Mapping the Blockchain Technology Integration and Research Trends in Accounting Practices: A Bibliometric Analysis

Md Abdul Kuddus*
Department of Accounting
Mawlana Bhashani Science and Technology University
Tangail, Bangladesh
E-mail: makuddus@mbstu.ac.bd

Rabeya Khatun Taniya
Department of Accounting & Information Systems
Jahangirnagar University
E-mail: taniaais@juniv.edu.bd

Md. Motahar Hossain
Department of Business Administration
Khwaja Yunus Ali University
Sirajganj, Bangladesh
E-mail: hmmotahar2006@gmail.com

Received April 16, 2025
Revised June 08, 2025
September 07, 2025
September 23, 2025
Accepted October 12, 2025

Abstract

Objectives/Purpose- This research intends to methodically explore and elucidate the scholarly writings pertaining to the use of blockchain technology in the field of accounting.

Methodology/Approach- From the SCOPUS database, 426 literature documents were collected and out of which, 244 were bibliometrically evaluated and scrutinized through VOSviewer. The analysis covers the period of 2017 to 2024 and employs the metrics of keyword frequency, subject area, co-word interactions, and research output by year, and geographical areas. The United States, China, India, Ukraine, Jordan, Italy, and Malaysia emerge as the forefront countries engaging in research of this nature. Key metrics such as temporal trends in publication volume, citation counts, citation frequency, leading journals, primary authors, contributor institutions, and keyword co-occurrence networks are fundamental to the analysis.

Results/Findings- The findings reveal that 2023 is the most fruitful year in terms of research output in this field. Notably, there was a steep rise in publications starting 2017 aligned with the increasing interest globally in the use of blockchain technology in accounting.

Implications- The implications of the study point out that blockchain technology in accounting has transformative effects within the accounting industry within a professional, theoretical, and regulatory scope, and the effects of practice are far-reaching. With the integration of Blockchain, practitioners can experience immediate reporting, added transparency, and automatic audit functions. For researchers, blockchain's presence in accounting will generate new theories, as well as in unexplored domains like taxation, sustainability, and management accounting. These implications call for the development of blockchain governance mechanisms along with coordinated reporting standards, audit frameworks that address the global and cross-border implications of blockchain.

Novelty/originality- This research delves into the principal themes of blockchain technology and its application in accounting and auditing, financial transparency, smart contract technology and triple-entry accounting.

Keywords: Accounting, blockchain, information systems, technology, VOSviewer

Paper type: Literature review

*Corresponding author

Cite this article as:
Kuddus, M.A., Taniya, R.K. and Hossain, M.M. (2025), "Mapping the Blockchain Technology Integration and Research Trends in Accounting Practices: A Bibliometric Analysis", *Journal of Management Accounting, Governance and Performance*, Forthcoming.

1.0 Introduction:

Blockchain technologies are a revolutionary innovation that provides a safe and decentralized way to record and verify transactions. A network of computers, known as nodes, essentially upholds a blockchain as a decentralized ledger, collaborating to authenticate and sequentially document transactions in a series of blocks (Komalavalli et al., 2020; Kuzior and Sira, 2022). The absence of a central authority in this decentralized system enhances security and reduces the likelihood of fraud. Each transaction undergoes encryption and establishes a connection with its predecessor, making it exceedingly challenging to alter previous records without the unanimous consent of the entire network. Many industries, including finance, supply chain management, and healthcare, have adopted blockchain technology beyond its original use in cryptocurrencies like Bitcoin. It offers the potential for enhanced transparency, efficiency, and trust. Directly written into code, smart contracts can execute themselves. These enhance the possibilities of blockchain by automating and enforcing agreements without the involvement of intermediaries (Hashemi Joo et al., 2019). Blockchain technology can significantly transform how we conduct and document transactions across various sectors as it advances.

Blockchain technology transforms accounting methods by bringing unparalleled transparency, security, and efficiency. The distinct characteristics of blockchain technology allow for the immutability of records as all activities are supposedly entered in a systematic manner in a centralized ledger. Each transaction is worked upon by a set of computers which enhances the security of the records. Having a computer control a smart contract will allow for encoded contract execution. These enhancements enhance the automation of auditing and compliance procedures, thereby reducing the need for manual intervention (Mandapuram, 2016). Additionally, blockchain technology enables immediate financial reporting, enhancing the ability to make more prompt and precise decisions. Through blockchain technology, accountants can offer more reliable financial data, enhance stakeholder confidence, and streamline various accounting procedures. Accounting has been made easy because of the use of blockchain technology, which has provided the field of accounting with numerous benefits and issues. It improves the accuracy, protection, and openness of payment records. The decentralized ledger in blockchain technology minimizes the potential for fraud and mistakes through disintermediation by confirming every transaction irrevocably. Audit trails can be made more efficient and more useful for decision-making. In addition, ever more sophisticated smart contracts are allowing accountants to concentrate on more value-added activities by automating the reconciliation and compliance processes (Prux et al., 2021). However, adopting blockchain technology in accounting can enhance the financial ecosystem, improve transparency, increase security, and boost efficiency (Akram et al., 2020).

Applications of blockchain technology are already in use in many different fields. Financial, accounting, manufacturing data collecting, automotive, information and security, digital purchasing, business, supervision, supply chain, transaction recording, data storage, appropriate management, system integration, and digital directories are among them (Kuzior and Sira, 2022; Kwilinski, 2019). In addition, performing gap analysis, outlining possible avenues for future research, or tracing actual applications of blockchain in accounting becomes

much more difficult when literature on the subject is not consolidated and organized logically (Kravchenko et al., 2023). This study focuses on filling this knowledge gap using bibliometric techniques to assess the availability of literature on the use of blockchain technologies in accounting. Tracking trends in literature, co-authorship networks, core studies, and topic clusters aims to describe the foundational aspects, upon which all future work will be based; in understanding the research done in this cross-disciplinary area will be done.

2.0 Objectives:

This particular review study intends to analyze what is already known and glean insights to inform future research on the uses of blockchain technology in accounting. The objectives of the study include:

1. To assess the growth and development in application of accounting blockchain technology research through the evaluation of accounting regionally and keyword frequency and frequency cluster analyses.
2. To propose new areas of study on the application of blockchain technology, accounting as a discipline, and relevant cross-country and cross-disciplinary accounting blockchain technology interfaces.

3.0 Review of Relevant Literature:

Blockchain technology is still widely used for several reasons (Kuzior and Sira, 2022). The primary ways blockchain technology enhances accounting and auditing are through increased efficiency, security, and transparency (Bonsón and Bednárová, 2019; Hsieh and Li, 2024; Hassanein et al., 2025). To provide a comprehensive overview of the available and published research in the Scopus database and its interconnected networks, the study employs Social Network Analysis (SNA). This provides important new insights into the evolutionary themes in this subject (Ogbaisi et al., 2024; Danach et al., 2024).

The Adoption of Blockchain Technology in Accounting Examined the Adoption of Accounting Blockchain Technology & Influenced the accounting paradigm by its real time validation and record keeping using the principles of shared ledger dominance and the interconnections of Blockchain and its underlying technologies in the continuous cycle of money flow (Sharma et al., 2022). As outlined in the study, the adoption of blockchain in accounting is hinged on the mobility of the openings, as well as security, real time transactions, cost effectiveness, reduced chances of fraud/errors, enhanced data integrity, and improve tracing of the data. The study used factor analysis to group the distinctive constituents into four dimensions, which were termed as Secure, Reliable, Sustainable, and Flexible.

Applications for blockchain technology range from automating accounting processes to incorporating cryptocurrency for settlements and smart energy trading contracts (Rahmana Putra et al., 2024; Albugami et al., 2024). However, business users must adopt blockchain technology more broadly to realize its full potential. It is essential for all stakeholders,

including management entities and accountants in companies, to have a comprehensive understanding of blockchain technology. Business firms can employ various criteria, such as Maximax, Bayes, Laplace, Wald, Savage, and Gurwitz, to optimize the utilization of blockchain technology in economic risk management strategies (Danach et al., 2024; Haruna et al., 2025). Firms ensure the effective implementation of blockchain technology by providing training and education to all stakeholders involved in accounting and auditing processes. Various criteria are employed to optimize the utilization of blockchain technology and mitigate associated risks (Ivanchenkova et al., 2023). Blockchain technology enhances operational performance in the banking sector, specifically by improving efficiency and reducing operating expenses. The utilization of blockchain technology in the banking sector has elevated firms to a more advanced stage, highlighting its capacity to bring about significant changes in the industry (R and Ravi, 2023). To address the issue of financial violations in public sector entities and to develop a mechanism for introducing blockchain technology into the system of accounting and analytical support for these entities, some scholars have developed the best solution to this problem (Volodymyr et al., 2023). The research findings uncover substantial financial infractions from public sector institutions, specifically in accounting and analytical assistance for financial reporting and budget implementation. The paper examines the legal limitations of implementing a consolidated information technology system for public sector organizations. It explores the possible influence of blockchain technology on accounting and analytical transactions in the public sector. Furthermore, there is no empirical research on blockchain's actual application, despite theoretical debates highlighting its potential advantages, which include increased transparency, fraud prevention, and simplified audits. Significant knowledge gaps exist about thematic patterns, adoption trends, and geographical or industry-specific variances in blockchain usage (Georgiou et al., 2024). Furthermore, the existing literature has not sufficiently addressed the interdisciplinary nature of blockchain technology, which intersects with domains such as cybersecurity, information systems, and regulatory compliance. To bridge the gap between theoretical discoveries and real-world applications in this emerging field, a comprehensive bibliometric study is necessary to map the research landscape, identify influential works and topics, and pinpoint areas that remain untapped (Novak et al., 2022) .

This study differs from earlier reviews of the literature for several reasons. First, we aim to provide a comprehensive explanation of the accounting, auditing, and accountability domains. Our second goal is to go beyond merely bibliometrically describing factors such as authors, nations, and keywords. To address future research issues, for example, our study provides comprehensive perspectives on previous research approaches (Secinaro et al., 2021; Zemánková, 2019).

Additionally, there is a lack of unified knowledge about how blockchain is accepted and implemented in accounting, as studies are scattered across various disciplines (Hassanein et al., 2025). Furthermore, there is a lack of empirical research on blockchain's actual applications, despite theoretical debates highlighting its potential advantages, which include increased transparency, fraud prevention, and simplified audits. Significant knowledge gaps exist about thematic patterns, adoption trends, and geographical or industry-specific

variances in blockchain usage (Georgiou et al., 2024). In addition, the existing literature has not sufficiently addressed the interdisciplinary nature of blockchain technology, which intersects with domains such as cybersecurity, information systems, and regulatory compliance. To bridge the gap between theoretical discoveries and real-world applications in this emerging field, a comprehensive bibliometric study is necessary to map the research landscape, identify influential works and topics, and pinpoint areas that remain untapped (Ivanchenkova et al., 2023).

To address a knowledge and research gap in blockchain, this study employs bibliometric analysis. It aims to address several research questions that shed light on various aspects of this subject by quantifying, visualizing, and analyzing the scientific output of blockchain in accounting and auditing (Desplebin et al., 2021). The study questions are: What is the evolution of the scholarly literature on blockchain technology in accounting and auditing? What are the most popular themes in blockchain technology as they relate to auditing and accounting? Last but not least, where are the areas of current and upcoming research in this field?

4.0 Methodology:

The methodology of the study is divided into two parts: d*ata extraction and data analysis tools and techniques.*

4.1 Data Extraction and Filtering:

This research employs the following methodology: (i) database selection and search term definition; (ii) preliminary statistical analysis; (iii) bibliometric network analysis; and (iv) thematic mapping. Additionally, the VoSviewer program was used for co-citation and citation analysis. This methodology provides a comprehensive evaluation of blockchain research in the accounting and auditing domain. VoSviewer is used widely in bibliometrics research, in part due to its ability to generate eye-catching maps of specified data (Benameur et al., 2025).

Additionally, a quantitative bibliometric analysis has been conducted to analyze the research trend of blockchain technology integration in accounting practices. The study uses secondary data extracted from the Scopus database. “Accounting” OR “Accountancy” AND “Blockchain Technology” has been used as a search string for extracting the data from the Scopus database. First search found 426 documents on June 4, 2024. Then, filtering has been made by limiting the subject area of “Business”, “Economics”, “Decision Science”, “Social Science”, and “Multidisciplinary”. Additionally, only the published English documents have been considered for the analysis. Then, filtering has been applied by limiting the subject areas to “Business”, “Economics”, “Decision Science”, “Social Science”, and “Multidisciplinary”. Additionally, only the published English documents have been considered for the analysis. An analysis has been conducted on the filtered results comprising 244 publications within the Scopus database (Zhang et al., 2019). This database is often chosen for bibliometric research since it provides a range of useful metadata for these types of studies, including titles, keywords, abstracts, references, authors, journals, and citations, among other relevant data (Zamil et al., 2023).

4.2 Sources of Keyword Selection and Data:

All the information was obtained from the SCOPUS database, widely regarded as the premier publication database worldwide. We chose the Scopus database as our search engine because of its large and well-known collection of publications and analysis tools. It was published by Elsevier in November 2004 (Chadegani et al., 2013). SCOPUS was selected to ensure quality of articles pertaining to similarity, indexing, and recency of data relevant to this research (Uddin et al., 2020). This study employed VoSviewer (visualization and similarities) software since its adoption by scholars since its development by the Leiden University Centre for Science and Technology Studies (CWTS) has become common practice (Hammouti et al., 2025; Gandasari et al., 2024; Hassan et al., 2021).

4.3 Tools and Techniques of Data Analysis:

VOSviewer is unique among computer programs for bibliometric mapping because it focuses on the graphical depiction of bibliometric maps. VOSviewer is particularly helpful when presenting large bibliometric maps in a clear and understandable manner. In addition to being used for pre-processing and simple descriptive analysis, the VOSViewer software has also been used for complicated network mapping (Van Eck and Waltman, 2010; Van Eck and Waltman, 2007).

5. Data Analysis, Results and Discussion:

This section discusses the following dimensions:

5.1 Analysis of Bibliometric Networks:

A network represents an arrangement of distinctive constituents bonded by one or more connections (Knoke and Yang, 2019). In Social Network Analysis (SNA), connections or ties between nodes are represented by edges. Literature concerning existing research has useful approaches, of which SNA can help construct useful theories and illuminate aspects that need more attention. Earlier works have utilized bibliometric network analysis for diverse topics such as co-word networks and collaboration networks among scholars (Chen and Liu, 2020; The University of Waikato et al., 2016).

5.2 Thematic Maps of Structures

By examining keyword or co-word occurrences, thematic maps are frequently used to uncover clustering dynamics (Benameur et al., 2025). Co-word network analysis, density, and centrality metrics are typically applied in these maps. Previous studies have shown that this approach is practical (Lee and Chen, 2012). Moreover, the study focuses on research productivity based on year, regional output, types of publications, and keyword frequencies in the research domain during the period.

5.3 Yearly Research Output:

Year	Documents
2024	34
2023	57
2022	44
2021	36
2020	34
2019	29
2018	9
2017	1

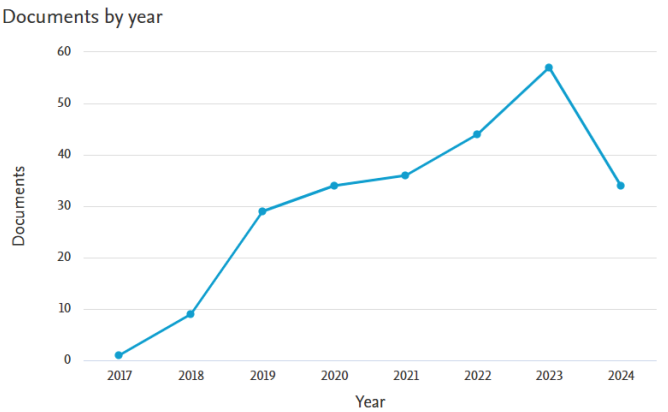

Figure 1: Number of published documents from 2017 to 2024, **Source:** Scopus database

Figure 1 illustrates the evolution of research articles incorporating blockchain technology in accounting processes from 2017 to 2024. According to the data, only one paper was published in the area in 2017. A consistent upward trend persisted from 2017 until 2023. However, it was rejected in 2024. Given the retrieval of the data on June 4, 2024, this subject is a crucial area of study and is likely to see an increase in research by the end of the year.

5.4 Document by Type:

Document type	Documents
Article	135
Conference Paper	54
Book Chapter	35
Review	16
Conference Review	3
Book	1

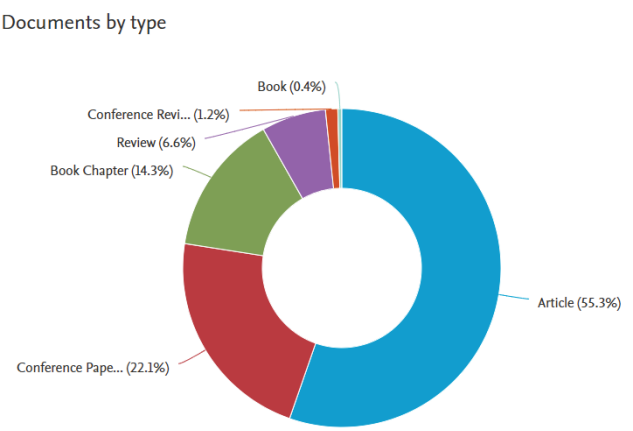

Figure 2: Number of documents considering forms of publication, **Source:** Scopus database

The research on the critical subject falls into various areas, as shown in Figure 2 above. The field of research published a total of 244 documents during the study period. Of these, 55.3% (135) are research articles, 22.1% (54) are conference papers, 14.3% (35) are book chapters, 6.6% (16) are article reviews, 1.2% (3) are conference reviews, and a meager 0.4% (01) are books. The above information suggests that a few research studies have been conducted in the domain. Future research can significantly impact the usage of blockchain in accounting information practice.

5.5 Regional Productivity Analysis:

Table 1: Top-15 Country-wise publications and citations

Country	No. of Publications	Country	Citation Number
United States	45	Viet Nam	967
China	33	China	475
India	17	Russian Federation	428
Ukraine	16	Jordan	408
Jordan	14	Denmark	386
Italy	13	Canada	206
Australia	12	Australia	162
Malaysia	10	Ukraine	141
Russian Federation	10	Bahrain	127
United Kingdom	10	Malaysia	83
Turkey	8	Italy	76
Saudi Arabia	7	United Kingdom	76
Spain	7	United Arab Emirates	41
Canada	6	Spain	30
Indonesia	6	Malaysia	83

Source: Authors' calculation based on the VOSviewer analysis

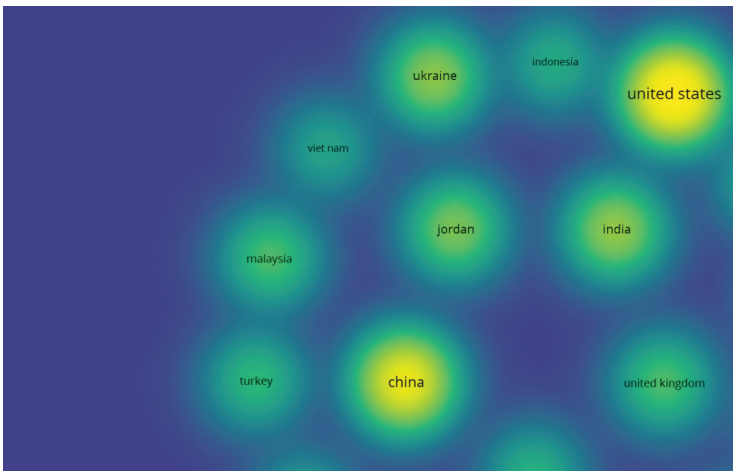

Figure 3: Country-wise publication, **Data source**: Scopus, Visualization: VOSviewer

Table 1 shows the top 15 regional or country-wise publications using the closest keywords of the research domain, i.e., usage of blockchain technologies in accounting practices. Figure 3 is used to visualize the data. The table and figure above indicate that the United States has the highest number of publications, followed by China, Ukraine, Jordan, Italy, Australia, and Malaysia. However, considering the document citation, Vietnam occupied the highest position, followed by China, the Russian Federation, Jordan, Denmark, Canada, Australia, Ukraine, etc.

5.6 Keyword Frequency Analysis:

Table 2: Top-Fifteen Keyword Occurrences

Sl. No.	Keywords	Frequency	Total link strength
1	Blockchain	146	326
2	Blockchain Technology	54	95
3	Block-chain	41	159
4	Accounting	43	126
5	Auditing	18	58
6	Finance	16	55
7	Cryptocurrency	15	30
8	Artificial Intelligence	12	31
9	Distributed Ledger	12	52
10	Distributed Ledger Technology	12	31
11	Smart Contract	11	37
12	Accounting Information Systems	11	41
13	Commerce	10	34
14	Supply Chains	9	39
15	Accounting Information System	9	35

Source: Authors' creation based on the VOSviewer analysis

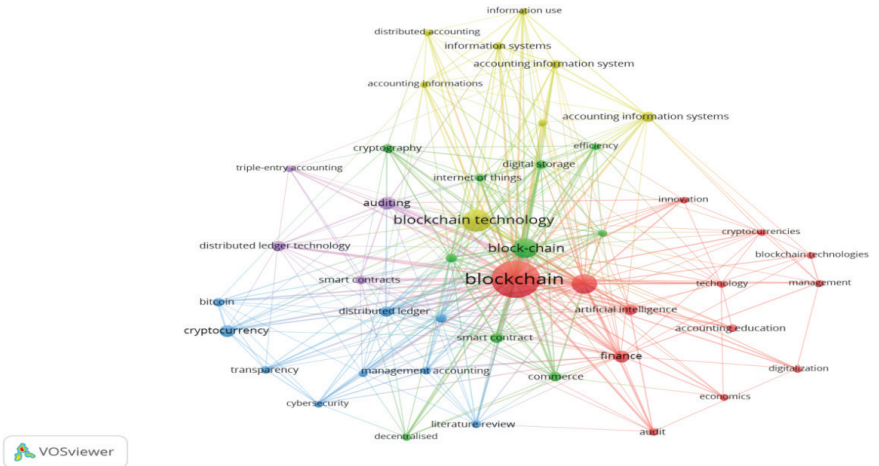

Figure 4: Keyword frequencies, **Data source:** Scopus, Visualization: VOSviewer

The research employed a keyword frequency analysis, with words serving as its unit of analysis. One method in bibliometrics called "keyword analysis" looks for relationships between ideas that appear in paper titles, abstracts, or keywords. This method's main selling point is the co-word's ability to generate a field and structure. According to Zupic and Čater, one drawback is that words might have several forms and interpretations (Zupic and Čater, 2015). The basic premise of co-word analysis is that frequently occurring words in texts may suggest related ideas. Of all the bibliometric methods, only co-word analysis uses actual text to generate similarity metrics (HE, 1999; Zupic and Čater, 2015). Co-word analysis, which combines titles, keywords, and entire texts, can construct a semantic map of the field and uncover the fundamental concepts that have shaped and continue to shape it (HE, 1999). According to Qin HE (1999), co-word analysis is now a "powerful tool for knowledge discovery in databases". The authors of the seminal work on co-word analysis, Callon et al. stressed the significance of words and provided the theoretical groundwork for the field (Callon, 1999). After 1986, Callon et al. published their findings, and co-word analysis gained popularity in the US and other European nations. Table 2 lists the top 15 keywords and the intensity of links related to them within the study domain of blockchain technology integration into accounting processes. Of all these keywords, "blockchain" has been used 146 times. The research domain's strongest co-word with the highest link strength (326) is blockchain, followed by terms like blockchain technology, blockchain, accounting, auditing, cryptocurrencies, and finance.

5.7: Keyword Cluster Analysis:

Table 3: Summary of keyword occurrences cluster

Cluster 1 (13)	Cluster 2(10)	Cluster 3(09)	Cluster 4(08)	Cluster 5 (04)
accounting, accounting education, artificial intelligence, audit, blockchain, blockchain technologies, ryptocurrencies, digitalization, economics, finance, innovation, management, technology.	blockchain, commerce, crypytography, decentralised, digital storage, efficiency, information management, internet of things, smart contracts, supply chains	bigdata, bitcoin, cryptocurrency, cybersecurity, distributed ledger, financial accounting, literature review, management accounting, transparency.	accounting information system, accounting information systems, accounting informations, blockchain technology, cloud computing, distributed accounting, information systems, information use.	auditing, distributed ledger technology, smart contracts, triple-entry accounting.

Source: Authors' compilation based on the VOSviewer analysis

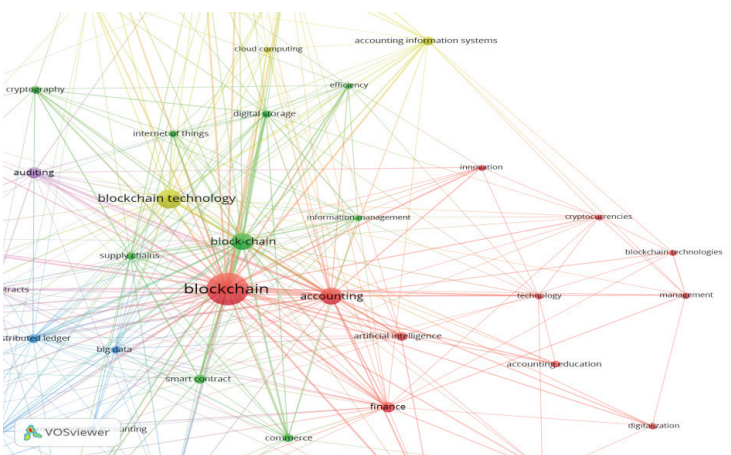

Figure 5: Co-occurrences of keyword network, **Data source:** Scopus, Visualization: VOSviewer

Custer-wise co-occurrences of the keywords in the research domain have been listed in Table 3. A total of 1158 frequently appearing keywords have been identified. Out of these, a minimum of 5 times occurred keywords have been chosen for cluster analysis, and only 44 thresholds meet the criteria. A total of 5 clusters have been created in VOSviewer Software. Additionally, Keyword connectivity and frequency have been visualized in the Figure 5. The following analyses have been made on the keyword cluster:

Cluster 1: This cluster comprises 13 keywords that focus on digitalization or technology integration in accounting, auditing, and financial activities. Blockchain technology significantly enhances accounting and auditing processes by providing greater transparency, efficiency, and security. Blockchain technology in accounting enables the immediate and secure recording of transactions, resulting in an immutable record that ensures data accuracy and minimizes the risk of fraudulent activity. Transparency enables the immediate verification of financial data, thereby obviating the need for conventional reconciliation procedures. Blockchain provides auditors with a reliable and unalterable source of accurate information, streamlining the tracking process and enabling more effective and precise audits. Smart contracts can automate tasks related to compliance and reporting, decreasing manual errors and operating costs (Secinaro et al., 2021; Prux et al., 2021) Blockchain's decentralized nature guarantees that all stakeholders have equal access to accurate and timely information, revolutionizing the field of accounting and auditing by increasing confidence and operational efficiency.

Cluster 2: Ten (10) keywords were found to be connected to investigate the impact of digitalization, the Internet of Things, digital storage, etc. on efficient information management and supply chains. Digitalization, the IoT, and enhanced digital storage have revolutionized information management and supply chains, boosting efficiency and innovation. Digitalization simplifies data collection and processing, giving real-time insights and better decisions. IoT devices track items throughout the supply chain, enhancing visibility and reducing delays. These devices can share location, condition, and usage data for predictive maintenance and inventory optimization. Digital storage systems store massive volumes of data securely and efficiently, preventing loss or breaches. These technologies enable a more flexible supply chain through data-driven strategies that optimize operations, minimize waste, and enhance stakeholder communication and engagement. The supply chain becomes more resilient and efficient, adjusting to market shifts and meeting consumer expectations more precisely (Ben-Daya et al., 2022)

Cluster 3: Nine interrelated keywords comprise Cluster 3, which focuses on the impact of digital transformation on financial accounting and management accounting processes, as well as their transparency in this regard. The digital transformation has altered financial and management accounting, improving operations and transparency. In financial accounting, cloud-based software, AI, and blockchain technologies streamline the recording, processing, and reporting of financial transactions. These technologies reduce manual errors, expedite processing, and provide real-time financial data, leading to more accurate and timely financial reporting. Management accounting utilizes advanced analytics and big data to enhance forecasting, budgeting, and performance evaluation. Managers can quickly make data-driven

decisions using the complete key performance indicator displays of digital dashboards. Digital developments also increase transparency by providing stakeholders with rapid access to consistent and verifiable financial information, thereby minimizing fraud and ensuring regulatory compliance. Digital transformation makes accounting more effective, precise, and transparent, improving governance and strategic planning (Phornlaphatrachakorn and Na Kalasindhu, 2021)

Cluster 4: Cluster 4 consists of 8 interconnected keywords focused on the influence of blockchain and other technologies on accounting information systems and distributed accounting. Blockchain and emerging technologies are transforming accounting information systems (AIS) and distributed accounting. Transactions are recorded immutably and openly in a decentralized ledger using blockchain technology. This breakthrough secures financial data, eliminating fraud and errors. Blockchain's real-time updates give participants the latest and most reliable information, improving decision-making and auditing. AI and machine learning automate data entry and analysis, improving productivity and eliminating human error. Cloud computing allows data exchange and collaboration across locations with scalable and accessible storage. These technologies enable distributed accounting, where financial data is available and verifiable across several nodes. Decentralization improves transparency, data security, accounting resilience, and flexibility. These technical advances make AIS more robust, efficient, and transparent, enabling creative financial management and reporting.

Cluster 5: This cluster examined the keywords that are interconnected to justify the impact of distributed ledger technology on auditing and triple-entry accounting procedures. Blockchain and other Distributed Ledger Technologies (DLTs) enhance auditing and improve the accuracy, transparency, and efficiency of triple-entry accounting. DLT records all transactions immutably, ensuring data integrity and simplifying auditing. The ledger provides auditors with real-time, verified data, thereby reducing the need for manual verification and streamlining the audit process. Auditors can continuously examine financial activities in real-time, discovering irregularities and concerns. DLT introduces a third entry to the double-entry accounting system, creating a cryptographically secure and verifiable record of transactions shared across a decentralised network. This third item is a universal ledger, visible to all participants, reducing fraud and errors. Shared ledgers promote transparency and trust among stakeholders by providing all participants with the same truth (Cai, 2021). DLT is a robust, transparent, and secure framework that enhances auditing, reliability, and efficiency in triple-entry accounting.

5.8 Discussion of Key Findings of the Study

In this subsection, the main results of the research are incorporated to the list of existing literature. Below are the major outputs of the significant results, along with the linked articles and the names of the authors.

Table 4: Key Findings Analysis

Key Findings	Source of References		Major Output
	Papers	Documents Title	
Growth of Research Output	(Kuzior and Sira, 2022), (Desai, 2023)	A Bibliometric Analysis of Blockchain Technology Research Using VOSviewer, Infusing Blockchain in accounting curricula and practice: expectations, challenges, and strategies	Research on blockchain in accounting has grown rapidly since 2017, with 2023 being the peak year for publications. The trend reflects increasing global interest in blockchain's integration into accounting practices.
Geographical Distribution	(Kuzior and Sira, 2022), (Liu et al., 2024)	A Bibliometric Analysis of Blockchain Technology Research Using VOSviewer, Evolution of blockchain accounting literature from the perspective of CiteSpace (2013–2023)	The United States, China, India, Ukraine, Jordan, Italy, and Malaysia emerged as leading contributors in terms of publication output. In terms of citations, Vietnam, China, and Russia stood out as highly influential countries, showing regional differences between productivity and impact.
Publication Types	(Lardo et al., 2022)	Exploring blockchain in the accounting domain: a bibliometric analysis,	Among 244 analyzed documents, the majority were research articles (55.3%), followed by conference papers (22.1%) and book chapters (14.3%) Limited review articles and books indicate that the field is still evolving and requires more synthesis-oriented studies.

Thematic Focus Areas	(Cai, 2021), (Kwilinski, 2019)	Triple-entry Accounting with Blockchain: How Far Have We Come? Implementation of Blockchain Technology in Accounting Sphere	Blockchain and Accounting Integration Auditing & Triple-Entry Accounting Smart Contracts & Automation Financial Transparency & Efficiency Digital Transformation
Keyword Analysis	(Guo et al., 2021), (Hassanein et al., 2025) journals, institutions, and countries, highlighting the key contributors to the field. We also use keyword co-occurrence techniques to analyze citation trends, collaboration networks, and thematic structures. Our findings show a compound annual growth rate (CAGR	A bibliometric analysis and visualization of blockchain, Mapping the scientific research of blockchain technology in accounting and auditing: bibliometric analyses and a roadmap for future research	The most frequently used keywords were “Blockchain” (146 occurrences), “Blockchain Technology”, “Accounting”, “Auditing”, and “Finance”. Co-word and cluster analysis revealed five thematic clusters: i. Digitalization in Accounting & Auditing ii. Blockchain, Smart Contracts, IoT, and Supply Chains iii. Digital Transformation in Financial & Management Accounting iv. Accounting Information Systems & Distributed Accounting v. Auditing, Distributed Ledger Technology, and Triple-Entry Accounting

Research Gaps	(Rahmawati and Subardjo, 2022), (Kravchenko et al., 2023)	A Bibliometric Analysis of Accounting in the Blockchain Era, Blockchain technologies in accounting: bibliometric analysis	Lack of empirical studies, most are conceptual or theoretical. Limited exploration in specific domains such as taxation, sustainability reporting, and management accounting. Insufficient interdisciplinary focus linking blockchain with cybersecurity, governance, and regulatory compliance.
Implications for the Field	(Sharma et al., 2022), (Secinaro et al., 2022)	Blockchain technologies in accounting: bibliometric analysis, Blockchain in the accounting, auditing and accountability fields: a bibliometric and coding analysis	**Practice** Blockchain can revolutionize real-time reporting, fraud prevention, automated compliance, and assurance services. **Theory** Need for blockchain-specific accounting theories to explain adoption and integration. **Policy** Standard-setters must develop harmonized reporting standards and governance mechanisms to address cross-border blockchain adoption.

6.0 Limitations and Future Research Directions:

The study aimed to analyze the incorporation of blockchain technology into accounting practice comprehensively. Nevertheless, it is essential to acknowledge the limitations of bibliometric analysis. For example, the study exclusively used a single database, namely SCOPUS, and assessed the influence by considering only the papers included in SCOPUS. Consequently, this procedure was constrained by impact factors and did not encompass all scientific publications (Zupic and Čater, 2015). Due to the novelty of incorporating blockchains in academic research, there will be a delay in the recognition and publication of works in this sector.

Regarding sample uniformity, the study included peer-reviewed journals, books, relevant articles, conference proceedings, and reports. Researchers established a minimal threshold level for cluster construction due to the novelty and emergence of the area. However, the

bibliometric study has a shortcoming in that it omitted some potentially relevant articles. The focus on specific academic areas, such as business, economics, decision science, social science, and multidisciplinary fields, has limited the scope of this study. The study confirms that empirical applications of blockchain in accounting remain limited, with most contributions still conceptual, exploratory, or technical in nature. Additionally, the limited presence of cross-disciplinary collaboration points to the need for greater integration with fields such as law, cybersecurity, and governance, particularly in addressing regulatory and assurance frameworks.

7.0 Conclusion:

The current study comprehensively evaluates the academic environment of this novel topic, drawing on various disciplines. The study identifies significant trends, influential authors, institutions, and topic areas by systematically analyzing academic publications. This provides valuable insights into the present status of research on blockchain technologies in accounting (Hashemi Joo et al., 2019).

The findings shed light on the significant increase in interest over the past few years, driven by the potential of blockchain technology to enhance the transparency, security, and efficiency of accounting procedures. Nevertheless, the study also reveals significant research gaps, including a lack of empirical studies, relevant analyses of regions and industries, and a need for a more in-depth investigation of actual applications and challenges. These gaps underscore the need for further research that integrates multiple disciplines and collaborates with policymakers, practitioners, and academics (Hassanein and Tharwat, 2024).

By positioning our findings against these earlier studies, it becomes evident that blockchain research in accounting is not only growing rapidly but also evolving in sophistication. Our results extend prior bibliometric analyses by linking thematic trends with regional and institutional productivity, thereby providing a more granular understanding of the current research landscape and offering concrete directions for future empirical and interdisciplinary investigations (Haruna et al., 2025; Singh, 2021).

8. Practical Implications for Business and Accounting:

The findings carry several important implications for business and accounting practice. First, blockchain's ability to generate absolute, transparent, and real-time financial records can significantly reduce the risk of fraud, manipulation, and reporting delays. Auditors, in particular, can leverage blockchain-based ledgers and triple-entry accounting to perform continuous assurance, thereby shifting from periodic verification to real-time monitoring of financial transactions.

Second, businesses can integrate blockchain with digital storage, IoT, and smart contracts to enhance supply chain transparency and efficiency. This has direct implications for cost savings, inventory management, and risk mitigation, particularly for industries with complex logistics.

Third, management accountants can utilise blockchain-driven systems in conjunction with big data and AI to enhance forecasting, budgeting, and performance measurement. Finally, the global dispersion of impactful blockchain research, particularly from emerging economies such as Vietnam and Jordan indicates that accounting practitioners in diverse contexts can benefit from cross-regional collaboration and knowledge sharing. For regulators and policymakers, the findings underscore the importance of establishing harmonised governance frameworks and interoperability standards, thereby ensuring that blockchain adoption in accounting practices occurs within a secure, consistent, and widely accepted regulatory environment.

9. 0 References:

Abdullah, K.H., Sofyan, D., Roslan, M.Z.H., Roslan, M.F., n.d. EXTRINSIC AND INTRINSIC MOTIVATION: BIBLIOMETRIC ANALYSIS-DERIVED INSIGHTS 5.

Akram, S.V., Malik, P.K., Singh, R., Anita, G., Tanwar, S., 2020. Adoption of blockchain technology in various realms: Opportunities and challenges. Security and Privacy 3, e109. https://doi.org/10.1002/spy2.109

Albugami, H.F., Kaikubad Ali, M., Hossain, S., Zaffar, H., Ahmad, N., 2024. Climate change and sustainable livelihood in south Asia: A bibliometric analysis. Environmental and Sustainability Indicators 24, 100524. https://doi.org/10.1016/j.indic.2024.100524

Benameur, K., Hassanein, A., Mostafa, M.M., Elmaghrabi, M., Tharwat, H., 2025. A decade of sustainable finance scholarly research: performance analysis, science mapping and future pathways. Journal of Financial Reporting and Accounting. https://doi.org/10.1108/JFRA-10-2024-0722

Ben-Daya, M., Hassini, E., Bahroun, Z., 2022. A Conceptual Framework for Understanding the Impact of Internet of Things on Supply Chain Management. OSCM: An Int. Journal 251–268. https://doi.org/10.31387/oscm0490345

Bonsón, E., Bednárová, M., 2019. Blockchain and its implications for accounting and auditing. MEDAR 27, 725–740. https://doi.org/10.1108/MEDAR-11-2018-0406

Cai, C.W., 2021. Triple-entry accounting with blockchain: How far have we come? Accounting & Finance 61, 71–93. https://doi.org/10.1111/acfi.12556

Callon, M., 1999. Actor-Network Theory—The Market Test. The Sociological Review 47, 181–195. https://doi.org/10.1111/j.1467-954X.1999.tb03488.x

Chadegani, A.A., Salehi, H., Yunus, M.M., Farhadi, H., Fooladi, M., Farhadi, M., Ebrahim, N.A., 2013. A Comparison between Two Main Academic Literature Collections: Web of Science and Scopus Databases. ASS 9, p18. https://doi.org/10.5539/ass.v9n5p18

Chen, X., Liu, Y., 2020. Visualization analysis of high-speed railway research based on CiteSpace. Transport Policy 85, 1–17. https://doi.org/10.1016/j.tranpol.2019.10.004

Danach, K., Hejase, H.J., Faroukh, A., Fayyad-Kazan, H., Moukadem, I., 2024. Assessing the Impact of Blockchain Technology on Financial Reporting and Audit Practices. ABR 9, 30. https://doi.org/10.20849/abr.v9i1.1427

Desai, H., 2023. Infusing Blockchain in accounting curricula and practice: expectations, challenges, and strategies. IJDAR 97–135. https://doi.org/10.4192/1577-8517-v23_5

Desplebin, O., Lux, G., Petit, N., 2021. To Be or Not to Be: Blockchain and the Future of Accounting and Auditing*. Accounting Perspectives 20, 743–769. https://doi.org/10.1111/1911-3838.12265

Gandasari, D., Tjahjana, D., Dwidienawati, D., Sugiarto, M., 2024. Bibliometric and visualized analysis of social network analysis research on Scopus databases and VOSviewer. Cogent Business & Management 11, 2376899. https://doi.org/10.1080/23311975.2024.2376899

Georgiou, I., Sapuric, S., Lois, P., Thrassou, A., 2024. Blockchain for Accounting and Auditing—Accounting and Auditing for Cryptocurrencies: A Systematic Literature Review and Future Research Directions. JRFM 17, 276. https://doi.org/10.3390/jrfm17070276

Guo, Y.-M., Huang, Z.-L., Guo, J., Guo, X.-R., Li, H., Liu, M.-Y., Ezzeddine, S., Nkeli, M.J., 2021. A bibliometric analysis and visualization of blockchain. Future Generation Computer Systems 116, 316–332.

Hammouti, B., Aichouch, I., Kachbou, Y., Azzaoui, K., Touzani, R., 2025. Bibliometric analysis of global research trends on UMI using Scopus database and VOS viewer from 1987–2024.

Haruna, E.U., Asiedu, W.K., Bello, L.O., 2025. Mapping the knowledge domain of natural capital and sustainability: A bibliometric analysis using the Scopus database for future research direction. Development and Sustainability in Economics and Finance 5, 100035. https://doi.org/10.1016/j.dsef.2024.100035

Hashemi Joo, M., Nishikawa, Y., Dandapani, K., 2019. Cryptocurrency, a successful application of blockchain technology. MF 46, 715–733. https://doi.org/10.1108/MF-09-2018-0451

Hassan, M.K., Alshater, M.M., Mumu, J.R., Sarea, A.M., Azad, Md.A.K., 2021. Bibliometric analysis of the Journal of Islamic Accounting and Business Research : Ten years review. COLLNET Journal of Scientometrics and Information Management 15, 63–88. https://doi.org/10.1080/09737766.2021.1934603

Hassanein, A., Benameur, K.B., Mostafa, M.M., Al-Shattarat, W., Magar, N.H., 2025. Mapping the scientific research of blockchain technology in accounting and auditing: bibliometric analyses and a roadmap for future research. Cogent Business & Management 12, 2513638. https://doi.org/10.1080/23311975.2025.2513638

Hassanein, A., Tharwat, H., 2024. Artificial Intelligence (AI) and Green Finance, in: Hunjra, A.I., Goodell, J.W. (Eds.), The Palgrave Handbook of Green Finance for Sustainable Development, Palgrave Studies in Impact Finance. Springer International Publishing, Cham, pp. 859–889. https://doi.org/10.1007/978-3-031-65756-6_32

HE, Q., 1999. Knowledge Discovery Through Co-Word Analysis. Library trneds: The Board of Trustees, University of Illinois 48, 133–159.

Hsieh, S.-F., Li, P.-L., 2024. Blockchain Technology in Accounting and Auditing: A Comprehensive Analysis and Review of Feasible Applications. In Digital transformation in accounting and auditing: Navigating technological advances for the future 265–330.

Ivanchenkova, L., Shevtsiv, L., Beisenova, L., Shakharova, A., Berdiyorov, T., 2023. Analysis of the Risks of Using the Blockchain Technology in the Accounting and Audit of a Fuel and Energy Complex Enterprise. IJEEP 13, 316–321. https://doi.org/10.32479/ijeep.14047

Knoke, D., Yang, S., 2019. Social Network Analysis. S A.

Komalavalli, C., Saxena, D., Laroiya, C., 2020. Overview of Blockchain Technology Concepts, in: Handbook of Research on Blockchain Technology. Elsevier, pp. 349–371. https://doi.org/10.1016/B978-0-12-819816-2.00014-9

Kravchenko, O., Nebaba, N., O. Aiyedogbon, J., 2023. Blockchain technologies in accounting: bibliometric analysis. Accounting and Financial Control 4, 14–29. https://doi.org/10.21511/afc.04(1).2023.02

Kuzior, A., Sira, M., 2022. A Bibliometric Analysis of Blockchain Technology Research Using VOSviewer. Sustainability 14, 8206. https://doi.org/10.3390/su14138206

Kwilinski, A., 2019. Implementation of Blockchain Technology in Accounting Sphere. Academy of Accounting and Financial Studies Journal 1–6.

Lardo, A., Corsi, K., Varma, A., Mancini, D., 2022. Exploring blockchain in the accounting domain: a bibliometric analysis. AAAJ 35, 204–233. https://doi.org/10.1108/AAAJ-10-2020-4995

Lee, M.R., Chen, T.T., 2012. Revealing research themes and trends in knowledge management: From 1995 to 2010. Knowledge-Based Systems 28, 47–58. https://doi.org/10.1016/j.knosys.2011.11.016

Liu, C., Muravskyi, V., Wei, W., 2024. Evolution of blockchain accounting literature from the perspective of CiteSpace (2013–2023). Heliyon 10, e32097. https://doi.org/10.1016/j.heliyon.2024.e32097

Mandapuram, M., 2016. Applications of Blockchain and Distributed Ledger Technology (DLT) in Commercial Settings. Asian Accounting and Auditing Advancement 7, 50–57.

Novak, Barišić, Žager, 2022. Implications of Blockchain Application to Accounting Education and Accounting Practice, in: Proceedings of the 17th European Conference on Innovation and Entrepreneurship. Losufona University, Lisbon, Purtoga.

Ogbaisi, S.A., Edosa, M., Ibadin, L.A., 2024. Block Chain Technology and the New Wave of Accounting Practices. FUJAFR 2, 45–55. https://doi.org/10.33003/fujafr-2024.v2i2.92.45-55

PHORNLAPHATRACHAKORN, K., NA KALASINDHU, K., 2021. Digital Accounting, Financial Reporting Quality and Digital Transformation: Evidence from Thai Listed Firms. The Journal of Asian Finance, Economics and Business 8, 409–419. https://doi.org/10.13106/JAFEB.2021.VOL8.NO8.0409

Prux, P.R., Momo, F.D.S., Melati, C., 2021. Opportunities and Challenges of Using Blockchain Technology in Government Accounting in Brazil. BAR, Braz. Adm. Rev. 18, e200109. https://doi.org/10.1590/1807-7692bar2021200109

R, V., Ravi, H., 2023. Blockchain: an EOM approach to reconciliation in banking. INMR 20, 17–27. https://doi.org/10.1108/INMR-05-2020-0060

Rahmana Putra, N., Veza, I., Irianto, I., 2024. Harnessing wood waste for sustainable biofuel: A bibliometric analysis and review of valorisation strategies. Waste Management Bulletin 2, 209–222. https://doi.org/10.1016/j.wmb.2024.11.006

Rahmawati, M.I., Subardjo, A., 2022. A Bibliometric Analysis of Accounting in the Blockchain Era. JAI 23, 66–77. https://doi.org/10.18196/jai.v23i1.13302

Secinaro, S., Calandra, D., Biancone, P., 2021. Blockchain, trust, and trust accounting: can blockchain technology substitute trust created by intermediaries in trust accounting? A theoretical examination. International Journal of Management Practice 14, 129–145.

Secinaro, S., Dal Mas, F., Brescia, V., Calandra, D., 2022. Blockchain in the accounting, auditing and accountability fields: a bibliometric and coding analysis. AAAJ 35, 168–203. https://doi.org/10.1108/AAAJ-10-2020-4987

Sharma, A., Bhanawat, S.S., Sharma, R.B., 2022. Adoption of Blockchain Technology Based Accounting Platform. Acad. J. Interdiscip. Stud. 11, 155. https://doi.org/10.36941/ajis-2022-0042

Singh, B., 2021. A Bibliometric Analysis of Behavioral Finance and Behavioral Accounting. ABR 24, 198–230. https://doi.org/10.37625/abr.24.2.198-230

The University of Waikato, Khan, G.F., Wood, J., Chungnam National University, 2016. Knowledge Networks of the Information Technology Management Domain: A Social Network Analysis Approach. CAIS 39, 367–397. https://doi.org/10.17705/1CAIS.03918

Uddin, M.K., Uzir, M.U.H., Hasan, Md.M., Hassan, M.S., Sahabuddin, M., 2020. A Scientific Novel Way of Article and Thesis Writing: Findings from a Survey on Keyword, Sequence, and Importance (KSI) Technique. ujer 8, 7894–7904. https://doi.org/10.13189/ujer.2020.082578

Van Eck, N.J., Waltman, L., 2010. Software survey: VOSviewer, a computer program for bibliometric mapping. Scientometrics 84, 523–538. https://doi.org/10.1007/s11192-009-0146-3

Van Eck, N.J., Waltman, L., 2007. VOS: A New Method for Visualizing Similarities Between Objects, in: Decker, R., Lenz, H.-J. (Eds.), Advances in Data Analysis, Studies in Classification, Data Analysis, and Knowledge Organization. Springer Berlin Heidelberg, Berlin, Heidelberg, pp. 299–306. https://doi.org/10.1007/978-3-540-70981-7_34

Volodymyr, I., Liudmyla, N., Larikova, T., 2023. Implementation of Blockchain Technology in The System of Accounting and Analytical Support for the Public Sector. Eastern-European Journal of Enterprise Technologies 5.

Zamil, I.A., Ramakrishnan, S., Jamal, N.M., Hatif, M.A., Khatib, S.F.A., 2023. Drivers of corporate voluntary disclosure: a systematic review. JFRA 21, 232–267. https://doi.org/10.1108/JFRA-04-2021-0110

Zemánková, A., 2019. Artificial Intelligence and Blockchain in Audit and Accounting: Literature Review 16.

Zhang, D., Zhang, Z., Managi, S., 2019. A bibliometric analysis on green finance: Current status, development, and future directions. Finance Research Letters 29, 425–430. https://doi.org/10.1016/j.frl.2019.02.003

Zupic, I., Čater, T., 2015. Bibliometric Methods in Management and Organization. Organizational Research Methods 18, 429–472. https://doi.org/10.1177/1094428114562629