## A Systematic Literature Review of Financial Sustainability

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Abstract: This study aims to examine the progression of financial sustainability by conducting a systematic literature review. It involves critical evaluations of prior research endeavors and endeavors to pinpoint potential directions for future analyses. The data were analyzed using a qualitative approach, which involved examining 27 articles published between 2013 and 2022. Certain reviews have adopted a quantitative method, primarily focusing on micro-finance institutions and banks, there has been limited discourse on the implementation of financial sustainability in both the private and public sectors. The results of this research offer a thorough examination of the development of financial sustainability over the past decade. The review conducted addresses a gap in the existing literature and acts as a valuable roadmap for future investigations into financial sustainability. This research fills a critical gap in existing literature and lays the groundwork for future investigations. Its implications extend to informing decision-makers, practitioners, and policymakers, emphasizing the need for a holistic approach in comprehending the multifaceted aspects of sustainable financial practices. The value of the study offers a nuanced perspective that bridges a gap in existing literature. The findings contribute to informed decision-making for practitioners, policymakers, and academics, fostering a holistic approach to sustainable financial practices.

Keywords: financial sustainability, measurement of financial sustainability, systematic literature review.

Article info: Received 17 July 2023 | revised 31 October 2023 | accepted 25 March 2024

Recommended citation: Novitasari, N. L. G., Yadnyana, I. K., Gayatri, G., & Putra, I. N. W. A. (2024). A Systematic Literature Review of Financial Sustainability. *Indonesian Journal of Sustainability Accounting and Management*, 8(1), 92–106. https://doi.org/10.28992/ijsam.v8i1.816

## INTRODUCTION

During the United Nations Sustainable Development Summit in December 2015 in New York, the United States, the 17 goals listed in "The 2030 Agenda for Sustainable Development" were formally introduced. Then, a few months later in April 2016, the "Paris Climate Agreement," an international agreement to mitigate climate change and global warming caused by human activity, was successfully ratified. These two agreements are connected, providing a complete and integrated framework for international cooperation to achieve sustainable development goals. The three main pillars of sustainable development—economic, social, and environmental—are focused on accomplishing all of the stated goals (Farisyi et al., 2022).



The United Nations Framework Convention on Climate Change (UNFCCC) has established low-carbon economy criteria and climate-resilient development indicators, and financial institutions are clearly called upon to consistently leverage their financial flows and expertise in accordance with these standards (Kashi & Shah, 2023). Sustainable finance is defined as the application of financial resources to industries or ventures that have a higher propensity to produce and/or sustain favorable effects on the environment, the economy, and/or society (Migliorelli, 2021).

Previous research regarding sustainable finance in the private sector, government, and financial institutions and banks has not been carried out much. Sridhara et al. (2022) notes that research on the characteristics of sustainable finance in developing countries, including political, social and economic aspects, influences sustainability reporting. The research findings of Yu et al. (2022) shows that circular economy practices are positively related to operational and economic performance. A number of previous systematic studies on sustainable financial factors have focused more on developing and developed countries (Dienes et al., 2016). This systematic study integrates various sustainable finance research in the Private, Government, and Financial Institutions and Banks sectors, covering methodology, theory, variables, and variable measurement techniques.

The novelty of this research lies in combining various studies of sustainable finance in the private sector, government, and financial institutions and banks. In contrast, previous research has focused more on developing and developed countries, without comprehensively considering financial sustainability in these sectors. This research not only explores methodologies, metrics, focal areas, variables, and underlying theories, but also connects these findings more holistically to understanding the overall framework of sustainable finance in the context of different sectors. Therefore, the novelty of this research lies in its comprehensive approach to understanding sustainable finance in the Private, Government, and Financial Institutions and Banks sectors.

This research aims to offer a comprehensive overview of the development of financial sustainability from 2013 to 2022, providing insights into its evolution in terms of methodologies, metrics, focal areas, variables, and underlying theories. The objective is to deepen our understanding of this domain and contribute valuable insights for future analyses. The subsequent sections are organized as follows: Section 2 defines the concept of financial sustainability and explores relevant theories, while Section 3 outlines the approach employed for collecting and analyzing research on the subject. Section 4 critically discusses key topics, evaluates existing research, and provides guidelines for future investigations. The findings of this research are summarized in Section 5, serving as the conclusion.

#### **METHODS**

This research used the Systematic Literature Review (SLR) method, which facilitated the identification of existing literature, selection and evaluation of contributions, data analysis, synthesis, and reporting of results to draw meaningful conclusions. Although SLR is commonly used in disciplines dominated by quantitative approaches, it could be adapted to accounting analyses due to the acceptance of both quantitative and qualitative methods within the field (Massaro et al., 2016). The systematic nature of SLR entailed a logical and well-planned structure, contributing to a comprehensive understanding of knowledge development through an extensive review of existing literature (Silverman, 2017). As such, SLR has been widely used in accounting research.

To conduct this research, a systematic review of articles published in peer-reviewed journals indexed in Scopus was performed. The software 'Publish or Perish' was utilized for article searches. Two main phrases, including "sustainability" and "financial sustainability," were employed to track and ensure the alignment of the

article search with the key areas of emphasis. Subsequently, these two criteria were applied to filter and obtain relevant articles. The filtering process aimed to ensure the inclusion of high-quality research for synthesis. After a comprehensive review of all available articles, a total of 27 articles published between 2013 and 2022 were systematically analyzed. The identities of these articles are presented in Table 1.

Table 1 Article Identity

No	Journal Name	Total
1	Journal of Sustainable Development	1
2	International Journal of Social Economics	1
3	Journal of Intellectual Capital	1
4	International Journal of Ethics and Systems	1
5	Journal of Sustainability Science and Management	1
6	European Journal of Business and Management	2
7	Annals of Public and Cooperative Economics	1
8	Enterprise Development and Microfinance	1
9	Asian Journal of Accounting Research.	1
10	Local Government Studies	1
11	Cogent Economics & Finance	1
12	Applied Economics	2
13	Waste Management	1
14	Sustainability	1
15	Accounting, Auditing & Accountability Journal	1
16	European Journal of Operational Research	1
17	Journal of Islamic Accounting and Business Research	1
18	International Journal of Economics and Finance	1
19	International Journal of Sustainability in Higher Education	1
20	Banks and Bank Systems	1
21	Organization Science	1
22	Journal of Management Information and Decision Sciences	1
23	International Journal of Finance & Economics	1
24	Cogent Business & Management	1
25	Sustainable Economic Growth, Education Excellence, and Innovation Management	1
	Total	27

Source: data processed (2023)

To identify and analyze the data, this research adopted a categorization approach where data served as the unit of analysis. Categorization is a valuable technique for mapping and critically examining the collected data. Various clustering classifications were explored for coding to enhance the clarity of the coding analysis scheme. Subsequently, the scheme was tested on a sample of articles and iteratively refined to obtain the final cluster version, as described by Massaro et al. (2016). The clustering results are presented in Table 2.

#### Table 2 Systematic Literature Review Criteria

## A Research Type

Cluster Description: Identification of the research methodology

**Coding Categories:** 

- 1. Paradigm
  - a. Qualitative
  - b. Quantitative
  - c. Mixed methods

#### B Research Context

Cluster Description: Identification of the research context

Coding Categories:

- 2. Sector
  - a. Private
  - b. Government
  - c. Financial Institutions and Banks

#### C Theory

Cluster Description: Identification of the research theories

Coding Categories:

- 3. Theory
  - a. RBV Theory
  - b. Theory of Intellectual Capital
  - c. Institutional theory
  - d. Stakeholder theory
  - e. Theory of the firm
  - f. Agency theory
  - g. Goal setting theory
  - h. Other theories

#### **D** Variables

Cluster Description: Identification of the types of research variables

- 4. Variables Used
  - a. Dependent variables
  - b. Independent variables
  - c. Control variables
  - d. Mediating variables

## E Measurement

Cluster Description: Identifying Financial Sustainability measurements

- 5. Measurement
  - a. OSS
  - b. FSS
  - c. Others

#### RESULTS AND DISCUSSION

Figure 1 delineates the dynamic landscape of published articles on financial sustainability spanning the years 2013 to 2022. Notably, 2013 saw the emergence of this discourse with a modest count of 3 articles, while 2018 marked a zenith with 6 publications. Conversely, 2015 and 2022 experienced a nadir, each contributing only 1 article to the corpus. Despite occasional dips, the overarching trend underscores a burgeoning interest among researchers in the realm of financial sustainability. The discernible ascent in publication rates, particularly in the peak year of 2018, hints at a field ripe with research opportunities. These fluctuations not only shed light on the ebb and flow of scholarly output but also beckon further investigation into the factors steering this evolving landscape. As the data suggests, the modest numbers should not be misconstrued as a lack of interest; rather, they signify a field with untapped potential and a call for deeper exploration in the years to come.

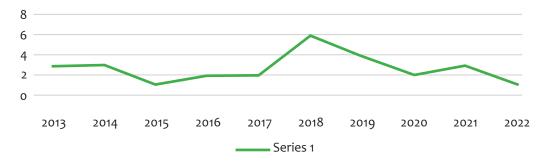


Figure 1 Development of the Number of Financial Sustainability Articles Each Year

In Figure 2, a comprehensive snapshot of financial sustainability research emerges through the analysis of 27 carefully chosen articles using the previously outlined methodology. The figure delineates the diverse paradigms employed in this body of research. Notably, a predominant reliance on quantitative methodologies is evident, with 25 out of the 27 selected articles adopting this approach. This underscores the prevalence of quantitative analysis as a primary tool in investigating financial sustainability. In contrast, only one article each employed qualitative and mixed methods, indicating a lesser but still noteworthy presence of alternative research paradigms. This breakdown offers valuable insights into the methodological landscape of financial sustainability research, showcasing a clear inclination toward quantitative approaches while acknowledging the significance of qualitative and mixed-methods contributions within this domain.

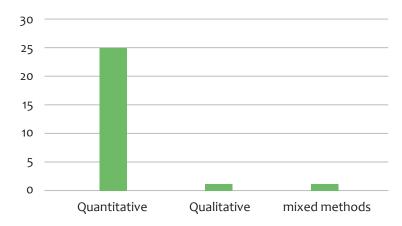


Figure 2 Research Paradigms

Table 3 explains the sectors that were examined in the context of financial sustainability research.

**Table 3 Research Sectors** 

No.	Research Sector	Total
1	Private organization (listed and privately held)	3
2	Microfinance Institutions	17
3	Commercial Banks	2
4	Universities	1
5	Government	4
	Total	27

Source: data processed (2023)

Table 3 delineates the distribution of research attention devoted to financial sustainability across various sectors. Notably, microfinance institutions emerge as the focal point of considerable research interest, with a substantial 17 articles dedicated to this sector. In contrast, the distribution of attention across other sectors is more modest, with only 1 article focusing on the private sector (listed organization), 2 articles on the private sector (privately held organization), 2 articles on commercial banks, 1 article on universities, and 4 articles on the government sector.

These findings underscore a pronounced emphasis on microfinance institutions within the realm of financial sustainability research. However, they also highlight a noticeable gap in the distribution of research attention, signaling a potential avenue for future exploration. Addressing this gap calls for increased scrutiny of financial sustainability issues within the private sector (both listed and privately held organizations), commercial banks, universities, and the government sector. Diversifying research endeavors to encompass these sectors could provide a more comprehensive understanding of financial sustainability across various organizational and institutional contexts. This insight is pivotal for guiding future research initiatives and fostering a more holistic understanding of financial sustainability dynamics. Table 4 provides an overview of the number of theories used in financial sustainability research.

**Table 4 Research Theories** 

No.	Theory	Total	Percentage
1	RBV Theory	1	4%
2	The neoclassical theory of the firm	1	4%
3	Theory intellectual capital	1	4%
4	Institutional theory	2	7%
5	Stakeholder theory	10	37%
6	Theory of the firm	1	4%
7	Agency theory	1	4%
8	Packing order theory	3	11%

9	Signaling theory	1	4%
10	Stewardship theory	2	7%
11	Agency theory and life cycle theory	1	4%
12	The welfarist theory and the institutional theory	1	4%
13	Goal setting theory, agency theory, institutional theory, and fiscal illusion theory	1	4%
14	Organizational theory and institutional theory	1	4%
	Total	27	100%

Source: data processed (2023)

Table 5 presents a breakdown of the theories used in financial sustainability research.

**Table 5 Theories Used by Authors** 

Theory	Authors
RBV Theory	(Dave et al., 2013)
The neoclassical theory of the firm	(Marwa & Aziakpono, 2015)
Theory of intellectual capital	(Jordão & de Almeida, 2017)
Institutional theory	(Said et al., 2019); (Navarro-Galera et al., 2016)
Stakeholder theory	(Rifai et al., 2019); (Chikalipah, 2017); (Quayes, 2012); (Bartolacci et al., 2018); (Tehulu, 2013); (Piot-Lepetit & Nzongang, 2014); (Sulaiman & Zakari, 2019); (Rahman & Mazlan, 2014); (Meher & Getaneh, 2019); (Leite et al., 2019)
Theory of the firm	(Chenuos et al., 2014)
Agency theory	(Tehulu, 2022)
Packing order theory	(Li et al., 2022); (Alshubiri, 2021); (Zabolotnyy & Wasilewski, 2019)
Signaling theory	(Ali & Oudat, 2021)
Stewardship theory	(Uchenna et al., 2017); (Kim, 2018)
Agency theory and life cycle theory	(Bayai & Ikhide, 2016)
The welfarist theory and the institutional theory	(Githaiga, 2022)
Goal setting theory, agency theory, institutional theory and fiscal illusion theory	(Rodríguez Bolívar et al., 2018)
Organizational theory and Institutional theory	(Wry & Zhao, 2018)

Source: data processed (2023)

Table 6 provides a comprehensive overview of the measures utilized to assess financial sustainability within the context of the research examined. The analysis reveals that the most frequently employed measurement is Operating Self Sufficiency (OSS), prominently featured in 8 articles. Following closely, Financial Self Sufficiency (FSS) is the second most common measure, appearing in 6 articles. These findings underscore the prevalence and significance of OSS and FSS as primary metrics for evaluating financial sustainability (Rosenberg, 2009).

The prominence of OSS and FSS in the literature suggests a consensus among researchers regarding the efficacy and relevance of these measures in capturing essential aspects of financial sustainability across diverse contexts. Acknowledging these widely adopted metrics is crucial for establishing a common framework in financial sustainability research and facilitating meaningful comparisons across studies.

**Table 6 Financial Sustainability Measurements** 

No.	Measurement	Total
1	Operating Self Sufficiency (OSS)	8
2	Financial Self Sufficiency (FSS)	6
3	OSS and FSS	3
4	ROA	4
5	ROA, ROE, financial stability	1
6	Endogenous growth indicators, involved indicators of efficiency, involved financial expenditure indicators	1
7	Equity balances, administrative costs, revenue concentration, operating margin	1
8	Adjusted income statement.	1
9	EBITDA, NPM, ROA, ROE	1

Source: data processed (2023)

Furthermore, this analysis identifies the number of dependent variables associated with financial sustainability. Table 7 presents the names and frequencies of these variables.

Table 7 Number of Dependent Variables in Each Research

Dependent Variables	Frequency
0	0
1	12
2	3
3	3
4	2
5	2
6	2
7	2
8	1
Total	27

Source: data processed (2023)

Table 8 provides an overview of variables used in financial sustainability research, categorized as independent, control, and mediating variables.

**Table 8 Names of Financial Sustainability Variables** 

No.	Variable Name	Independent	Control	Mediating
1	Gross margin	1		
2	Marketing performance	1		
3	Teknologi preformance	1		
4	Technical efficiency	1		
5	ROA	3		
6	Size	3	2	
7	Deposit mobilization	1		
8	Operating efficiently	2		1
9	Macro and micro economic factors	1		
10	ROE	1		
11	Portfolio yield	1		
12	Operating Expense Ratio	2		
13	Gross loan portfolio to asset ratio	2		
14	Corporate governance	1		
15	Financial structure	2		
16	Age	1	1	
17	Deposits	1		
18	Average loan size	1		
19	Cost per borrower	2		
20	Portfolio at risk	2		
21	Revenue diversification	3		
22	Depth of outreach	1	2	
23	Breadth of outreach	2		
24	Leverage	2	1	
25	Collaborative leadership	1		
26	Profitability	2	1	
27	Debt ratio	3		
28	Operational sustainability	1		
29	Average loan per borrower	1		
30	Total Equity	1		
31	Total Expense Ratio	1		
32	The waste disposal tax	1		
33	Management inefficiency	1		
34	Market capitalization	1		

35         Productivity         1           36         Interest coverage         1           37         Retained earnings         1           38         Mayor's gender         1           39         Training profile         1           40         Political competition         1           41         Herfindahl indeks         1           42         Political fragmentation         1           43         Political ideology         1           44         Regional goverment         1           45         Poverty outreach         1           46         Government expediture on education         1           47         Economic stability         1           48         Degree of openness         1           49         Social Outreach         1           50         Lending risk         1           51         Cross domestic product         1           52         Accounting information system         1           53         Net income growth         1           54         Liquidity risk         1           55         Asset quality         1           56         Net interest risk					
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62 Board independence 1 63 Gender diversity 1	60	Staff turnover rate		1	
63 Gender diversity 1	61	Credit expansion	1		
	62	Board independence	1		
64 Board size 1	63	Gender diversity	1		
	64	Board size	1		

Source: data processed (2023)

Table 8 systematically outlines the incorporation of size, operating efficiency, age, and profitability as variables in financial sustainability research across various studies. The diverse treatment of these variables underscores the complexity and multifaceted nature of the investigations. Marwa & Aziakpono (2015), Tehulu (2013), and Alshubiri (2021) employed size as an independent variable in their research, focusing on its direct impact. Conversely, Leite et al. (2019) and Githaiga (2022) used size as a control variable, suggesting its role in moderating or influencing other factors in the context of financial sustainability. Said et al. (2019) and Zabolotnyy & Wasilewski (2019) treated operating efficiency as an independent variable, suggesting it as a key factor influencing financial sustainability.

Wry & Zhao (2018) took a different approach by considering operating efficiency as a mediating variable, indicating its role in mediating the relationship between other variables and financial sustainability. Chikalipah (2017) utilized age as an independent variable, indicating its direct impact on financial sustainability. Meanwhile, Leite et al. (2019) regarded age as a control variable, suggesting its potential influence on other factors being studied. The treatment of profitability varied across studies, with some considering it as an independent variable, highlighting its direct impact on financial sustainability. In other cases, profitability was used as a moderating variable, indicating its potential role in influencing the strength or direction of relationships between other variables and financial sustainability.

This comprehensive breakdown of variable usage provides a nuanced understanding of how different dimensions contribute to financial sustainability research. The varying roles assigned to these variables highlight the evolving nature of research methodologies and the need for a tailored approach based on the specific goals of each study.

The significance of this research lies in the rich insights it offers into the intricate landscape of financial sustainability research. The systematic breakdown presented in Table 8 not only highlights the incorporation of key variables—size, operating efficiency, age, and profitability—but also underscores the diverse ways in which researchers conceptualize and utilize these variables in their investigations. the significance of this research lies in its ability to unravel the intricate and evolving nature of financial sustainability investigations. The nuanced understanding derived from the varying roles assigned to these key variables emphasizes the need for tailored methodologies, reflecting the unique goals and contexts of each study. This comprehensive breakdown not only enriches our understanding of financial sustainability but also provides a roadmap for future research endeavors in this dynamic field.

The systematic breakdown in Table 8 adds significant value to the existing knowledge bank on financial sustainability research by offering a detailed understanding of how key variables—size, operating efficiency, age, and profitability—are employed across various studies. The recognition of diverse approaches, such as the dual treatment of size as both an independent and control variable, underscores the adaptability of researchers in addressing the multifaceted nature of financial sustainability. This analysis provides insights into the evolving methodologies within the field, identifying gaps and suggesting avenues for future exploration. The nuanced understanding of variable usage not only enriches theoretical frameworks but also offers valuable guidance for designing more effective research methodologies tailored to the unique goals and contexts of individual studies. Overall, the breakdown contributes to a deeper comprehension of financial sustainability dynamics, fostering the continued growth and refinement of knowledge in this critical domain.

The review of the 27 articles provides valuable insights into the current landscape of financial sustainability research, revealing both strengths and potential areas for future exploration. Notably, the majority of studies rely on secondary data sources, particularly financial ratios, indicating a prevalent analytical approach. However, a notable gap is identified in the limited use of perspectives from business practitioners, with methods like surveys and interviews being underutilized. Future analyses could benefit from incorporating these methods to gather firsthand insights from leaders and organizational members, thereby enhancing the depth and breadth of understanding regarding the sustainability of businesses.

The examination also highlights the need for continued research attention to this topic, emphasizing the potential for future analyses utilizing both quantitative and qualitative approaches. Despite the existing body of literature, there are identified gaps that warrant further exploration. The review underscores the use of diverse theories, with stakeholder theory being the most employed framework. However, the call for future

research suggests an opportunity to explore financial sustainability through alternative theoretical lenses, such as goal-setting theory and resource-based view (RBV) theory. This diversification in theoretical perspectives can contribute to a richer and more nuanced understanding of financial sustainability, capturing its complexities from various angles. In summary, the review not only sheds light on the current state of financial sustainability research but also provides a roadmap for future investigations. Embracing a more holistic approach that incorporates both practitioner perspectives and alternative theoretical frameworks has the potential to advance the field, offering a more comprehensive understanding of the dynamics and challenges associated with financial sustainability.

## **CONCLUSION**

This research has contributed valuable insights into the evolution of financial sustainability from 2013 to 2022 and has outlined key directions for future analysis. The existing literature review revealed significant progress in understanding financial sustainability, while also highlighting areas for further exploration. Future research endeavors could expand their focus to include diverse sectors like the private sector, government, universities, and commercial banks. Additionally, there is a call for a deeper exploration of variables influencing financial sustainability beyond traditional metrics like Operating Self Sufficiency (OSS) and Financial Self Sufficiency (FSS). The dominance of quantitative methods in the reviewed literature emphasizes the need for a more balanced approach that incorporates qualitative analyses, tapping into the perspectives of business practitioners. This inclusive strategy is crucial for designing effective strategies to achieve financial sustainability within organizations. A comprehensive understanding of financial sustainability requires the integration of diverse research methods that account for the intricate interplay between businesses, society, and the environment. However, it's essential to acknowledge the limitations of this research. The search process was constrained by the choice of keywords and research sources, and future investigations could refine this process by using more specific keywords and accessing comprehensive digital libraries. Additionally, the reliance on Scopus-indexed articles using specific software may have excluded relevant studies from other reputable sources. Recognizing and addressing these limitations will be vital for ensuring the robustness and inclusivity of future research on financial sustainability.

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