Journal of Internet Banking and Commerce

An open access Internet journal (http://www.icommercecentral.com)

Journal of Internet Banking and Commerce, March 2023, Vol. 28, No. 2

Role of Information Technology in Fraud Detection and Economic Loss

Flanik Wain
Department of Economics and Management,
Federal University of Maranhao,
Maranhao, Brazil
Email: flanikwain@gmail.com

Received date: 22-02-2023, Manuscript No. JIBC-23-95882;
Editor assigned date: 24-02-2023, Pre QC No. JIBC-23-95882 (PQ);
Reviewed date: 10-03-2023, QC No. JIBC-23-95882;
Revision date: 17-03-2023, Manuscript No: JIBC-23-95882 (R);
Published date: 27-03-2023

Description

The constant incidence of financial fraud committed by listed businesses has considerably impacted the capital market's healthy expansion. Existing studies on financial fraud typically use methodologies that neglect the interactions between different participants, such as the effectiveness of audit opinions or the association between auditor change rates and financial fraud. Based on the audit linkages between businesses, audit firms, and auditors, this study constructs an audit information knowledge graph and proposes a knowledge graph reasoning framework based on the Sub Feature Extraction approach to identify possibly fraudulent organisations. When the audit data of 376 organisations in the China Growth Enterprises Market was studied between 2013 and 2019, it was determined that by employing searched paths to search from known fraud corporations, potential fraud corporations may be easily identified. Furthermore, they uncover two additional audit features of financial fraud organisations that are linked to both abnormal audit firm relationships and abnormal audit opinions issued by auditors. They can help authorities identify businesses that need to be actively monitored for evidence of financial misconduct more efficiently.

Financial fraud instances involving publicly traded firms have become more widespread in recent years, attracting the attention of regulatory organisations all around the world. Financial reporting fraud harms investors' interests and jeopardises capital market resource allocation, limiting the market's ability to grow regularly. The case of Luckin Coffee exemplifies financial dishonesty. Following the admission of financial deceit, the company's stock price dropped by 80%, badly damaging the company's reputation. According to the Association of Certified Fraud Examiners' (ACFE) 2020 Global Study on Occupational Fraud and Abuse, financial reporting fraud causes the most economic loss of any sort of fraud, with a median loss of 954,000 dollars.

It is consequently critical to strengthen financial market oversight and reduce the risk of financial fraud. The traditional method for detecting financial fraud in publicly traded firms entails a manual audit of the financial statements and an analysis of the financial ratios, both of which are time-consuming and rely on the expert's subjective assessments. The current body of research has successfully investigated these difficulties and improved the accuracy and precision of fraud detection. The regression model or machine learning method, for example, makes use of the company's financial KPIs. There have been studies to investigate the fraud risk by assessing the effectiveness of audit opinion on fraud identification and aspects of the auditor change rate of fraud corporations, while keeping in mind that audit information may represent audit results and auditor's attitude.

However, companies frequently rely on outsiders, such as auditors and audit firms, to conceal their fraudulent activities, causing the fraud corporations to form unusual partnerships with other entities. In the current study, which does not account for this type of link relationship, the usage of information from several sources is often underutilised. The rapid growth of information technology creates new demands and challenges for the detection of fraudulent organisations and the mining of fraudulent features.

In order to address the aforementioned challenges, provides an audit information knowledge graph based on the audit information of 376 organisations in the China Growth Enterprises Market from 2013 to 2019 in the China Stock Market & Accounting Research (CSMAR) database. Using the conventional route mining method of inductive reasoning theory, we search the knowledge network for potential fraud businesses. The relationships between various organisations in identifying fraud corporations, but it also gives the characteristics of fraud corporations and increases interpretability, lowering the risk of fraud.