the Beneish model identified two fraud indicators in 2009, but five indicators in 2010,
four fraud indicators in 2011, one fraud indicator in 2012 and two fraud indicators in 2013 again. In 2010 and 2011, possible manipulation was identified in the AQI and the LVI, by the general and administrative expense index, by the sales growth index (SGI) and gross margin (GMI) index. Based on the above mentioned analysis of detection of increased risk of manipulation of financial statements in the Beneish model, 2010 and 2011 should be assessed as risky and it is likely that there was a manipulation of the result of the accounting entity. For the rest of the years it would be appropriate to focus on different fraud indicators and to make certain that the expenses in 2012 and 2011 were not capitalized incorrectly (the AQI indicator) and to perform detailed tests of administrative expenses and general expenses including the promotion expenses (the SGAI indicator). At the level of Czech accounting standards, fluctuations in the cost accruals may cause a discrepancy between reported income and expenses in relation in the same period.

**Jones Non-discretionary Accruals**

Jones’s analysis provides information on using time resolution as considered by an accounting entity. The accruals model finds risk in manipulation with the financial statements in inconsistency of non-discretionary accruals in the development between different accounting periods. If the non-discretionary accruals compared to total assets are lower in a period with a comparison to other periods than the model reveals that discretionary expenditures of the following periods are higher. The Jones model of non-discretionary accruals suggests that if nondiscretionary accruals decrease, discretionary accruals increase and vice versa. If these fluctuations are significant, they can indicate the manipulation of financial statements by some accruals violation and some kind of earning management.

Jones Non discretionary Accruals are defined as follows:

\[
\left( \frac{1}{\text{Total Assets}} \right) + \left( \frac{\text{Revenue}_{\text{current year}} - \text{Revenue}_{\text{prior year}}}{\text{Total assets}_{\text{current year}}} \right) + \left( \frac{\text{Property, plant, equipment, gross}_{\text{current year}}}{\text{Total assets}_{\text{prior year}}} \right). \tag{2}
\]

(Mantone, 2013)

Tab. II shows the results of Jones's Non-discretionary Accruals. The high risk of manipulation was detected in 2012 and 2013. Years 2008 and 2009 were not possible to be assessed as a result of the calculation method of the model in the first years of testing. The risk of fluctuation of discretionary expenditure is identified in all periods. By analyzing financial statements prepared in accordance with Czech accounting standards, the fluctuation of discretionary expenditure
is higher than when evaluating the financial statements prepared by IFRS. It is the difference in both accounting systems in the accruals principle, the matching principle and the rule that “the content is more important than the form” causes that reporting financial items in accordance with Czech accounting standards does not always strictly require to report income and expenses, assets and liabilities in the period they are related to based on the economic substance and form of actually implemented content rather than its form.

### The CFEBT Model

The CFEBT model is defined as follows:

$$\text{CFEBT} = \frac{\sum_{t=1}^{5} \Delta CF - \sum_{t=1}^{5} \text{EBT}}{\sum_{t=1}^{5} \text{EBT}} \times 100,$$

where

- $\Delta CF$ ...... Increase of cash flow in period $t$.
- $\text{EBT}$ ...... Earnings before taxes in period $t$.

If $\text{CFEBT} \geq \text{materiality}$, there is a high risk of breaching a true and fair view of the accounts (Drábková, 2013).

Materiality significance ranges between 5 and 10%, taking into account the individual circumstances of the entity, as it did during the audit of financial statements by an external auditor.

Materiality of 5–10% is considered in this paper.

Tab. III contains the results of detecting manipulation risk in the financial statements through the CFEBT model in the accounting periods of 2008 to 2013. It was high above the materiality of the separate assessment of years 2008 to 2013, and the CFEBT revealed high levels above the materiality in CF and EBT accruals in the years of 2010 to 2012.

The analysis of the accruals development in different accounting periods between 2008 and 2013 revealed two possible tendencies of financial statement manipulation. During these six reporting periods, the entity reported negative accounting loss from its activities in a total amount of EBT amounting to –37.491 million CZK and in the same reporting period, the increase in the amount of 3.734 million CZK was revealed. After calculating the value of the CFEBT model, it represents 110% of the value thus well above consideration materiality 5–10%.

In case an entity’s financial statements are manipulated two basic ways of manipulation are obvious. The first line reports manipulation with the profit/loss – undervaluation of the profit (overvaluation of the loss). In the second line, an entity manipulated its cash flow, which is not reflected in the profit and it overvalued the reported cash flow. The reasons for this discrepancy may be defined in the context of both the accounting system of International Financial Reporting Standards (IFRS) and Czech accounting standards (CAS) so that in the period:

- The costs reported in the period are not reflected as expenses in particular, the reported cost of the risk to be borne by an entity in future periods as accounting allowances and reserves. The case of manipulated financial statements may potentially lead to overvaluation of costs using techniques of creative accounting using methods as Big bath, tax optimization, artificial costs without implementation costs, formally recognized contractual penalties (earning management).
- Revenues were not reported to the created cash flow within the true and fair view of the accounts because it does not meet the criteria for revenue reporting or the CASs for example because of advanced payments of unvoiced unrealized supply of work in progress. In case of manipulated accounts revenues were potentially undervalued for example by mispricing, by not-recognized orders, (earning management).
- Increased cash flow by maximizing the operating cash inflows or minimizing operating cash outflows.

To evaluate the risk of manipulation of financial statements beyond the true and fair presentation of financial accounting statements prepared in accordance with IFRS or CAS, it is necessary to analyze the development of risk items above mentioned guidelines of the discrepancy between development and cash flow items reported in the financial statements. Accounting expert or an auditor then evaluates whether the deviation of the reported values can be considered as the inherent risk of the accounting system or as some risk of manipulation of accounting statements beyond the legislative rules.

Based on an analysis of costs and revenue items and their links to increase the production of cash flow of an entity in the period from 2008 to 2013 on the condition of the true and fair view of accounting, risk items were identified in order to find potential manipulation leading to an undervaluation of profits and overvaluation of reported losses. Subsequently, they were adjusted for these material differences in accounting items.
which caused a diversion of development of the EBT and growth of CF in the context of true and fair view of accounting; the CFEBT values were modified so that the modified CFEBT could be calculated. The resulting value of the modified CFEBT was reduced to 21%.

This result has implications of legislation of the country. In legislative terms of the Czech Republic, especially for auditors it means to assess the risk of accounting fraud and its response to perceived risk, particularly of ISA 240, Act No. 253/2008 Coll. on money laundering and terrorist financing (the “Act against money laundering”) and Act 40/2009 Coll. of the Criminal Code.

Table IV below presents various adjustments to the calculation of the CFEBT that emerged from the analysis of financial statements and the development of cash flow over the period.

By Table IV, the value of the modified CFEBT was significantly reduced from 110% to 21%, but it remains above the considered materiality of a deviation.

Increased risk of manipulation of financial statements for users of financial statements can therefore be considered beyond the true and fair view. Users of financial statements who need to decide about the credibility of financial statements in terms of CAS can be advised to perform a more detailed analysis of risk items within the accounting and taking into account the specifics defined by the true and fair view of the accounts of the national accounting systems.

These detailed tests can be performed by a professionally qualified user of accounts who wants to decide about the development of the company's financial health, as part of the introduction of anti-fraud program into their internal control systems based on the submitted financial statements. The group of professionally qualified users include internal or external auditors, owners, those charged with governance (Corporate Governance) or stakeholders of public administration and control offices. Information about the risk of manipulation of financial statements may not only improve the effectiveness of internal control systems of the subject, but also reduce the information asymmetry between owners and those charged with management of an enterprise.

The Altman Model – Z-score

The Altman bankruptcy model is defined as follows for enterprises not traded on the stock exchange:

\[
Z = 0.717 \times x_1 + 0.847 \times x_2 + 3.107 \times x_3 + 0.420 \times x_4 + 0.998 \times x_5, \tag{4}
\]

where

\[
\begin{align*}
x_1 & \quad \text{Net working capital/total assets}, \\
x_2 & \quad \text{Retained earnings/total assets}, \\
x_3 & \quad \text{EBIT/total assets}, \\
x_4 & \quad \text{Registered capital/total debt}, \\
x_5 & \quad \text{Sales/total assets}.
\end{align*}
\]

If the resulting \(Z\) is greater than 2.70 an enterprise is financially stable. If the \(Z\) is less than 1.2 an enterprise is at risk of bankruptcy (Vochozka, 2011).

Tab. V shows the results of the Altman bankruptcy model in the period from 2008 to 2013. By the \(Z\)-scores for 2008, 2009, 2010 and 2011, the assessment is not possible as the entity is revealed in the gray area of uncertainty. In 2013, the Altman Z-score revealed significantly good financial stability of the entity. This significant change was caused by varying the ratio of the partial \(x_5\)ratio, the ratio of sales to total assets.

In terms of risk assessment of manipulation of financial statements, the Altman model has no real possibilities to identify this risk. A significant increase in reported revenues (sales) could potentially mean some manipulation of the revenue by for example circular trades or deliberate increase in the value of recognized income by mispricing; on
the other hand also it could also mean manipulation by the reduction in the reported value of assets (in terms of CAS, a mass sale of assets already depreciated in significant values).

**DISCUSSION**

Based on the results of the analysis of individual models, the author can conclude that it is appropriate to use the combination of several models for the detection of manipulation in the financial statements. Based on their results it is possible to identify risk points, reverse reaction in the financial statements or accounting (if you are a user who has access to the records) and to carry out detailed tests to obtain assurance that no manipulation occurred. The CFEBT model is considered to be a basic comprehensive view of the financial statements and the links between them. The model traces the development of the statements and links for more accounting periods (optimally in five years) and analyses the links between cash flow and profit. The paper also presents a modified version of this model, which is the result of identifying risk factors that emerged from the development of discrepancies in cash flow and profit. The modified version of the CFEBT model respects the individuality of the accounts of a sample entity and substantially eliminates the diversity of national accounting systems such as the Czech accounting standards, IFRS and US GAAP.

We believe that the suggested CFEBT model may be used by auditors to identify risks of accounting fraud of in accordance with ISA 240 or by any user accounts for testing financial statements. Its modified version may be used as a detailed test for auditors to identify risk; particularly in application of the audit judgment in assessing audit risk, in audit planning and in testing different items in the financial statements.

**CONCLUSION**

Auditors or any professionally qualified user of the accounts should be see the financial statements of an entity with professional skepticism and assume that the financial data are partly manipulated as intentions, objectives and scope of an entity using creative methods of accounting adequately lead to complex and diverse nature of business transactions.

Then it depends of the specialists to be able to identify risk areas of accounting. A narrower group of financial statement users who have the access to more detailed accounting data at lower levels of accounts (account-level, off-balance sheet records, supporting documentation) should perform a targeted analysis of risk areas in context of the development of each accounting period. This analysis requires knowledge of the possibilities and limits of creative accounting, and the projection of accounting concepts (especially the true and fair view, the accrual principle, matching principle, the content is more important than the form) reporting to the national accounting system.

The paper evaluates the possibility of detection the risk of manipulated financial statements above frame of the true and fair view of accounting using sample models in comparison with the results of the bankruptcy model. Different models of financial analysis, bankruptcy or creditworthiness often show different results when compared. In addition, the user should take into account the possibility of manipulation with various accounting items when deciding on the basis of the previously mentioned models. In our opinion, it is necessary for any user of the accounts to take this risk into account.

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**V: Assessing the risks of manipulation of financial statements in accordance with the CFEBT model**

<table>
<thead>
<tr>
<th>Accounting period</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT (= EBT + interest expense)</td>
<td>-6732</td>
<td>-8437</td>
<td>-5725</td>
<td>68264</td>
<td>-1738</td>
<td>-8502</td>
</tr>
<tr>
<td>Total assets</td>
<td>21618</td>
<td>18256</td>
<td>48020</td>
<td>68264</td>
<td>42774</td>
<td>12172</td>
</tr>
<tr>
<td>Total sales</td>
<td>41194</td>
<td>31421</td>
<td>64734</td>
<td>110070</td>
<td>103635</td>
<td>86620</td>
</tr>
<tr>
<td>Registered capital</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>62812</td>
<td>9482</td>
<td>45371</td>
<td>72937</td>
<td>49213</td>
<td>27226</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>532</td>
<td>-1832</td>
<td>-7575</td>
<td>-4976</td>
<td>-6752</td>
<td>-15254</td>
</tr>
<tr>
<td>Net working capital</td>
<td>13078</td>
<td>8120</td>
<td>2206</td>
<td>-4983</td>
<td>-6770</td>
<td>-15245</td>
</tr>
<tr>
<td>X1 = NWC/total assets</td>
<td>0.6</td>
<td>0.4</td>
<td>0.0</td>
<td>-0.1</td>
<td>-0.2</td>
<td>-1.3</td>
</tr>
<tr>
<td>X2 = Retained earnings/total assets</td>
<td>0.0</td>
<td>-0.1</td>
<td>-0.2</td>
<td>-0.1</td>
<td>-0.2</td>
<td>-1.3</td>
</tr>
<tr>
<td>X3 = EBIT/total assets</td>
<td>-0.3</td>
<td>-0.5</td>
<td>-0.1</td>
<td>1.0</td>
<td>0.0</td>
<td>-0.7</td>
</tr>
<tr>
<td>X4 = registered capital/total liabilities</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>X5 = total sales/total assets</td>
<td>1.9</td>
<td>1.7</td>
<td>1.3</td>
<td>1.6</td>
<td>2.4</td>
<td>7.1</td>
</tr>
<tr>
<td>Z-score</td>
<td>2.26</td>
<td>1.82</td>
<td>1.21</td>
<td>1.81</td>
<td>2.16</td>
<td>4.93</td>
</tr>
</tbody>
</table>

Results: [gray area gray area gray area gray area gray area financially stable]

Source: Altman model, author
when deciding. The group of users includes internal or external auditors, the owners, banks or other institutions, and the managers of Corporate Governance and every one whose decisions regarding the outcome of accounting is dependent on the quality of the accounting data in the financial statements.

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