

Detection of Fraudulent Financial Statement Using Financial Ratios and Textual Information: Moderating Of Corporate Governance



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ABSTRACT: Financial Statement Fraud interpreted as intention or carelessness in do something or no do something that should be done which causes report finance become mislead materially. Companies that do fraud Possible modify the words for to overstate so that no own mark high disclosure. Mistake presentation in report finance nominal and textual used for hide misappropriation or abuse finance. Study this is study quantitative. Population study is there are 27 state-owned companies listed on the Indonesian Stock Exchange for the 2019-2023 period. As well as determination sample use technique purposive sampling and obtained as many as 14 companies with use period study for five years so that 70 research data were obtained. Research result show profitability (ROE) has an effect to detection fraudulent financial statement. Liquidity (CR) no effect to detection fraudulent financial statement. Solvency (DAR) no effect to detection fraudulent financial statement. Activity (ITO) no effect to detection fraudulent financial statement. Textual information (MD&A) no effect to detection fraudulent financial statement. Corporate governance no to moderate connection between profitability (ROE) and detection fraudulent financial statement. Corporate governance moderate connection between liquidity (CR) and detection fraudulent financial statement. Corporate governance moderate connection between ratio solvency (DAR) and detection fraudulent financial statement. Corporate governance moderate connection between activity (ITO) and detection fraudulent financial statement. Corporate governance no to moderate connection between textual information MD&A and detection fraudulent financial statement.

KEYWORDS: Detection of Fraudulent Financial Statement, Profitability, Liquidity, Solvency, Activity, MD&A, CG

I. INTRODUCTION

Fraudulent financial statement is a global phenomenon that losses for investors and undermines the efficiency of resource and financial allocation in securities markets (Kong et al., 2022). The Association of Certified Fraud Examiners (ACFE) defined fraud as unlawful acts carried out intentionally for a specific purpose (manipulation or giving false reports to other parties) carried out by people from inside or outside the organization to personal or group which directly or indirectly harms other parties (Lamawitak, 2021). How can we limit and detect early the occurrence of repeated financial statement fraud? This is a fundamental question because there is division about how accounting, financial and business regulations should be enforced to prevent future violations. Fraud will always occur when there is no prevention and detection (Kennedy & Siregar, 2017).

In 2019 a multinational company in the US, General Electric (GE) was suspected of manipulating financial reports of up to US\$ 38 billion. This caused GE shares to fall by 15%. The 175-page report published in claims to have hidden financial problems. Markopolos, an accounting and finance investigator in the US, said GE would change its reporting format every two to four years to prevent analysts from making comparisons across time, in other words GE was doing everything it could to make analysis of business unit performance impossible (CNBC, 2019). In Indonesia, a case of financial report manipulation at PT Garuda Indonesia Tbk was officially declared guilty and imposed sanctions by the financial services authority and the Indonesian Stock Exchange for fraudulent revenue recognition in financial statements in 2018. PT. Garuda Indonesia Tbk was proven to have violated OJK Regulation Number 29/POJK.04/2016 concerning Annual Reports of Issuers or Public Companies (kemenkeu, 2019). Detecting financial fraud is a challenge, especially in the context of the COVID-19 pandemic, which has created financial risks and raised concerns about a global economic slowdown (Li et al., 2023).

The difference in authority between the agent and the principal causes conflict so that the information obtained between the agent and the principal is not in line (information asymmetry). The existence of information asymmetry between the agent and

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the principal causes fraudulent financial statement by the agent as the preparer of the financial report. Financial ratios are an effective tool for detecting fraudulent financial statements (Persons, 1995). The financial ratios used, such as profitability, can significantly be used in detecting fraudulent financial statements (Zainudin & Hashim, 2016). Isabella's research (2019) states that companies with liquidity problems have significantly higher error rates in their financial reports. Research by Firdausya & Parasetya, (2020) suggests that the solvency, namely debt to total assets, has a positive relationship to detect fraudulent financial statements. Activity value suddenly decreases or fluctuates unnaturally, this can indicate the potential for detecting fraudulent financial statements.

Some research that textual information can help detecting fraudulent financial statements (Purda & Skillicorn, 2015; Hoberg & Lewis, 2017). As a complement to general financial data, textual information can describe the company's situation more comprehensively. Hoberg & Lewis, (2017) detect financial fraud based on Management Discussion and Analysis (MD&A). Purda & Skillicorn, (2015) build a model based on individual words in MD&A financial statement disclosures, and the results show that companies can achieve better performance than general financial report data. The existence of fraudulent financial statements has caused great concern regarding the effectiveness of corporate governance (Li et al., 2023). A commonly held view is that corporate governance ensures accountability in a company through mechanisms to reduce or eliminate fraudulent behavior. According to Mulyasari et al, (2017), corporate governance mechanisms such as institutional ownership, are expected to overcome agency problems and reduce the occurrence of fraudulent financial reports. Institutional ownership has a good impact on the company, apart from investing quite a lot, the majority shareholder also helps in improving supervision of the company's operations (Dini et al, 2022).

The novelty of this research is examining financial ratios by textual analysis of financial reports to detect fraudulent financial statements. Analyzing financial data is tedious and clunky, while financial fraud tactics are increasingly sophisticated. So this research adds textual information to determine the influence of textual information on financial reports on the detection of financial statement fraud. This research has been carried out in western countries and is rarely carried out in Indonesia or takes samples of companies in Indonesia. Apart from that, this research also adds a moderating variable in the form of corporate governance which is intended to strengthen the detection of fraudulent financial statements because corporate governance is expected to overcome agency problems so as to reduce fraudulent behavior.

II. THEORITICAL REVIEW

Agency Theory

In agency theory the principal is gives authority and has ownership rights to company profits, while the agent is receives authority and acts in the interests of the company owner (Jensen and Meckling, 1976 in Restianita, 2023). Agency relationships can cause problems when the parties concerned have different goals. For example, the principal wants to increase the wealth and prosperity of the capital owners, while the manager (agent) also wants to increase the welfare of the managers, so a conflict of interest arises between the owner and the manager. To achieve these interests, managers take various steps to improve the company's financial performance in order to gain more recognition from shareholders this can encourage manipulation of financial reports (Karoma, Y. 2022).

Fundamental Theory

Fundamental theory are based on circumstances economy national both global and local. This theory drip focus on financial ratios as well as influencing events performance finance company in a way direct and no directly (Wikipedia, 2023). One of aspect important from fundamental theory is analysis of financial, because can estimate condition, or position direction company. Fundamental theory plays a role important in detect existence fraud in financial statement. Some Fundamental financial factors are very important to detect fraud which includes financial ratios such as profitability ratios, activity ratios, solvency ratios, and liquidity ratios can reveal anomalies that may indicate fraud. In addition, the lack of transparency in disclosing financial information can be a warning sign of suspected fraudulent financial statement.

Detection of Fraudulent Financial Statement

In The Treadway Commission's Report of the National Commission Fraudulent Financial Reporting (1987), Fraudulent Financial Statement is as intentional or careless doing something or not doing something that should be done which causes the financial statements to be materially misleading. To categorize a company as having indications of manipulation (fraud) or not, a calculation model is needed that helps detect unusual movements in financial statements. One tool that can be used to detect fraudulent financial reports is the F-Score model. Research by Purda & Skillicorn, (2015) which adopted the model carried out by Dechow et al, (2011) with the aim of the output being an indicator of the possibility of financial reporting having material

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misstatements. This research uses the F-Score model because the F-Score model is a better model to use compared to the Beneish M-Score model in assessing financial statement fraud (Maherliana, & Ariyanto, 2022). Where the Dechow F-Score model gets a result of 73.17% in financial statement fraud and the Beneish M-Score model gets a result of 69.51% (Aghghaleh et al, 2016). F-Score can be calculated using the following formula:

F-Score: Accual Quality + Financial Performance

Financial Ratios

Financial ratios are a company's benchmark for assessing how good or bad a company's financial performance. Financial ratios are used to compare the company's financial level both in terms of the company's history (from time to time) and in terms of comparing the company's financial performance level with the average level of financial performance. Financial ratios are an effective tool for detecting fraud (Persons, 1995; Spathis, 2002). The existence of expectations management will maintain or even increase the level of profitability, puts pressure on management to achieve the expected targets, this will be a motivation to commit financial statement fraud if expectations are not in line with the company's actual performance. Skousen et al, (2009) Profitability with Return on Equity (ROE) is often used in assessing manager performance and in determining bonuses and wage increases. Liquidity with Current Ratio (CR) may be an incentive for managers to engage in fraudulent financial statement. Kreutzfeldt and Wallace, (1996) in Isabella, (2019) states that companies with liquidity problems have a significantly greater error rate in their financial reports than companies that do not liquidity problems.

The solvency with total debt to asset ratio (DAR) are often used to detect fraudulent financial statements (Dalnial et al, 2014). Research by Firdausya & Parasetya, (2020) suggests that debt to asset have a positive relationship to fraudulent financial statement. The Activity is a ratio to measure the extent of the effectiveness of asset use by looking at the level of asset activity. The ratio used to determine false statements is Inventory turnover (ITO) namely, this ratio measures how quickly a company sells inventory in a period of time. If ITO value suddenly decreases or fluctuates unnaturally, this could indicate potential fraud in the financial statements. Companies engaging in fraud may intentionally slow inventory turnover to cover up shortages or manipulations in inventory (Prasetya, BE, (2023) from linkedin.com).

Textual information

Textual risk disclosure can be more direct and describe the company's future risks (Sun & Zhu, 2023). In addition, existing research finds that this section contributes an increasingly large portion of the overall financial report and provides a correct and effective picture of the risks that the company will face in the future (Campbell et al, 2014). In the textual analysis used in annual reports, there is a large amount of research focusing on the management discussion and analysis (MD&A) section specifically (Purda & Skillicorn, 2015; Li et al, 2023). This section may include a discussion of compliance, risks, and future plans, such as goals and new projects. Companies often use the MD&A section to inspire investor confidence by explaining how and why the company's future plans will be successful. Bahri's (2024), the textual analysis section is in accordance with the annual report award criteria. MD&A criteria that are in accordance with the Annual Report Award (ARA) organizing institutions in Indonesia include 15 disclosure items.

Table I: Analysis and Discussion Management (MD&A)

No	Disclosure Items
1	Company, Production including processes, capacity and development, revenue/sales
2	comprehensive financial performance includes a comparison of financial performance in the last 2 (two) financial years, as well as an explanation of the causes of changes and the impact of these changes.
3	Ability to pay debts or obligations by presenting relevant ratio calculations
4	The level of collectibility of the company's receivables by presenting relevant ratio calculations.
5	Capital structure and management policies on capital structure accompanied by the basis for determining the policy in question
6	Discussion on material bonds for capital goods investment with explanation
7	Discussion on capital goods investments realized in the last financial year
8	Business prospects are linked to industry conditions, the general economy and international markets, accompanied by quantitative supporting data from reliable data sources.

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9	Comparison between targets/projections at the beginning of the financial year with the results achieved (realization)
10	Targets/projections that the Company wants to achieve for the next 1 (one) year,
11	Marketing aspects of the Company's goods and/or services, at least regarding marketing strategy and market share.
12	Description of dividends during the last 2 (two) financial years
13	Realization of the use of funds from the public offering
14	Material information, including regarding investments, expansion, business mergers, acquisitions, debt/capital restructuring, material transactions, affiliated transactions, and conflict of interest transactions, which occurred in the financial year.
15	Changes in statutory provisions that have a significant impact on the Company and their impact on the financial statements.

Source: KNKG (2023)

Corporate Governance

Corporate Governance is a set of regulations that regulate the relationship between shareholders, company management, creditors, government, employees and other internal and external stakeholders relating to their rights and obligations, or with in other words, a system that regulates and controls a company. Corporate governance of companies as an effective monitoring tool is highlighted as one of the reasons for preventing fraudulent financial reporting. This concludes that an effective corporate governance structure has a positive impact in reducing incidents of financial statement fraud (Razali & Arshad, 2014). Mulyasari et al, (2017) corporate governance mechanisms, such as institutional ownership, are expected to overcome agency problems and reduce the occurrence of fraudulent financial reports.

III. RESEARCH METHODS

This research was conducted on the Indonesia Stock Exchange on the page www.idx.co.id. The population in this study of State-Owned Enterprises (SOE) listed on the Indonesian stock exchange for the period 2019-2023, with a total of 27 companies. The sampling technique was carried out using a purposive sampling technique. External data type is time series. This research use secondary data sources are data obtained through second hand meaning the data is obtained in a way no direct but through intermediary media. This study is quantitative study. Documentation techniques is a technique data collection that is not direct intended to subject research, but rather through documents company that is made subject. Documentation method with collect, record, and review secondary data form of annual report and financial statement state-owned enterprises. Population as many as 27 companies, determination sample used use purposive sampling method obtained by 14 companies with 5 years research so that 70 data.

Data analysis technique in this research used analysis regression logistics due to the data used non-metric in nature on variables dependent, whereas independent variable is mixture metric data variables (continuous) and non-metric data (categorical). Analysis logistics used for analyze quantitative data that reflects two options normal called with binary logistic regression. Analysis regression logistics done with SPSS program assistance.

IV. RESULTS AND DISCUSSION

Profitability Influence the Detection of Fraudulent Financial Statement

Significance value from profitability with ROE is 0.041 more small from $\alpha = 0.05$ which means variable ratio profitability influential to detection fraudulent financial statement. In other words, it can concluded that H1a Accepted, this results in line with Persons' research (1995); Zainudin & Hashim (2016) which proves that ratio profitability in a way significant can used in detect fraudulent financial statement. Proxy Return On Equity (ROE) can used for see return equity on owner a company as well as measure ability company in to obtain profit. There is an expectation that management will maintain or even increase level profitability, providing pressure for management for achieve the expected target, things this is what will be become motivation do fraudulent financial statement if expectation owner no in harmony with company performance. Viewed from corner view perspective theory fundamental, ROE is able used as tool for detect existence fraudulent financial statement because ROE can often use in evaluate performance manager in determine bonuses and increase wages, increase wages this got from existence stakeholder satisfaction on company performance.

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Liquidity No Influential the Detection of Fraudulent Financial Statement

Significance value from liquidity with CR is 0.134 more big from $\alpha = 0.05$ which means variable ratio liquidity no influential to detection fraudulent financial statement. In other words, it can concluded that H1b Rejected, this result in line with Dalnial et al. (2014), Firdausya & Parasetya (2020) also show that ratio liquidity no significant in detection fraudulent financial statement. Based on results the to signify that tall or low, no is sign that company do fraudulent financial statement. In addition, the value current ratio (CR) that is too high height can also indicates that not enough capable of company in use his assets in a way efficient because lots idle assets. Research Haqqi et al, (2015) stated ratio liquidity not yet capable used for detect fraudulent financial statement. In the sample study this ratio liquidity between the alleged company do fraud and companies that are not do fraud no far different or different no significant. This is what causes ratio liquidity not yet succeed used for detect fraudulent financial statement.

Solvency No Influential the Detection of Fraudulent Financial Statement

Significance value from solvency with DAR is 0.124 more big from $\alpha = 0.05$ which means variable ratio solvency no influential to detection fraudulent financial statement. In other words, it can concluded that H1c Rejected. This result in line with Putri, NA, & Nuryatno, M. (2023) research states that no there is correlation tall low DAR so the more tall DAR ratio is increasing low ability company fulfil obligation with assets not result in company do fraudulent financial statement. Ansori, M., & Fajri, S. (2018), DAR does not influential to detection fraud report finance because of company many are diverted the capital to equity financing so that result in happen decline the amount of capital from activity operation that causes low DAR value.

Activity no Influential the Detection of Fraudulent Financial Statement

Significance value activity with ITO is 0.535 more big from $\alpha = 0.05$ which means variable ratio activity no influential to fraudulent financial statement. In other words, it can concluded that H1d Rejected. This result based on because the existence of a harmonized inventory with sale so that fraud no can happened. Based on study Milasari, W., & Ratmono, D. (2019), Internal control of inventory aiming for prevent assets from abuse and damage as well as ensure accuracy (precision) of presentation supply in report finance, so that ITO does not influential to detection fraudulent financial statement. However this study no in line with Riska, R., Rismauli, J., Ryanda, O., & Umar, H. (2019) who informs that inventory is variable important to use in detect fraudulent items.

Textual Information no Influential the Detection of Fraudulent Financial Statement

From the results of the Wald test (partial test (t)) it is known textual information (MD&A) against variable dependent namely detection fraudulent financial statement is 0.113 more big from $\alpha = 0.05$ which means variable textual information no influential to fraudulent financial statement. In other words, it can concluded that H2 Rejected. This result in line with research by Bhattacharya, I., & Mickovic, A. (2024) which states that analysis textual on the part Analysis and Discussion Management (MD&A) no immune to limitation certain things that are necessary pay attention, meaning study This only depend on data set according to with ARA criteria that limit information to detection fraud report finance. Where the company with possibility do fraud highest relatively small in size, so that its detection Possible No own relevance significant social.

Corporate Governance does not to Moderate Connection between Profitability to Detection of Fraudulent Financial Statement

Significance is $0.699 > 0.05$ then can concluded that CG not to moderate connection between profitability (ROE) with Detection Fraudulent Financial Statement. In other words, it can concluded that H3a Rejected. Corporate governance in this study considered don't capable operate his role in a way good so that don't capable control company for achievement fluctuating profitability (ROE) tend high to avoid from there is cheating. This research in line with Kurnia et al, (2023) who stated that how much big too shares owned by the party institution no ensure can give supervision more to activity operational specifically performance management. Although in this study there is influence corporate governance to detection fraudulent Financial Statement. However corporate governance can't to moderate connection between profitability (ROE) and detection fraudulent financial statement.

Corporate Governance to Moderate Connection between Likuidity to Detection of Fraudulent Financial Statement

Significance is $0.030 < 0.05$ then can concluded that CG moderate connection between liquidity (CR) with Detection fraudulent financial statement. In other words, it can concluded that H3b Accepted. Corporate governance besides to plant sufficient investment, one holder share the majority also participated help in improvement supervision operational company to run with good. Based on the data that obtained level liquidity is highly volatile and tends to worth high. If mark low liquidity (CR) will cause asset company decreased. Meanwhile, the principal will request agent for get additional funds from creditors for pay off debt. In order to show condition liquidity good can cause pressure for agent for do action manipulation report finance with raise CR value (Annisa, RA, & Arifin, J., 2024).

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Corporate Governance to Moderate Connection between Solvencies to Detection of Fraudulent Financial Statement

Significance is $0.008 < 0.05$ then can concluded that CG moderate connection between solvency (DAR) with Detection fraudulent financial statement. In other words, it can concluded that H3c Accepted. Implementation corporate governance is one of the the mechanism used for minimize conflict agency with method give harmony connection between stakeholders for determination direction and control company. If company own high solvency, meaning company the considered have large debts and risks the credit owned is also high. The more tall risk credit, increasingly big level concern creditors for give loan to company (Yaramah, W., & Hidayat, I. 2022). This is be one of reason emergence fraud in financial reporting. So that can concluded that corporate governance to moderate influence solvency to detection fraudulent financial statement.

Corporate Governance to Moderate Connection between Activities to Detection of Fraudulent Financial Statement

Significance is $0.024 < 0.05$ then can concluded that CG moderate connection between activity (ITO) with Detection fraudulent financial statement. In other words, it can concluded that H3d Accepted. Corporate governance own a very important role in minimize conflict agency that occurs between agents and principals. The existence of institutional investors is one of the part from CG is considered capable become mechanism effective monitoring in every decisions taken in the strategic decision - making process (Jensen & Meckling, 1976). The activity (ITO) towards detection fraudulent financial statement capable moderated by corporate governance Because there is monitoring of inventory on purpose for prevent assets from theft, misappropriation, abuse and damage as well as ensure accuracy (precision) of presentation supply in finance report. It can be concluded that corporate governance to moderate influence activity to detection fraudulent financial statement.

Corporate Governance Does Not to Moderate Connection between Profitability to Detection of Fraudulent Financial Statement

Significance value is 0.348 then can concluded that CG don't moderate connection between textual information (MD&A) with Detection fraudulent financial statement. In other words, it can concluded that H4 Rejected. Kurniawan et al, (2020) stated that party holder share institution outside still don't play a role active in do supervision to action the manager who does fraudulent financial statement. This is can happen because institutional ownership still don't play a role active in supervise fraud committed by managers. Structure corporate governance as tool monitoring not enough effective as one of the reason for prevent fraud especially in presentation information addition on finance reporting like text. In the text this contained in the MD&A (management discussion and analysis) report annual which provides evaluation comprehensive on performance past companies and future prospacks. In theory agency existence problem agency that can cause manager (agent) does fraudulent financial statement. Ownership institutional as mechanism from corporate governance can reduce problem agency in this research, institutional ownweship as mechanism corporate governance can't reduce problem agency in the relationship between information textual with detection fraudulent financial statement, cause manager do fraudulent financial statement so that no in accordance with theory agency.

V. CONCLUSION

Based on results of testing and analysis that has been done obtained the results that answer formulation problem as following. Profitability influential to detection fraudulent financial statement, because of there are expectations that management will maintain or even increase level profitability, providing pressure for management for achieve the expected target, things this is what will be become motivation do fraudulent financial statement if owner expectation do not harmony with company performance. Liquidity no influential to detection fraudulent financial statement, because tall or low measured liquidity with current ratio no sign that company do fraudulent financial statement. Solvency no influential to detection fraudulent financial statement, because of no there is correlation tall low mark measured solvency with debt to asset ratio so that the more ratio debt to asset ratio then the more low ability company fulfil obligation with assets not result in company do fraudulent financial statement. Activity no influential to detection fraud report finances because mark activity measured by inventory turnover show the existence of a harmonized inventory with sale so that fraud no can happened. So that inventory turnover no influential to detection fraudulent financial statement. Information textual using MD&A no influential to detection fraudulent financial statement because in study only depend on data set according to with ARA criteria that limit information to detection fraudulent financial statement. In the context of textual in adjusted MD&A with ARA criteria lacking existence framework systematic analytic for guide work detection fraud, so that information textual no influential to detection fraudulent financial statement.

Corporate governance no to moderate connection between profitability to detection fraudulent financial statement in state-owned companies listed on the Indonesian stock exchange because corporate governance in study this considered not yet capable operate his role in a way good so that not yet capable control company for achievement profitability. Corporate

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governance to moderate connection liquidity to detection fraudulent financial statement in state-owned companies listed on the Indonesian stock exchange because of show condition liquidity good can cause pressure for agent for do action manipulation financial statement. If the company own high corporate governance so will the more lots the power that will supervise financial performance company so that will increasingly optimal management operational, Corporate governance to moderate connection solvency to detection fraudulent financial statement at state-owned companies listed on the Indonesian stock exchange because if the more tall risk credit, increasingly big level concern creditors for give loan this is be one of reason emergence fraud in financial reporting. With existence supervision from effective corporate governance can found existence correlation tall low measured solvency with debt to asset ratio where the more low debt to asset ratio the more tall ability with assets not result in company do fraudulent financial statement matter this can seen from mark debt to asset ratio in average sample of each year experience decline. Corporate governance to moderate connection activity to detection fraudulent financial statement at state-owned companies listed on the Indonesian stock exchange because corporate governance own a very important role in minimize conflict agency that occurs between agents and principals. The existence of institutional investors is one of the part from CG is considered capable become mechanism effective monitoring in every decisions taken in the strategic decision-making process. Monitoring of inventory for prevent assets from theft, misappropriation, abuse and damage as well as ensure accuracy (precision) of presentation supply in financial reporting. Corporate governance no to moderate the relationship between MD&A and Detection fraudulent financial statement in state-owned companies listed on the Indonesian stock exchange because existence limitations Where testing only based on MD&A analysis according to ARA. In the section text This contained in the MD&A annual report which provides evaluation comprehensive on performance past and future.

VI. SUGGESTION

Researcher certain that potential study to detection fraudulent financial statement still lots aspects that can made into as tool for detect, such as possibility use ratio finance yes more complex for know performance the actual company. As well as analysis language contextual in detect fraud accounting is very broad and still lots aspects that have not been explored. Here this, some ideas for future research. For example, future research can done for extracting deeper meaning in from text business (from report finance, press conference, or report not quite enough answer social company) can help in estimate income company. Problem detection fraud accountancy trigger interest among auditors, investors, and researchers. However, solving problems and detect fraud no easy or free. Literature previously part big explore potential use feature different quantitative like information from report finance for detect possibility cheating, and literature latest start investigate use analysis textual for detect.

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