

**Research Article****Mastering Corporate Integrity: The Dynamic Relationship Between Board Independence and Financial Quality**Sayyid Salman Rizavi¹ | Wasim Ul Rehman² | Kamran Ali³ | Amna Arshad^{4*}**Authors Information**

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Declaration of Interests

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Abstract

The quality of financial reporting is increasingly scrutinized in the context of corporate governance, particularly with respect to board independence. This study explores the relation among board independence and financial reporting quality, an area of growing interest as stakeholders demands greater transparency in corporate financial practices. Board independence is hypothesized to increase the quality of financial reporting by mitigating conflicts of interest and increasing accountability. This research employs a bibliometric approach to review 66 journal articles published between 1995 and 2020, focusing on the social sciences and business disciplines. Using the bibliometric 3.0 package in R-studio, we carry out a comprehensive bibliometric analysis to identify key sources, influential authors, and the evolution of research themes. Our findings indicate a rising focus on the impact of board independence on financial reporting, with significant attention to the role of independent audit committees and the importance of diversity in board composition. We also observe an increasing number of studies on how board independence affects company transparency and earnings management. This paper offers important implications for policymakers, investors, and corporate governance researchers, emphasizing the need to strengthen board independence practices to enhance financial reporting quality and corporate transparency.

Keywords: Board Independence, Financial Reporting Quality, Corporate Governance, Bibliometric Analysis.

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1 INTRODUCTION

In the realm of corporate governance and financial transparency, the quality of financial reporting (FRQ) and the independence of the board of directors (BI) are two interlinked elements that significantly influence the accuracy of financial data disclosed to stakeholders (Ali et al., 2024; Ali et al., 2023; Amir et al., 2024). FRQ is the degree to which financial statements give accurate, transparent, and reliable information that reflects the true economic state of a company, thus enabling investors, regulators, and other stakeholders to make informed decisions (Yaseen et al., 2023). However, BI makes sure that decisions are taken with the interests of shareholders and other stakeholders in mind by removing the board of directors from outside pressures, especially management (Arslan & Bashir, 2021). The relationship between these two concepts has gained increasing attention in academic research and practice, given their potential to enhance corporate accountability, mitigate conflicts of interest, and reduce information asymmetry (Arslan et al., 2022a).

The role of BI in ensuring high FRQ has been widely discussed (Arslan et al., 2023). An independent board is generally seen as a safeguard against managerial opportunism, reducing the likelihood of earnings manipulation or biased reporting (Arslan et al., 2022b). In turn, high FRQ fosters greater trust among investors, regulators, and the public, contributing to a more stable and transparent financial environment (Gerged et al., 2023). As global financial markets continue to grow in complexity and sophistication, understanding the dynamics between FRQ and BI has become critical to promoting sustainable corporate practices, enhancing investor confidence, and reducing systemic risks in the global economy (Mahmood et al., 2023).

FRQ and BI are very important for the company. As financial reporting shows the company's financial position, it may be high quality or low quality (Arshad et al., 2024). The company and investors used accrual-based earnings to value and monitor the firm's performance. Accounting decisions that affect managerial disposition are the subject of accruals-based earnings (Khanchel & Lassoued, 2024; Malik et al., 2024). GAAP's accounting disposition provides a strong study environment for evaluating how well boards and audit committees perform their roles to enhance FRQ (Dhaliwal et al., 2006; Maksymov et al., 2024). The percentage of independent directors and the number of abnormal accruals are negatively correlated. There is a correlation between lower levels of irregular accruals and audit committees with more independent directors, particularly those with entirely independent directors (Dechow et al., 1996). Additionally, research indicates that the amount of discretionary accruals is inversely correlated with the presence of financial specialists on the audit committee and a greater level of financial knowledge on the board (Salma & Bhuiyan, 2024). Therefore, various possible indicators of the FRQ have been examined by some academics, including analyst ratings, earnings response coefficients, benchmark comparisons, voluntary disclosures, and the use of accounting discretion (Dechow et al., 2024; Tsang et al., 2024; Zennaro et al., 2024).

Agency theory (Jensen & Meckling, 1976), sometimes referred to as authorization theory, is concerned with the connection between the representation (proxy) and the owner (authorizer) (Mubeen et al., 2024). By examining the ratio of non-executive BOD members, the quantity of BOD meetings, the kind of audit business, and the influence on FRQ, the agency theory is used to explain the convergent holding of the CEO post, BOD chairperson, BOD size, and BOD independence. According to this theory the primary goal of financial reporting is to track managers' performance, and managers utilise the announcement to persuade shareholders that they are acting in the best interests of the company (Chaudhry et al., 2021; Watson et al., 2002). By identifying significant inaccuracies in the firm's financial statements, audit helps to monitor shareholders and reduce disputes among owners and management (Naseer et al., 2024).

The idea that board and audit committee independence is connected to accruals is generally supported by previous research. The remainder of this section supports the idea that there is a predictable relation among the board of directors and better financial reporting (as evidenced by reduced abnormal accruals). BI, audit committee independence, board size, and board leadership are all correlated with the particular board attributes. If the CEO concurrently serves as the board chair, there is probably a lack of independence between the board and management. According to Dechow et al. (1996), companies that break GAAP are more likely to have a CEO who also chairs the board. As a result, anomalous accruals and the combined responsibilities of chair and CEO are positively correlated. According to Tainio and Virtanen (1996), coordination and processing issues make huge boards less successful. Yermack (1996) discovers a unfavorable correlation among the board size and the chance of the CEO being fired. This suggests that small boards are likely to manage supervision more successfully.

The purpose of this research is to provide a literature review of FRQ and BI, which can be used to enhance the FRQ with effective BI and decrease fraudulent activity. For better understanding, we subdivided our objective. Our first study objective is to find core publications, authors, nations, and organizations. We employ "Biblioshiny," a web-specific R program (called "bibliometrics 3.0") for the descriptive analysis of documents, to accomplish this goal. Global citation, h, g, m-index, and Bradford's Law are the analytical tools available on the Biblioshiny interface. The second

objective is to determine the primary themes and research streams. For this purpose, we employ scientific mapping methodologies of conceptual structure and keywords as input data. After achieving goals 1 and 2, we may thoroughly analyze and outline future study topics. The following questions will determine the efficacy of the BI and the FRQ. They will also provide thorough resources for future accounting and corporate finance studies. The following questions are addressed in this research.

1. What factors affect BI and the FRQ?
2. Considering BI and the FRQ, what are the major themes and trends?
3. What thorough lessons may be drawn from the literature of the past, and what agendas might be established for the future in order to prepare?

With descriptive analysis, we answer question 1 and find core sources, authors, publications, and affiliations in the field of accounting business and finance. We have used source impact, total citations (TC), and net publications (NP) per year for core sources and core authors. Additionally, we use Bradford's Law to determine the primary sources. Bradford's Law states that sources fall into one of 3 zones (Viju & Ganesh, 2013). We recommend top nations and affiliations based on total citations and publication frequency.

In order to link many research streams and establish future research directions, significant issues and fields of study are essential. Because of this, we have included several technological tools, including theme evolution, co-occurrence maps, and thematic maps. Because Keywords Plus specifies the study's knowledge structure and makes it easier to discover and connect various research fields, we utilize it for analysis (Li et al., 2016). Using the keywords in FRQ literature, we developed "Biblioshiny," a bibliometric analysis tool provided by the R-program, to identify research streams and topics.

2 MATERIAL AND METHODS

There are two parts to the creation of our bibliometric data. We choose the source from which to extract and examine articles in the first section. We have chosen databases like Scopus for that reason. In the second section, we have developed the search query for integrative data collecting. For that reason, we have chosen to gather data in the social sciences. In order to meet our goal and achieve the best results, we used a variety of strainers to our search query. Keywords utilized in the query are "earning*", "accrual", "financial reporting", "manipulation*", "transparency", "opport*", "board", "board independence". Nearly every item relates to the search query for BI and FRQ. The goal of employing FRQ and BI is to see whether there has previously been any study that suggests these terms. 313 articles from Scopus were found using the last search phrase. The conceptual framework uses keywords to generate themes and facilitate successful analysis; we restrict our search query to journal papers and English-language publications exclusively. One complete language is used to perform effective bibliometric analysis since it provides a variety of capabilities for comparing affiliations, article sources, and keywords. Additionally, after carefully reviewing the papers, we eliminated over fifty since they did not align with the study's goal; as a result, our final sample consists of 66 articles.

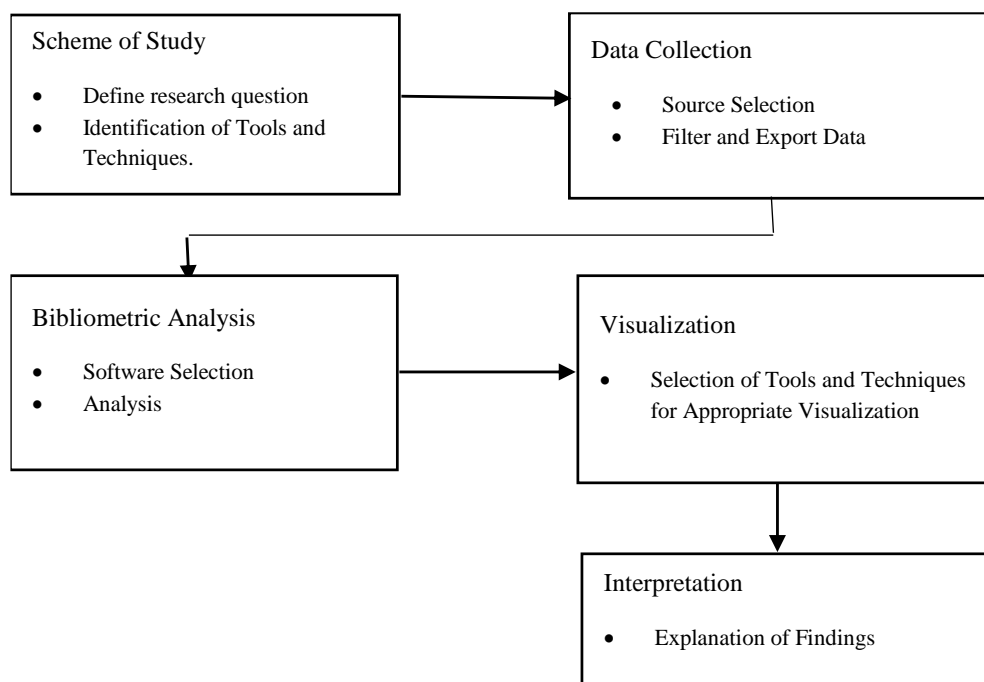


Figure 1. The procedure of bibliometric analysis

3 FINDINGS

Using statistical and mathematical methods to analyze books and media communication is bibliometric analysis (Andrés, 2009). The package's "Biblioshiny" tool, intended for non-programmers, offers a wide range of choices for comprehensive scientometrics and bibliometric analysis, broken down into categories such as sources, documents, authors, conceptual structure, social structure, and intellectual structure. Unlike other applications, it enables the acquisition of numerous findings in tables and graphs (Moral-Muñoz et al., 2020). The descriptive features of the FRQ and BI literature are shown in Table 1. Before going forward with this study, it is imperative to recognize this. 66 documents, all journal articles, were finalized. These journals utilize 130 author keywords and more than 38 keywords. We used the years 1993–2020 for the FRQ and BI literature. 160 authors wrote these articles in total. However, only 15 of them had only one author. The collaboration index shows that there is high collaboration in FRQ and BI. With an average document-per-author ratio of 0.142, nearly four writers have contributed to a single document.

Table 1. Descriptive characteristics of FRQ and BI literature

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	1935:2020
Sources (Journals, Books, etc)	54
Documents	66
Average years from publication	9.92
Average citations per documents	61.76
Average citations per year per doc	4.035
References	3357
DOCUMENT TYPES	
Article	57
book chapter	3
Letter	2
Review	4
DOCUMENT CONTENTS	
Keywords Plus (ID)	38
Author's Keywords (DE)	130
AUTHORS	
Authors	160
Author Appearances	165
Authors of single-authored documents	15
Authors of multi-authored documents	145
AUTHORS COLLABORATION	
Single-authored documents	15
Documents per Author	0.412
Authors per Document	2.42
Co-Authors per Documents	2.5
Collaboration Index	2.84

(Source: Authors Own Work)

Figure 2 shows the annual production for the FRQ and BI. At the start, production is limited, but with time literature production increases. There is an increase in the production of the articles with time.

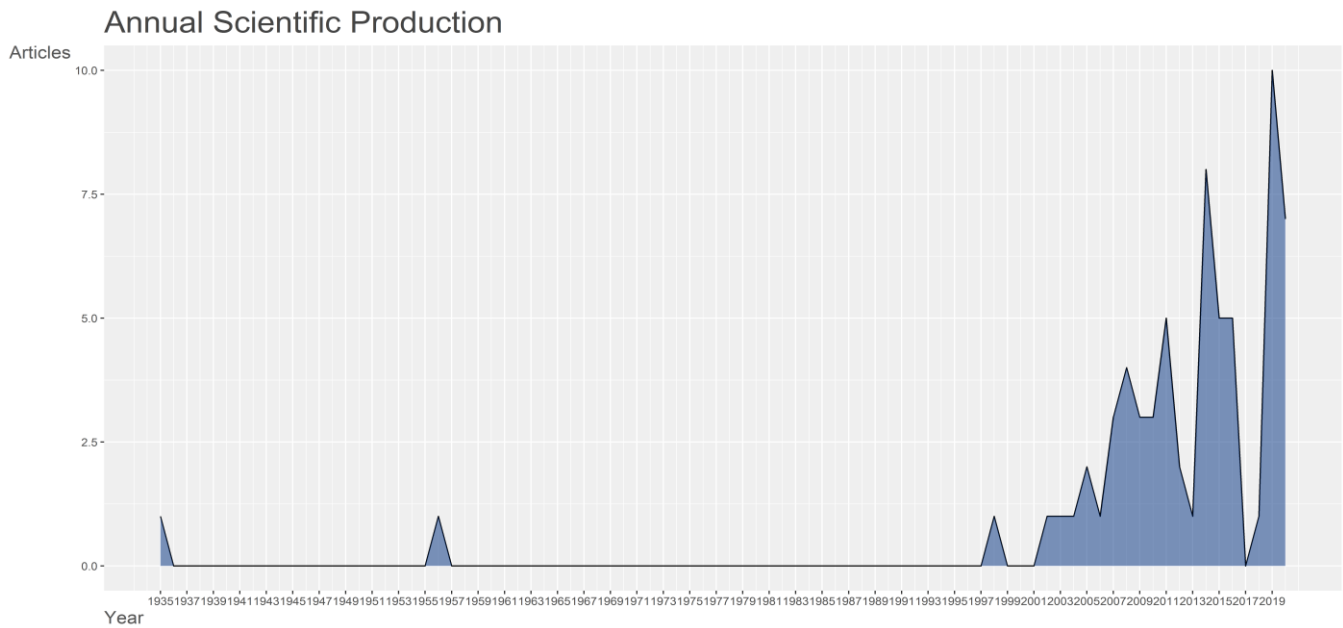


Figure 2. Annual scientific production (Source: Authors Own Work)

A three-fold analysis of FRQ and BI articles is shown in Figure 3, with nations of interest in the centre, affiliations on the right, and keywords on the left. The figure reveals that Malaysia, and the US are home to the leading institutions contributing to research on the effectiveness of FRQ and BI. Additionally, countries such as Spain, Australia, the United Kingdom, and Tunisia have contributed notable to various business and finance topics related to FRQ and BI. The figure also highlights that corporate governance and earnings management have been extensively studied across numerous countries, emphasizing their global relevance in shaping financial reporting and governance practices.

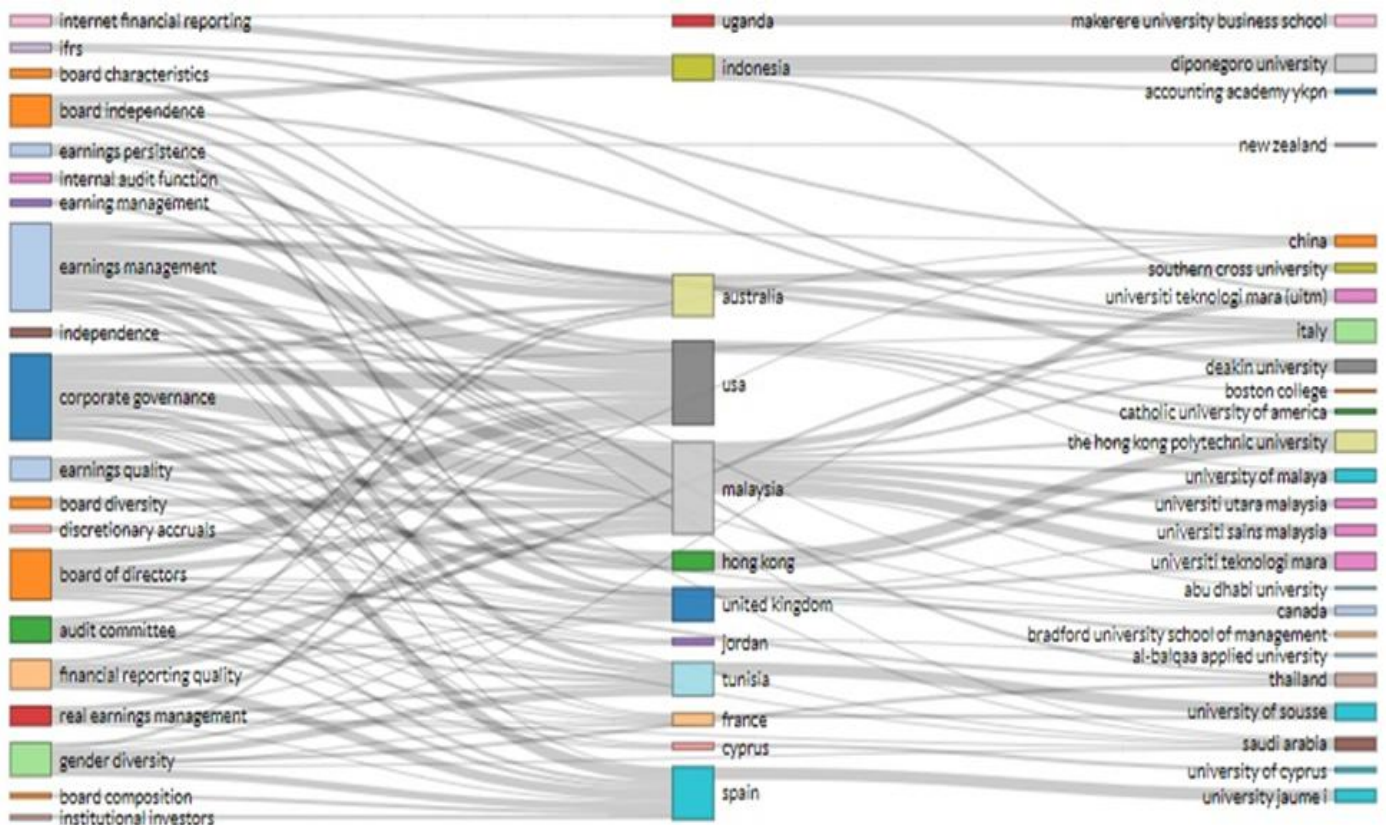


Figure 3. Three-fold analysis of FRQ and BI literature (Source: Authors Own Work)

3.1 Influential aspects of FRQ and BI literature

3.1.1 Core Journals

We employ Bradford Law and source impact to determine which key journals publish the FRQ literature. The publications are ranked in Table 2 according to h, m, g-index, net production (NP), total citation (TC), and publication starting year (PY_start). Bradford's law, which separates the journal into t3 zones, is shown in Table 3. Core sources for publishing papers on corporate governance and management are represented by Zone 1. This is the nuclear zone, which stands for journals with many articles. The journal rankings based on Bradford's law are shown in Table 3. Of the 66 journals that we found, 10 are in Zone 1, while the other journals are in Zones 2 and 3. The top ten journals are the primary publication outlets for corporate governance and management-earning financial reporting literature.

Table 2. Top ten journals according to source impact

Source	h_index	g_index	m_index	TC	NP
CORPORATE OWNERSHIP AND CONTROL	2	3	0.11	46	3
ACCOUNTING HORIZONS	2	2	0.13	85	2
ACCOUNTING RESEARCH JOURNAL	2	2	0.16	20	2
CORPORATE GOVERNANCE: AN INTERNATIONAL REVIEW	2	2	0.14	132	2
JOURNAL OF APPLIED BUSINESS RESEARCH	2	2	0.28	30	2
AUSTRALASIAN ACCOUNTING, BUSINESS, AND FINANCE JOURNAL	1	2	0.12	22	2
ICES JOURNAL OF MARINE SCIENCE	1	1	0.01	1	2
INTERNATIONAL JOURNAL OF ECONOMICS AND MANAGEMENT	1	2	0.07	31	2
INTERNATIONAL JOURNAL OF FINANCIAL RESEARCH	1	1	0.5	1	2
PACIFIC ACCOUNTING REVIEW	1	2	0.06	116	2

(Source: Authors Own Work)

Corporate ownership and control are significant platforms for publishing FRQ and BI literature in business finance and management sciences. Its recent publications by Berbou and Sadqi express that corporate governance impacts the financial market. In addition to several governance-related cognitive, they focused on the BODs' independence, openness, focus, and presence of workers in the ownership structure. According to the study, implementing a hybrid corporate governance model substantially correlates with the firms' stock market and financial success.

Table 3. Journal rankings according to Bradford law

SO	Rank	Freq	cumFreq	Zone
CORPORATE OWNERSHIP AND CONTROL	1	3	3	Zone 1
ACCOUNTING HORIZONS	2	2	5	Zone 1
ACCOUNTING RESEARCH JOURNAL	3	2	7	Zone 1
AUSTRALASIAN ACCOUNTING, BUSINESS AND FINANCE JOURNAL	4	2	9	Zone 1
AUSTRALIAN JOURNAL OF MANAGEMENT	5	2	11	Zone 1
CORPORATE GOVERNANCE: AN INTERNATIONAL REVIEW	6	2	13	Zone 1
ICES JOURNAL OF MARINE SCIENCE	7	2	15	Zone 1
INTERNATIONAL JOURNAL OF ECONOMICS AND MANAGEMENT	8	2	17	Zone 1
INTERNATIONAL JOURNAL OF FINANCIAL RESEARCH	9	2	19	Zone 1
JOURNAL OF APPLIED BUSINESS RESEARCH	10	2	21	Zone 1

(Source: Authors Own Work)

Australian Accounting Business and Finance Journal is a remarkable and important platform for publishing FRQ and BI kinds of literature in the field of accounting business and finance, and it is also on the list of top-ranked journals in this literature. Published in AAB&FJ (Alves, 2014), it was stated that overseeing the financial reporting functions of the outside board members is a crucial task recommended by the agency theory. Because of this, supervisory boards with more independent members are probably going to have more supervision and, as a result, demand higher-quality earnings. This research investigates if less earnings management due to BI enhances earnings quality.

Figure 3 illustrates the growth trends of top journals in publications, employing the LOESS (Locally Weighted Scatterplot Smoothing) technique. LOESS is a regression-based smoothing method that helps visualize trends over time by generating a smooth line on a scatter plot or time plot, as described by Sauerbrei, Meier-Hirmer, et al. (2006). The figure highlights significant growth in Corporate Ownership and Control publications since 2000, establishing it as a primary source of literature on FRQ and BI in accounting, business, and finance. Meanwhile, ICEs Journals of Marine Science has shown a steady publication rate since 1935, with no notable increase or decrease since 1970, reflecting a consistent trend. This journal, however, had limited publications from 1935 to 1975, contributing only a single publication during this period. Accounting Horizons has experienced substantial growth in publications since 2000, and both The International Journal of Economic and Management and Accounting Research journals have seen consistent increases in output over the same period. Corporate Governance: An International Review has also shown a significant rise in publications starting in 2005. The International Journal of Financial Research is recommended for further exploration, as it holds valuable insights for businesses and companies. Overall, the figure demonstrates a gradual rise in the quantity of publications across these journals, reflecting the growing importance of these topics in the academic and business spheres.

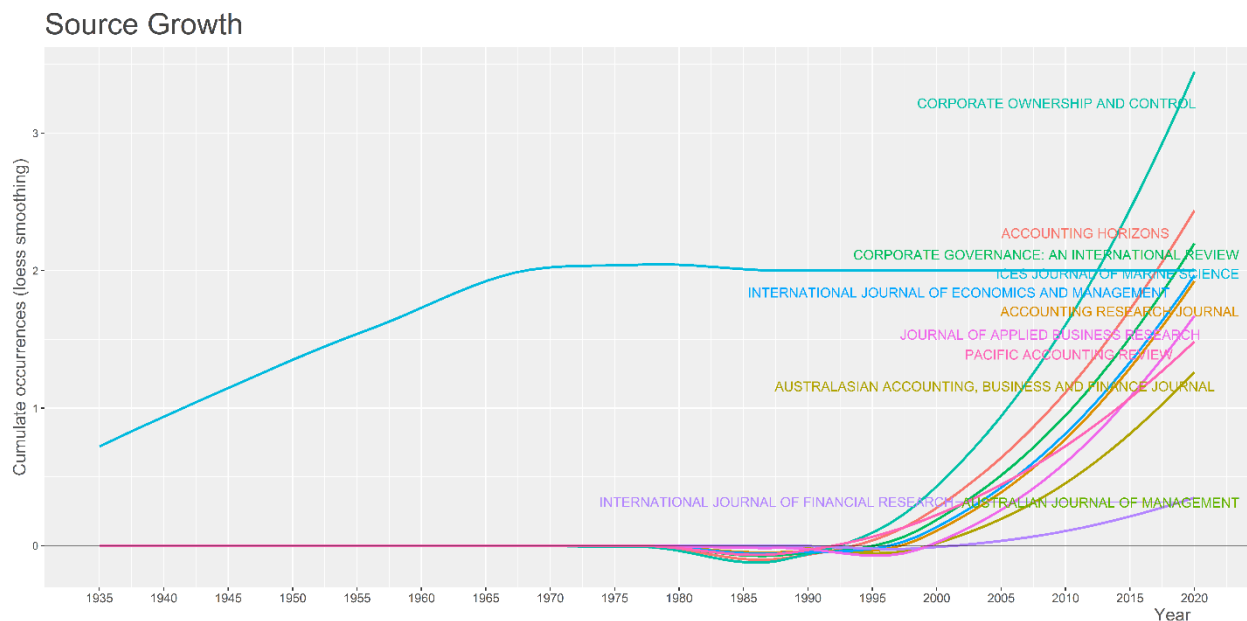


Figure 4. Source Growth (Source: Authors Own Work)

3.1.2 Core Journal Articles

This section highlights the best articles from the FRQ literature published in the fields of finance, business, and accounting. Table 4 contains a list of the top 10 articles that have been cited worldwide. Klein (2002), who came in first on the list, studied how much the qualities of the board and audit committee were related to the business's earnings management in 2000. Abnormal accruals and audit committee independence are negatively correlated. Second on the list of the most often referenced publications is research by Karamanou and Vafeas (2005) that explains the relation among corporate boards and audit committees and financial disclosure policies as management profit predictions display them. He learns that managers are more likely to anticipate earnings in a company with a more efficient board and audit committee structure. The idea that better financial disclosure quality is linked to efficient corporate governance is generally supported by empirical data. This research was carried out in 2005.

Third on the list is a study by Jaggi et al. (2009) that found that independent corporate boards of Hong Kong companies effectively supervise earnings management. The study indicate that corporate BI is crucial to guaranteeing high-FRQ despite variations in the organizational environment. Additionally, they discover that, whether through property retention or the inclusion of family members on corporate boards, corporate board supervision is only somewhat successful in family control businesses. This study was carried out in Hong Kong in 2009. Vafeas (2005) investigated the connection between board directors and audit committees and the caliber of financial reporting. Between 1994 and 2000, he gathered information from 252 American companies and used it to do logistic regressions. The findings indicate a relation among the profit's quality and the assessment of the audit committee and board structure that is mostly consistent with the agency's ideological forecasts.

Table 4. Most globally cited article

Papers	Total Citations	TC per Year
Audit committee, board of director characteristics, and earnings management	1867	93.35
The Association between Corporate Boards, Audit Committees, and Management Earnings Forecasts: An Empirical Analysis	582	34.2353
Family control, board independence and earnings management: Evidence-based on Hong Kong firms	235	18.0769
Audit Committees, Boards, and the Quality of Reported Earnings	208	12.2353
Board Characteristics, Audit Committee Characteristics, and Abnormal Accruals	116	7.25
Board of Directors and Opportunistic Earnings Management: Evidence from India	113	8.0714
Board Independence and Real Earnings Management: The Case of R&D Expenditure	103	7.3571
The Emergence of Corporate Governance from Wall St. to Main St.: Outside Directors, Board Diversity, Earnings Management, and Managerial Incentives to Bear Risk	102	5.3684
Board Monitoring and Earnings Management Pre- and Post-IFRS	87	7.9091
Non-GAAP earnings and board independence	68	6.1818

(Source: Authors Own Work)

3.1.3 Core Words

The most common terms used in FRQ literature related to accounting, business, and finance are listed in Table 5. Keywords plus, Authors Keywords, Abstract, and Title are the four sections that make up the table. The most often used term is "board of directors" throughout. Board, directors, earning quality, corporate governance, and audit committee keywords are also used. These keywords are related to FRQ, audit committee, earnings quality, and earning management. In FRQ literature, minimal author keywords are used. Additionally, keywords related to earning management board characteristics indicate the relationship between FRQ and BI. There are topics related to corporate governance. Author keywords were not employed by many researchers. The most often occurring term in the abstract is "board," while the most frequently occurring word in the title is "corporate governance." The abstract and title contain more general terms less likely to generate a subject or line of inquiry.

The word cloud created with keyword addition is seen in Figure 5. In literature, words that are used often are usually bigger. The two topics that appear most frequently in the FRQ and BI literature are board of directors and FRQ. Thus, these are the most significant terms employed. Then there is board independence, which is studies in different countries. The literature is about FRQ and BI. For this reason, many studies have been conducted on BI. Many authors have studied the influence of earnings management, BOD, audit committees, gender diversity, and earnings persistence.

There are studies on board diversity, internal audit function, and board composition. Some studies link the board characteristics with Internet financial reporting, using these as keywords. The FRQ literature uses real earnings management and gender diversity as keywords because they are crucial for business growth. Earning persistence and discretionary accruals are also used as keywords in the literature because these studies can be used to further explain how to control business problems. These keywords are all related and cover a wide range of issues that different

businesses in different nations are dealing with. Utilize this material to solve various accounting, business, and finance-related issues.

Table 5. Most frequent words.

Words	Occurrences	Words	Occurrences
corporate governance	25	Board	58
earnings management	20	Earnings	37
board of directors	15	Management	27
board independence	7	Quality	21
earnings quality	7	Characteristics	16
financial reporting quality	7	Financial	16
audit committee	6	Audit	15
gender diversity	6	Evidence	15
earnings persistence	3	Reporting	13
real earnings management	3	Independence	12
Words	Occurrences	Words	Occurrences
Board	252	united states	2
earnings	171	Article	1
quality	133	audit index	1
management	107	Awareness	1
directors	95	board of trustees	1
financial	89	Certification	1
Study	79	chief executive officers	1
independence	73	computer applications	1
Audit	72	Copyright	1
reporting	66	directors' nationality	1

(Source: Authors Own Work)



Figure 5. Word Cloud (Source: Authors Own Work)

Figure 6 shows how words have grown throughout literature along with the word cloud. After 2016, there has been rapid growth in the board of director's keyword. A loess smoothing approach is used in Figure 6 to see how keyword usage has changed over time. There has been an increase in the FRQ keywords since 2013. The gender diversity keyword rapidly increased after 2014. From 2002 to 2007, the BI keyword was below the x-axis. It increased after 2009, but then the use of this keyword decreased after 2013 and increased again after 2016. The use of the audit committee keyword decreased after 2006 but then increased, but after 2014, it decreased badly, and after 2019, it was below the x-axis. From

2002 to 2020, there are ups and downs in earning quality, earning persistence, and real earning management keywords. Keywords like BI, gender diversity, and the BOD have all shown development.

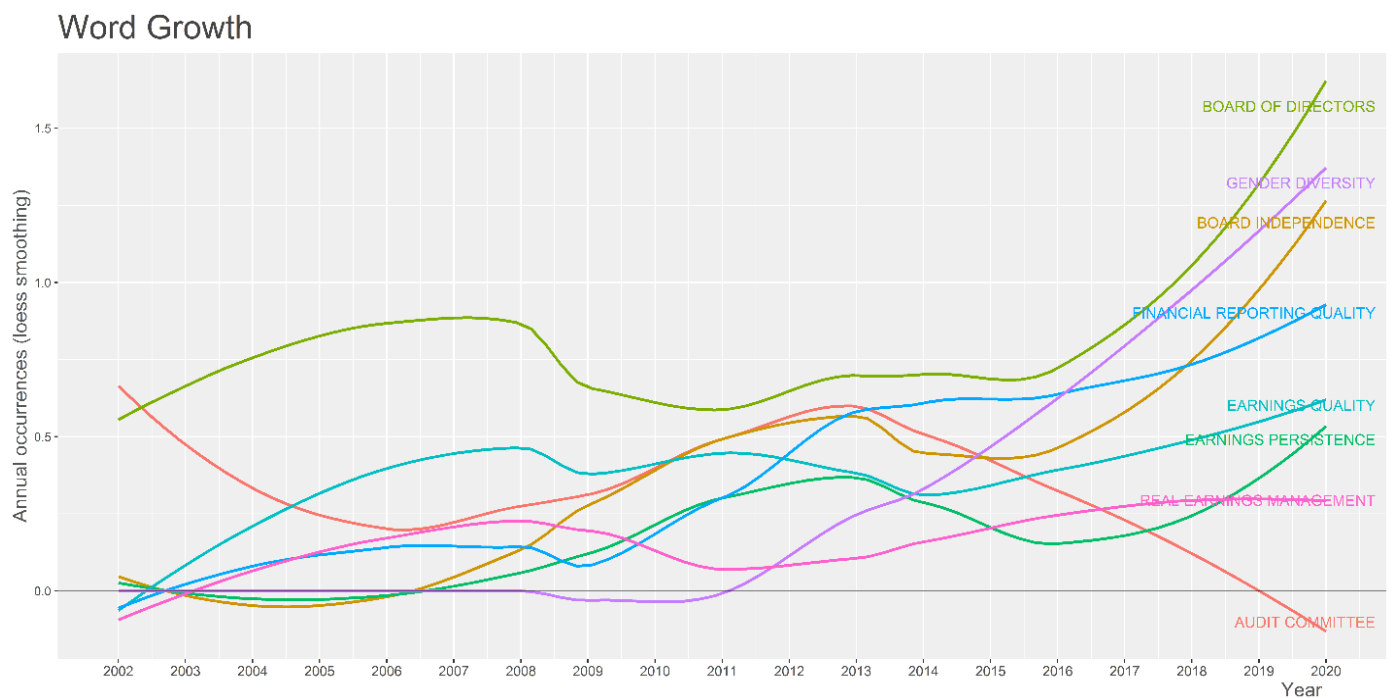


Figure 6. Word Growth Overtime (Source: Authors Own Work)

3.1.4 Main Authors, Affiliations, Institutions, and Countries

The primary writers, associations, organizations, and nations of FRQ literature in the accounting, business, and finance domains are included in this section. Table 6 lists the ten writers who have had a more significant influence on FRQ literature. The h-index serves as the basis for the ranking. On the list of authors with the most influence, Hashim HA is ranked first. Hashim and Devi (2008) examined the connection between Malaysian evidence on ownership structure, earning quality, and board characteristics. Additionally, they researched the percentage of independent non-executive directors and CEO duality, two crucial aspects of board success. They investigate whether raising income and decreasing discretionary efficiencies, as required by the Malaysian Code on Corporate Governance (MCCG) 2000 and having a majority of independent non-executive directors, effectively limit instances of income management.

Table 6. Top 10 authors' impact in FRQ and BI

Author	h_index	g_index	m_index	TC	NP	PY_start
HASHIM HA	2	2	0.143	87	2	2008
ISMAIL KNIK	2	2	0.25	15	2	2014
PUCHETA-MARTNEZ MC	2	2	0.25	47	2	2014
VAFEAS N	2	2	0.118	790	2	2005
BANANUKA J	1	2	0.333	4	2	2019
AGUIR A	1	1	0.143	22	1	2015
AL-DHAMARI RA	1	1	0.125	4	1	2014
AL-OTHMAN LN	1	1	0.333	4	1	2019
AL-ZOUBI MN	1	1	0.333	4	1	2019
AL DAOUD KA	1	1	0.125	11	1	2014

(Source: Authors Own Work)

Figure 7 shows the top authors and the number of articles over time. Smaller and lighter dots show fewer articles about the author this year, and big dots show 2.00 articles about the author. There has been an increase in the number of

authors, but there were fewer articles in 2019. It is essential to view the primary subjects, locations, and affiliations of FRQ publications in addition to the yearly production and article citations.

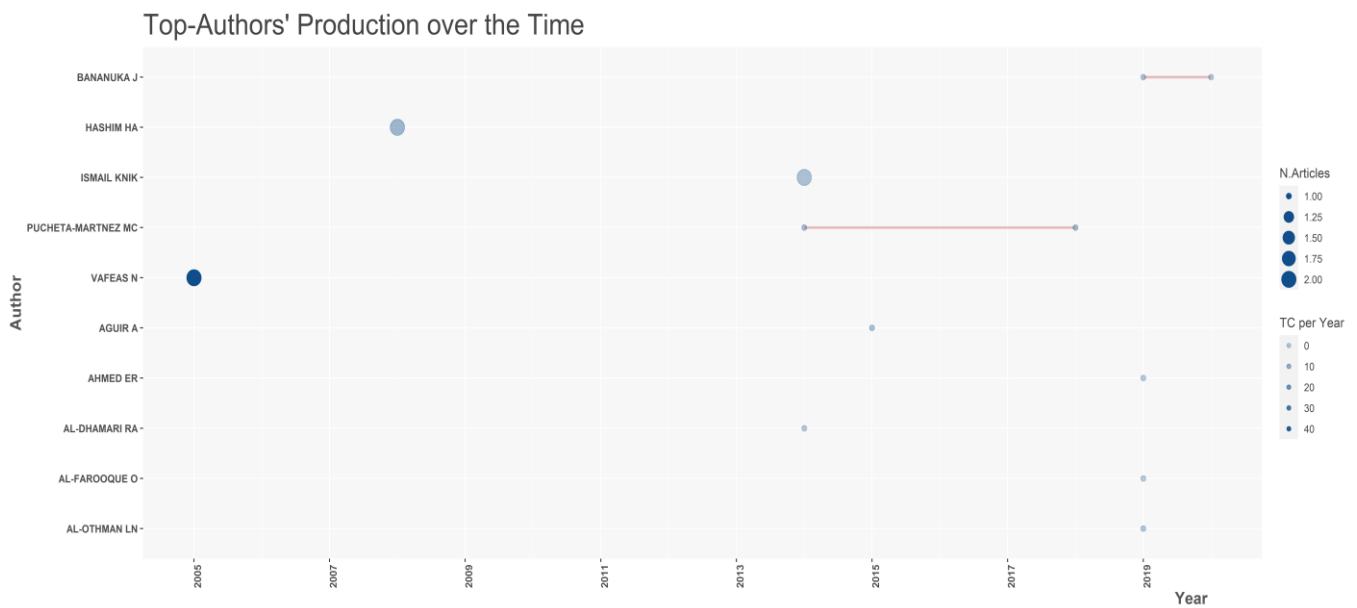


Figure 7. Top author's production over time (Source: Authors Own Work)

Two data sets are displayed in Table 7; the nations and areas on the left side have a high volume of scientific output throughout time. Nations having a lot of citations are on the right. With several publications and citations, the USA leads the world. Malaysia ranked second, Indonesia ranked third in publications, and Cyprus ranked second in citations. Cyprus has better citations than Malaysia, and Spain's total citations are better than Indonesia's. Australia published 8 articles on FRQ and BI, ranking fourth in publications. When it comes to citations, New Zealand ranks fourth.

Table 7. Top countries in terms of publications and citations.

Region	Freq	Country	Total citations	Average Article Citations
USA	19	USA	2218	246.4
MALAYSIA	18	CYPRUS	790	395
INDONESIA	9	SPAIN	150	50
AUSTRALIA	8	NEW ZEALAND	116	58
SPAIN	7	MALAYSIA	91	13
TUNISIA	6	ITALY	87	87
UK	6	CHINA	53	26.5
CANADA	4	NORWAY	34	34
CHINA	3	FRANCE	22	22
FRANCE	3	PORTUGAL	22	22

(Source: Authors Own Work)

Table 8 presents the most relevant affiliations in the research on FRQ and BI. The University of Utara Malaysia is leading the list, establishing a strong foundation for research in these areas. Makerere University Business School (MUBS) ranks second. Founded in 1997, MUBS has become a leading institution in Uganda for business and management education. In third place is Deakin University, founded in 1974 Victoria, Australia. Known for its consistently high levels of student satisfaction, Deakin University was ranked fourth nationally in the 2019 Student Experience Survey. Since 2010, it has continuously ranked in the top two for postgraduate satisfaction and has the highest undergraduate student satisfaction rating of any university in Victoria. Numerous programs in education and the arts, business and law, science and health, engineering, and the built environment are available at Deakin. Fourth place goes to Diponegoro University. Economics business, engineering, fisheries and marine sciences, humanities, law, medical, natural sciences, psychology, public health, and social and political sciences are only a few subjects offered at

Diponegoro University, founded in 1960. On the list, Southern Cross University comes in at number five. Sixth place goes to Hong Kong Polytechnic University (PolyU). A renowned public research university, PolyU was established in 1972 and has eight faculties and schools that provide courses in applied science, business, engineering, social science, health, humanities, design, and hotel management. Universiti Sains Malaysia (USM) ranks seventh. Founded in 1969, USM is one of the largest universities in Malaysia by enrollment and is recognized for its significant research contributions. In eighth place is Universiti Teknologi Mara (UITM), established in 1956. UITM offers programs across 24 faculties and three academic centers, covering various disciplines, comprising science and technology, business and management, and social sciences and humanities. Finally, The University of Jaume I, founded in 1991, ranks tenth as one of the most impactful affiliations in publications related to FRQ and BI.

Table 8. Most relevant affiliations

Affiliations	Articles
UNIVERSITI UTARA MALAYSIA	4
MAKERERE UNIVERSITY BUSINESS SCHOOL	3
DEAKIN UNIVERSITY	2
DIPONEGORO UNIVERSITY	2
SOUTHERN CROSS UNIVERSITY	2
THE HONG KONG POLYTECHNIC UNIVERSITY	2
UNIVERSITI SAINS MALAYSIA	2
UNIVERSITI TEKNOLOGI MARA	2
UNIVERSITI TEKNOLOGI MARA (UITM)	2
UNIVERSITY JAUME I	2

(Source: Authors Own Work)

Table 9 lists the ten comparable author nations, with the United States at the top. Nine papers have been published by the USA's corresponding authors, six single-country publications (SCP) and three multiple-country publications (MCP). In publications from many nations, at least one international co-author is acknowledged. Malaysia comes in second with seven communication items, four SCPs, and three MCPs. In Canada, there are three publications with three SCP and zero MCP. With three research publications about the FRQ, Spain is ranked fourth. Its SCP is 3. With two corresponding research publications, Australia ranks sixth. Accounting business and finance issues are linked to the FRQ and BI.

Table 9. Most Relevant Countries by Corresponding Authors

Country	Articles	Freq	SCP	MCP	MCP_Ratio
USA	9	0.1915	6	3	0.333
MALAYSIA	7	0.1489	4	3	0.429
CANADA	3	0.0638	3	0	0
SPAIN	3	0.0638	3	0	0
AUSTRALIA	2	0.0426	2	0	0
CHINA	2	0.0426	2	0	0
CYPRUS	2	0.0426	2	0	0
INDONESIA	2	0.0426	2	0	0
NEW ZEALAND	2	0.0426	0	2	1
UGANDA	2	0.0426	2	0	0

(Source: Authors Own Work)

Figure 8 illustrates the distribution of corresponding authors by country. The United States ranks highest, with a total of 9 publications. Of these, 6 are SCP, and 3 are MCP. Malaysia is second, contributing 7 SCP articles and 3 MCP articles. In third place is Canada, while Spain holds fourth, each with 3 SCP publications and no MCP publications from corresponding authors. Australia, China, Cyprus, and Indonesia each have 2 SCP publications, with no MCP publications from corresponding authors.

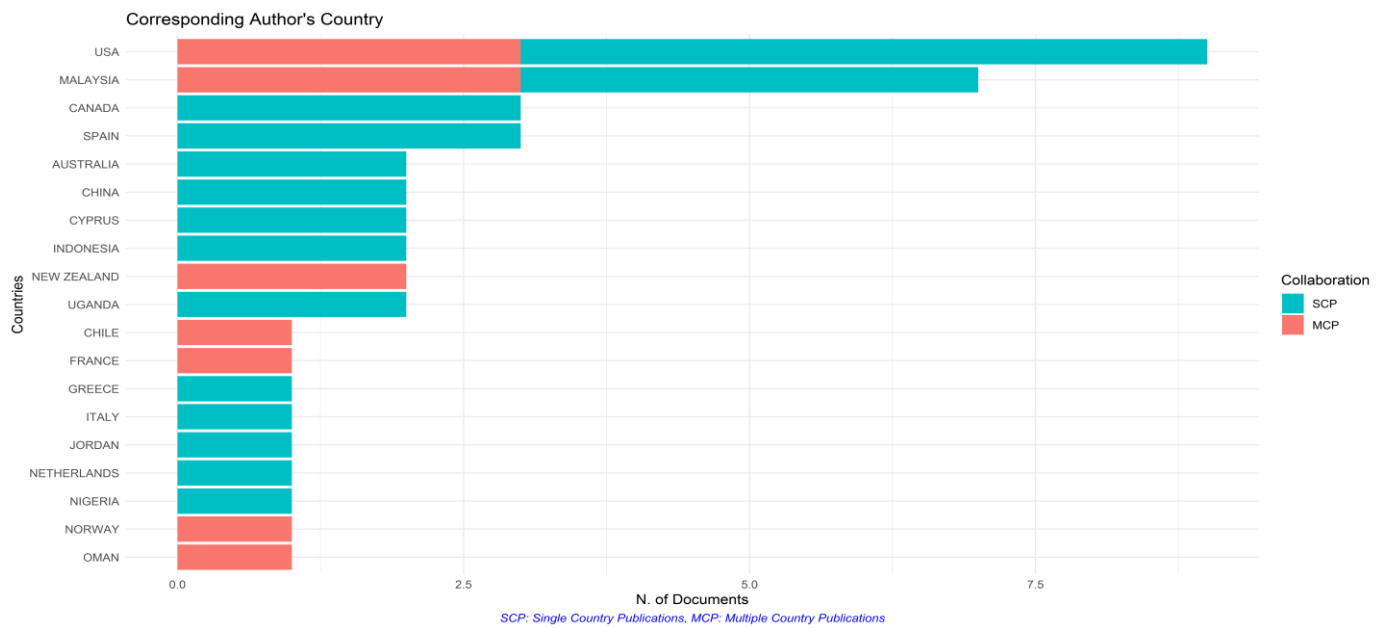


Figure 8. Corresponding Authors Countries (Source: Authors Own Work)

Table 10 highlights the issue of limited international collaboration in the publications. Malaysia has collaborated with Australia on 3 articles, while Tunisia partnered with France and Saudi Arabia on 2 publications. The remaining countries in the table were involved in only one collaborative publication each.

Table 10. Collaboration Network

From	To	Frequency
MALAYSIA	AUSTRALIA	3
TUNISIA	FRANCE	2
TUNISIA	SAUDI ARABIA	2
AUSTRALIA	NEW ZEALAND	1
COLOMBIA	GERMANY	1
FRANCE	SAUDI ARABIA	1
ITALY	NORWAY	1
MALAYSIA	HONG KONG	1
MALAYSIA	INDONESIA	1
MALAYSIA	OMAN	1

(Source: Authors Own Work)

3.2 Conceptual Framework

This section uses the connection between words (keyword plus) to help us grasp a variety of subjects. In order to assess several aspects of BI and FRQ in the field of accounting business and finance across time, the research first suggests a co-occurrence network. The centrality and density of these word networks will next be examined by placing them on a bi-dimensional matrix known as a "Thematic Map."

3.2.1 Co-Occurrence Network

Figure 9 presents the co-occurrence network of keywords, extracted using the 'Biblioshiny' tool from the R-package ('bibliometric'). The network indicates that there are two different study streams into which the literature on FRQ and BI may be divided. The red cluster represents the central network, showing high centrality and encompassing the core themes of FRQ and BI. Blue clusters are linked through shared themes, providing additional context to these research areas. The red cluster is the focal point of the FRQ and BI literature, addressing various characteristics of FRQ and BI while emphasizing their significance for firms and businesses. Corporate governance emerges as a key theme,

connecting elements such as the board of directors, audit committees, FRQ, earnings quality, and earnings management to improve overall firm performance. The blue cluster, though secondary, is also critical. It highlights the importance of earnings management, BI, and gender diversity in enhancing FRQ. Additional themes such as board characteristics, discretionary accruals, earnings persistence, accrual management, board composition, and board diversity also play significant roles in shaping the FRQ and BI literature.



Figure 9. Co-occurrence network (Source: Authors Own Work)

3.2.2 Thematic map

Several study topics have been found, and in order to better understand the findings, we may group these themes into a strategic diagram and examine their significance and evolution (Cobo, López-Herrera, et al., 2011). A thematic map based on centrality (x-axis) and density (y-axis) is present in Figure 10. Density shows the theme's level of growth, whereas centrality gauges the chosen theme's significance. There are four quadrants on the map. Emerging or waning themes are shown in the lower left quadrant. These new themes may evolve into more significant research areas or fade away from the field's focus. The lower right quadrant contains the transversal or fundamental motifs. Despite being well-established and extensively studied, these themes have low density but high centrality, indicating that they are still in the early stages of development. The top left quadrant represents themes with low centrality but great density. Although well-developed, these concepts are not as fundamental to the present discussions because they are somewhat detached from the primary research focus. Motor themes with high centrality and density are assigned to the top right quadrant. These themes are well-developed, essential, and a prerequisite for further research (Nasir, Shaukat, et al., 2020). The size of the thematic map corresponds to the volume of research related to each theme. As shown in Figure 9, the IFRS theme falls in the upper left quadrant, indicating that while it is developed, it is not central to the current FRQ and BI literature. Corporate governance, BI, earnings management, and board characteristics are in the lower right quadrant. These themes exhibit high centrality but low density, suggesting that although they are crucial to FRQ and BI literature, their development is declining. As also seen in Figure 8, the red and blue clusters are prominent and play a significant role in FRQ literature. On the upper right of the thematic map, themes like earnings persistence, earnings quality, and discretionary accruals are identified as developing and critical, indicating they are motor themes with both high centrality and density.

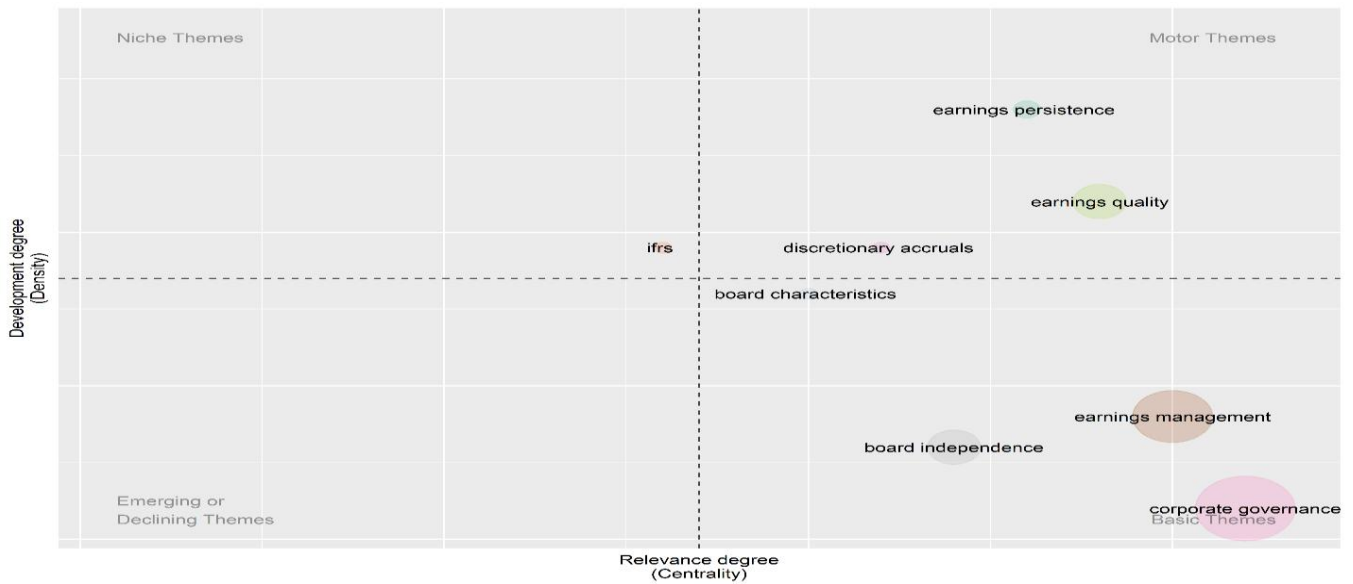


Figure 10. Thematic map (Source: Authors Own Work)

3.2.3 Thematic Evolution

In addition to the thematic map, Figure 11 presents the thematic evolution, which illustrates the historical development of FRQ and BI literature. The thematic development illustrates how these topics have changed throughout time using keywords plus. The "Biblioshiny" program is used to construct the theme development, which is separated into four-time segments. These time segments are based on the authors' subjective judgment, aiming to represent thematic development accurately. The first segment covers the period from 1935 to 2009; the second segment spans from 2010 to 2014, the third from 2015 to 2019, and the final segment covers the years 2019 to 2020. Over time, themes have evolved and shifted. From 1935 to 2009, the FRQ and BI literature primarily focused on earnings quality and corporate governance. In the period from 2010 to 2014, research on corporate governance saw a significant increase, and the theme of earnings management began to develop more prominently. During this period, BI emerged as a key theme. From 2015 to 2019, the focus shifted to the board of directors, with some aspects of corporate governance evolving into more specialized discussions around the board of directors' literature. Furthermore, earning management literature evolved into corporate governance from 2015 to 2019. From 2015 to date, topics related to the board of directors have been under observation.



Figure 11. Thematic Evolution (Source: Authors Own Work)

4 CONCLUSION

This study underscores the growing importance of FRQ in corporate governance, specifically concerning BI. By conducting a comprehensive bibliometric analysis, we have identified the key factors influencing FRQ in the context of BI and highlighted influential journals, authors, and countries contributing to this critical research area. Bradford's Law provided the framework for our exploration, guiding us to examine the most frequently cited literature and the emerging trends within this field. Our analysis reveals that the most influential journals contributing to FRQ research include *The Accounting Review*, *Journal of Accounting and Economics*, and *Accounting, Organizations and Society*. Among the 25 most-cited articles, XIE and HUI (2013), published in *Journal of Accounting Research*, stand out for examining the relation among BI and financial transparency. The top authors in this area include JONES A, whose work on corporate governance and FRQ has shaped current understanding, and WILLIAMS B, whose contributions on BI's role in reducing financial reporting manipulation have been pivotal. The University of Oxford emerges as a key academic institution in publishing research on this topic, with the UK and the USA being the leading contributors to the literature. Geographically, the USA leads in publication volume, though research from the UK and Germany receives higher citation counts, reflecting the international scope of interest in this area. The USA, UK, and Canada also show strong collaborative patterns, working with countries such as Australia and Japan on multi-country studies examining BI's global relevance in ensuring high FRQ. Through thematic evolution analysis, we observed a growing focus on corporate governance mechanisms, particularly board composition and structure, as key drivers of FRQ. The conceptual structure, developed using the 'Biblioshiny' R-package, highlighted several significant research streams, including the relationship between BI and financial transparency, the influence BI on earnings management, and the role of BI in improving investor confidence. Notably, themes like board monitoring, audit committee effectiveness, and regulatory compliance have emerged as central to understanding how BI influences FRQ. Over time, the research on BI and FRQ has evolved, with early studies focusing on the role of BI in mitigating financial fraud, followed by more recent research examining the intricate ways BI affects the quality and reliability of financial statements. The analysis also revealed a shift towards considering environmental factors, such as the legal and institutional frameworks, that shape BI's effectiveness in enhancing FRQ. In conclusion, this paper provides valuable insights into the evolving role of BI in improving FRQ. It sheds light on the critical variables influencing FRQ and presents a roadmap for future research in this field. Further investigation is needed into the interactions between BI, firm-specific factors, and external regulatory environments, with particular attention to how BI may evolve in response to emerging global governance standards. This study offers academics, regulators, and practitioners a foundation to enhance corporate governance practices, improve financial transparency, and ultimately contribute to more reliable and effective financial reporting worldwide.

4.2 Practical Implication

This study has significant implications for academics, practitioners, policymakers, and global initiatives that focus on corporate governance and financial transparency. Exploring the intersection of BI and FRQ provides a robust foundation for advancing governance practices and aligning them with global priorities, including the United Nations Sustainable Development Goals (SDGs), particularly SDG 16: Peace, Justice, and Strong Institutions. The findings highlight the pivotal role of BI in enhancing financial transparency, thereby contributing to more robust and transparent corporate governance systems, directly supporting SDG 16 by promoting accountability, reducing financial fraud, and fostering trust among stakeholders. Regulators and policymakers can use these insights to strengthen governance frameworks, ensuring that board structures and practices align with these principles. Additionally, the study underscores the impact of BI on reducing earnings management and improving financial statement reliability, fostering investor confidence, encouraging capital inflow, and contributing to sustainable economic growth (SDG 8: Decent Work and Economic Growth). Firms can leverage these insights to attract long-term investments by prioritizing board composition and monitoring effectiveness. The study's revelation of strong collaborative patterns among countries, particularly the USA, UK, and Canada, underscores the need for cross-border cooperation in advancing governance research and practices. This collaboration aligns with SDG 17: Partnerships for the Goals, as international organizations facilitate knowledge sharing and harmonize governance standards to ensure consistent and high FRQ globally. By highlighting the role of BI in regulatory compliance and oversight, this study contributes to the discourse on sustainable corporate behavior. Organizations can incorporate BI strategies to ensure ethical financial practices, aligning corporate objectives with broader societal and environmental goals (SDG 12: Responsible Consumption and Production). The observed shift towards examining legal and institutional frameworks emphasizes the need to integrate environmental factors into corporate governance research. This includes exploring how emerging global governance standards, climate-related financial disclosures, and sustainability reporting practices intersect with BI to drive progress toward the SDGs. These

implications emphasize the critical intersection of governance, financial reporting, and sustainable development, encouraging a multidimensional approach to enhancing corporate accountability and transparency.

4.3 Future Agenda

While this study offers valuable insights into the relation among FRQ and BI, several avenues that could significantly contribute to understanding this critical issue in corporate governance remain unexplored. Firstly, there is a need for more cross-country studies to examine how different legal, regulatory, and institutional environments influence the effectiveness of BI in enhancing FRQ. While the USA and UK have received extensive attention in the literature, other emerging economies, especially in Asia and Africa, present unique challenges and opportunities for studying the dynamics between BI and FRQ. Exploring whether institutional contexts, such as the level of legal enforcement, corporate culture, and market maturity, moderate the relationship between BI and FRQ could provide deeper insights. Secondly, while BI is crucial for FRQ, other board characteristics, such as board size, diversity (gender, age, and ethnic), and board expertise, may also play significant roles in ensuring high FRQ. Future research could expand beyond BI to examine how these additional factors contribute to or interact with BI in shaping the overall effectiveness of governance and financial reporting. Understanding the interplay between different board attributes could help refine corporate governance policies and further elucidate the role of BI in ensuring transparency and accountability. Thirdly, most studies have focused on cross-sectional data to investigate the link among BI and FRQ, which limits the understanding of the long-term effects. Longitudinal studies could provide a more comprehensive view of how BI influences FRQ over time. Such studies would allow researchers to examine causality and whether BI leads to improved reporting practices or whether firms with higher FRQ tend to attract more independent directors over time.

4.4 Limitations of the Study

This research offers valuable insights into the relation among BI and FRQ, but several limitations should be noted. First, the focus on publicly listed companies may not fully capture the governance dynamics of privately held or family-owned businesses, where ownership concentration and governance structures may differ, potentially leading to different BI-FRQ relationships. Thus, the findings' generalizability is limited. Second, using cross-sectional data restricts the ability to draw causal conclusions. It is unclear whether BI improves FRQ or if firms with better reporting are more likely to appoint independent directors. Longitudinal studies would offer a clearer understanding of this causal relationship. Lastly, the study relies on a narrow set of variables to measure BI and FRQ. The proportion of independent directors alone does not capture other important governance aspects, such as committee independence or board diversity. Considering these things, a more thorough understanding of how board qualities affect FRQ may be possible.

REFERENCES

- Ali, K., Arslan, H. M., Mubeen, M., Azeem, H., Zhen-Yu, Z., Yushi, J., & Miao, M. (2024), "From reporting to responsibility: investigating the influence of sustainability disclosure on earnings management", *Environment, Development and Sustainability*, first online, pp. 1-34. <https://doi.org/10.1007/s10668-024-04920-y>
- Ali, K., Kausar, N., & Amir, M. (2023), "Impact of pollution prevention strategies on environment sustainability: role of environmental management accounting and environmental proactivity", *Environ Sci Pollut Res Int*, Vol. 30 No 38, pp. 88891-88904. doi:10.1007/s11356-023-28724-1
- Amir, M., Malik, M. S., & Ali, K. (2024), "Unlocking green growth: an ARDL estimation of pollution prevention practices for economic and environmental sustainability", *Environment Development and Sustainability*, Vol. 26 No 8, pp. 19983-20000. doi:10.1007/s10668-023-03449-w
- Andrés, A. (2009). *Measuring academic research: How to undertake a bibliometric study*: Elsevier.
- Arshad, A., Arshad, S., Azeem, H., Naseer, K., & Rehan, M. (2024). *Shattering the glass ceiling: The unseen impact of gender diversity on financial transparency*. Paper presented at the Forum for Economic and Financial Studies.
- Arslan, H., & Bashir, M. (2021), "Contemporary research on spillover effects of COVID-19 in stock markets. A systematic and bibliometric review", No.
- Arslan, H. M., Chengang, Y., Bilal, Siddique, M., & Yahya, Y. (2022a), "Influence of senior executives characteristics on corporate environmental disclosures: a bibliometric analysis", *Journal of Risk and Financial Management*, Vol. 15 No 3, pp. 136.
- Arslan, H. M., Chengang, Y., Komal, B., & Chen, S. (2023), "Nexus between environmental disclosures and top management team characteristics: a systematic review", *Environmental Science and Pollution Research*, Vol. 30 No 4, pp. 9763-9781.

- Arslan, H. M., Khan, I., Latif, M. I., Komal, B., & Chen, S. (2022b), "Understanding the dynamics of natural resources rents, environmental sustainability, and sustainable economic growth: new insights from China", *Environmental Science and Pollution Research*, Vol. 29 No 39, pp. 58746-58761.
- Berbou, H., & Sadqi, O. "The impact of internal governance mechanisms on financial and stock market performance of listed companies: Evidence from an emerging market", No.
- Chaudhry, N. I., Asad, H., Abdulghaffar, M., & Amir, M. (2021), "Contagion effect of COVID-19 on stock market returns: Role of gold prices, real estate prices, and US dollar exchange rate", *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, Vol. 15 No 3, pp. 614-635.
- Dechow, P. M., Loh, W. T., & Wang, A. Y. (2024), "A rating system to evaluate non-GAAP exclusion quality", *Review of Accounting Studies*, No, pp. 1-62.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996), "Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC", *Contemporary accounting research*, Vol. 13 No 1, pp. 1-36.
- Dhaliwal, D. S., Naiker, V., & Navissi, F. (2006), "Audit committee financial expertise, corporate governance and accruals quality: An empirical analysis", *Corporate Governance and Accruals Quality: An Empirical Analysis (May 2006)*, No.
- Gerged, A. M., Arslan, H. M., Abbas, A., Chen, S., & Manzoor, S. (2023), "A bibliometric review of corporate environmental disclosure literature", *Journal of Accounting Literature*, No ahead-of-print.
- Jensen, M. C., & Meckling, W. H. (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of financial economics*, Vol. 3 No 4, pp. 305-360.
- Karamanou, I., & Vafeas, N. (2005), "The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis", *Journal of Accounting research*, Vol. 43 No 3, pp. 453-486.
- Khanchel, I., & Lassoued, N. (2024), "Is it hard to be different during the COVID-19 crisis? Investigating the relationship between corporate social responsibility and earnings management", *International Journal of Ethics and Systems*, Vol. 40 No 1, pp. 17-44.
- Klein, A. (2002), "Audit committee, board of director characteristics, and earnings management", *Journal of accounting and economics*, Vol. 33 No 3, pp. 375-400.
- Li, H., An, H., Wang, Y., Huang, J., & Gao, X. (2016), "Evolutionary features of academic articles co-keyword network and keywords co-occurrence network: Based on two-mode affiliation network", *Physica A: Statistical Mechanics and its Applications*, Vol. 450 No 4, pp. 657-669.
- Mahmood, A. N., Arslan, H. M., Younas, Z. I., Komal, B., Ali, K., & Mubeen, M. (2023), "Understanding the dynamics of capital structure, corporate governance, and corporate social responsibility in high-and low-leveraged US and Chinese firms", *Environmental Science and Pollution Research*, Vol. 30 No 16, pp. 46204-46221.
- Maksymov, E., Peecher, M., Sutherland, A., & Weber, J. (2024), "Audit partners' role in material misstatement resolution: Survey and interview evidence", *Journal of accounting research*, Vol. 62 No 1, pp. 275-333.
- Malik, M. S., Ali, K., Amir, M., Tariq, K., & Ramzan, M. (2024), "Green transformational leadership, environmental strategy, and green innovation: Mediated moderation of knowledge sharing and green absorptive capacity", *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, Vol. 18 No 2, pp. 503-526.
- Moral-Muñoz, J. A., Herrera-Viedma, E., Santisteban-Espejo, A., & Cobo, M. J. (2020), "Software tools for conducting bibliometric analysis in science: An up-to-date review", No.
- Mubeen, M., Arslan, H. M., Ashfaq, K., Nisar, A., Azeem, H., & Riaz, A. (2024), "Bridging the sustainability gap: Unraveling the interplay of sustainability disclosure and cost of debt", *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, Vol. 18 No 1, pp. 181-225.
- Naseer, K., Arshad, S., Arshad, A., & Rehan, M. (2024), "Assessing Sustainability Disclosure Trends in State-Owned Enterprises: A Comprehensive Review", *Sustainable Trends and Business Research*, Vol. 2 No 1, pp. 56-75.
- Salma, U., & Bhuiyan, M. B. U. (2024), "Do advisory directors increase discretionary accruals?", *International Journal of Accounting & Information Management*, Vol. 32 No 2, pp. 345-368.
- Tainio, R., & Virtanen, K. (1996). Governance structures in Finnish corporations. In *Governance Structures* (pp. 51-64): Springer.
- Tsang, A., Wang, K. T., Wu, Y., & Lee, J. (2024), "Nonfinancial corporate social responsibility reporting and firm value: International evidence on the role of financial analysts", *European accounting review*, Vol. 33 No 2, pp. 399-434.
- Vafeas, N. (2005), "Audit committees, boards, and the quality of reported earnings", *Contemporary accounting research*, Vol. 22 No 4, pp. 1093-1122.
- Viju, V. G. W., & Ganesh, V. (2013), "Application of Bradford's Law of Scattering to the Literature of Library & Information Science: A Study of Doctoral Theses Citations Submitted to the Universities of Maharashtra, India", *Library Philosophy and Practice*, Vol. 11 No 4, pp. 1-45.

- Watson, A., Shrivess, P., & Marston, C. (2002), "Voluntary disclosure of accounting ratios in the UK", *The British Accounting Review*, Vol. 34 No 4, pp. 289-313.
- Yaseen, A., Arshad, S., & Al-Hyasat, S. S. M. (2023), "Corporate Environmental Ethics: Catalyst for Green Innovation and Business Performance in Pakistan's Healthcare Manufacturing Sector", *Sustainable Trends and Business Research*, Vol. 1 No 2.
- Yermack, D. (1996), "Higher market valuation of companies with a small board of directors", *Journal of financial economics*, Vol. 40 No 2, pp. 185-211.
- Zennaro, G., Corazza, G., & Zanin, F. (2024), "The effects of integrated reporting quality: a meta-analytic review", *Meditari Accountancy Research*, Vol. 32 No 7, pp. 197-235.