

***The impact of sustainable practices on the financial performance of stocks in IPOs:
A literature review***

**O impacto das práticas sustentáveis na performance financeira das ações em
IPOs: Uma revisão da literatura**

***El impacto de las prácticas sostenibles en el desempeño financiero de las acciones
en las IPOs: Una revisión de la literatura***

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Abstract: *There is a growing interest from society, markets, and academia in understanding the impact of sustainable practices on companies' financial performance. However, the analysis of this relationship—in an initial public offering (IPO) process—is still in its early stages. Nevertheless, research conducted to date suggests an investigation of existing literature, as well as the proposition of future avenues on the subject. Therefore, this study aims to perform a bibliometric analysis and systematic review on the impact of sustainable practices on the financial performance of shares—in an IPO process. Both analyses are carried out using the ten steps proposed by the Bibliometric-Systematic Literature Review (BSLR) methodology. The articles in the sample are obtained from the Web of Science and Scopus databases. As a result, there is confirmation of Bradford and Lotka's bibliometric laws, identification of keywords, patterns of collaboration between countries and researchers, as well as the most prominent journals. Furthermore, the (sub)categorization matrix points to the main aspects already analyzed and presents gaps for future investigations regarding theories, econometric models, proxies for (in)dependent variables, types and origin of the analyzed data, as well as the main results obtained on the investigated topic. Beyond academia, companies, regulators, and governments benefit from the results of this research in guiding investment decisions, as well as in defining sustainable policies as a means of stimulating the health of capital markets.*

Keywords: *Sustainable practices. IPO. Literature review.*

Resumo: Há um interesse crescente da sociedade, mercados e academia sobre a compreensão do impacto das práticas sustentáveis na performance financeira das companhias. Todavia, a análise dessa relação - num processo de oferta pública inicial (IPO) - ainda é incipiente. Não obstante a isso, as pesquisas realizadas até então sugerem uma investigação sobre a literatura existente, assim como uma proposição de avenidas futuras sobre o tema. Assim sendo, este estudo tem como objetivo realizar uma análise bibliométrica e revisão sistemática sobre o impacto das práticas sustentáveis na performance financeira das ações - num processo de IPO. Ambas as análises se dão por meio dos dez passos propostos pela metodologia Bibliometric-Systematic Literature Review (BSLR). Os artigos da amostra são obtidos a partir das bases da Web of Science e Scopus. Como resultado, há a confirmação das leis

bibliométricas de Bradford e Lotka, identificação de palavras-chave, padrões de colaboração entre países e pesquisadores, bem como de periódicos que mais se destacam. Ademais, a matriz de (sub) categorização aponta para os principais aspectos já analisados e apresenta lacunas de investigações futuras sobre teorias, modelos econométricos, *proxies* de variáveis (in)dependentes, tipos e origem dos dados analisados, bem como os principais resultados obtidos sobre o tema investigado. Além da academia, empresas, reguladores e governos se beneficiam dos resultados desta pesquisa no direcionamento de decisões de investimento, assim como na definição de políticas sustentáveis como meio de estimular a hígidez dos mercados de capitais.

Palavras-Chave: Práticas sustentáveis. IPO. Revisão da literatura

Resumen: Existe un creciente interés de la sociedad, los mercados y la academia por comprender el impacto de las prácticas sostenibles en el desempeño financiero de las empresas. Sin embargo, el análisis de esta relación, en un proceso de oferta pública inicial (IPO), aún se encuentra en sus etapas iniciales. No obstante, la investigación realizada hasta la fecha sugiere una indagación de la literatura existente, así como la propuesta de futuras vías sobre el tema. Por lo tanto, este estudio tiene como objetivo realizar un análisis bibliométrico y una revisión sistemática sobre el impacto de las prácticas sostenibles en el desempeño financiero de las acciones, en un proceso de IPO. Ambos análisis se llevan a cabo utilizando los diez pasos propuestos por la metodología Bibliometric-Systematic Literature Review (BSLR). Los artículos de la muestra se obtienen de las bases de datos Web of Science y Scopus. Como resultado, existe una confirmación de las leyes bibliométricas de Bradford y Lotka, identificación de palabras clave, patrones de colaboración entre países e investigadores, así como las revistas más destacadas. Además, la matriz de (sub)categorización señala los principales aspectos ya analizados y presenta lagunas para futuras investigaciones en cuanto a teorías, modelos econométricos, indicadores indirectos de variables (in)dependientes, tipos y origen de los datos analizados, así como los principales resultados obtenidos sobre el tema investigado. Más allá del ámbito académico, empresas, reguladores y gobiernos se benefician de los resultados de esta investigación para orientar sus decisiones de inversión y definir políticas sostenibles que impulsen la salud de los mercados de capitales.

Palabras Clave: Prácticas sostenibles. IPO. Revisión bibliográfica.

Introduction

Corporate sustainability has become increasingly relevant in academia and global financial markets. Awareness of environmental, social, and governance (ESG) issues has also attracted significant interest from investors and regulators. In the context of initial public offerings (IPOs), the relationship between these practices and stock financial performance has sparked an important debate that remains embryonic in academic literature. Financial performance is defined here as stock returns in market value across various time horizons (very short, short, and long term) (Cleverley *et al.*, 2025).

According to Chen *et al.* (2023) and Kang *et al.* (2022), transparency in ESG disclosures helps mitigate underpricing, defined as the discount measured by the difference between the closing price on the first trading day and the IPO offer price. This view is shared by Ferri *et al.* (2023) and Harasheh (2022), who argue that effective communication about climate risks and robust governance policies are crucial for accurate stock pricing and short-term investor confidence. Cleverley *et al.* (2025), in turn, suggest that well-communicated sustainable practices foster both immediate investor confidence and long-term corporate financial sustainability.

Studies indicate that adopting sustainable practices can reduce information asymmetry and, consequently, stock underpricing. Harasheh (2022) examines whether ESG factors influence investor decisions before the IPO. Chen *et al.* (2023) highlight that climate change disclosure improves the informational environment during the IPO process, leading to lower underpricing. Similarly, Kang *et al.* (2022) reinforce the importance of transparency in environmental

information for investor valuation.

Furthermore, Mehmood *et al.* (2024) examine the effects of macroeconomic instability on IPO performance. Ferri *et al.* (2023) and Economidou *et al.* (2022) examine how the market perceives sustainability disclosures during the IPO. Finally, Meng *et al.* (2024) and Wang *et al.* (2022) emphasize the relationship between green innovation and IPO returns, emphasizing the growing importance of sustainable approaches in stock pricing.

The diversity of topics and findings across these studies warrants a structured investigation of literature to understand its principal characteristics. Accordingly, this study aims to conduct a bibliometric analysis and a systematic literature review of the impact of sustainable practices on stock financial performance during the IPO process. The purpose is to provide a comprehensive overview of this body of research, identify knowledge gaps, and propose a future research agenda on the subject.

The research questions guiding this study are: 1. What is the evolution of academic output on this topic? 2. What are the collaboration patterns among the main countries represented in the analyzed sample? 3. Which journals exert the greatest influence on this research topic? 4. What are the primary theories underpinning the hypotheses of these studies? 5. What are the main econometric methods employed in these studies? 6. What are the key characteristics of the samples considered in these studies? 7. What are the most frequently observed effects of adopting sustainable practices on stock prices during the going-public process?

To this end, a sample of 33 articles retrieved from the Scopus and Web of Science databases, covering the period from 2008 to May 21, 2025, is analyzed. In addition to the aforementioned objectives, the study examines the main bibliometric laws, Lotka's Law (1926) and Bradford's Law (1934). The distinctive contribution of this study lies in combining bibliometric analysis with a systematic literature review on an under-investigated topic: the relationship between sustainable practices and stock behavior during the IPO process.

In other words, this study goes beyond a descriptive account of publication metrics for the articles in the final sample. It distinguishes itself by synthesizing findings associated with the concepts discussed within each analytical (sub)category, highlighting evolutionary trends and identifying gaps for future investigation. Both the science mapping component and the performance analysis of the examined constructs add value to academic research by advancing domain knowledge of relevant topics, theories, and methodologies and clarifying which factors warrant further investigation and how they interrelate (Donthu *et al.*, 2021; Mukherjee *et al.*, 2022).

The findings contribute to the literature by offering a comprehensive review and identifying new research opportunities concerning the relationship between sustainable practices and stock returns during the going-public process. For firms, the study highlights the importance of sustainable practices and supports the development of ESG strategies. For market participants, it helps investors make more informed decisions by positioning sustainability as a relevant factor in the IPO process. For regulators and governments, the study points to the need for policies that incentivize transparent disclosure of sustainable practices. For society at large, it raises awareness of the importance of corporate sustainability and its impact on financial markets.

Theoretical framework

According to Wang *et al.* (2022), sustainable practices are the actions and strategies firms adopt to minimize their environmental impact, promote social justice, and ensure transparent and

ethical governance. Tuo *et al.* (2023) complement this perspective by arguing that these actions and strategies are communicated through specialized reports and that the ecological awareness of capital markets is a fundamental element in building a national green financial system. Accordingly, corporate sustainability, with a focus on ESG practices, has become a central theme in both academia and global financial markets.

In the context of IPOs, such practices may include the disclosure of sustainability reports, the implementation of corporate social responsibility (CSR) policies, and the adoption of green technologies (Tuo *et al.*, 2023). Meng *et al.* (2024) emphasize that sustainable practices, particularly green innovation, are crucial to the going-public process. They reduce information asymmetry between investors and firms, resulting in lower underpricing and fairer equity valuations. Moreover, the adoption of these practices enhances corporate reputation and attracts institutional investors who value sustainability commitments, thereby fostering superior financial performance and greater stock market efficiency.

An IPO is the process through which a private company offers its shares to the general public for the first time, enabling it to be listed on a stock exchange. This event grants the firm access to a new source of capital to fund growth and future projects, while also increasing its market visibility and credibility. However, the IPO process entails significant challenges, including compliance with stringent regulatory requirements and financial transparency standards, which expose the firm to heightened public scrutiny. Additionally, equity pricing during an IPO is a complex undertaking that must balance capital maximization with investor attractiveness (Wang *et al.*, 2022; Meng *et al.*, 2024).

In this study, financial performance is measured by stock returns based on market value across three horizons: very short, short, and long term. In the very short term, the most used metric is underpricing, which captures the discount in the stock price on the first day of trading (Ritter, 1984). It is calculated as the difference between the stock price 24 hours after trading begins and the initial offer price set in the investment bank's prospectus, representing a capital gain for investors. Ibbotson (1975) pioneered the study of this phenomenon on the New York Stock Exchange, documenting an average underpricing of 11.4% between 1960 and 1969. Subsequent studies, including Beatty and Ritter (1986), Grinblatt and Hwang (1989), and Ritter and Welch (2002), confirm the persistence of underpricing.

Regarding short-term stock performance, studies examine event windows extending up to approximately twenty trading days. These analyses are conducted using event studies designed to identify the impact of the IPO on abnormal returns, cumulative or otherwise, of the equities under examination. Such metrics assess the difference between an asset's actual return and its expected return over a given period, and the direction and magnitude of this impact may help confirm or reject the semi-strong form of the market efficiency hypothesis (Fama, 1970).

Finally, according to Dang (2023), long-term performance refers to an asset's financial return over an extended horizon, typically ranging from one to five years, enabling a more comprehensive assessment of return trends and sustainability. In the context of IPOs, this performance is often benchmarked against industry peers and broader market indices, offering insight into how the firm performs relative to comparable companies after its initial listing. Long-term analysis shows that initial overvaluation can undermine investor confidence and, consequently, future stock performance.

Methodological framework

This study aims to analyze the existing academic literature on the relationship between the

adoption of sustainable practices and the financial performance of stocks during the IPO process, using bibliometric analysis and a systematic literature review. To this end, the ten steps proposed by the Bibliometric-Systematic Literature Review (B-SLR) guidelines of Marzi *et al.* (2025) are followed.

Step 1: Defining research questions and study boundaries through a preliminary literature review.

Step 2: Defining search keywords for the selected databases.

Step 3: Selection of databases. Articles are retrieved from the Web of Science (WoS) and Scopus.

Step 4: Selection and verification of articles, including database merging and removal of duplicate records using R software (see Table 1).

Step 5: Data cleaning and export, applying the established inclusion and exclusion criteria (see Table 1).

Table 1 – Sample selection

Sign	Description	Number of articles	
		WoS	Scopus
(+)	Initial sample retrieved using keywords in the title, abstract, and keyword fields: IPO and underpricing and ESG, OR IPO and underpricing and sustain*, OR IPO and underpricing and “corporate social responsibility,” OR IPO and underpricing and “climate change,” OR IPO and underpricing and green, OR IPO and performance and ESG, OR IPO and performance and sustain*, OR IPO and performance and “corporate social responsibility,” OR IPO and performance and “climate change,” OR IPO and performance and green.	129	109
(-)	Document types other than “article” and “review article.”	10	16
(-)	Subject areas outside the scope of: a) WoS: Business economics b) Scopus: i. Business management and accounting, ii, Economics, econometrics and finance	35	24
(=)	Subtotal	84	69
(-)	Removal of duplicate articles between WoS and Scopus.		54
(=)	Total intermediate sample		99
(-)	Articles where the full text was unavailable.		18
(-)	Articles where dependent variables are not proxies for firm financial performance during an IPO (a).		19
(-)	Articles where independent variables are not proxies for sustainable practices (b).		29
(=)	Total final sample		33

Source: Prepared by the authors.

Notes: (a) These articles used dependent variables that proxied for capital structure, bankruptcy risk, earnings management, IPO withdrawal probability, or audit quality. (b) These articles used independent variables that proxied for macroeconomic uncertainty factors, monetary policy, or underwriting quality.

Step 6 – Bibliometric analysis of the final article sample using the Biblioshiny software package, including verification of two foundational bibliometric laws: (i) Bradford’s Law (1934) for journal productivity, and (ii) Lotka’s Law (1926) to identify the most prolific authors in the defined field.

Step 7 – Full reading of all articles in the final sample to define the analytical (sub)categories (see Table 2).

Step 8 – Organization and coding of articles according to the defined (sub)categories. A single article may be coded into up to three subcategories within each category; consequently, the cumulative frequency of classifications may exceed 100%.

Step 9 – Systematic literature review through critical synthesis of existing knowledge, laying the groundwork for as-yet-unexplored research questions.

Step 10 – Development of theoretical contributions by integrating findings to generate new insights or extend existing conceptual models. To this end, subcategory frequencies and their least-frequent combinations are examined to identify knowledge gaps.

Table 2 – **Categorization matrix**

Categories	Subcategories	Description
1. Main topic	A. Impact of climate change disclosure on stock financial performance during IPOs	Examines the effect of climate change factors on stock financial performance during an IPO
	B. Impact of environmental disclosure on stock financial performance during IPOs	Examines the effect of environmental disclosures on stock financial performance during an IPO
	C. Impact of sustainability disclosure on stock financial performance during IPOs	Examines the effect of ESG or CSR disclosures on stock financial performance during an IPO
	D. Impact of country-level SDG compliance on stock financial performance during IPOs	Examines how national progress toward the United Nations Sustainable Development Goals (SDGs) affects stock financial performance during an IPO
	E. Other	Other topics not covered by subcategories 1A through 1D
2. Core theories	A. Agency theory	Firms are viewed as a collection of contracts. Optimal contracts align interests or mitigate conflicts between principals (owners) and agents (managers) (Jensen & Meckling, 1976)
	B. Information asymmetry	One party in a transaction possesses more or better information than the other, causing market inefficiencies and potential adverse selection (Akerlof, 1970)
	C. Signaling theory	Firms convey signals to inform the market and consumers about their actions and the quality of their products and services to mitigate information asymmetry (Spence, 1978)
	D. Market timing	Firms issue new equity when market windows of opportunity open, i.e., when they perceive their shares to be overvalued. Conversely, they repurchase shares when their shares are undervalued (Baker & Wurgler, 2002)
	E. Legitimacy theory	Firms seek to legitimize their actions to society and stakeholders by aligning practices with social norms, values, and expectations. Legitimacy ensures continuous support and survival resources (Suchman, 1995)
	F. Shareholder theory	The theory holds that a firm's primary objective is to maximize shareholder value. Managers have a fiduciary duty to act in shareholders' best interests, focusing on financial returns (Friedman, 1970)
	G. Stakeholder theory	The theory holds that firms must balance the interests of all parties affected by their actions, including employees, customers, suppliers, communities, and shareholders. Effective stakeholder management is crucial to long-term sustainability and success (Freeman, 1984)

	H. Other	Other theories not covered by subcategories 2A through 2G
3. Methods	A. Cross-sectional regression	Observations are collected at a single point in time and are used to analyze relationships across different cross-sectional units (Gujarati, 2019)
	B. Panel data regression	The same cross-sectional units are observed over time, combining spatial and temporal dimensions (Gujarati, 2019)
	C. Logit/Probit regression	Both are non-linear models representing an underlying, unobservable latent variable, proxied by a dummy variable calculating event probability (Gujarati, 2019)
	D. Multilevel regression	Hierarchical data analysis that accounts for variability both within and between groups, allowing predictors at multiple levels (Fávero & Belfiori, 2019)
	E. Event study	Analysis focused on a specific exogenous event and its impact on variables of interest, examining pre- and post-event changes to identify causal and temporal effects (MacKinlay, 1997)
	F. Other	Other methods not covered by subcategories 3A through 3E
4. Dependent variables	A. Underpricing	Underpricing measured by the difference between the first day closing price and the IPO offer price
	B. Short-term performance	Analysis of stock returns post-IPO within a short-term horizon ranging from 1 to 20 trading days
	C. Long-term performance	Analysis of stock returns post-IPO over an extended horizon ranging from 1 to 5 years
	D. Other	Other dependent variables not covered by subcategories 4A through 4C
5. Independent variables	A. Aggregator ESG score	Weighted average score of the three core ESG dimensions
	B. Individual dimension scores (E, S, G)	Individual metric evaluating each of the three ESG pillars independently
	C. Corporate social responsibility (CSR)	Metric assessing voluntary practices aimed at sustainable development and social welfare beyond legal mandates
	D. ESG sub-metric scores	Scores of sub metrics of each of the ESG pillars, such as emissions reduction initiatives, employee turnover, or green patents
	E. Climate change	Scores related to climate change, such as adverse weather, climate shifts, extreme temperatures, or carbon dioxide levels
	F. Other	Other independent variables not covered by subcategories 5A through 5E
6. Data types	A. Market data	Stock prices of firms traded on public exchanges
	B. Corporate ESG scores	Aggregate or individual ESG metrics from specialized databases (e.g., MSCI, Bloomberg, Governance Metrics International [GMI], Refinitiv [LSEG])
	C. Country sustainability metrics	National ESG performance indicators, such as carbon emissions, water resource management, gender equality, corruption indices, and the Human Development Index (HDI)
	D. Financial statements	Accounting metrics derived from the firm's financial statements, such as EBITDA margin, CapEx, ROI, or ROA
	E. Macroeconomic data	Country-level economic indicators, such as GDP, unemployment rates, or the Consumer Price Index (CPI)
	F. Other	Other data types not covered by subcategories 6A through 6E

7. Geographic origin	A. Global	Cross-continental firm datasets
	B. United States and Canada	Dataset of firms operating in North America
	C. Europe	Dataset of European firms
	D. Asia/Oceania	Dataset of firms operating in Asia and Oceania
	E. Latin America	Dataset of Latin American firms
	F. Africa	Dataset of African firms
8. Findings	A. There is a negative relationship between sustainable practices and the financial performance of shares during an IPO.	Higher commitment to sustainability is associated with lower stock financial performance during the IPO
	B. There is a positive relationship between sustainable practices and the financial performance of shares during an IPO.	Higher commitment to sustainability corresponds to superior stock financial performance during the IPO
	C. There is no statistically significant relationship between sustainable practices and the financial performance of shares during an IPO.	Sustainability practices do not significantly affect stock financial performance during the IPO
	D. Others	Findings not covered by subcategories 8A through 8C
9. Future research avenues	A. Analysis of sustainability disclosure authenticity	Investigation into the credibility or potential greenwashing of corporate sustainability disclosures
	B. Studies on corporate sustainability in emerging markets	Impact analysis focused on firms operating within developing economies
	C. Analysis of the countries' institutional quality	Assessment of the moderating role played by country-level institutional quality on corporate sustainable practices
	D. Analysis of the relationship between ESG disclosure and listing duration	Analysis of whether the transparency and sustainability commitments of firms that went public affect the efficiency of the listing process
	E. Analysis of the impact of SPACs on sustainability	Analysis of the impact of Special Purpose Acquisition Companies (SPACs) – created to acquire operating firms and guide them through the going-public listing process – on sustainable practices
	F. Other	Future avenues not covered by subcategories 9A through 9E
	G. Not applicable	No explicit recommendations for future research

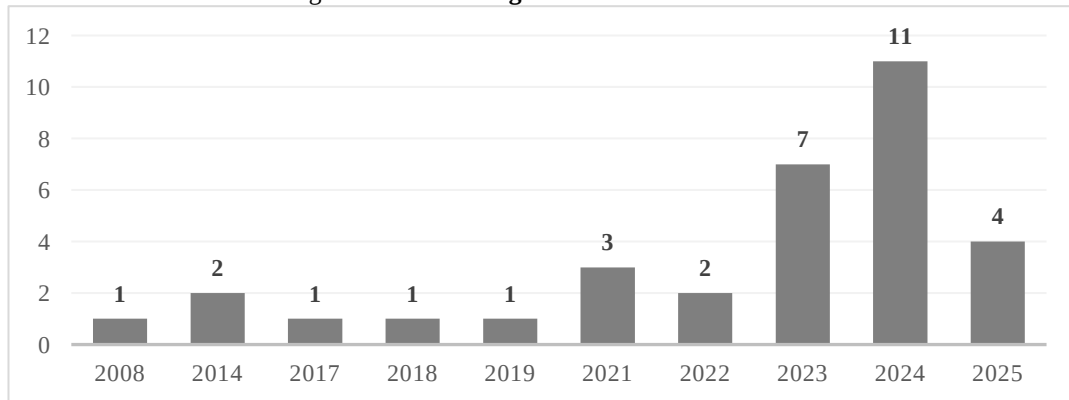
Source: Prepared by the authors

Results and discussion

Bibliometric analysis

Figure 1 illustrates the chronological evolution of the 33 articles comprising the final sample. The earliest article was published in 2008, with a pronounced increase in publications on this topic observable from 2023 onward.

Figure 1 – Chronological evolution of articles



Source: Prepared by the authors

Figure 2 displays the co-occurrence map of primary keywords, with particular prominence given to “corporate social responsibility,” “performance,” and “initial public offerings.” The terms “corporate social responsibility” and “performance” exhibit the highest frequency, suggesting sustained academic interest in examining the impact of corporate social responsibility on firm performance.

Other keywords, such as “initial public offerings” and “financial performance,” also feature prominently but show weaker connections to “corporate social responsibility.” This gap points to a relative scarcity of studies specifically targeting the impact of sustainable practices on the market performance of equities during their IPOs.

Finally, terms such as “disclosure,” “stakeholder theory,” and “impact” are classified as niche themes, representing more specialized research streams that are gaining traction in the literature or are discussed within specific contexts. The growing prominence of these terms signals a broader shift toward integrating sustainable and transparent practices into the analysis of corporate performance.

Figure 2 – Keyword co-occurrence map

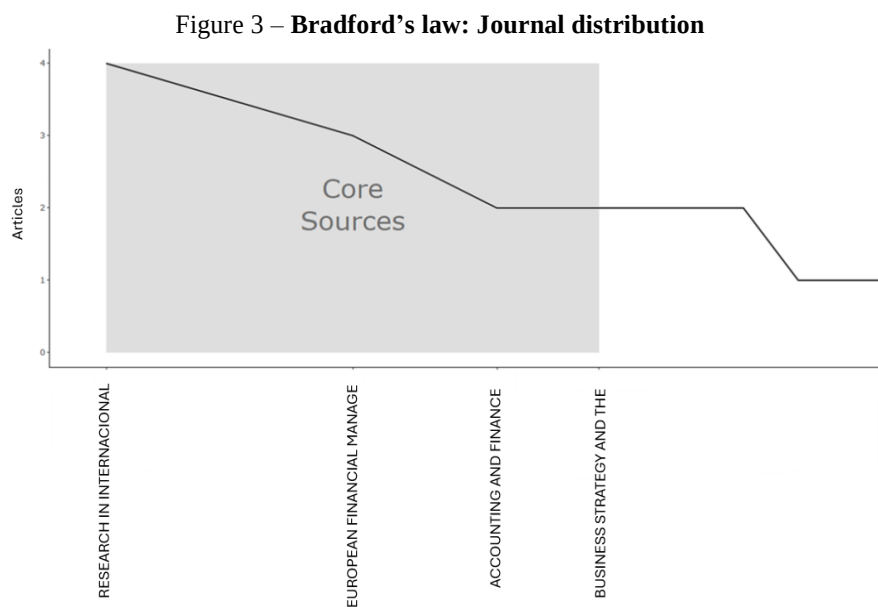


Source: Biblioshiny

Note: Node size reflects keyword frequency in the final sample. Node color indicates keyword clustering based on co-publication relationships.

Bradford's Law (1934) states that a small core of journals accounts for a disproportionate share of publications in a given field, while a large number of peripheral journals contribute relatively few articles each. It thus helps estimate the degree of relevance of academic journals within specific domains of knowledge. When journals are ranked in decreasing order of productivity, they can be grouped into zones following an approximate 1: n: n² ratio. Applying Bradford's Law to the present dataset reveals a distribution across three distinct zones, each with its own concentration profile.

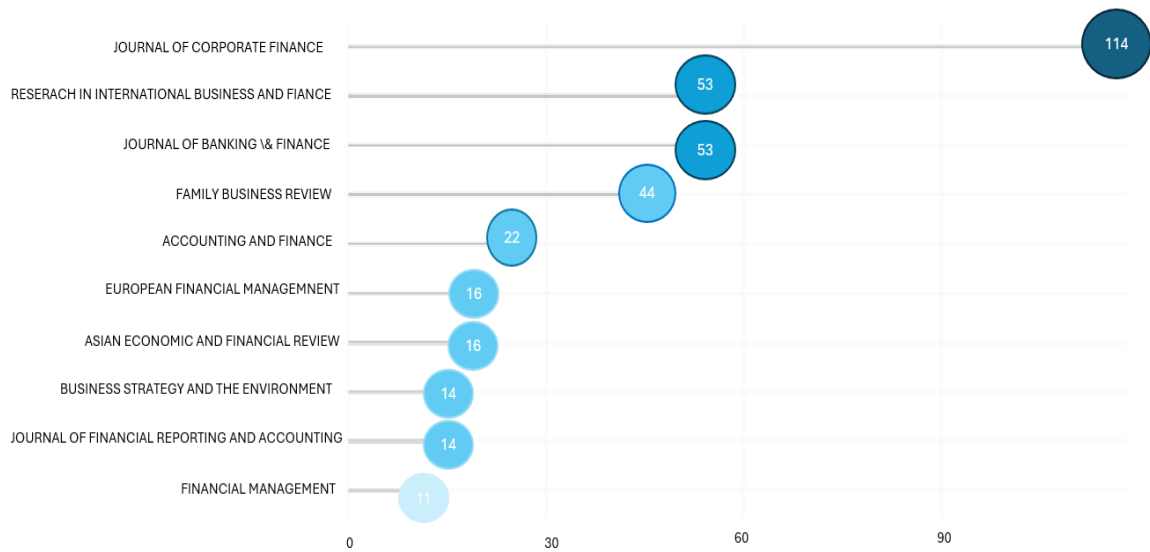
Figure 3 shows that in Zone 1, of 33 articles published across 24 journals, 4 journals (16.67%) account for 11 articles (33.33%). The journals in this core zone are Research in International Business and Finance (4 articles), European Financial Management (3 articles), and Accounting and Finance and Business Strategy and the Environment (2 articles each). Zone 2 shows greater dispersion, with 10 journals (41.67%) accounting for 12 articles (36.36%), averaging 1.2 articles per journal. Zone 3 also comprises 10 journals, each contributing a single article.



Source: Biblioshiny

Figure 4 presents the total citations (TC) per journal. These global citations represent the aggregate number of times articles in the final sample have been cited by other works indexed in the WoS and Scopus databases. The top 10 most-cited journals account for 143 citations in total. Among these, the Journal of Corporate Finance leads with 114 citations, followed by Research in International Business and Finance and the Journal of Banking & Finance, each with 53 citations, and the Family Business Review with 44 citations.

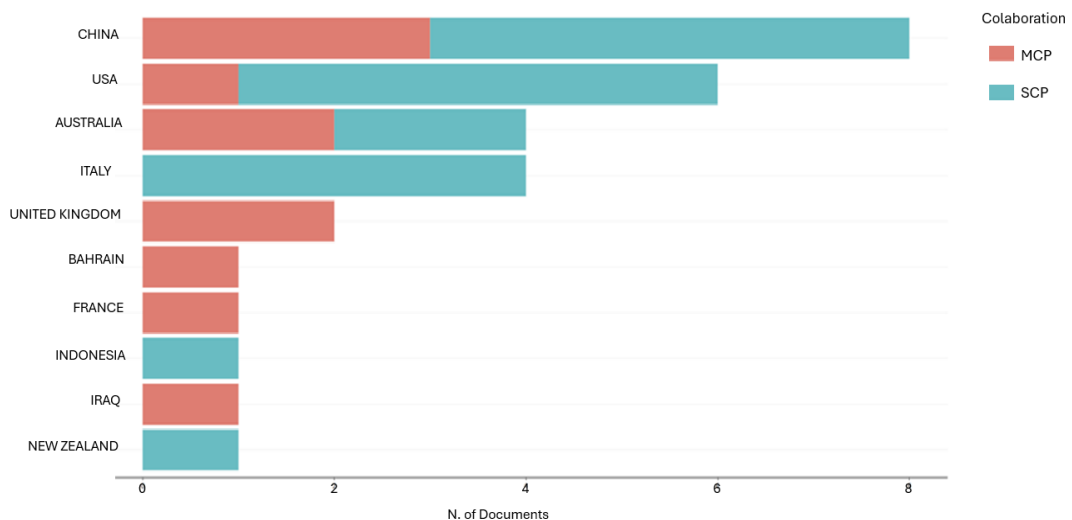
Figure 4 – Total global citations per journal



Source: Biblioshiny

Figure 5 highlights patterns of cross-regional author collaboration. A country's article count is determined by the first author's institutional affiliation. China records the highest volume of publications and the highest level of international co-authorship, as reflected in its multiple-country publications (MCP). Australia and the United Kingdom follow, with the United States, Bahrain, France, and Iraq each contributing one or two articles. Italy, Indonesia, and New Zealand, by contrast, publish exclusively through single-country publications (SCP), with no recorded international co-authorship.

Figure 5 – Country collaboration in article publishing



Source: Biblioshiny

Lotka's Law (1926), also known as the inverse-square law of scientific productivity, holds that a small number of highly productive authors produce a large share of the literature, with

their total output equaling that of all other authors combined. This relationship is expressed in Equation 1:

$$a_n = a_1 / n^2, n = 1, 2, 3 \dots \quad (1)$$

Where:

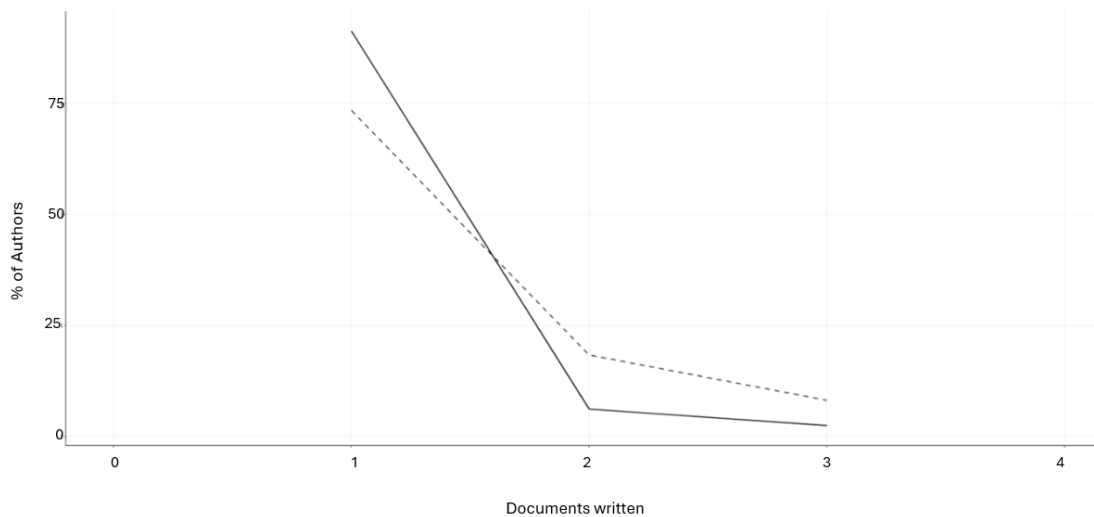
a_n = number of authors publishing n articles; a_1 = number of authors publishing a single article; n = number of articles published per author.

As established by Chung and Cox (1990) in Equation 2, the theoretical baseline proportion of authors with a single publication under Lotka's Law is 60.8%. Authors with two publications should account for 15.2% (60.8%/22), and those with three publications for 6.8% (60.8%/32).

$$a_1 = 6 / \pi^2 = 0.6079 = 60.8\% \quad (2)$$

Figure 6 shows the volume and proportion of articles published by authors in the sample, plotted against the theoretical benchmarks derived from Equation 2. The data confirm Lotka's inverse-square distribution: 2.47% (2/81) of authors published 3 articles on the impact of sustainable practices on IPO stock prices; 6.17% (5/81) published 2 articles; and 91.36% (74/81) published a single article on the subject. This concentration profile is even more skewed than Lotka's theoretical benchmark of 60.8%, indicating that the field remains in an early and highly fragmented stage of scholarly development.

Figure 6 – Lotka's law: Author productivity



Source: Biblioshiny

In summary, despite the recent surge in publications on this topic, research remains heavily concentrated in a limited set of journals, authors, and geographic regions, indicating that the academic debate is still driven by relatively narrow research niches.

Systematic literature review

The systematic literature review aims to identify knowledge gaps within a specific field. In this study, the objective is to develop a research agenda outlining future directions on the impact of sustainable practices on stock financial performance during the IPO process. To this end, Steps 7 through 10 of Section 3 (methodology) are applied. A (sub)categorization matrix was first established (see Table 2), after which all 33 articles in the final sample were read, coded, and classified. Each article could be assigned to up to three subcategories per category. Subcategory frequencies were then calculated, with the least frequent combinations representing potential knowledge gaps. Figure 7 summarizes these results.

Category 1 addresses the primary focus of the studies. The most frequent subcategory (63.64%) is 1C – Analysis of the impact of sustainability disclosure on stock financial performance during IPOs. According to Fu *et al.* (2023), the disclosure of ESG scores signals a higher probability of post-IPO firm survival and superior long-term financial performance. Subcategory 1B – Analysis of the impact of environmental disclosure on stock financial performance during IPOs, appears in 21.21% of the articles, reflecting growing societal concern over the financial consequences of climate change for firms.

Conversely, subcategory 1D – Analysis of the impact of country-level SDG compliance on stock financial performance during IPOs – appears in only 3.03% of the articles. This scarcity points to an opportunity to investigate whether firms operating in countries that actively incentivize SDG alignment experience reduced underpricing. According to Boulton (2024), national progress toward SDG compliance mitigates IPO uncertainty for investors, thereby affecting offer prices, underwriters' reputations and spreads, and offer size, and lowering firms' cost of capital.

Category 2 examines the theoretical foundations underpinning the hypotheses of the sampled studies. The most frequently invoked frameworks are agency theory (2A, 21.21%), information asymmetry (2B, 15.15%), and shareholder theory (2F, 9.09%). Agency theory (2A) suggests that adopting sustainable practices can align the interests of managers and shareholders, leading to superior financial performance and greater investor confidence. The information asymmetry framework (2B) highlights that sustainability disclosures mitigate IPO underpricing. Shareholder theory (2F), in turn, posits that sustainability can function as an intangible asset that enhances corporate reputation and attracts ESG-oriented investors. Economidou *et al.* (2022) reinforce this perspective by confirming that ESG ratings influence investor expectations and stock performance during an IPO.

By contrast, signaling theory (2C) and shareholder theory (2E) are the least frequently cited (3.03% each), and thus warrant further investigation as sources of complementary, under-explored perspectives on the relationship between ESG adoption and post-IPO financial performance. Signaling theory (2C) posits that firms adopting sustainable practices convey a positive signal to the market, which may strengthen investor confidence and improve stock performance both during and after the IPO. Shareholder theory (2E), conversely, frames the adoption of sustainable practices as a transfer of wealth from shareholders to other stakeholders. However, according to Cleverley *et al.* (2025), when green firms undertake an IPO, they tend to align with long-term shareholder value maximization.

Category 3 identifies the primary econometric methods used in literature. Panel data regression (3B, 36.36%) and cross-sectional regression (3A, 21.21%) are the most widely used approaches. By contrast, event studies (3E) are notably underutilized, appearing in only 3.03% of articles, despite being particularly well-suited to analyzing the impact of exogenous events on stock returns. Investigating regulatory changes in sustainability disclosure frameworks, for

instance, represents a compelling gap for future research. The same applies to multilevel regression (3D, 3.03%), which would enable researchers to assess how higher-level hierarchical structures, such as countries or industries, moderate the relationship between sustainable practices and post-IPO stock returns (Datar *et al.*, 2024).

Category 4 presents the primary dependent variables considered in the final sample. Underpricing (4A, 30.30%) is the most extensively investigated metric, reflecting the well-documented tendency for investors to demand an initial discount relative to the firm's true value to compensate for IPO-related uncertainty (Boulton, 2024). However, only 6.06% of the studies examine the impact of sustainable practices on short-term post-IPO stock performance (4B), an analysis that could be effectively conducted via event study methodology (3E), emphasizing the relevance of both elements in a future research agenda.

Category 5 details the main independent variables employed by researchers. The aggregate ESG score (5A) is the most used proxy, appearing in 45.45% of the papers. This concentration highlights an opportunity for studies that employ granular sub-metrics within individual ESG dimensions, such as emissions-reduction initiatives, employee turnover, or green patents (5D, 6.06%). According to Meng *et al.* (2024), the presence of green patents indicates corporate environmental performance, contributes to reduced stock underpricing during an IPO, and leads to consistent environmental practices being viewed favorably by the market, presenting a clear avenue for future inquiry.

Regarding sustainability proxies more broadly, Chen *et al.* (2023) and Ferri *et al.* (2023) highlight the lack of standardization across ESG rating agencies, including MSCI, Bloomberg, Refinitiv, and GMI. They argue, however, that adopting more uniform criteria for measuring sustainability scores would enhance the credibility, comparability, and relevance of the information presented to investors. This issue also intersects with greenwashing risks, which are particularly acute during the going-public process, when firms face strong incentives to signal their sustainability commitments to the market to reduce underpricing and attract capital.

Category 6 addresses the types of data used in the econometric models. The literature draws on a diverse range of information, and the combination of market data, corporate ESG scores, and financial statements (6A, 6B, and 6D together, 21.21%) is the most frequently used configuration, reflecting researchers' interest in assessing the impact of sustainable practices on both market value and accounting performance. In contrast, few studies incorporate country-level data (3.03%), whether sustainability metrics (6C) or macroeconomic indicators (6E) such as GDP, the consumer price index (CPI), or worldwide governance indices. Yet, as Jamaani *et al.* (2024) argue, institutional environments and economic systems exert considerable influence on the strategic decisions of both firms and investors, suggesting that capturing the moderating effects of such macro-level factors could yield valuable insights for future research on this topic.

Category 7 identifies the geographic origin of the data used in the econometric models. In 48.48% of the studies, the datasets consist of firms located in Asia and Oceania (7D). For instance, Dang (2023) examines how offering characteristics and non-financial disclosures shape short-term IPO performance in that region. In contrast, only 15.15% of the articles draw on global datasets spanning multiple continents (7A), a scarcity that points to a significant gap in the literature, particularly regarding potential differences between emerging and developed markets, as well as between bank-based and market-based financial systems.

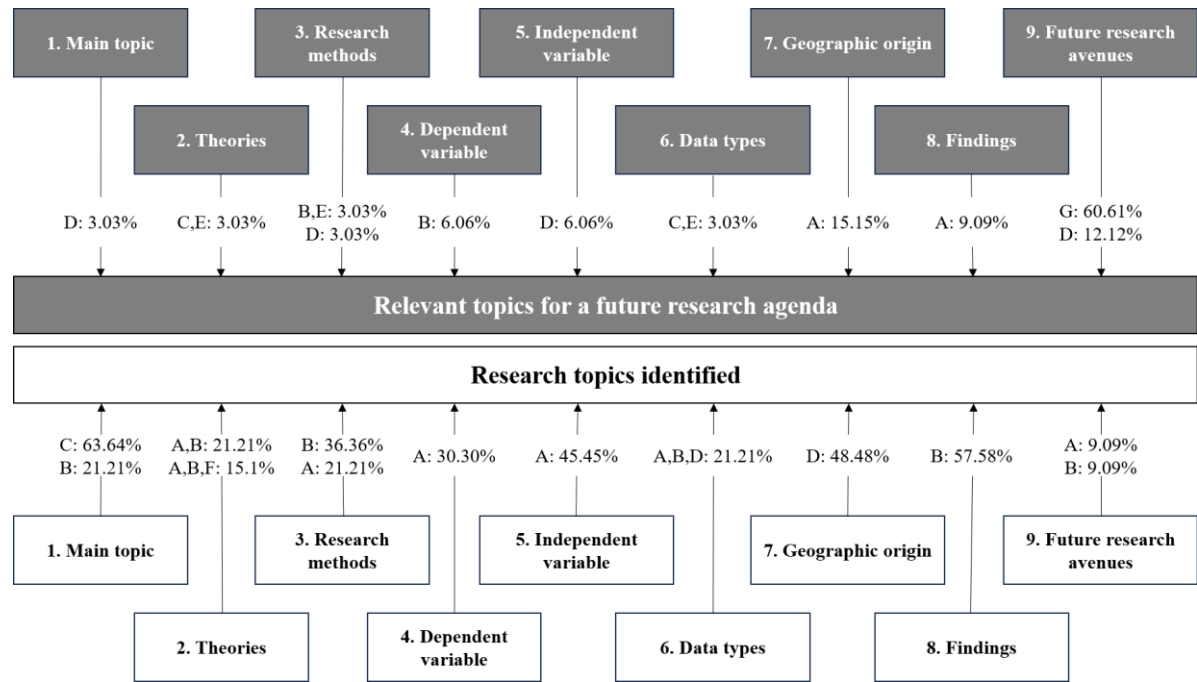
Category 8 examines the principal empirical findings reported across the sample. A majority of the articles (57.58%) document a positive relationship between sustainable practices and the financial performance of stocks during the IPO process (8B), a finding that lends empirical support to agency theory (2A), the information asymmetry framework (2B), and shareholder theory (2F) as discussed under Category 2. Only 9.09% of the studies report a negative relationship (8A). Mumtaz *et al.* (2021), for example, find that green IPOs can underperform in

the long run relative to comparable non-green peers, while Wang *et al.* (2022) emphasize that firms classified as green IPOs continue to face elevated levels of informational uncertainty and structural pricing difficulties.

These divergent findings may reflect heterogeneity in institutional environments across the studies. Markets with robust regulatory oversight, high transparency, and mature ESG disclosure frameworks tend to reduce information asymmetry and facilitate efficient pricing of sustainable practices (Kang *et al.*, 2022; Chen *et al.*, 2023). Discrepancies may also stem from differences in econometric specifications and variable proxies: some studies assess stock performance over the very short term, such as the first trading day, using event studies, while others focus on short- or long-term horizons with various regression approaches. Further variation arises from the use of aggregate ESG scores versus dimension-specific sub-metrics, climate-related indicators, or CSR measures.

Finally, Category 9 examines the future research avenues proposed by the sampled articles themselves. The majority (60.61%) do not explicitly identify such directions (9G). However, 12.12% highlight the importance of analyzing the relationship between ESG disclosure and the duration of the listing process (9D) (Agustina *et al.*, 2025), and 9.09% call for research into the authenticity of sustainability communications, i.e., greenwashing (9A), as well as expanded investigation of corporate sustainability in emerging markets (9B), consistent with the geographic gap identified in the analysis of subcategory 7A.

Figure 7 – Subcategory analysis for identifying knowledge gaps



Source: Prepared by the authors

Note: Subcategories positioned at the top of the figure are those with the lowest frequencies, representing areas open to future investigation, except for Category 9 (Future Research Avenues), for which the highest-frequency subcategories indicate the most suggested directions for a future research agenda.

In sum, the findings indicate that the effects of sustainable practices on the financial performance of IPO stocks are far from homogeneous. These effects depend on country-level institutional quality, the credibility of ESG disclosures, the empirical methods employed, and

the proxies used to measure financial performance and corporate sustainability. Literature, therefore, still lacks comprehensive conceptual frameworks that explain how contextual variables moderate the relationship between corporate sustainability and financial performance during the IPO process.

There is a clear opportunity for future studies to employ standardized, targeted sustainability metrics, such as climate change management practices or board diversity indicators, when analyzing post-IPO equity returns. Such investigations could compare performance dynamics between Global South economies and more developed markets, with a view to identifying the institutional features that underpin and legitimize sustainable policies in the going-public process.

Final considerations

There is growing interest in sustainability across society, markets, and academia. However, the analysis of its relationship to corporate financial performance during the IPO process remains nascent. Nonetheless, the existing literature warrants a structured examination of the principal aspects already investigated, as well as the identification of gaps for future research. To this end, a bibliometric analysis and a systematic literature review were conducted on 33 articles, retrieved from the Web of Science and Scopus databases, published between 2008 and May 21, 2025. The foundational bibliometric laws – Lotka’s Law (1926) and Bradford’s Law (1934 – were also examined.

The research questions addressed both methodologies span. With respect to the bibliometric analysis: 1. What is the evolution of academic output on this topic? The first article was published in 2008; a marked increase in publications is observed in 2023 (7 articles) and 2024 (11 articles). 2. What are the collaboration patterns among the main countries represented in the analyzed sample? China (8 articles) and the United States (6 articles) exhibit the highest publication volumes, with Chinese researchers recording the highest level of international co-authorship (3 multi-country publications). 3. Which journals exert the greatest influence on this research topic? The *Journal of Corporate Finance* and *Research in International Business and Finance* lead with 114 and 53 global citations, respectively.

Both bibliometric laws were confirmed. Bradford’s Law (1934) establishes that a small number of journals account for a disproportionate share of publications: the average number of articles per journal is 2.75 in Zone 1, 1.20 in Zone 2, and 1.00 in Zone 3. Lotka’s Law (1926) likewise confirms that a small number of researchers produce a large share of the articles: 2.47% of authors in the sample published three articles, while 91.36% published only one. With regard to keywords, “corporate social responsibility,” “performance,” and “initial public offerings” are the most frequent, reflecting the field’s central concern with the impact of sustainable practices on financial performance during the going-public process.

The systematic literature review addresses the remaining research questions: 4. What are the primary theories underpinning the hypotheses of these studies? Agency theory, information asymmetry, and shareholder theory are the predominant theoretical frameworks; 5. What are the main econometric methods employed? More than half of the articles use panel or cross-sectional regression models to empirically test their hypotheses; 6. What are the key characteristics of the samples considered? Most articles analyze market and accounting data from firms operating in

Asia and Oceania (48.48%), which limits the generalizability of findings to other regions such as Latin America and Africa, contexts characterized by distinct challenges, including lower financial market maturity, higher information asymmetry, and weaker regulatory oversight. Another common feature is the use of underpricing and aggregate ESG scores as the dependent and independent variables, respectively; 7. What are the most frequently observed impacts of adopting sustainable practices on stock prices during IPOs? Most of the articles (57.58%) report a positive relationship between the two constructs.

The systematic literature review further identifies the following knowledge gaps, each representing a potential avenue for future research: (i) analyzing the impact of SDG compliance on corporate underpricing; (ii) empirically testing shareholder theory as a counterpoint to stakeholder theory; (iii) assessing the short-term financial impact of sustainability through event studies; (iv) incorporating dimension-specific sub-metrics for each ESG pillar; (v) examining the moderating effect of country-level macroeconomic and institutional variables on the relationship between sustainability and financial performance during an IPO; (vi) comparing distinct country groupings – emerging versus developed economies, or bank-based versus market-based financial systems. A combined analysis of regions such as Africa and Latin America alongside the United States and Europe could reveal whether the effects of sustainable practices on financial performance in IPOs remain consistent across different institutional structures and levels of economic development; (vii) investigating the occurrence of greenwashing during the IPO process.

This study contributes to academia by providing a comprehensive overview of the key aspects examined in the existing literature and by identifying themes that warrant deeper investigation. For companies and investors, it clarifies the effects of sustainable practices on financial performance across the very short, short, and long term. For regulators and governments, it underscores the relevance of sustainability-oriented policies as a means of fostering the soundness of capital markets and attracting new investment flows. For the broader public, it raises awareness of the importance of corporate sustainability and its impact on organizational maturity.

One limitation of this study is the use of only two academic databases, WoS and Scopus. Although these are the most widely recognized in the field, other databases may yield different results. Additionally, the study focused on quantitative articles that employed econometric regression models to identify proxies for financial performance and sustainability metrics during the IPO process. Future research could expand the sample to include aspects not covered by the current (sub)categorization matrix, including those pertaining to qualitative study designs.

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