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Financial Reporting Fraud and Models to Assist in Detecting Financial Statement Fraud

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ABSTRACT: The article has used the methodology, analysis and synthesis to accomplish the set research objectives. Accordingly, based on the methodology, the article has presented the concept, purpose and importance of information provided in financial statements. Under many influences such as pressure to commit fraud, opportunities for fraud or management's attitude will lead to the intention to manipulate the financial statements. Next, the article also analyzes typical fraud cases, the impact of fraudulent financial statements on all financial market participants and identifies common forms of financial fraud in Vietnam. Vietnam. From these common types of fraud, the authors also propose two typical models to support fraud detection that are highly appreciated, the M-score model and the Z-score model.

KEYWORDS: Financial statements, Fraud, M-score, Model, Z-score

1. INTRODUCTION

In Vietnam, many businesses have been found to have fraudulent financial statements, causing a series of investors to lose their investments. Typically, the case of Vien Dong Pharmaceutical Company in 2011, Tay Bac Mineral Investment Joint Stock Company in 2012, Cuu Long Pharmaceutical Joint Stock Company in 2014 and Viet Nhat JVC Medical Joint Stock Company in 2012. 2015, Wood Industry Group in 2016. In addition, many businesses have committed fraud and provided false information on financial statements that have been sanctioned for many years. Financial statements have an important meaning in the field of economic management, attracting the attention of many people inside and outside the business. Each audience is interested in financial statements in a different way, but in general, they want to get the necessary information for making decisions in accordance with their goals. Cases of fraud and manipulation by these businesses have raised alarms about the quality of information on financial statements. The financial management agency has taken many measures to rectify, check and inspect as well as require enterprises to enhance the quality of audit reports for units with public interest, but the effect is not high. The goal of this article is to learn about financial reporting and recent forms of financial reporting fraud. Recommend highly appreciated fraud detection models to assist investors in making their decisions.

2. LITERATURE REVIEW

2.1. Financial report

The concept of financial statements is specified in Clause 1, Article 3, "Financial statements are economic and financial information systems of an accounting unit, presented according to the form prescribed in accounting standards. accounting and accounting regime" (Law on Accounting No. 88/2015/QH13). As an important document in the accounting field, Financial Statements contain information about the financial position of a business for a certain period of time. A financial statement consists of four main components: balance sheet, statement of cash flows, statement of income and statement of changes in equity. Financial statements are used to assess the financial position of a business, providing information to investors, business partners and regulators. According to Article 97 of the Circular guiding the corporate accounting regime, the financial statement is a tool that provides information on the financial position, business situation and cash flows of an enterprise, meeting the requirements of management business owners, government agencies and useful needs of users in making economic decisions (Circular 200/2014/TT-BTC). In simple terms, financial statements provide financial, business and cash flow information about a business. A financial statement must include information about Assets, Liabilities, equity, sales, profits, taxes, and cash flows. In addition, Article 97 of this circular also requires enterprises to provide other information in the "Notes to the Financial Statements" in addition to the above information in order to explain more about the above-represented indicators. the consolidated financial statements and the accounting policies applied to recognize the arising economic transactions. Thus, the information on the financial statements gives the interested parties grounds to make investment decisions. If an enterprise provides inaccurate information on debt or revenue and profit, investors may misjudge the business ability of the enterprise. The wrong assessment of the business status will lead to economic losses for investors, business partners and serious economic consequences.

2.2. The role of financial statements

Financial statements show the most general and comprehensive view of assets, capital, liabilities and business results in an accounting period. The information contained in the Financial Statements provides the primary means of assessing the position, performance and financial position of an enterprise in the past operating period and projections for the future. In the field of economics, financial statements are important. It attracts the attention of many audiences inside and outside the business. Each audience has different interests in the information in the financial statements, but the general purpose is that they want to use the information on it to make their own business and investment decisions. Because the financial statements carry all the information of the business to the stakeholders, it has many roles. In the role of business managers, financial statements provide general information about the status of assets, the source of asset formation as well as the business situation and results after a period of operation. On that basis, business managers will analyze, evaluate and offer solutions for the development or plan to expand or reduce the production scale of the enterprise in the future. In the role of relevant state agencies such as banking units, audit units, tax and financial statements, financial statements are important documents in inspecting, supervising, guiding and advising on the implementation of these economic and financial policies and regimes for enterprises. In the role of investors, financial statements help to understand clearly financial capacity, use of assets, capital sources, profitability, efficiency of production and business activities, the risk level of the business for them to consider, choose and make investment decisions accordingly. In the role of suppliers, financial statements help identify the ability to pay, the payment method. From there, they decide to cooperate in selling to the business or stop cooperating. In the role of customers, financial statements help them have information about production capacity, product consumption, business reputation, and customer treatment policies. After seeing the correct information, they will carefully consider the purchase of the business. In their role as shareholders and employees, financial statements help them to understand information about dividend payment policy, salary, social insurance, and their benefits shown in financial statements.

2.3. Basic requirements for financial statements

According to Article 5 of the Law on Accounting, financial statements must be prepared accurately, honestly and in accordance with the prescribed forms. The financial statements must have all the signatures of the relevant people and the certification mark of the agency or unit to ensure legality. Financial statements must always be consistent in content, accounting order and preparation method according to the State's regulations, promptly and accurately reflect accounting information and data. Reflect clearly, easily and accurately accounting information and data. To honestly and objectively reflect the current state of affairs, the nature of events, the content and value of economic and financial operations. Accounting information and data must be reflected continuously from the time of arising to the end of economic and financial activities, from the establishment to the termination of operation of the accounting unit; the accounting data of this period must follow the accounting data of the previous period. Classification and arrangement of accounting information and data in order, systematically and comparably and verifiable (Law No. 88/2015/QH13). From there, users can compare and evaluate the production and business activities of enterprises over time, or between enterprises. The figures reflected in the financial statements must be clear, reliable and easy to understand, ensuring convenience for the users of the information in the financial statements to achieve their purposes. Financial statements must be prepared and sent within the prescribed time limit (Law No. 88/2015/QH13). In addition, the financial statements must also ensure compliance with the issued accounting principles and standards. Only then will the new financial reporting system be really useful, to ensure that it meets the requirements of the users to make appropriate decisions. Thus, in case the financial statements do not meet the above requirements, it means that the enterprise prepares the financial statements with errors. Mistakes can be due to errors from objectivity and can also be due to the subjectivity of the creator. If errors due to subjective factors occur in financial statements, it means that there is the influence of objects in the enterprise to falsify information, also known as manipulation of financial statements and reporting fraud. In this article, we focus on errors that occur due to the intentional manipulation of data by humans leading to fraud in financial statements.

2.4. Fraudulent financial statements

According to Boyle et al. (2015), fraud includes forms such as asset fraud, employee misappropriation, and financial reporting fraud. Fraud is also understood as management's concern about the company's performance that leads to this behavior (p.41). According to Grove et al. (1982), the limitations of creating vulnerabilities for financial fraud have existed since the 70s of the 19th century. He listed the first and most influential factors as the influence of the founder's corporate governance, the weakness of the Internal Control System, the management's focus on short-term performance objectives, the ethical factor and the lack of transparency in business operations (pp.153-162). Author Donal R. Cressey (1919-1987) conducted a study of 200 economic crimes on embezzlement and embezzlement. After hitting girls and analyzing the answers of the respondents, the cause of cheating is created by three factors: "Pressure, opportunity and attitude". Accordingly, when the corporate management fails to satisfy the needs and desires of investors, customers, partners, employees in terms of revenue, profit, liquidity or salary, it will put pressure on the business management department. This pressure can be an incentive for management to find ways to manipulate the figures on financial statements to increase profits and increase liquidity. The second factor is Opportunity, this factor is analyzed by the author and the management will take advantage of legal loopholes and the laxity of the law to commit fraudulent acts. Finally, there is the Attitude factor. This element states that the intention to cheat will be different for different people. Also under pressure, but many managers are adamant about not working to make the data better.

3. METHODS

The two research methods used in this article are the methodology, the analytical method and the synthesis method. Using these methods, we have learned the regulatory documents on financial statements, the purpose of financial statements, the requirements for it. All of these financial reporting materials are compiled and built on the theoretical basis of Financial Statements, financial reporting roles and fraud. The literature on particularly serious financial fraud is included in the analysis and presents typical forms of fraud commonly occurring in the Vietnamese market. The documents related to the predictive model of the possibility of fraud in the financial statements of enterprises are synthesized, selected models that are highly appreciated by many researchers for their effectiveness to present in the article.

4. RESULTS

According to Beasley (2001), accounting regulators have combined with the legislature to implement a series of changes aimed at preventing financial fraud after expensive lessons from the cases of Enron, Tyco and WorldCom financial fraud in 2000. Changes included the enactment of the Sarbanes-Oxley Act of 2002, the establishment of the Public Company Accounting Oversight Board (PCAOB) and the issuance of Auditing Standard 99 (SAS 99) in 2002, "Reviewing Fraud in Financial Statements Auditing" (now AU Sec. 316 (AU 316)). After these changes, the situation against financial reporting fraud has not improved. A series of fraud cases still take place with no sign of decreasing compared to before (pp.3-9). According to Hang (2022), financial reporting fraud is a problem that causes especially serious consequences for investors, the government and the businesses that commit the wrongdoing. Financial reporting fraud thrives in a group of developing countries with high-growth capital markets and rapidly growing investment activities. Fraudulent financial statements cause investors, customers and the public to lose confidence in the regulatory agency's ability to manage and operate economic markets (para 6). In Vietnam, many businesses have been found to be fraudulent, causing a series of investors to lose their investments. Typically, the case of Cuu Long Pharmaceutical Joint Stock Company in 2014 and Viet Nhat JVC Medical Joint Stock Company in 2015. The financial scandal of Cuu Long Pharmaceutical Joint Stock Company was discovered to have irregular financial transactions. The enterprise's unusual performance was discovered at the end of the first quarter of 2014 when the "borrowing" and "debt" sections on the equivalent financial statements were equal to the enterprise's debt of VND 250 billion. The reason businesses commit fraud is because the receivables ratio from customers is too high, equal to 34% of total assets. The corporate management of Cuu Long Pharmaceutical Joint Stock Company has created virtual revenue, causing the amount of profit reported to be excessively high. After reporting high profits, the company continued to inflate the share price to sell to the public. Finally, this business has the activity of pushing drug prices through each transaction between a group of businesses with common interests. This scandal has caused a series of serious losses for investors and pharmaceutical customers have to bear the price pushed by the business. Further analysis with the second case of Viet Nhat JVC Medical Joint Stock Company. This enterprise had many unusual points in 2015 when it was continuously late to submit financial statements, used capital issued to shareholders for improper purposes and the cash at the enterprise was too large up to VND 465 billion and receivables increased sharply from 400 billion dongs to 615 billion dongs without explaining the specific reason in the financial statements.

The reason for this fraud is that the company used the money to be distributed to shareholders to pay for the obligations that have arisen in the past. Therefore, in order to make up for this, the company has approved other businesses to help guarantee these businesses for bank loans. The collateral is used by the enterprise with its own shares through a third party. Corporate fraud includes the issuance of shares to shareholders that are not disclosed. Increase the amount of cash available at the business to make the difference disappear. Make many bogus economic contracts as a basis for disbursement to banks through backyard companies. After the financial statement accounting is completed, the money used to cover these losses is returned to the bank. This fraud case also caused a series of objects such as shareholders and banks to suffer serious damage. Thus, after these fraud cases, the confidence of domestic and foreign investors was seriously reduced. Many investors withdraw their capital from Vietnam because the market lacks transparency, causing the financial market to lack capital. Businesses with transparent financial statements are also turned away by a large group of investors due to their lack of trust in businesses in Vietnam. From the two examples of financial statement fraud that we analyzed above, we can draw the main forms of fraud in Vietnam as follows:

Businesses hide liabilities and expenses. Similar to the fraud method of the two businesses mentioned above. Cutting costs through debt concealment is a common financial statement fraud scheme to overstate profit margins. The lower the cost, the higher the profit, so the increase in the difference due to fraud is proportional to the decrease in the amount of hidden costs or debt. The main methods of concealing fraud and expenses are not recording liabilities and expenses, not making adequate provisions; cost capitalization; no returns for sale - deductible and non-deducting warranty costs.

The business recognizes virtual revenue or declares an increase in revenue. The creation of fake contracts by the company Viet Nhat JVC Medical Joint Stock Company is an example of this form. This form is used frequently with the method of creating fake customers and other fake documents to formalize sales. In fact, there are not any goods sold in these activities and after accounting for the financial statements at the end of the year, these "virtual goods sold" will be recorded in the "Returned sales" section. In addition, the recording of an increase in revenue is also done through the form of recording an increase in the quantity and selling price of goods on the invoice. Next is the method of fraud through pre-recognition of sales of goods sold.

The business mispriced the account. This form is done by misvaluing assets, which is done by not recording a decrease in inventory value when goods are damaged, failing to fully set up provisions for the devaluation of inventories, and bad debts receivables, short-term and long-term investments. Assets that are often mispriced, such as assets acquired through business combinations, fixed assets, inadequate capitalization of intangible costs, and misclassification of assets.

Enterprises use the form of "Sell, re-purchase/re-lease". This trick was used a lot by Lehman Brothers before it was discovered to be manipulating earnings. In Vietnam, Eximbank was also taken to the public for using this form of fraud to "beautify" financial statements in 2016. This form of fraud is performed by enterprises by recording an increase. revenue from selling fixed assets of great value and recognizing this revenue but immediately leasing back the same asset.

The enterprise recorded the wrong accounting year. Delaying the revenue recognition time leads to this revenue appearing on the financial statements in the correct accounting period. This recording of revenue can be backward from the current year to the next year or vice versa for the purpose of increasing or decreasing income according to the wishes of the business management.

Enterprises do not declare full information. In order to conceal information and reduce the analysis ability for the auditors, the enterprise will not fully declare information. Information that is often misrepresented and understated and not fully disclosed in the notes to the financial statements is a contingent liability, events occurring after the balance sheet date are not recognized in the statements, information about related parties, and changes in accounting policies.

To prevent these forms of fraud, Vietnam has issued Auditing Standard 240 (VSA 240). This standard clearly sets forth the auditor's responsibilities in relation to fraudulent financial statements. The Standard also requires the auditor to assess the risks and potential misstatements of the entity's financial statements, if any. However, in recent years, the Vietnamese market has continuously experienced fraud and discrepancies between pre-and post-audit financial statements. Therefore, from an investor's perspective, auditing standard 240 has not really been effective in the decision-making process. Therefore, to avoid having incorrect data affect investment decisions. Investors need to use a variety of methods to support their decision-making. These support tools will give investors a prediction about the possibility of fraudulent financial statements of enterprises.

4.2. Outstanding financial reporting fraud detection models

According to Grove & Basilico (2011), identifying forms of fraud and learning about fraudulent financial statements in order to draw lessons learned and provide measures and strategies to detect and reduce these frauds. cheating in the future. The author Schilit (2010), said that in order to find fraud, it is necessary to carefully study the forms of fraud. He said that signs of fraud are recognizable, easy to find and hard to miss. (p.8). Thus, the study of scandals helps us to have a clearer view of the ways businesses often use to manipulate income and attract investors. Along with that, identifying indicators that are often affected by management has helped many researchers develop tools to detect and warn of financial fraud. Currently, there are many models to assist investors, customers and partners in assessing the possibility of fraud. In this article, we refer to three models that are said to be influential and widely used Beneish's M - Score model and Edward Altman's Z - Score model.

Beneish's M-Score model

Messod Beneish's model was first published in 1999. The model was built with 8 financial indicators for the purpose of detecting fraudulent financial statements of enterprises (Beneish, 1999). According to authors Nguyen & Nguyen (2016), the “M-score model is one of the useful techniques in detecting earnings manipulation behavior of companies and can be applied to improve the quality of reporting financial reporting and better protection for investors” (p.14). Holda, (2020) also confirmed the effectiveness of the M-score model in detecting fraud and manipulation of financial statements in Poland (p.389). Alfian & Triani (2019) concluded in their research that the Beneish M-Score model is an easy-to-use and nearly cost-free tool. The author also advises investors to use this calculation tool before making an investment (p.27). The formula for the M - Score Model is as follows:

M - Score = -4.840+0.920*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI - 0.172*SGAI - 0.327*LVGI + 4.697*TATA

In there:

The dependent variable is M-Score, which predicts the possibility of financial statement fraud

The independent variable includes DSRI - accounts receivable for sales index; GMI - gross margin index; AQI - asset quality index; SGI - sales revenue growth index; DEPI - depreciation rate index; SGAI - selling and administrative expense index; LEVI - financial leverage index; TATA - accrual variable index to total assets.

After the calculation, we will use the results of the M-score model calculation to evaluate the possibility of financial statement fraud. The reference point of this model at two points is -2.22 and -1.78. Enterprises with an M-score < -2.22 are less likely to have financial statement manipulation. Businesses with a score of -2.22 < M-score < -1.78 are those with a moderate likelihood of fraud. Enterprises with an M-score >-1.78 are likely to have fraudulent financial statements. The component indicators in the model also show some predictions about the possibility of corporate fraud. For example, the DSRI, GMI, AQI, SGI, DEPI and TATA indexes have a positive coefficient in the formula. When these ratios are greater than 1, the company is showing signs of possible financial fraud. In contrast, the two indexes SGAI and LVGI have negative coefficients, so if these two indexes are greater than 1, it will have a positive effect on the M-score and reduce the risk of financial fraud.

Edward Altman's Z-Score model

The Z-score model was built in 1968 by Professor Edward Altman based on statistical methods. Altman's original model was only for manufacturing firms and not for financial firms. Altman built a model with 5 financial indicators to assess the bankruptcy risk of enterprises. These calculation criteria are collected from secondary data from the financial statements of enterprises (Altman, 1968). Anjum's study (2012) confirmed the appropriateness of the Z-score model in predicting the bankruptcy of enterprises in the economic field and it can predict this possibility from 1 year to 3 years in advance (p.212). Similar to Anjum's comments, Panigrahi (2019) and Andriawan & Salean (2016) also believe that the Z-score model is a good tool to predict the bankruptcy of an enterprise (p.65). The Z-Score formula is determined as follows:

Z - Score = 1.2*X1 + 1.4*X2 + 3.3*X3 + 0.6*X4 + 0.999*X5

In there:

Dependent variable Z - Score is the Z Score achieved by the company

Independent variables: X1 - working capital/total assets ratio; X2 - retained earnings/total assets ratio; X3 - profit before interest and taxes/total assets; X4 - Market value of equity/book value of total debt; X5 - Ratio of sales/total assets.

The calculation results of the Z-score model are determined at point 2.99. If Z> 2.99 are businesses with healthy financial status, they are eligible to be classified in the safe zone. If 1.81 < Z < 2.99, businesses have weak financial performance and are at risk of bankruptcy. If Z < 1.81 the business with financial distress and the risk of bankruptcy is very high. In addition to the version for manufacturing businesses, to meet the evaluation needs of unlisted financial and manufacturing businesses, Z-Score has two more versions, Z'-Score and Z'' -Score. The defining formula of these two models is Z' = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4 and Z'' = 3.25 + 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4.

Through understanding the above two models, we see that the use of these two tools in the assessment of financial statement fraud brings high efficiency to investors. The application of this model helps businesses and investors avoid losses when conducting investment and cooperation in production and business.

5. CONCLUSION

The content of the article we presented above has fulfilled the research objectives set out at the beginning of the article. Build a theoretical basis as an argument for the article. Identify types of financial reporting fraud and provide typical examples of financial reporting fraud in Vietnam. After researching and analyzing financial statement fraud, we found that financial statement fraud seriously affected investors, customers, and the economy. Therefore, the use of tools is absolutely necessary before making investment decisions. The authors also provide two models that are highly appreciated by many authors for their ability to detect fraud and predict bankruptcy. The two models presented are the M-score model and the Z-score model. The combination of learning, recognizing signs of fraud, and the tools outlined above can help investors and other interested parties not make the wrong decisions in the face of manipulated financial statements needy.

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