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THE ROLE AND SCOPE OF EXTERNAL AUDITING IN FRAUD DETECTION IN THE BANKING SECTOR: A BIBLIOMETRIC ANALYSIS

Milica Đorđević*, Tadija Đukić, Mirjana Jemović, Ivana Marković

University of Niš, Faculty of Economics, Niš, Serbia

ORCID iDs: Milica Đorđević https://orcid.org/0000-0003-1652-4186
Tadija Đukić https://orcid.org/0000-0003-4793-8592
Mirjana Jemović https://orcid.org/0000-0002-5212-182X
Ivana Marković https://orcid.org/0009-0004-2084-3889

Abstract

The banking sector, as the dominant channel of financial intermediation, has systemic importance for the efficient and stable financial and economic system as a whole. Contemporary academic and professional literature recognises external auditing as an important mechanism for enhancing the credibility of financial reporting and detecting financial fraud in the banking sector. Building on this theoretical framework, this paper applies a bibliometric analysis of scientific publications with the aim of the systematisation and critical examination of the role and scope of external auditing in combating fraud in banks. The analysis relies on a corpus of 130 scholarly articles indexed in the Scopus database, published in the period between 1992 and 2025, and encompasses an examination of publication dynamics, thematic clusters, collaboration networks and dominant research trends. The results indicate a continuous and pronounced growth in scholarly interest in this field, with a predominance of topics related to fraud detection, audit quality and corporate governance. At the same time, research addressing the preventive role of auditing, the implementation of digital and analytical technologies, and studies focusing on less developed economies remains relatively underrepresented, highlighting gaps in the available literature and suggesting potential avenues for future research. The paper contributes to a better understanding of the evolution of the scientific discourse on external auditing and provides a foundation for further theoretical and empirical advancement of research in this area.

Key words: auditing, fraud, banking sector, bibliometric analysis.

* Corresponding author: Milica Đorđević, University of Niš, Faculty of Economics, Trg kralja Aleksandra Ujedinitelja 11, 18105 Niš, Serbia
milica.djordjevic@eknfak.ni.ac.rs

УЛОГА И ДОМЕТИ ЕКСТЕРНЕ РЕВИЗИЈЕ У БОРБИ ПРОТИВ ПРЕВАРА У БАНКАРСКОМ СЕКТОРУ: БИБЛИОМЕТРИЈСКА АНАЛИЗА

Апстракт

Банкарски сектор, као доминантан канал финансијског посредовања, има системски значај за ефикасно функционисање и стабилност финансијског и економског система у целини. Екстерна ревизија се у савременој научној и стручној литератури препознаје као значајан механизам за јачање кредибилитета финансијског извештавања и откривање финансијских превара у банкарском сектору. Полазећи од таквог теоријског оквира, овај рад примењује библиометријску анализу научних публикација са циљем систематизације и критичког сагледавања улоге и домета екстерне ревизије у борби против превара у банкама. Анализа је заснована на корпусу од 130 научних радова индексираних у бази Scopus, објављених у периоду од 1992. до 2025. године, а обухвата испитивање динамике публиковања, тематских кластера, сарадничких мрежа и доминантних истраживачких праваца. Добијени резултати указују на континуиран и изражен раст научног интересовања за ову област, уз доминацију тема које се односе на детекцију превара, квалитет ревизије и корпоративно управљање. Истовремено, уочена је релативна недовољна заступљеност истраживања која се баве превентивном улогом ревизије, применом дигиталних и аналитичких технологија, као и истраживања у мање развијеним економијама, што указује на празнине у литератури и потенцијалне правце будућих истраживања. Рад доприноси бољем разумевању еволуције научног дискурса о екстерној ревизији и пружа основу за даље теоријско и емпиријско унапређење истраживања у овој области.

Кључне речи: ревизија, преваре, банкарски сектор, библиометријска анализа.

INTRODUCTION

The reliability of banks' financial statements directly affects the confidence of depositors, investors and regulatory authorities. Given the complexity of bank balance sheets and the growing volume of financial transactions, banks are exposed to various forms of financial fraud, including manipulation of loan portfolios, concealment of non-performing loans and misrepresentation of capital adequacy. Financial fraud in banks directly undermines the integrity and reliability of financial reporting, deepens information asymmetry between management, regulators and market participants, and increases banks' exposure to reputational, operational and systemic risks. According to the Basel Committee on Banking Supervision and the World Bank reports, even developed financial systems' institutions encounter substantial regulatory or financial irregularities, highlighting the need for proactive supervision and robust control mechanisms (Basel Committee on Banking Supervision, 2015; Jeremić et al., 2023).

Fraud risk management in banks has led to the development and strengthening of numerous institutional and regulatory mechanisms, among which external auditing stands out as one of the most significant instruments of corporate oversight (Jeremić et al., 2023). The role of external auditors becomes vital, as their standard audit procedures, designed to detect potential fraud indicators and analyse anomalies within financial statements, substantially contribute to comprehensive fraud risk management in the banking sector (Kassem and Turksen, 2021). The Basel Committee on Banking Supervision specifically emphasises that high-quality and independent external auditing enhances the transparency of financial reporting and provides regulators with additional insight into potential risks and irregularities in banks' operations (Basel Committee on Banking Supervision, 2015). Although auditing cannot, by itself, completely eliminate the risk of fraud, its integration into supervisory frameworks enables a more accurate risk assessment and strengthens the overall system of internal and external controls, including the evaluation of the effectiveness of banks' internal procedures and oversight mechanisms. For this reason, auditing is considered a central component of the control system (Zgarni, 2021).

Collaboration between regulatory authorities and external auditors improves the effectiveness of supervision, reduces the likelihood of malfeasance or misrepresentation of financial information and helps maintain investors' confidence in the financial system. High-quality external auditors, particularly banking sector specialists, are capable of significantly reducing the risk of financial statement manipulation, detecting potential fraud and improving overall financial discipline within banks (Leventis et al., 2013). However, the ability to fully leverage the potential of external auditing depends on a country's institutional characteristics, regulatory requirements and the overall quality of external oversight. This particularly applies to transitional economies and countries with less developed banking sectors, where institutional weaknesses, inconsistent application of standards and limited independence of auditing firms can diminish the effectiveness of audits in fraud detection and supervision.

Alongside the recognition of external auditing's potential in combating fraud and its increasing integration into banks' corporate governance systems, there has been a growing interest in the academic community regarding its role and scope in identifying and preventing fraud in the banking sector. This, in turn, necessitates an examination of research dynamics and a systematic review of the results obtained so far, specifically addressing the following research questions:

- RQ1: What are the main research topics in this field?
- RQ2: What are the trends in terms of published papers and citations over time?
- RQ3: What is the geographical distribution of publications and the collaboration among studies?
- RQ4: Who are the most influential authors, institutions and journals in the field?
- RQ5: What are the most cited papers and their key findings?
- RQ6: What are the research gaps and potential directions for future studies?

Given that a literature review, as a conventional method, provides qualitative overviews and cannot comprehensively cover extensive research findings, we conduct a bibliometric analysis to address the previously defined research questions. Bibliometric analysis allows for a well-structured and efficient examination of a field with a large volume of bibliographic data (Yazdanjue et al., 2023), facilitates the identification of key trends and patterns and provides valuable support for guiding and directing research (Jing et al., 2023) without subjectivity (Lamboglia et al., 2021). In this way, it is possible to reliably assess how the academic community has conceptualised and empirically investigated the role of external auditing in preventing and detecting fraud in the banking sector, as well as to identify gaps that represent directions for future research.

Several bibliometric studies have already examined the relationship between auditing and fraud (Ramos et. al., 2024; Ratzinger-Sakel & Tiedemann, 2021; Branet et. al. 2024). However, this is the first study to systematically analyse the role of external auditing in fraud detection in the banking sector, at the same time identifying trends, performance and directions for future research. The objective of this research is to provide a comprehensive overview of the current discourse that will benefit both the academic community and practitioners, as well as decision-makers, enhancing their understanding and supporting their research and practical activities.

The paper is structured as follows. Following the introduction, the second section provides the theoretical foundation of the study, outlining the potential and role of external auditing in identifying and preventing fraud in the banking sector and highlighting its significance in this context. The third section presents the applied bibliometric methodology. The fourth section covers the presentation and discussion of the obtained results. The final section presents the research conclusions, highlights its limitations and proposes directions for future research.

THE CONCEPTUALISATION OF THE ROLE OF EXTERNAL AUDIT IN THE PREVENTION OF FRAUD IN THE BANKING SECTOR

Financial fraud in banks is one of the key sources of operational and reputational risk, with potentially serious implications for the stability of the financial system. Scholarly articles often use the *fraud triangle theory*, originally developed by Cressey (1973), as a framework to explain why individuals commit fraud. According to the fraud triangle theory, the fundamental arguments for committing fraud are pressure, opportunity and rationalisation. Homer (2020) tests the application of this theory across various sectors, including the banking sector. In banks, pressure can arise from employees' financial obligations or sales targets, opportunity emerges from weaknesses in internal controls and digital systems, while rationalisation allows perpetrators to justify their fraudulent actions. Homer (2020) emphasises that understanding these three elements helps identify and prevent fraud in the banking sector.

Contemporary literature on fraud in the banking sector (Mangala & Soni, 2022; Repousis et al., 2019; Sanusi et al., 2015) defines financial fraud as a wide range of illegal and unethical activities, which can be perpetrated by employees and managers (internal fraud) as well as clients and third parties (external fraud). According to the Association of Certified Fraud Examiners (ACFE, 2024), the banking and financial services sectors report the highest number of occupational fraud cases, a specific form of insider fraud. Among these, the most prevalent forms of occupational fraud are related to corruption (44%), while traditional cash-related frauds are relatively less common. This fraud structure reflects the complexity of banking operations, the high level of regulatory requirements and the significance of employees' discretionary powers, further highlighting the role of external auditing and internal control systems in fraud prevention and early detection. Although corruption is the most frequent single form of fraud, other categories also account for a substantial share, arising from operational complexity of banking operations, high levels of digitalisation and extensive internal processes. Non-cash frauds (16%) and cash misappropriation by employees (18%) indicate that, despite highly formalised procedures, operational risks remain an important source of fraud in banks. These schemes often involve unauthorised use of bank assets, manipulation of internal resources or hidden benefits that are difficult to quantify in the early stages. Such frauds are particularly challenging because they frequently occur below materiality thresholds and may escape detection through standard audit procedures. Check and payment manipulations (14%) and fictitious invoicing (12%) reveal vulnerabilities in payment and settlement systems, especially under conditions of automation and reliance on third parties. Although the incidence of these frauds is lower than in some non-financial sectors, their significance in banks stems from the high transaction values, potential for cascading effects, reputational risk and regulatory consequences. Despite accounting for a relatively small share of cases (5%), financial statement fraud represents a significant risk within the banking sector. Manipulation of financial statements in banks can obscure the true level of credit and market risk, compromise capital adequacy and undermine investor and depositor confidence. Therefore, this form of fraud is considered a key systemic risk, despite its lower frequency. While the ACFE (2024) report primarily focuses on occupational fraud, its findings are especially relevant to the banking sector, as occupational fraud stands for a significant segment of the total financial fraud to which banks are exposed. However, although internal employee risk is a key factor in large-scale and systemically significant frauds in the banking sector, comprehensive prevention requires consideration of external stakeholders as well as collusive frauds involving both internal and external participants.

The ACFE (2024) data indicate that the banking and financial sector is characterised by a relatively high number of occupational fraud cases, with a pronounced asymmetry in the distribution of financial losses. While the median losses in banks are lower compared to certain other industries, the average losses are significantly higher, suggesting a small number of extremely damaging cases with potentially systemic implications. This risk structure further highlights the importance of external auditing in identifying material misstatements resulting from fraud. The fraud structure in banks suggests that existing regulatory and control mechanisms effectively limit simple forms of fraud but are less successful in detecting complex, combined and long-term schemes. This implies the need to strengthen the regulatory framework and further enhance the role of external auditing.

Contemporary practice already positions external auditing as one of the central institutional mechanisms in managing fraud risk in the banking sector. Through independent and systematic evaluation of financial statements, internal controls and transactional processes, auditors help reduce information asymmetry between management, investors and regulators, thereby enhancing the credibility of financial information and the stability of the financial system (Zhang, 2024). External auditing is increasingly taking on a proactive role in improving fraud risk management strategies (Ahmad & Alrabba, 2017), serving not only as a control mechanism but also as a driver of institutional learning, encouraging banks to develop more robust control frameworks. Specifically, the transformation of the role of external auditing in combating fraud can be explained through the complementarity of several theoretical perspectives. From the agency theory standpoint, auditors act as an independent monitoring mechanism that reduces the scope for management's opportunistic behavior and increases the reliability of reporting (Tümmler & Quick, 2026; Kassem, 2024). Signaling theory further emphasises that the audit opinion serves as a signal of the quality of financial information, reducing investor uncertainty and strengthening market trust (Duan, 2025; Espahbodi et al., 2023). At the same time, the institutional perspective highlights that auditing operates within a broader oversight ecosystem that includes regulators, internal audit and other risk management mechanisms, thus allowing for the early identification of systemic weaknesses and potential abuses (Masciandaro et. al., 2020).

From an operational perspective, fraud identification in the audit process relies on an integrated risk assessment process that includes analytical procedures, evaluation of internal controls and the application of professional skepticism. Empirical studies show that structured discussions among audit teams regarding fraud risks ('fraud brainstorming') and the critical analysis of audit evidence significantly enhance the ability to recognise indicators of manipulation that are not directly visible in financial documentation (Tümmler and Quick, 2026; Hoffman & Zimbelman, 2009). Furthermore, the evolution of digital banking is driving a substantial transformation in auditing methodologies. Big data analytics, machine learning and natural language processing enable auditors to identify anomalies in large transactional datasets and extend the scope of traditional sample-based procedures (Huamán et al., 2025; George et al., 2023; Ikhsan et al., 2022). These technological tools foster a shift toward continuous risk monitoring and require the development of new interdisciplinary auditor competencies, including understanding digital platforms and advanced analytical techniques.

Despite the evolution of auditing approaches, the scope of external auditing remains structurally limited. First, the literature indicates that auditors often place greater emphasis on the 'opportunity' factor of the fraud triangle, while motives and rationalisation are less systematically analysed, potentially limiting the quality of risk assessment, especially in complex banking environments (Kassem, 2024). Additionally, audits provide reasonable, but not absolute, assurance, which means that sophisticated frauds involving collusion or abuse of managerial positions may go undetected. This limitation contributes to the existence of the 'expectation gap' between the public and the auditing profession, particularly in the banking sector, where expectations from auditors are often extremely high (Tümmler & Quick, 2026). International Standard on Auditing (ISA) 240 highlights the need for heightened professional skepticism and systematic fraud risk assessment (IAASB, 2026). However, PCAOB inspections findings reveal variations in the implementation of these requirements, including insufficient testing of management's override of internal controls (PCAOB, 2023b). The ACFE reports further show that external auditors rarely serve as initial fraud detectors, highlighting the need for continuous improvement of auditing practices (ACFE, 2024).

In this context, contemporary literature increasingly emphasises the importance of an interdisciplinary approach that integrates external auditing with internal audit, regulators and IT experts (Masciandaro et al., 2020). Furthermore, the involvement of forensic accountants can be another way to improve auditing capabilities in high-risk situations (Vučković-Milutinović & Ribić, 2024), with their role viewed as complementary rather than substitutive to the audit team's professional skepticism and responsibility.

RESEARCH FRAMEWORK

This section presents the methodological framework employed to enable quantitative mapping, key pattern identification and trend analysis within the selected research area. This study applies concepts of bibliometric and scientometric analysis to illuminate specific dimensions of external auditing in combating financial fraud, while a detailed methodological analysis of applied approaches can be found in the relevant literature (Leydesdorff & Milojević, 2012; Haghani, 2023; Aria & Cuccurullo, 2017).

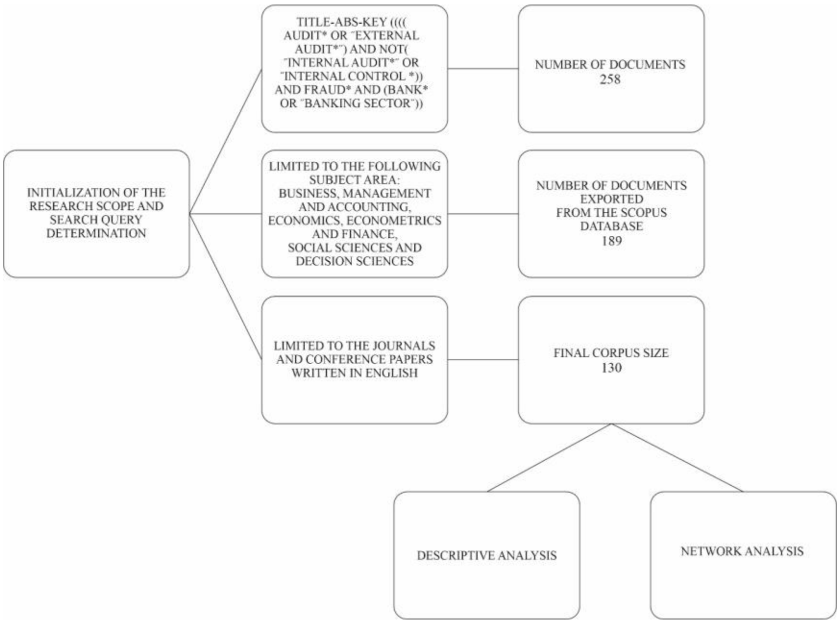

Figure 1. Research design

The bibliometric analysis in this study relies on data retrieved from the Scopus bibliographic database, aiming to explore the role of external auditing in the prevention and detection of fraud in the banking sector through the analysis of relevant scientific publications. Scopus was chosen due to its extensive coverage of peer-reviewed journals and conference proceedings (Mongeon & Paul-Hus, 2016) in the fields of economics, finance, accounting and auditing, allowing a comprehensive overview of the research area.

The data collection process included three stages. The first defined the research scope: The research focused on publications that thematically link external auditing, financial fraud and the banking sector, with the objective of examining how the academic literature conceptualises and empirically investigates the role of external auditing in fraud prevention and detection in banks. The second stage included a systematic Scopus database search using a carefully defined set of terms related to external auditing, fraud and banking. The following search query was constructed: TITLE-ABS-KEY(((((audit* OR 'external audit*') and not ('internal audit*' or ‘internal control*’)) AND fraud* AND (bank* OR ‘banking sector’)))). The third stage related to result filtering. To ensure the relevance of selected publications, filters were applied to limit the analysis to specific scientific domains, limited to subject area Business, Management and Accounting, Economics, Econometrics and Finance, Social Sciences and Decision Sciences. This reduced the initial corpus from 258 to 189 documents. Further filtering was conducted using the Bibliometrix package in RStudio, retaining only journal articles and conference papers published in English to ensure wider comprehension and accessibility for the global academic community (Cinpolat, 2022). The final dataset consisted of 130 publications, covering the period 1992–2025, forming the basis for the subsequent bibliometric analysis.

As illustrated in Figure 1, the research analysis was carried out through two distinct analytical approaches. The first approach involved a descriptive bibliometric analysis, which examines the volume and dynamics of publications over time, source structure, authorship and citation patterns and identifies the most influential journals, authors and publications. Special attention was given to the application of Bradford’s Law of Scattering, which enables the identification of the core journals in the analysed area. The second approach included a network analysis, aimed at exploring the relationships between authors, countries, journals and key terms, as well as identifying dominant thematic clusters and research collaboration patterns in the study of the role of external auditing in combating fraud in the banking sector. It is important to note that when performing co-word analysis, it is necessary to eliminate different representations and contexts of the same form. For that reason, in this paper thesaurus files are used and adapted (Marković & Jeremić, 2024).

RESULTS AND DISCUSSION

Descriptive Analysis

The results of the descriptive analysis indicate that the study corpus comprises 130 publications released between 1992 and 2025, spanning 93 scientific sources. Written by 302 scholars, these papers reflect a relatively broad and internationally dispersed research community. The average age of the documents is 9.09 years, while the average number of citations per publication is 20.98, indicating a solid academic impact of the analysed literature. The average number of co-authors per paper is 2.42, while the share of international co-authorship is 16.15%, suggesting a moderate yet growing level of international research collaboration. The annual growth rate of publications in this area is 9.15%, reflecting an accelerated increase in scholarly interest in this topic, particularly over the past decade.

The analysis of the dynamics of publications (Figure 2) shows that interest in the role of external auditing in combating fraud in the banking sector was relatively modest during the 1990s and early 2000s. The aftermath of the 2008 global financial crisis brought a more pronounced increase in publication activity, likely associated with stronger regulatory frameworks, increased attention to corporate governance and the risks of financial fraud in banks. The growth in publications becomes especially pronounced after 2018, peaking in the final years of the observed period. This trend confirms that the topic is gaining increasing relevance in the context of digitalisation in banking, regulatory reforms and more sophisticated forms of financial fraud.

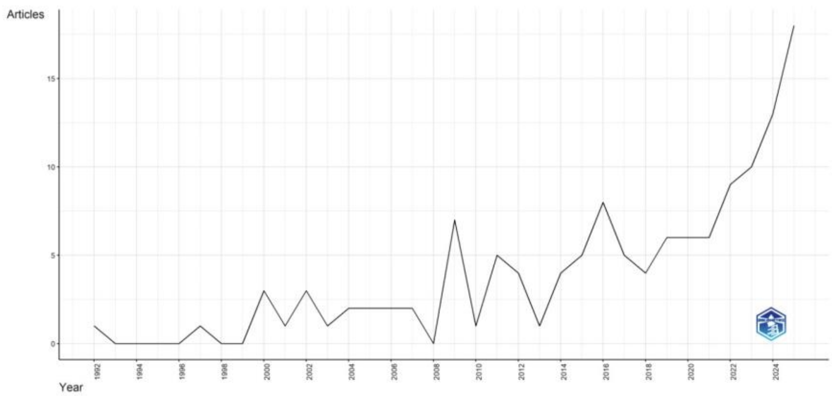

Figure 2. Dynamics of scientific publications in the period 1992-2025

The application of Bradford's Law enabled the identification of the core journals in this field (Figure 3). The results indicate that a relatively small number of journals emerge as the primary carriers of research in this area.

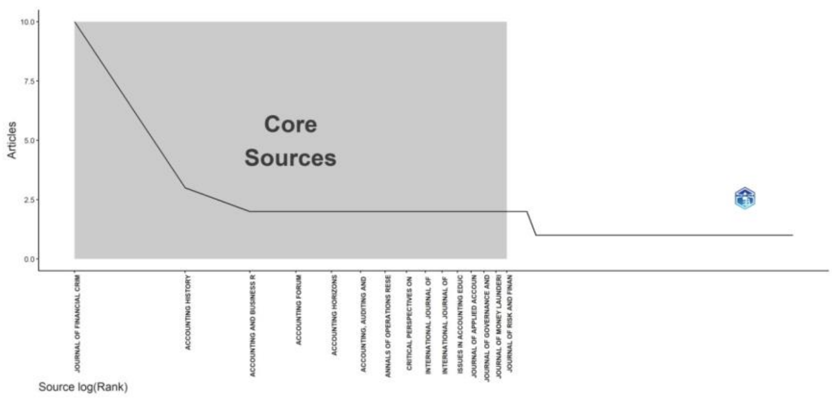

Figure 3. Core journals according to Bradford's Law

Among the most relevant sources, the Journal of Financial Crime stands out with the highest number of published papers in the examined field. In addition, journals in the fields of accounting, auditing and corporate governance play a significant role, confirming the interdisciplinary nature of the research area. This concentration of publications in a limited number of journals points to the existence of a clearly defined core of literature, which is in line with the theoretical assumptions of Bradford's Law.

Following the identification of the core journals using Bradford's Law, the analysis of publication dynamics over time offers further insight into their role, as shown in Figure 4.

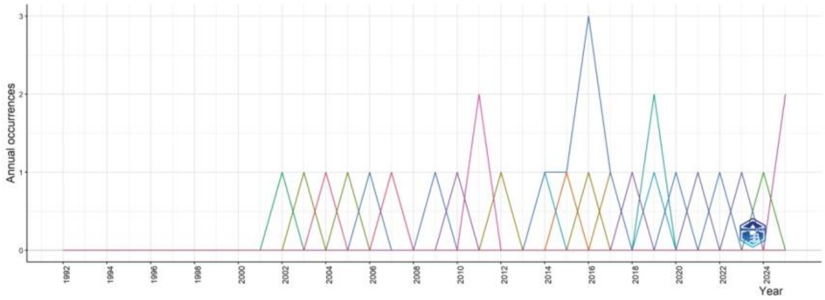

Figure 4. Publication dynamics in core journals over time

The results show that journals belonging to the core literature have the largest number of published papers, at the same time exhibiting a relatively stable and continuous presence throughout the observed period. This pattern confirms their long-term relevance in research on the role of external auditing in combating fraud in the banking sector, whereas other sources show lower frequency and publication discontinuity.

The authorship structure and the identification of the most relevant authors in this field, based on the number of publications, are presented in Figure 5.

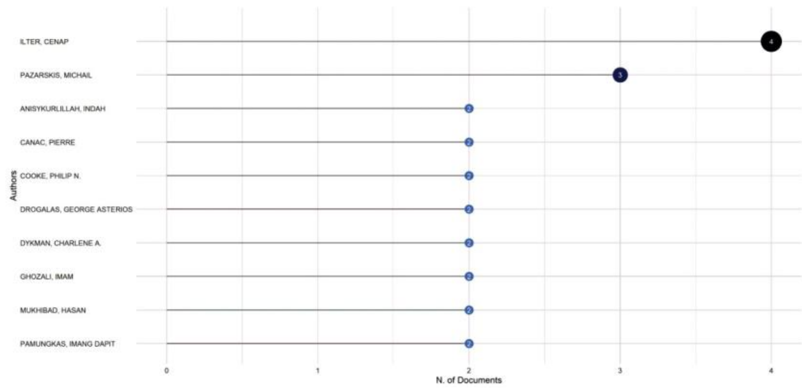

Figure 5. Most relevant authors by number of publications

The results indicate that a small number of authors stand out in terms of publication frequency, while the majority of researchers have a limited number of papers in this field. The most productive authors have between three and four publications, suggesting that the research area is not highly concentrated around a narrow circle of authors but is instead characterised by a relatively dispersed authorship structure. The relatively low share of single-author publications (34 papers) confirms that research in this field primarily relies on team-based work, which is in line with the complexity of the topic and the need for an interdisciplinary approach. This pattern suggests that the field is open to new researchers and contributions, while still featuring recognised authors who provide continuity in research development. The most influential authors, measured by the number of global citations, are presented below (Figure 6).

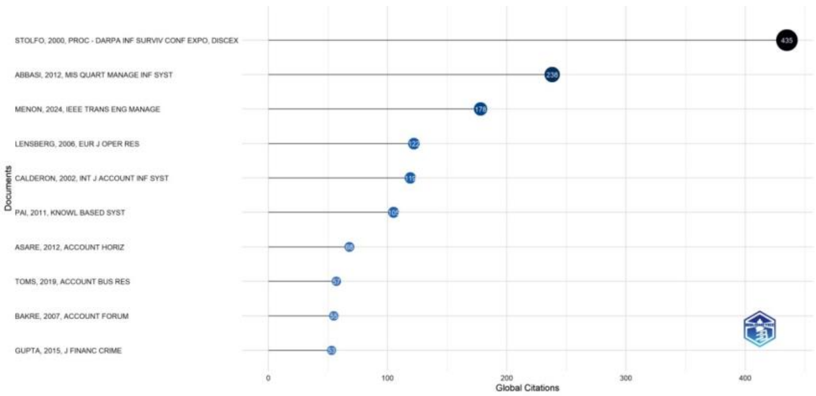

Figure 6. Most influential publications by number of global citations

The results point to a small number of publications with an exceptionally high citation count, whereas most publications record moderate or low citations. The most cited papers predominantly focus on key aspects of financial fraud, audit quality and financial statement manipulation, highlighting the thematic pillars with the greatest impact on research development in this area. This citation distribution confirms that knowledge in this research field relies heavily on a limited number of key papers, which have established the theoretical and empirical foundations for subsequent research. Table 2 presents an overview of the key contributions of the most cited publications in the analysed area.

Table 2. Analysis of the most cited publications on the role of external audit in fraud detection in the banking sector

Most cited publications	Key contributions
Stolfo et al. (2000)	The study introduces a cost-based approach to fraud detection, replacing the traditional objective of accuracy maximisation with the goal of minimising overall risk and cost. This approach is particularly relevant to the banking sector and external auditing, as it allows for the focus on high-risk cases and rational resource allocation.
Abbasi et al. (2012)	The research emphasises the use of multiple fraud detection models, including MetaFraud meta-learning. The introduction of a confidence score is a notable contribution, as it enables auditors to assess the level of risk associated with identified irregularities and make informed professional judgments accordingly.
Menon and Jain (2021)	The study also highlights the potential of blockchain technology to enhance data transparency and reduce the risk of manipulation, thereby limiting opportunities for fraud and strengthening preventive controls.
Lensberg et al. (2006)	The paper is an empirical proof of the importance of auditor opinions as key predictors of bankruptcy. It demonstrates the informational value of external audits in the early detection of financial problems and potential reporting manipulations.
Calderon and Cheh (2002)	The study provides a systematic review of neural network applications in auditing and fraud risk assessment. It establishes a theoretical and methodological framework for the use of AI tools in auditing, highlighting both their advantages and limitations.

The analysis of the most cited publications indicates that contemporary research on the role of external audit in detecting fraud within the banking sector is increasingly oriented toward integrating auditors' professional judgment with advanced analytical and digital technologies. External audit is increasingly being perceived as a risk-based and preventive control mechanism, able to identify complex fraudulent behavior patterns in conditions of high informational and systemic risk. The collective contribution of this literature lies in shifting the focus from retrospective verification toward continuous risk assessment, while preserving the essential role of auditor accountability and regulatory compliance in the banking sector.

Furthermore, the descriptive analysis considers the institutional and geographical distribution of research in this domain, highlighting the leading institutions by publication output, tracking evolution of research activity across countries over time and comparing nations based on citation levels.

The analysis of institutional and geographical research distribution highlights a pronounced concentration of scientific activity within a limited number of institutions and countries. Specifically, a small number of higher education and research institutions stand out in terms of publication volume, whereas most institutions contribute only one or two papers, indicating a relatively dispersed institutional structure without clearly dominant research centers. Geographical analysis shows that the largest share of publications originates from the United States and the United Kingdom, which record stable and long-term growth in research activity, while the more recent period has brought a marked increase in publications from India and Indonesia. A comparison of countries by average citation level shows that, alongside the United States and the United Kingdom, high citation levels are also recorded in countries with a smaller number of publications, such as Norway, the Netherlands and New Zealand, suggesting higher visibility and impact of individual papers. The analysis of corresponding authors' countries further confirms the dominance of the United States, the United Kingdom and India, with a prevailing share of papers produced by national research teams and a relatively limited, yet present, degree of international collaboration. Overall, these findings indicate that the research field addressing the role of external audit in combating fraud in the banking sector is geographically concentrated in developed economies, while gradually expanding toward new research centers in developing countries. Special attention is given to the corresponding authors' countries in order to assess patterns of international contribution and the concentration of research activity (Figure 7).

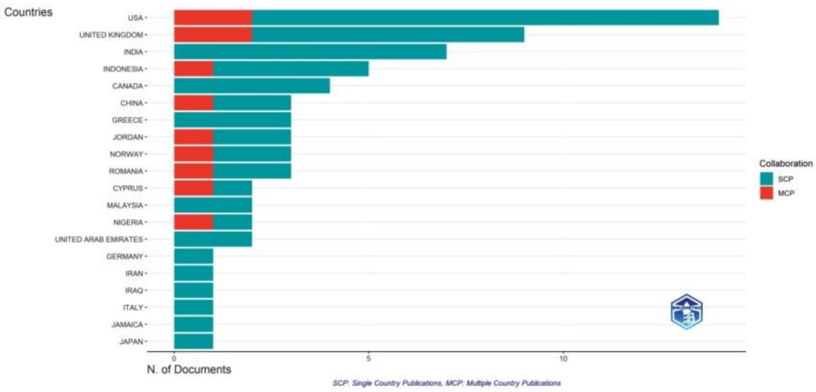

Figure 7. Distribution of publications by corresponding authors' countries

The analysis of corresponding authors' countries provides additional insight into the geographical concentration and research contribution patterns in this field. As shown in Figure 7, the largest number of publications comes from the United States, which stands out both in terms of total publication volume and the share of papers produced within national research teams. Significant contributions also come from the United Kingdom and India, while Indonesia, Canada and Greece are represented to a lesser, yet noticeable, extent. The structure of corresponding authorship shows that most research is conducted within national frameworks, whereas international collaboration is limited. This pattern suggests that research activity on the role of external audit in combating fraud in the banking sector is geographically concentrated, with a gradual inclusion of additional countries in the more recent period.

Building on these descriptive findings, the following section of this paper focuses on network analysis and the examination of the thematic structure of research.

Network Analysis and Thematic Structure of Research

To systematically map the thematic structure and internal organisation of the research area, this study employed network analysis through a series of complementary steps. First, dominant research topics were identified based on the frequency of keywords, followed by an assessment of their temporal dynamics and development over the observation period. The analysis was then deepened by examining interrelationships and connection patterns among key concepts, as well as the broader context including authors' countries and publication sources. Finally, through the application of clustering techniques and thematic mapping, the structure and positioning of major research areas were explored, allowing for the identification of stable, well-developed and emerging topics within the field.

The analysis of keyword frequency indicates a clear concentration of research around several central concepts. The most frequent terms relate to financial fraud, the banking sector, external audit and corporate governance, confirming that research in this field predominantly focuses on the role of auditing in fraud identification and interpretation in banks. In addition to these core terms, there are keywords referring to specific types of fraud, such as financial statement manipulation and accounting fraud, as well as more contemporary concepts, including digital technologies and blockchain. This keyword structure suggests that the research area is thematically well-defined, with a strong focus on fraud detection and regulatory and governance aspects, while emerging and more specialised topics remain underrepresented.

Figure 8. Dominant research topics based on keyword frequency

Following the identification of dominant research topics, the subsequent analysis examines their temporal dynamics and development over the observed period (Figure 9).

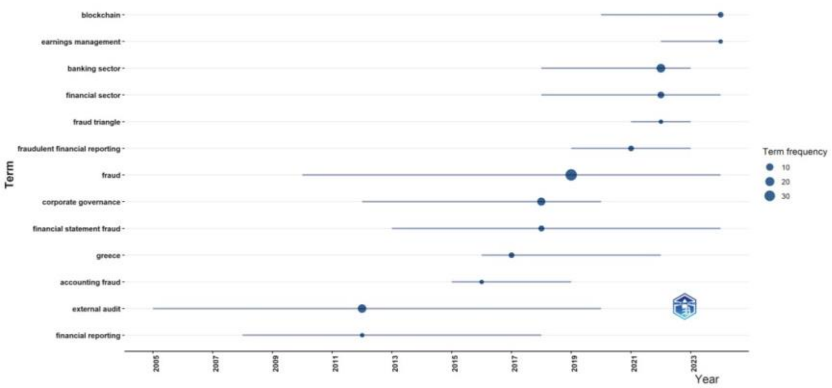

Figure 9. Temporal dynamics of dominant research topics

The analysis of research topic trends indicates that earlier studies were predominantly focused on fundamental concepts of auditing and financial reporting, including external audit, financial reporting and accounting fraud. The later period brought a notably higher interest in topics such as financial fraud, financial statement manipulation and corporate governance, reflecting a shift in focus toward more complex forms of fraud and the regulatory and governance aspects of banking operations. The most recent period is characterised by the emergence of topics related to digitalisation and new technologies, such as blockchain, as well as the expansion of research to the broader banking and financial sector. This evolution of topics indicates that the field is gradually moving from traditional auditing issues toward contemporary challenges arising from regulatory changes and technological advancements.

Following the identification of dominant research topics and their temporal dynamics, the next step is to examine how these topics are interconnected, using a keyword co-occurrence network analysis (Figure 10).

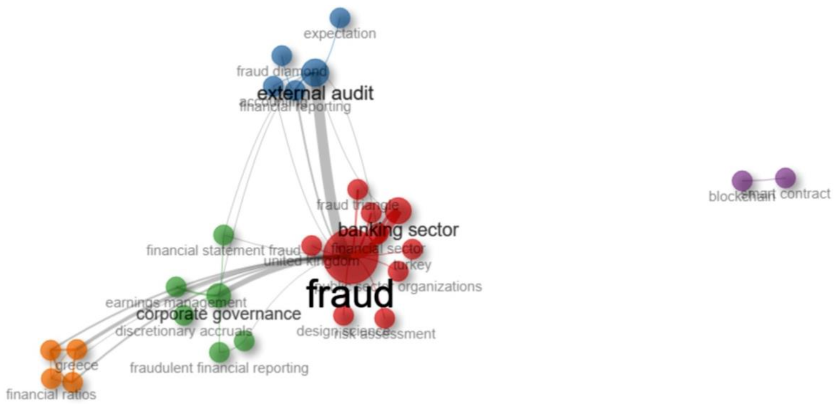

Figure 10. Keyword co-occurrence network

Analysis of the keyword network structure shows that the term 'fraud' occupies a central position and is linked to the largest number of other terms, including banking sector, external audit, corporate governance and financial statement manipulation. This structure suggests that financial fraud serves as the core conceptual framework around which other research topics are organised. Simultaneously, there are smaller thematic clusters that connect auditing procedures, financial reporting and regulatory aspects, as well as isolated topics related to modern technologies, such as blockchain and smart contracts, which are less integrated into the central network structure. These findings confirm that the research area is thematically concentrated around fraud detection and auditing mechanisms, while newer, technology-oriented topics remain peripherally represented.

To examine dominant research topics within a broader geographic and institutional context, a network analysis linking author countries, keywords and publication sources follows (Figure 11).

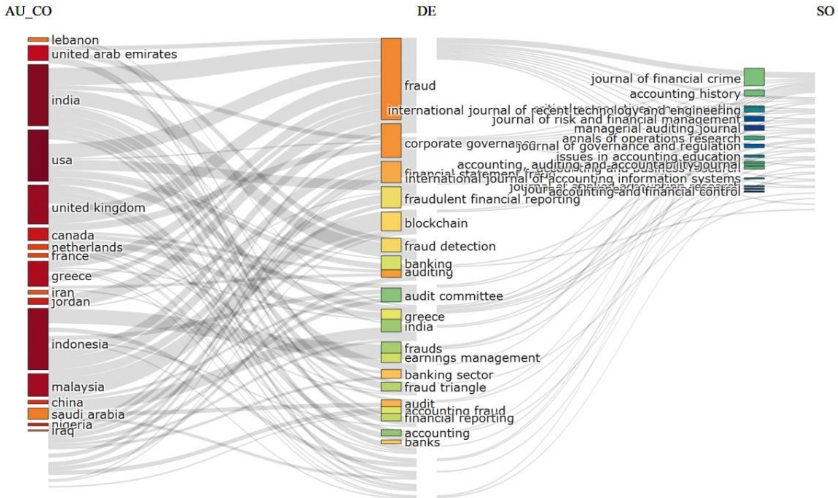

Figure 11. Connections between countries, keywords and publication sources

Building on the previous keyword co-occurrence network analysis, which highlighted the central role of financial fraud in the thematic structure of research, the analysis linking author countries, keywords and publication sources reveals that these dominant topics are most frequent in studies originating from the United States and the United Kingdom. These countries are strongly associated with central terms such as 'fraud,' 'corporate governance' and 'financial statement fraud,' and the results of such research are predominantly published in specialised journals, including the Journal of Financial Crime, International Journal of Auditing, and Accounting, Auditing & Accountability Journal. At the same time, certain topics are linked to a narrower set of countries and publication sources, indicating thematic specialisation and research niches within the broader research area. Thus, the findings confirm that the thematic structure identified in the previous keyword network analysis is also reflected in international publication patterns.

Thematic cluster structure was additionally confirmed through bibliographic coupling, and, for the sake of clarity, the study gives a synthesised overview of the thematic structure using a thematic map (Figure 12).

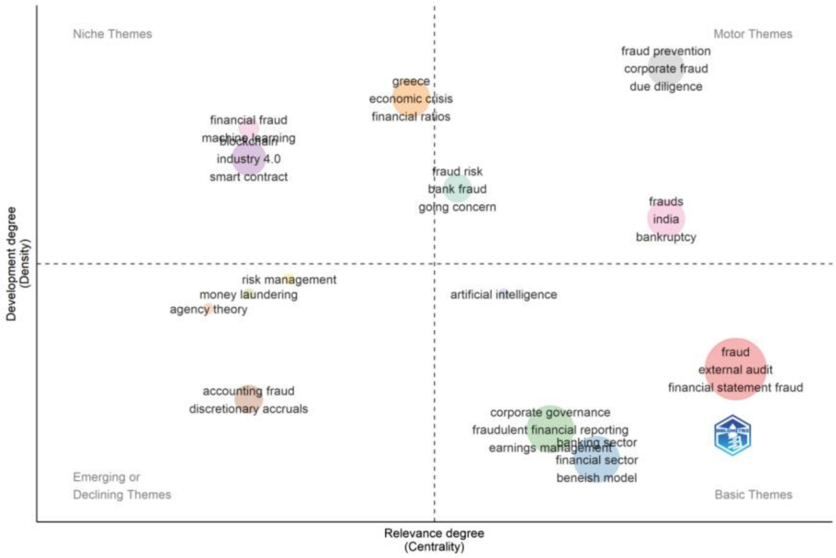

Figure 12. Thematic map

The results of thematic analysis indicate that the research area is predominantly organised around topics related to fraud, external auditing and financial statement manipulation, which represent central and highly relevant research fields. Simultaneously, a significant portion of literature focuses on fraud prevention, corporate governance and due diligence processes, which emerge as well-developed and methodologically stable topics. Beyond these central areas, several thematic niches have been identified, pointing to potential directions for future research. These include topics related to the application of artificial intelligence and digital technologies in fraud detection, including blockchain, smart contracts and advanced analytical tools. Additionally, there remains scope for further research in the areas of fraud risk management, accounting estimates and managerial discretionary decisions.

CONCLUSION

The results of the conducted bibliometric analysis indicate that research on the role of external auditing in combating fraud in the banking sector predominantly focuses on fraud detection and the assessment of financial statement reliability, while the preventive aspects of auditing remain relatively underexplored. The identified thematic structure reveals a clear concentration of literature around financial fraud, corporate governance and the regulatory framework, alongside the presence of less-developed and peripheral topics. In this context, future research should focus on examining the preventive role of external auditing, its integration with internal auditing and regulatory oversight, as well as the analysis of institutional factors that influence its effectiveness, particularly in transition and less-developed economies. Furthermore, the growing significance of banking digitalisation underscores the need to deepen research on the application of artificial intelligence, big data analytics and digital auditing in the detection and prevention of financial fraud. These directions provide a relevant framework for advancing research and can help improve both theoretical insights and practical solutions in auditing and banking supervision.

The findings confirm that the academic literature recognises external auditing as an important, but not self-sufficient, mechanism in the fight against fraud in the banking sector. The dominance of studies focused on fraud detection suggests that the preventive dimension of auditing remains underexplored. Notably, there is a lack of empirical studies addressing transition and less-developed economies, the impact of institutional frameworks on the effectiveness of external auditing, integration of external auditing with regulatory supervision and internal auditing and the use of digital auditing and big data analytics in banks. These gaps represent significant opportunities for future research and carry direct implications for regulators, auditing professionals and banking practice.

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УЛОГА И ДОМЕТИ ЕКСТЕРНЕ РЕВИЗИЈЕ У БОРБИ ПРОТИВ ПРЕВАРА У БАНКАРСКОМ СЕКТОРУ: БИБЛИОМЕТРИЈСКА АНАЛИЗА

Милица Ђорђевић, Тадија Ђукић, Мирјана Јемовић, Ивана Марковић
Универзитет у Нишу, Економски факултет, Ниш, Србија

Резиме

Екстерна ревизија представља један од кључних механизама корпоративног надзора у банкарском сектору, са важном улогом у откривању финансијских превара и очувању поузданости финансијског извештавања. Полазећи од растуће комплексности банкарског пословања и све израженијих ризика од превара, овај рад испитује како је улога екстерне ревизије концептуализована и анализирана у академској литератури. Истраживање је спроведено применом библиометријске анализе научних радова индексираних у бази Scopus у периоду од 1992. до 2025. године. Комбинацијом дескриптивне и мрежне анализе идентификовани су кључни трендови, доминантне истраживачке теме, као и најутицајнији аутори, земље и научни часописи у овој области. Резултати указују да је истраживачко поље доминантно усмерено на детекцију превара, квалитет екстерне ревизије и корпоративно управљање, док су превентивни аспекти ревизије, интеграција са регулаторним надзором и примена дигиталних технологија и вештачке интелигенције знатно мање заступљени. Посебно је уочен мањак истраживања која се односе на транзиционе и мање развијене економије. Добијени резултати пружају систематизован увид у постојећу литературу и представљају основу за будућа теоријска и емпиријска истраживања, као и за унапређење ревизорске и регулаторне праксе у банкарском сектору.