

## The Development of Financial Statement Fraud Research: A Bibliometric Analysis



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**ABSTRACT:** This research aims to present and explain the development of research related to financial statement fraud by reviewing bibliometric analysis taken from the Scopus database for the period 1979 – 2023. The method used is a bibliometric analysis approach using VOSviewer and Microsoft Excel to analyze data frequency. The results of this research show that the research topic of financial statement fraud will be most researched in 2023 with 60 articles, the journal that publishes the most topics related to financial statement fraud is the Journal of Financial Crime. The country that publishes the most on the topic of financial statement fraud is the United States. Variables that often appear related to the topic of financial statement fraud are corporate governance, earnings management, crime, and the fraud triangle. Brazel, Hermanson, and Jones are the authors who write most frequently or extensively about financial statement fraud.

**KEYWORDS:** fraud, financial statement fraud, detection of financial fraud, corporate governance, bibliometric analysis.

### INTRODUCTION

Fraud is a deliberate act of deceiving, deceiving, or using dishonest methods to take or lose someone else's money, property, or legitimate rights either because of an action or the fatal impact of the action itself (Priantara, 2013). According to the Association of Certified Fraud Examiners (2019), fraud is divided into three parts, including: corruption, misuse of assets, and financial statement fraud. ACFE also conducted a survey in A Report to the Nation 2022, which stated that there were 2,110 cases of fraud from 133 countries, where financial statement fraud schemes were the least common but most costly in 9% of cases with a median loss of \$593,000. Fraud in financial statements is a type of fraud in which company management changes information in financial statement with the aim of portraying a positive image of their company (Skousen *et al.*, 2009). Financial statement fraud, in a fraud scheme, has the smallest number of cases compared to corruption cases, but has the smallest number of cases but has the greatest impact, namely loss and damage, this type of fraud occurs because stakeholders rely on trust and base their decisions only based on the financial statement presented by the company (Dewi, 2017). The Enron case in 2011 was the largest fraud case involving the audit and accounting institution Arthur Andersen, which together with Enron committed fraud on Enron's financial statement by inflating the value of the company's income (Reditya, 2021). Cases of financial statement fraud also occurred in one company in Indonesia, namely PT Garuda Indonesia (Persero), which manipulated its financial statement by posting a net profit of US\$ 809.85 thousand in 2018, which profit was also a collaboration between Garuda and PT Mahata Aero Technology. This collaboration has a value of US\$ 239.94 million. These funds are still receivables but have been recognized as income (Sugianto, 2019). The rise in cases of financial statement fraud can cause large losses and can damage investors in related companies, and can also cause a decline in public confidence in the performance of an auditor. Of course, the audit process that took place in the relevant period can be questioned as to why the process failed to detect fraud.

This research aims to provide an analysis related to financial statement fraud for the period 1979-2023. This research uses a bibliometric analysis approach with the Scopus database data source. This research uses VOSviewer to analyze. This research provides an analysis of research developments, the journals that most often publish related to financial statement fraud, the countries that research the most related to financial statement fraud, the variables that are frequently used and the authors who are the most productive in the study of financial statement fraud.

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## METHOD

The method used in this research is bibliometric analysis. This analytical approach will show the development of previous research in a particular field. This analysis is part of the research evaluation methodology and comes from various existing literature (Ellegaard & Wallin, 2015). Bibliometric studies have various objectives such as evaluating, reviewing, identifying and interpreting various research topics that are interesting to study (Cardina *et al.*, 2022). This research was obtained by screening the Scopus page using the following criteria:

**Table 1. Article Data Found**

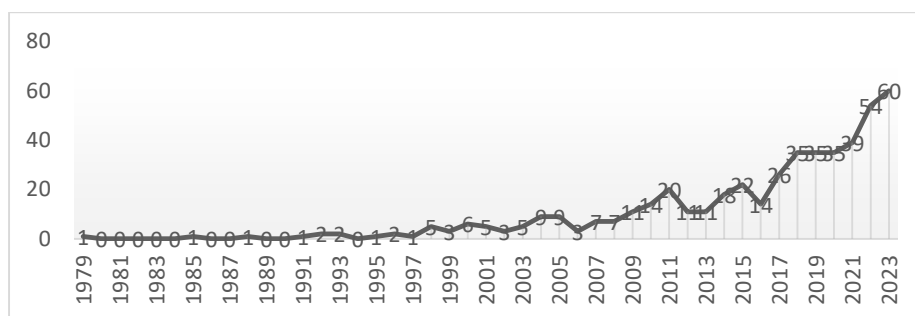
Criteria	Screened Articles
Keyword to search: <b>Financial Statement Fraud</b>	929
Year: <b>1979 - 2023</b>	927
Subject Area: <b>1. Business, Management, and Accounting</b> <b>2. Economics, Econometrics, and Finance</b>	585
Document Type: <b>Article</b>	479

Source: Data processed by researchers (2024)

Based on Table 1, the articles processed in this research amounted to 479 data. From this data, bibliometric analysis was carried out using the VOSviewer application with co-occurrence analysis (used to visualize bibliometric networks between keywords) and co-authorship analysis (used to find relationships between researchers based on collaboration in published research). Co-occurrence analysis will provide information about the variables that have been used in financial statement fraud studies. Based on this information, areas that have been developed and areas that are still rarely researched can be mapped. In co-authorship analysis, we will map the main authors who contributed to literature related to financial statement fraud.

## RESULT AND DISCUSSION

There were 477 articles related to fraudulent financial statement collected from the Scopus page. Research related to financial statement fraud for the period 1979-2023 shows fluctuating movements. The development of the research is shown in Figure 1 below:



**Figure 1. Development of Publications Related to the Topic of Financial Statement Fraud**

Source: Data processed by researchers (2024)

Figure 1 shows, that the movement of research developments related to financial statement fraud fluctuates. In 1979 – 1997, it showed that there were only 0 – 1 publications regarding research related to financial statement fraud. However, in 1998 research related to financial statement fraud increased by 4 publications. A drastic increase occurred from 2021 to 2022, namely in 2021 there were 39 publications and in 2022 there were 54. This coincided with the world experiencing the Covid-19 pandemic, where economic conditions were in decline and many companies posted negative profits which caused a decline in confidence. investors regarding the company's condition. So, the company will do everything it can to restore investor confidence. Fraud in financial statements is a type of fraud in which company management changes information in financial statement with the aim of portraying a positive image of their company (Skousen *et al.*, 2009). The most research developments related to

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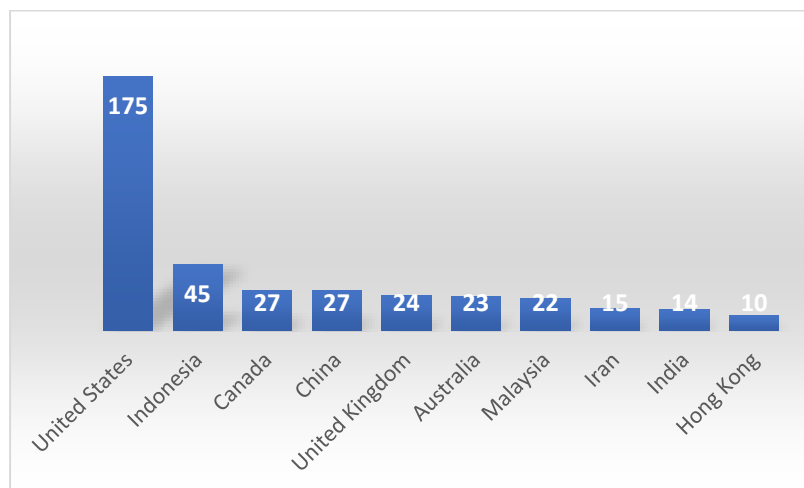
financial statement fraud will occur in 2023 with 60 articles. The following are the 5 highest journals that publish research related to financial statement fraud.



**Figure 2. Journal that publishes research related to fraudulent financial statement.**

**Source:** Data processed by researchers (2024)

Figure 2 shows, that publication of topics related to financial statement fraud is research with broad publication potential, where the results of the research can be published in various journals including the fields of economics, business, accounting and auditing. The journal with the highest distribution regarding financial statement fraud is in the Journal of Financial Crime with 32 articles, the second position is the Journal of Business Ethics with 19 articles, the third position is Issues In Accounting Education with 14 articles, the fourth position is the Managerial Auditing Journal with 13 articles, and the fifth position Accounting Horizons as many as 10 articles. Figure 3 below shows the distribution of research articles by country or territory regarding fraudulent financial statement.

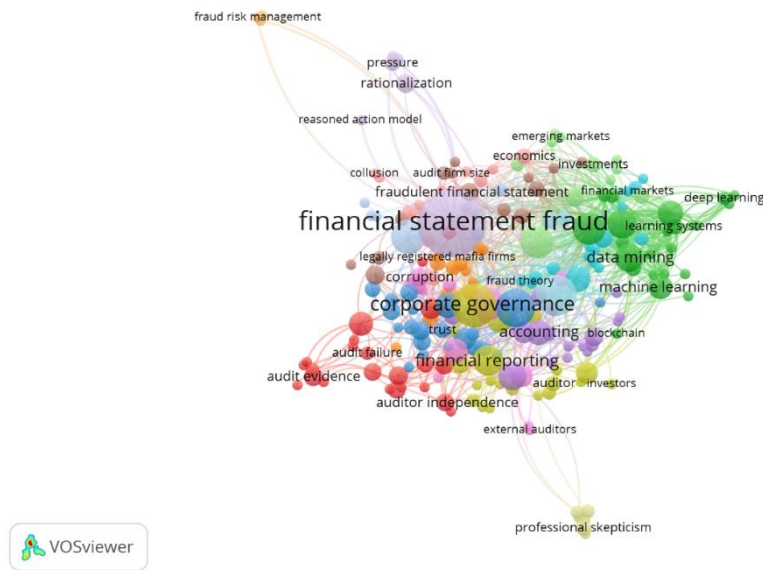


**Figure 3. Distribution graph of research articles by country or territory**

**Source:** Data processed by researchers (2024)

Figure 3 shows that the United States is the country with the highest number of studies related to financial statement fraud with 175 articles. This shows a significant difference with other countries, where Indonesia has 45 and Canada has 27. The development of research that occurred in the United States could be due to the large number of fraud cases that occurred or to further explore these cases, it could be developed in the form of related research. Figure 4 shows the variables used in research related to financial statement fraud:

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**Figure 4. Variables Related to Financial Statement Fraud**  
 Source: Data processed by researchers (2024)

In Figure 4, the variables that often appear related to financial statement fraud. The larger the circle shown by a variable, the more often the variable is used or appears frequently. The lines in Figure 4 show the relationship between variables. The following is a table regarding the quantification of variables:

**Table 2. Number and Links Between Variables**

Variables	Cluster	Total link strength	Occurrences
agency problem	1	6	2
audit committee	1	12	7
audit confirmations	1	1	2
audit evidence	1	15	6
audit failure	1	5	3
audit fees	1	6	6
audit planning	1	9	5
audit procedures	1	7	2
audit quality	1	18	9
audit risk	1	3	2
auditor independence	1	10	5
auditor responsibility	1	3	2
corporate collapse	1	7	2
external audit	1	8	4
fraud type	1	4	2
fraudulent financial statement	1	3	2
internal audit	1	19	5
managerial ownership	1	5	3
Materiality	1	13	5
Misstatement	1	11	3
omission bias	1	8	2
omission strategy	1	8	2
risk of material misstatement	1	2	2
artificial intelligence	2	17	2

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attention mechanisms	2	12	2
bayesian networks	2	24	2
Blockchain	2	4	2
Crime	2	124	17
data mining	2	66	13
decision support systems	2	18	2
decision trees	2	22	3
deep learning	2	12	3
ensemble learning	2	3	2
ensemble models	2	4	2
feature extraction	2	32	3
feature selection	2	32	3
Finance	2	88	14
financial information	2	22	2
financial statement fraud detection	2	6	2
financial statement frauds	2	55	10
learning systems	2	38	4
machine learning	2	32	9
<b>Variables</b>	<b>Cluster</b>	<b>Total link strength</b>	<b>Occurrences</b>
machine learning methods	2	25	2
Managers	2	22	2
text mining	2	25	4
Accountability	3	5	3
anomaly detection	3	2	2
Assurance	3	4	2
audit committees	3	6	2
Auditing	3	44	24
Auditors	3	11	6
benford's law	3	8	5
Business	3	5	2
business ethics	3	4	2
Disclosure	3	8	3
Ethics	3	14	8
financial performance	3	5	4
forensic accounting	3	14	10
fraud risk assessment	3	5	4
Investigation	3	4	2
Livent	3	7	2
locus of control	3	4	2
Malaysia	3	11	5
Perception	3	14	3
public sector	3	14	3
Responsibility	3	8	5
Trust	3	10	4
accounting fraud	4	24	11
accounting information	4	3	3
accounting profession	4	4	2
auditing profession	4	5	2

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Auditor	4	4	4
business failures	4	2	2
corporate fraud	4	11	6
corporate governance	4	61	31
covid-19	4	13	2
evidential reasoning	4	3	2
financial reporting	4	32	15
financial statement comparability	4	3	2
fraud diamond	4	5	4
fraud risk	4	22	8
information asymmetry	4	4	3
Investors	4	2	2
logistic regression model	4	6	2
			3
Negligence	4	4	
<b>Variables</b>	<b>Cluster</b>	<b>Total link strength</b>	<b>Occurrences</b>
Restatement	4	3	2
Accounting	5	19	10
accounting errors	5	7	3
accounting regulation	5	6	2
Audit	5	25	13
Bankruptcy	5	3	2
cash flow	5	5	2
creative accounting	5	11	6
financial analysis	5	4	2
financial statement	5	14	8
Frauds	5	6	2
listed company	5	3	2
Manipulation	5	7	3
reporting bias	5	6	2
Restatements	5	9	5
Risk	5	5	2
statistical analysis	5	7	2
textual analysis	5	7	4
Valuation	5	4	2
banking sector	6	2	2
beneish model	6	23	10
capital markets	6	8	2
corporate frauds	6	11	2
data analytics	6	17	6
Detection	6	8	3
earning management	6	6	2
financial markets	6	5	2
financial statement analysis	6	11	3
fraud examination	6	10	3
fraud theory	6	7	2
Investment	6	3	2
journal entry testing	6	6	2

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Regulation	6	8	2
Regulator	6	4	2
risk management	6	5	3
board of directors	7	12	4
board structure	7	3	2
corporate social responsibility	7	8	3
discretionary accruals	7	5	4
Embezzlement	7	9	4
fraud in financial statements	7	9	3
Governance	7	4	2
intellectual capital	7	9	2
<b>Variables</b>	<b>Cluster</b>	<b>Total link strength</b>	<b>Occurrences</b>
internal control over financial reporting	7	2	2
internal controls	7	12	4
legally registered mafia firms	7	5	2
money laundering	7	11	4
ponzi scheme	7	4	3
social capital	7	4	2
analytical auditing	8	3	2
audit firm size	8	2	2
classification and regression tree	8	11	2
earnings quality	8	6	3
financial restatements	8	7	3
fraudulent financial statements	8	9	5
logistic regression	8	16	4
management fraud	8	5	3
meta-learning	8	7	2
misappropriation of assets	8	2	2
neural networks	8	26	4
red flags	8	6	3
support vector machines	8	16	2
Whistleblowing	8	14	6
asset misappropriation	9	4	2
Corruption	9	14	6
Coso	9	8	3
external auditors	9	2	2
financial system	9	24	4
fraud risk factors	9	3	2
fraud triangle	9	34	17
information technology	9	14	3
internal auditing	9	2	2
internal control	9	23	9
occupational fraud	9	7	4
quantitative analysis	9	16	2
risk assessment	9	39	8
whistleblowing system	9	2	2
Banking	10	9	2
beneish m-score	10	9	4

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benford's law	10	9	3
Collusion	10	2	2
Economics	10	28	4
Financial	10	4	2
financial crime	10	5	4
financial market	10	14	2
financial statement manipulation	10	5	2
<b>Variables</b>	<b>Cluster</b>	<b>Total link strength</b>	<b>Occurrences</b>
fraud hexagon	10	3	2
Fraudulent	10	5	2
international financial reporting standards	10	6	2
Reporting	10	11	3
banking industry	11	5	2
Beneish	11	3	2
beneish m-score model	11	6	2
decision making	11	26	4
earnings manipulation	11	15	6
emerging markets	11	8	2
financial fraud	11	62	17
financial instruments	11	2	2
Investments	11	17	4
numerical model	11	10	2
political connections	11	8	2
Profitability	11	11	3
venture capital	11	9	2
agency problems	12	2	2
agency theory	12	4	2
book-tax differences	12	6	2
design/methodology/approach	12	15	3
earnings management	12	30	19
moral intensity	12	2	2
Motivation	12	7	2
Taxation	12	15	3
accounting standards	13	2	3
analytical procedures	13	5	3
audit report	13	1	2
auditing standards	13	4	2
Deloitte	13	4	2
professional skepticism	13	4	4
artificial neural network	14	4	2
financial statement fraud	14	151	74
Opportunity	14	10	3
Pressure	14	11	4
Rationalization	14	14	6
reasoned action model	14	2	2
economic crisis	15	6	2
financial ratios	15	14	5
financial statements	15	77	26

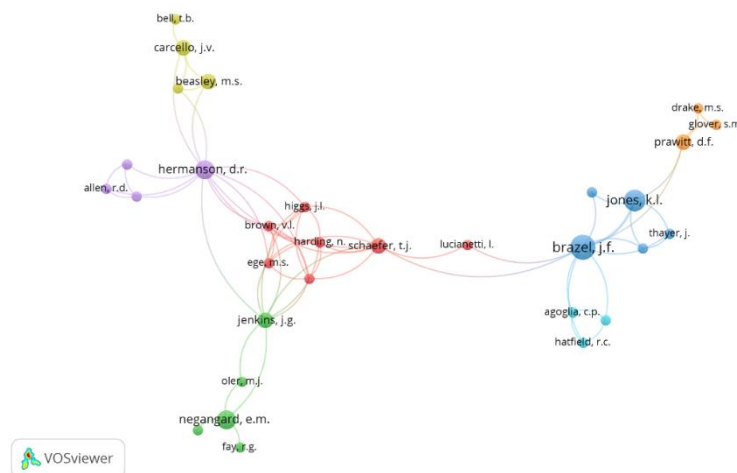


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fraud risk management	16	6	2
non-government organisations	16	6	2
proactive forensic auditing techniques	16	6	2

Table 2 shows the variables associated with the topic of financial statement fraud. The cluster column shows that the variable appears frequently and is related to other variables in the same cluster. However, it does not rule out the possibility that this variable is related to other variables in different clusters. Total links show how often the variable is linked to other variables. The occurrences column shows how many times the variable appears in the publication. Variables that often appear related to the topic of financial statement fraud are corporate governance, earnings management, crime, and the fraud triangle.

Based on table 2, these variables are associated with fraudulent financial statements. Apart from the variables above, there are variables that have not been listed in the table. This shows that variables that have not been studied can provide researchers with the opportunity to research these variables further. Figure 5 shows authors who often publish related to fraudulent financial statement.



**Figure 5. Author Related to Financial Statement Fraud**

Source: Data processed by researchers (2024)

Figure 5 shows that there is a relationship between one author and another author in publishing. The larger the circle, the more frequently the author publishes, such as Brazel, Hermanson, and Jones. Writers who frequently appear on the same topic can be concluded that the writer often researches and understands related topics and by frequently appearing the writer it can be said that the writer is worthy of being a reference for further research related to financial statement fraud.

## CONCLUSIONS

This research was conducted to analyze and study fraudulent financial statement using a bibliometric analysis approach from the Scopus database. This research used the keyword "financial statement fraud" and found 929 documents and by filtering the years, namely 1979-2023, 927 documents were found. Researchers also filtered the subject area "Business, Management, and Accounting" and "Economics, Econometrics, and Finance" namely 585 documents and based on document type, namely articles totaling 479 documents. The final results that can be used for research are 479 documents. The results of this research show that the research topic of financial statement fraud will be most researched in 2023 with 60 articles, the journal that publishes the most topics related to financial statement fraud is the Journal of Financial Crime. The country that publishes the most on the topic of financial statement fraud is the United States. Variables that often appear related to the topic of financial statement fraud are corporate governance, earnings management, crime, and the fraud triangle. Brazel, Hermanson, and Jones are the authors who most often write about financial statement fraud.

This research has limitations, namely variables that are rarely studied cannot be visualized. This is caused by nodes and edges, which is too small. However, this research can find various interesting phenomena and can be studied further for future research agendas. This research also only uses a database from Scopus. It is hoped that future researchers can develop research such as Web of Science, Dimension API and others. Expansion of research can also be done through other bibliometric analyzes such as HistCite and Gephi. Although there are research limitations, this research provides significant contributions and new insights into financial statement fraud.

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