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Primanita Setyono

*Departement of Accounting, Universitas Islam Indonesia, Yogyakarta, Indonesia,  
PhD Student at Faculty of Economics and Business, Universitas Sebelas Maret, Surakarta, Indonesia*  
primanita@uii.ac.id

Bambang Sutopo

*Faculty of Economics and Business, Universitas Sebelas Maret, Surakarta, Indonesia*  
bsutopo@staff.uns.ac.id

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# Board and financial performance: A bibliometric and social network analysis research in Indonesia

Primanita Setyono<sup>1</sup>, Bambang Sutopo<sup>2</sup>

<sup>1</sup>Departement of Accounting, Universitas Islam Indonesia, Yogyakarta, Indonesia,

<sup>1</sup>PhD Student at Faculty of Economics and Business, Universitas Sebelas Maret, Surakarta Indonesia

<sup>2</sup>Faculty of Economics and Business, Universitas Sebelas Maret, Surakarta, Indonesia

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**Corresponding Author:**

[primanita@uii.ac.id](mailto:primanita@uii.ac.id)

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**Abstract**

This study conducts a comprehensive bibliometric analysis examining the relationship between board and financial performance in Indonesia, analyzing 61 Scopus-indexed articles (2011-2025) using VOSviewer software. Employing dual methodology combining bibliometric and social network analysis, the research maps publication trends, key contributors, co-citation networks, and keyword co-occurrence patterns. Findings from Scopus database reveal substantial research growth with 76% of global publications emerging in the last eleven years, though Indonesian research represents only 9.6% globally. Key insights include increased scholarly interest, research concentration in major Indonesian universities; dominance of corporate governance themes; and emerging interest in board diversity, Sharia governance, and environmental performance. This first comprehensive bibliometric study of board-financial performance literature in Indonesian context provides scholars, policymakers, and practitioners systematic understanding of research priorities, influential works, and collaborative networks, enabling strategic research planning and evidence-based governance policy development in emerging markets.

## Introduction

Financial performance represents the systematic evaluation of a company's operational outcomes and strategic effectiveness in fiscal terms (Huang et al., 2022). Corporate governance has emerged as a pivotal research domain in management and finance, particularly following high-profile corporate scandals such as Enron, WorldCom, and the 2008 global financial crisis that underscored the imperative of effective board oversight (Zahra & Pearce II, 1989; Monks & Minow, 2011). Empirical evidence demonstrates that robust corporate governance mechanisms play instrumental roles in enhancing financial performance, with direct relationships observed across both developing and developed financial markets (Beiner et al., 2003; Claessens & Yurtoglu, 2013).

At the heart of corporate governance lies the board of directors, a body entrusted by shareholders to control and manage company matters while safeguarding stakeholder interests (Adams & Ferreira, 2009). The board's effectiveness in fulfilling these responsibilities has become increasingly critical, with mounting evidence suggesting that board characteristics significantly influence organizational outcomes (Dalton et al., 1999). Consequently, understanding the complex relationship between board attributes and firm performance has gained prominence among academics, practitioners, and policymakers seeking to enhance organizational effectiveness, accountability, and long-term value creation (McNulty et al., 2013).

Extensive scholarly inquiry has sought empirical evidence of linkages between boards of directors and firm performance, yielding diverse and sometimes contradictory findings (Hillman & Dalziel, 2003). The conceptualization of board roles and the extent to which boards undertake specific functions has been guided by four dominant theoretical perspectives: legalistic, resource dependence, class hegemony, and agency theory (Zahra & Pearce II, 1989 ; Daily et al., 2003). These complementary perspectives converge in identifying three critical board roles: service, strategy, and control (Zahra & Pearce II, 1989; Hillman & Dalziel, 2003). The service role encompasses providing expert advice and counsel to management (Westphal, 1999), the strategy role involves active participation in strategic decision-making processes (Bakke et al., 2023; Pugliese et al., 2009) and the control role focuses on monitoring managerial behavior to ensure alignment with shareholder interests and organizational objectives (Jensen & Meckling, 1976). Based on this background, this study has three main research questions: 1) How has the volume and trajectory of research on the effect of board attributes on financial performance evolved in the Indonesian context, as reflected in the Scopus-indexed literature (2011-2025)? 2) What is the intellectual structure and social network of the key contributors, institutions, and foundational works (co-citation networks) shaping this research domain in Indonesia? 3) What are the predominant and emerging thematic clusters (keyword co-occurrence patterns) within the Indonesian literature on board-financial performance, and how do they align with or diverge from global research on trends?

This study aims to assess the background, development of current research, and future direction of relation in the field relation between board and financial performance. To achieve these objectives, we explore the published articles on Board and FP from (2011–2024) and attempts to use cited references to analyse/identify: (1) The distribution patterns of papers, (2) Top players: authors, networks, institutions, and journals, and (3) The core articles that influence international literature.

By addressing these objectives, this study contributes to the literature in several ways. First, it provides a comprehensive map of the intellectual structure of research on board characteristics and financial performance, enabling scholars to understand the field's evolution and current state. Second, it identifies influential works, authors, and institutions, highlighting the knowledge focal point and key contributors that have shaped the field. Third, it reveals collaborative networks and knowledge flows, offering insights into how research communities form and interact. Fourth, it identifies research gaps and emerging themes, providing valuable guidance for future research directions. Finally, by documenting the measures and methodologies commonly employed in the field, this study offers practical guidance for researchers designing new empirical investigations.

## **Literature Review**

The literature examining the connection between board characteristics and financial performance has expanded exponentially in recent decades, reflecting growing recognition of corporate governance's importance in determining organizational success (Gordini & Rancati, 2017). Scholars have dedicated substantial effort to exploring how various board attributes including size, composition, independence, diversity (gender, age, nationality, expertise), meeting frequency, and CEO duality affect organizational financial outcomes (Adams & Ferreira, 2009; García-Ramos & Díaz, 2021). Recent research has also examined emerging dimensions such as board interlocks (Mizruchi, 1996; Omer et al., n.d.), and committee structures (Aldamen et al., 2012)

However, despite the proliferation of research in this domain, the field remains substantially fragmented, with studies employing diverse methodologies, theoretical frameworks, contextual settings, and measurement approaches (Bhagat & Bolton, 2009). This fragmentation manifests in several ways: inconsistent operationalization of board characteristics and performance metrics, conflicting empirical findings regarding the direction and magnitude of relationships, varying theoretical lenses applied to similar phenomena, and limited integration across geographical and institutional contexts (Dalton et al., 1999; Terjesen et al., 2016). These challenges make it increasingly difficult for researchers and practitioners to gain a comprehensive, coherent

understanding of current knowledge and to systematically identify critical gaps warranting further investigation (Mcnulty et al., 2013).

While numerous narrative and systematic reviews have attempted to synthesize findings in this area (Daily et al., 2003; Dalton et al., 1999;), there remains an urgent need for systematic, quantitative approaches that can objectively map the intellectual structure of the field, identify influential contributors and seminal works, trace the evolution of research themes over time, reveal collaborative networks among scholars and institutions, and assess the diffusion of theoretical frameworks across different research communities (Zupic & Cater, 2015). Bibliometric analysis and social network analysis (SNA) offer powerful methodologies to address these needs by providing objective, data-driven insights into the patterns, dynamics, and evolution of scholarly communication (Aria & Cuccurullo, 2017).

## Research Method

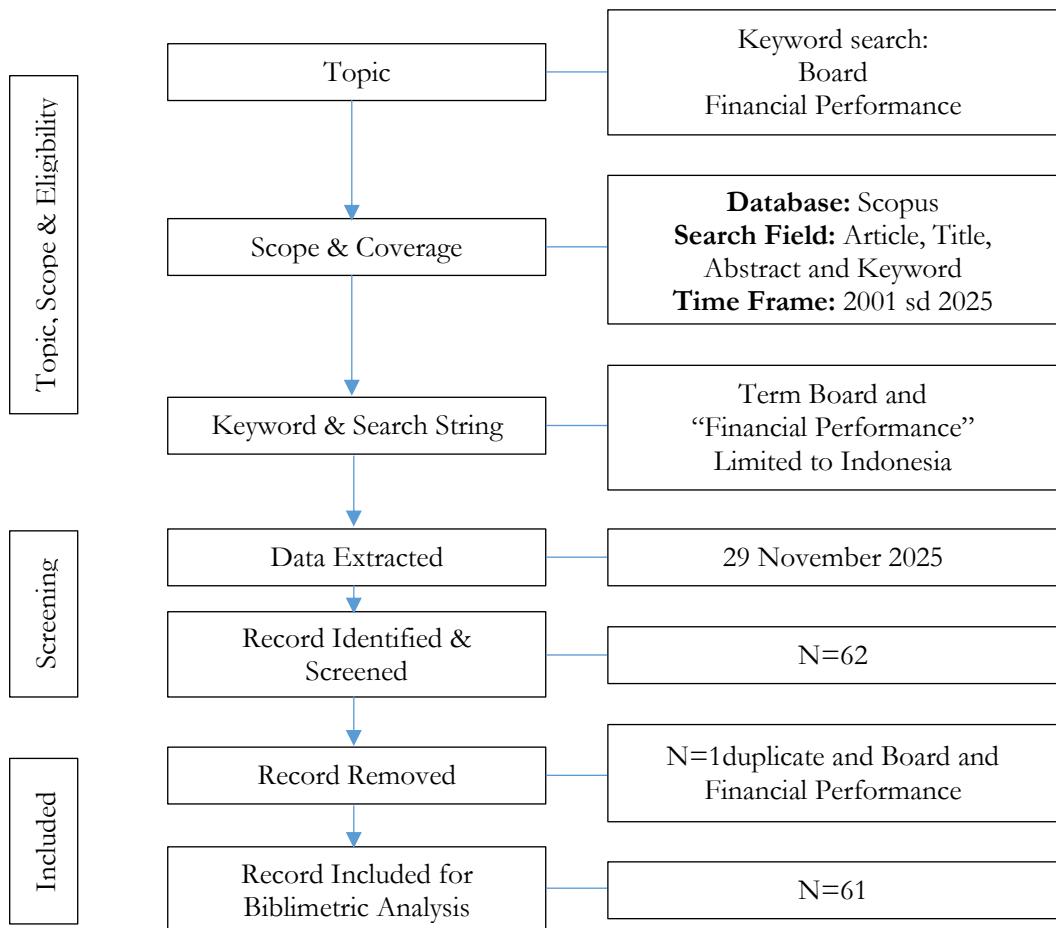
This study uses bibliometric and social network analysis. Bibliometric analysis is a research technique that describes patterns in literature with a specific subject and time using quantitative data (Sarkar & Searcy, 2016). In general, there are two methodological approaches to quantify the flow of information. First, using a whole publication or using its features, such as citations, keywords, author's name, etc. Second, by identifying the links among objects, their networks, and co-occurrences (Cobo et al., 2011). In our research, such techniques are based on direct counts (occurrences) of particular bibliographic items (Cobo et al., 2011) provide the significant characteristics of various representatives (individual researchers, countries, fields, etc.) and research performance as well as its evolution and trends over time. For scientific production, this approach is considered adequate, but it can only be treated as a partial indicator of contributions to knowledge.

The SNA is the second approach used to recognise and classify related nodes of keywords, authors or research institutions to assess associations and collaborations (Pfeffer, 2016). Thus, these procedures identify the relations (co-occurrences) of certain items, such as the number of times that keywords (co-word), citations (co-citation), and authors (co-authorship) are mentioned together in publications in a particular research field. This approach is mainly used to understand the underlying frame of the interrelationships between articles (Cobo et al., 2011). Citations show the relation between the investigation and the work of another author. Thus, citation analysis deals with the links among the citations. On the other hand, co-citation occurs when two or more works (also authors or journals) are cited by another document simultaneously (Small, 1973).

The co-citation strength depends on the number of times that two earlier documents are cited together by a new article. Bibliographic coupling was introduced by Kessler (1963), and it happens when two papers use a reference as a unity of coupling between those two papers. Its strength depends on the number of references the two papers have in common (Egghe & Rousseau, 1990). To achieve a global view of the effect of the boards on FP in the literature, we have used a combination of both techniques (scalar and analytical).

## Data Collection

Research protocol is shown in Figure 1. In line with previous bibliometric and social networks analysis studies we searched the Scopus database using keyword search: board and financial performance. It includes different citation indices in its core collection and we used all indexes from 2011 to 2025 because the first articles in this search appear in 2011. We use Scopus database because it is among the largest curated abstract and citation databases with wide global and regional coverage of scientific journals, conference proceedings, and books, while ensuring only the highest quality data are indexed through rigorous content selection and re-evaluation by an independent Content Selection and Advisory Board (Baas et al., 2020). The journals included in Scopus database undergo rigorous review processes and are recognized for meeting high-quality standards (Zhu & Liu, 2020).

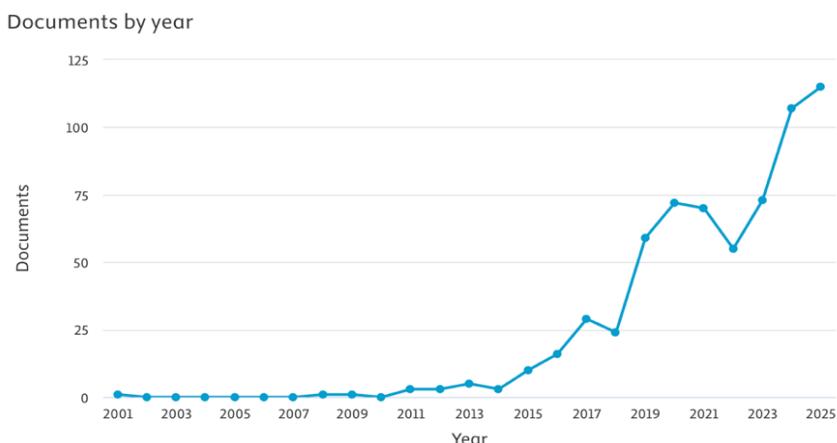


**Figure 1.** Research Protocol

## Results and Discussion

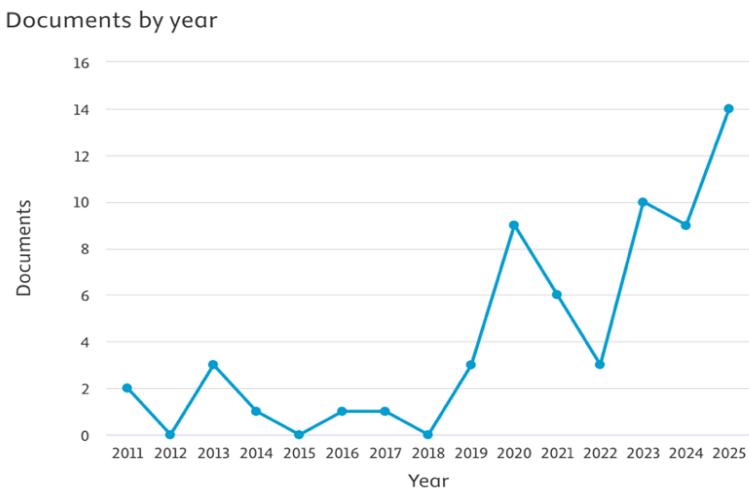
### Trend in Research Publication

We analyzed the trend of publications globally on board and financial performance occur in the period from 2001 to 2025. Figure 2 shows the global publication trend, total 647 articles. There is a massive growth in the last eleven years, which account for 76% of the total publication in this field.



**Figure 2.** Publication Trend (Global)  
Source: Created by the authors based on Scopus.

We then analyzed the trend publication on board and financial performance in Indonesia. The trend of publications started from 2011 and grew until 2025, as shown in figure 3. Total document found are 61 articles. Figure 3 can be split into two period, before 2014 and after. It shows that the interest from researchers is increasing with the rising numbers of publications. Comparing the two figures, publication in Indonesia is around 9,6% (61 of 647) researchers have interest on board and financial performance. Figure 2 shows that the research interest grows from 2014. The increase numbers of publications may due to the expected increase role and quality of the boards. It also reflects the recognition of scholars to field importance, and the publications trend then to continue to grow.

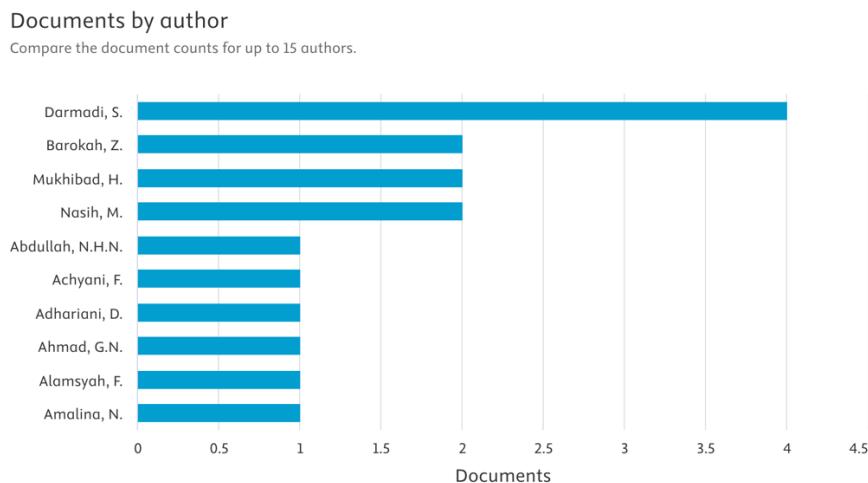


**Figure 3.** Publication Trend (Indonesia).  
Source: Created by the authors based on Scopus database

## Top players: authors, network, institution and journal

### Author

In Indonesia, 175 authors participate and top fifteen authors is listed in Figure 5. The top productive authors come from The Indonesia Financial Services Authority (OJK), Central Jakarta, Indonesia, while three next authors are from institution: Gadjah Mada University, Universitas Negeri Semarang and Universitas Airlangga.



**Figure 5** Top Authors  
Source: Created by the authors based on Scopus database

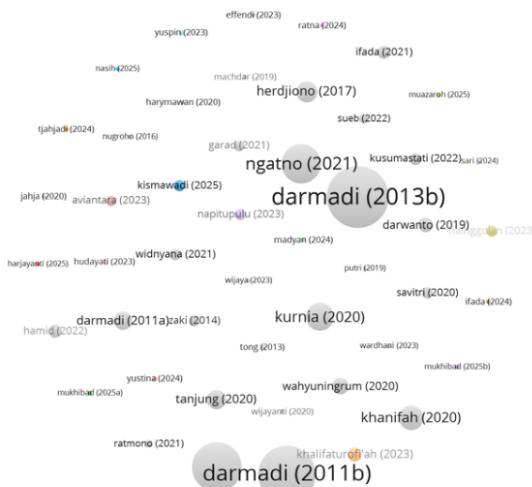
**Table 1.** Authors and Institution

Rank	Authors	Institutions	Doc
1	Darmadi, S	The Indonesian Financial Services Authority (OJK(Central Jakarta, Indonesia	4
2	Barokah, Z	Universitas Gadjah Mada	2
3	Mukhibad, H	Universitas Negeri Semarang	2
4	Nasih, M	Universitas Airlangga	2

Source: Created by the authors based on Scopus database

### Authors co-occurrence

Figure 6 shows the co-occurrence of authors in the context of academic research. The leading author Darmadi have 3 articles, cited most follow by Ngatno published in 2021.



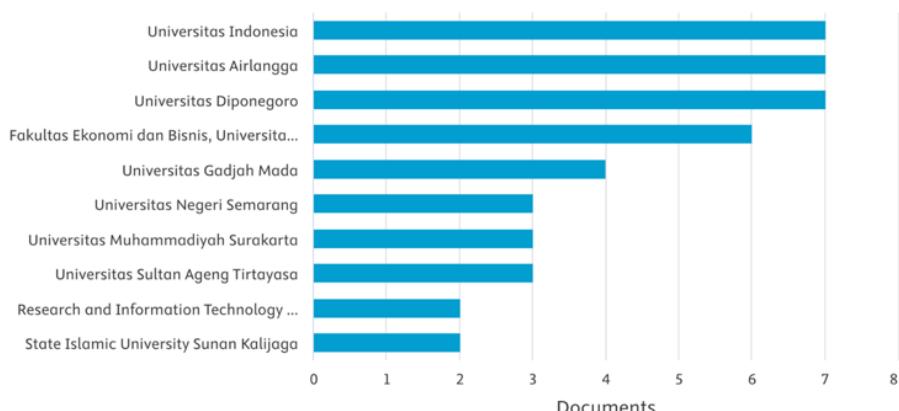
**Figure 6.** Co-occurrence Authors

Source: Created by the authors based on Scopus database using VOSviewers software

### Productive Institution

Figure 7 shows 3 most productive institution, Universitas Indonesia, Universitas Airlangga and Universitas Diponegoro. These institution are public university in Indonesia.

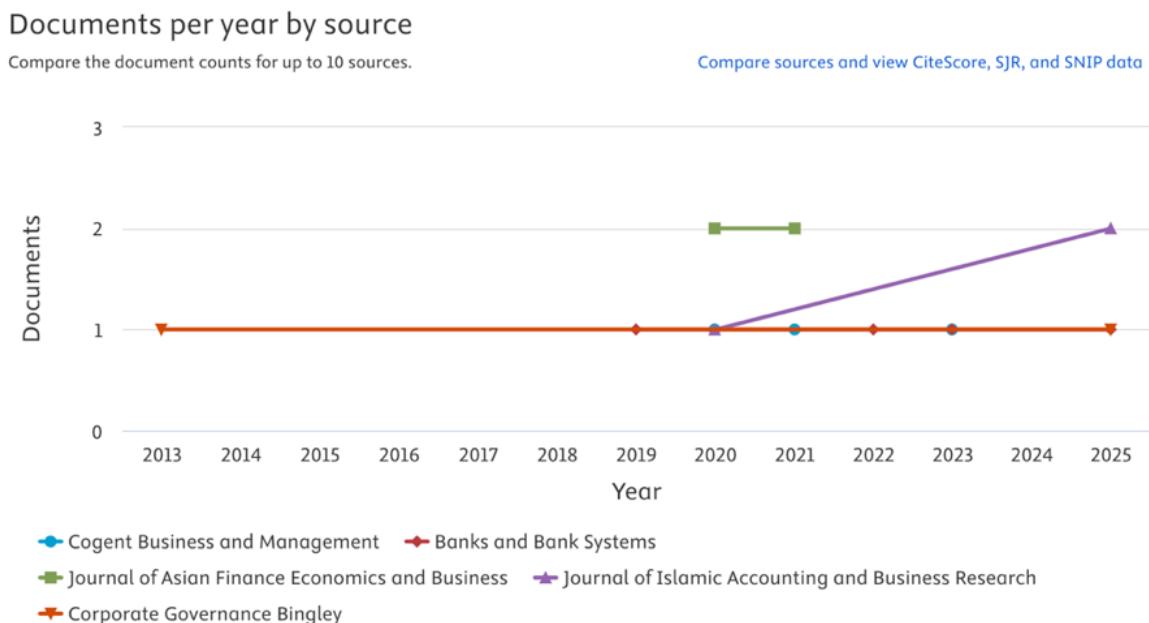
Documents by affiliation  
Compare the document counts for up to 15 affiliations.



**Figure 7.** Most productive institution  
Source: Created by the authors based on Scopus database

## Productive Journals

Figure 8 shows the most productive journals, 61 articles published in 45 journals, the result reflects the low diversity of articles produced in this field. Around 28% (28 of 61) of the articles were concentrated in 11 journals. Two top journals are Journal of Asian Finance Economics and Business, Journal of Islamic Accounting and Business Research. As shown in Table 2, the scope of the most productive journal is Bank and Bank Systems and Journal of Asian Finance Economics and Business.



**Figure 8.** Productive Journals  
Source: Created by the authors based on Scopus database

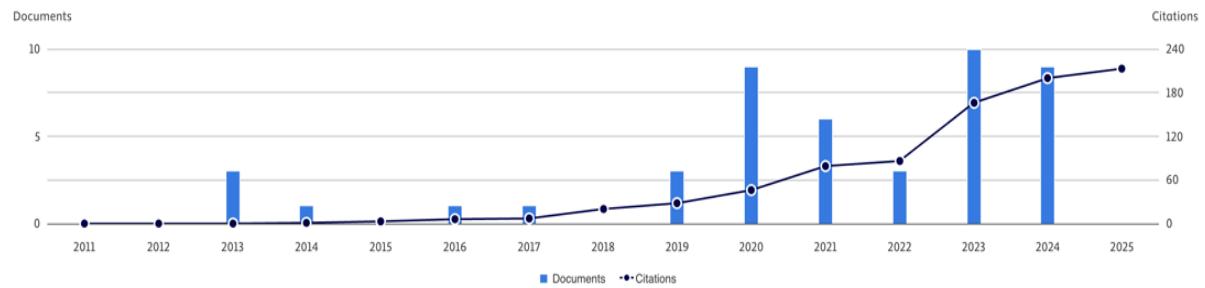
**Table 2.** Most Productive Journals

Journal	Record Count	Scope	% of 61	Q
Journal of Asian Finance Economics and Business	4	Environmental Performance Environmental Disclosure Corporate Governance Related to Financial Performance	6	Q3
Bank and Bank Systems	4	Islamic Corporate Governance to Financial Performance	6	Q2
Cogent Business and Management	3	Corporate Governance, Board of Director to Financial Performance	5	Q2
Journal of Islamic Accounting and Business Research	3	Board Governance, Sustainability activities related to Financial Performance	5	Q2

Source: Created by the authors based on Scopus database

## Core literature in the international literature

Figure 9 shows citation growth per year from 2011 - 2025. Table 3 ranks the 10 most cited articles. 'Do women in top management affect firm performance? Evidence in Indonesia' by Darmadi (2013), which was published in the Research and Information Technology Bureau, Indonesian Capital Market and Financial Institution Supervisory Agency (Bapepam-LK), Jakarta, Indonesia, was the most cited article (140 times) with an average 15 citation per year since 2020.



**Figure 9.** Citation. Source: Created by the authors based on Scopus database

**Table 3.** Rank Cited Article

No	Title	Year	Cited
1	Do woman top management affect firm performance? Evidence from Indonesia	2013	140
2	Board members education and firm performance: evidence from a developing economy.	2013	107
3	Moderating effect if corporate governance mechanism on the relation between capital structure and firm performance.	2021	81
4	Carbon Emission Disclosure, Good Corporate Governance, Financial Performance and Firm Value.	2020	53
5	The effect of corporate governance disclosure on banking performance of accompany. Empirical evidence findings from Indonesia.	2020	44
6	The effect of corporate governance on the performance of accompany. Some empirical findings from Indonesia.	2017	37
7	A cross-firm analysis of corporate governance compliance of a company. Some empirical findings from Indonesia.	2020	32
8	Do environment and financial performance affect environmental disclosure? Evidence from listed companies in Indonesia	2020	28
9	Corporate governance and financial performance in Islamic banks: The role of the sharia supervisory board in multiple-lever management	2019	25
10	Cost efficiency, innovation and financial performance of banks in Indonesia	2023	22

Source: Created by the authors based on Scopus database

### Co-citation

Co-citation analysis is a scientific technique that assume that documents that are frequently cited together are thematically similar (Hjørland, 2013). The analysis can be used to represent the intellectual structure of publications in this field (Rossetto et al., 2018). We analyzed reference that were cited at least 1 time to identify the most influential works that have shaped the field. The resulting co-citation map shows in Figure 11, visually represents the relationships between these core references. The analysis reveals that the intellectual structure of this research area is organized into four clusters, each representing a thematic domain within a broader field.



**Figure 10.** Co-citation (minimum of 1).

Source: Created by the authors based on Scopus database using VOSviewer software.

### Bibliographic coupling analysis of authors

Bibliometric coupling examines the semantic relation between documents by identifying instances where two papers cite a common third document in their references. “The total link strength” indicated the aggregate strength of connections between documents, based on shared references.

Figure 11 represents 10 authors in the broad and financial performance research based on The highest link strength, which are Savitri (2020), Nainggolan (2023).

**Create Map**

**Verify selected documents**

Selected	Document	Citations	Total link strength
<input checked="" type="checkbox"/>	kusumastati (2022)	19	3
<input checked="" type="checkbox"/>	nainggolan (2023)	18	5
<input checked="" type="checkbox"/>	savitri (2020)	17	5
<input checked="" type="checkbox"/>	kismawadi (2025)	17	4
<input checked="" type="checkbox"/>	widnyana (2021)	17	3
<input checked="" type="checkbox"/>	zaki (2014)	17	1
<input checked="" type="checkbox"/>	napitupulu (2023)	17	0
<input checked="" type="checkbox"/>	aviantara (2023)	16	0
<input checked="" type="checkbox"/>	garad (2021)	16	0
<input checked="" type="checkbox"/>	sueb (2022)	14	4
<input checked="" type="checkbox"/>	ratmono (2021)	12	0
<input checked="" type="checkbox"/>	hudayati (2023)	7	4
<input checked="" type="checkbox"/>	yustina (2024)	7	1
<input checked="" type="checkbox"/>	yuspin (2023)	7	0
<input checked="" type="checkbox"/>	tong (2013)	7	0
<input checked="" type="checkbox"/>	wijayanti (2020)	6	4
<input checked="" type="checkbox"/>	harymawan (2020)	6	2
<input checked="" type="checkbox"/>	ifada (2024)	6	1
<input checked="" type="checkbox"/>	tjahjadi (2024)	5	9
<input checked="" type="checkbox"/>	machdar (2019)	5	3
<input checked="" type="checkbox"/>	madyan (2024)	4	3
<input checked="" type="checkbox"/>	iahia (2020)	4	2

< Back    Next >    **Finish**    Cancel

**Figure 11.** Bibliographic Coupling (minimum of 10).

Source: Created by the authors based on Scopus databases using VOSviewer software.

Figure 12 shows the bibliometric coupling of the top authors in board and financial performance research. The node size indicates the productivity of the authors in terms of number documents. The thickness indicates their link strength with other authors. Darmadi has the highest productivity, has overlaps research with salina, while barokah and zuni has overlapping research areas.



**Figure 12.** Bibliographic Coupling (minimum of 1).

Source: Created by the authors based on Scopus database using VOSviewer software

### Most relevant topics in the literature

After processing the database, Table 4 and Table 5 shows the most frequent keywords with 4 times more than the field of Financial Performance and Corporate Governance. We notice that Board of Commissioners keyword frequency also occurs. Figure 13 and Figure 14 shows where financial performance and corporate governance appeared to be highly uses among the researchers in their publications. Figure 15 shows the co-occurrence of keywords in the content of academic research. The visualization represents topics recent studies, and can be suggestion area topics that can gain momentum in future.

**Table 4.** Keyword frequency

No	Keyword	Count
1	Financial Performance	21
2	Corporate Governance	19
3	Indonesia	9
4	Firm Performance	6
5	Audit Committee	6
6	Board of Commissioners	5
7	Sharia Supervisory Board	4
8	Performance	4
9	Governance	4
10	Carbon Emission Disclosure	4
11	Board of Directors	4
12	Islamic Banks	3
13	Good Corporate Governance	3
14	Environmental Performance	3
15	Corporate Financial Performance	3
16	Board Diversity	3

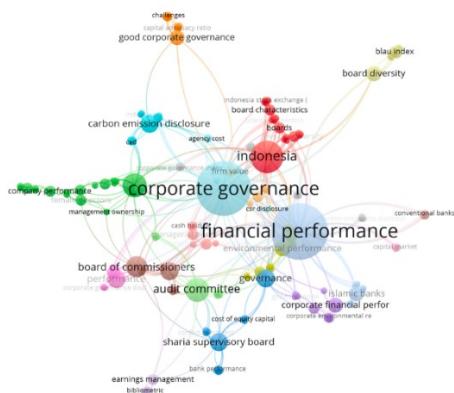
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Source: Created by the authors based on Scopus database

**Table 5.** Keyword co-occurrence

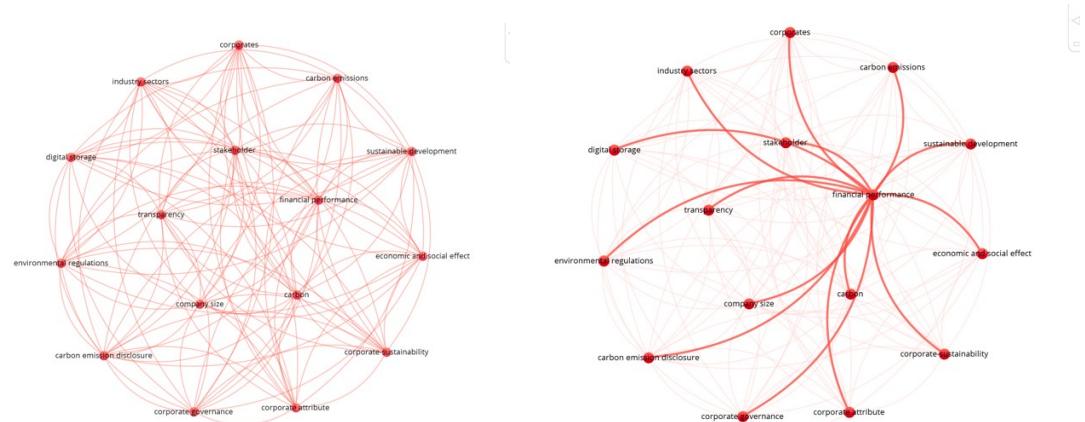
No	Keyword	Count
1	Financial Performance	26
2	Corporate Governance	23
3	Indonesia	14
4	Board of Commissioners	11
5	Audit Committee	8
6	Board of Directors	7
7	Firm Performance	6
8	Board Diversity	6
9	Sharia Supervisory Board	5
10	Performance	5
11	Governance	4
12	Carbon Emission Disclosure	4
13	Environmental Performance	4
14	Islamic Banks	3
15	Good Corporate Governance	2
16	Corporate Financial Performance	2

Source: Created by the authors based on Scopus database.



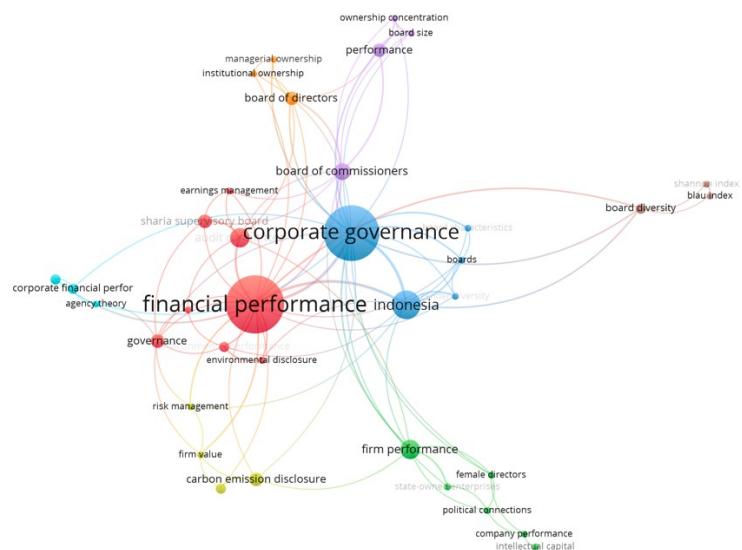
**Figure 13.** Word cloud of the author’s keyword showing the most common used keyword board and “financial performance”.

Source: Created by the authors based on Scopus database using VOSviewer software



**Figure 14.** Keyword analysis per index

Source: Created by the authors based on Scopus database using VOSviewer software



**Figure 15.** Keyword co-occurrence.

Source: Created by the authors based on Scopus database using VOSviewer software.

## Conclusion

This bibliometric and social network analysis provides a comprehensive mapping of the research landscape. It analyzed the relationship between board characteristics and financial performance from 2011 to 2025. Through the systematic analysis of 61 Scopus-indexed articles using VOSviewer software, this study reveals several important insights about the field's intellectual structure and evolution. The findings demonstrate a significant growth trend in publications, with 76% of the total output emerging in the last eleven years, indicating increasing scholarly interest in understanding how board attributes influence organizational financial outcomes, though Indonesian research represents only 9.6% (61 articles) of global output, indicating significant room for expansion. The upward trajectory reflects growing scholarly recognition of board governance importance in Indonesia's emerging market context, likely driven by regulatory reforms and increased emphasis on corporate governance standards following the establishment of Indonesia's Financial Services Authority (OJK). The analysis identifies a concentrated network of key contributors and institutions shaping Indonesian research in this domain. The intellectual structure reveals Darmadi (Indonesian Financial Services Authority) as the most prolific and influential author with four publications and 140 citations for the seminal work on women in top

management. The research ecosystem is anchored in three major public universities, Universitas Indonesia, Universitas Airlangga, and Universitas Diponegoro demonstrating research concentration in established academic institutions. Co-citation analysis reveals four distinct thematic clusters representing the intellectual foundation of the field, with foundational works by Darmadi (2013) on gender diversity and board member education serving as pivotal references. The social network analysis demonstrates relatively limited international collaboration, with most co-authorship networks remaining within Indonesian institutional boundaries, suggesting opportunities for enhanced global research partnerships. From keyword co-occurrence analysis identifies financial performance (26 occurrences) and corporate governance (23 occurrences) as dominant themes, with Board of Commissioners (11 occurrences), audit committees (8 occurrences), and board of directors (7 occurrences) emerging as primary board attributes examined. Notably, Indonesian research exhibits distinctive thematic characteristics that both align with and diverge from global patterns. Convergent themes include board diversity (6 occurrences) and general corporate governance mechanisms, reflecting universal governance concerns. However, Indonesian research demonstrates unique contextual emphases including Sharia Supervisory Boards (5 occurrences) reflecting the prominence of Islamic banking, Board of Commissioners rather than the Western board structure terminology, and emerging interest in environmental performance and carbon emission disclosure (4 occurrences each) indicating alignment with global sustainability trends. The thematic landscape reveals growing attention to context-specific governance mechanisms while maintaining engagement with mainstream international corporate governance discourse.

These findings provide scholars, practitioners, and policymakers with systematic understanding of research priorities, influential works, and collaborative networks in Indonesian board-financial performance research. The combination of bibliometric and social network methodologies proves particularly valuable in providing objective, data-driven insights into scholarly communication patterns specific to Indonesia's emerging market context. Moving forward, researchers are encouraged to address identified gaps including expanding international collaborations, deepening investigations into Indonesia-specific governance mechanisms such as dual board systems and Sharia governance, and exploring how board effectiveness differs in family-controlled firms and state-owned enterprises that dominate Indonesia's corporate landscape. This study ultimately serves as a foundational resource for understanding the current state of knowledge and provides clear directions for advancing theoretical and empirical investigations in this crucial area of corporate governance within Indonesia's unique institutional environment.

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