International Conference on Rural Development and Entrepreneurship (ICORE 2026)
Proceedings
Vol. 08 Year 2026, 937 – 948

A BIBLIOMETRIC MAPPING OF LOAN LOSS PROVISIONS RESEARCH: LINKING EARNINGS MANAGEMENT, CREDIT RISK, AND THE FUTURE INTEGRATION OF BEHAVIOURAL ACCOUNTING

Achmad Ulin Nuha[1*], Dewi Susilowati[2], Yudha Aryo Sudibyo[3]

[1-3]Department of Accounting, Universitas Jenderal Soedirman, Indonesia

[*]Email corresponding author: ulin.nuha@mhs.unsoed.ac.id

Abstract

This study aims to map the intellectual structure and research trends in loan loss provisions (LLP) through a bibliometric analysis of 581 Scopus-indexed articles from 2016 to 2026. Using VOS-viewer, the study visualizes keyword co-occurrence networks to identify dominant themes, research clusters, and conceptual linkages within the literature. The results indicate that loan loss provisions function as the central node, strongly interconnected with key topics such as earnings management, income smoothing, credit risk, and banking. The network analysis reveals several major research clusters: (1) financial reporting and earnings management, emphasizing discretionary behaviour and accounting quality; (2) credit risk and banking performance, focusing on risk assessment, efficiency, and financial stability; (3) macroeconomic and regulatory dimensions, including IFRS 9, expected credit loss, and economic policy uncertainty; and (4) governance and regulatory frameworks, such as bank supervision, audit quality, and market discipline. Furthermore, the findings demonstrate that prior studies are predominantly quantitative and concentrate on financial and risk-based indicators. Although elements of managerial discretion and behavioural tendencies are implicitly present, they have not been systematically developed within a behavioural accounting framework. This highlights a significant theoretical gap in integrating behavioural accounting perspectives into LLP risk modelling. This study contributes by providing a comprehensive bibliometric overview and proposing future research directions that emphasize integrating behavioural factors into risk modelling frameworks to enhance the accuracy, transparency, and reliability of loan loss provisioning practices.

Keywords: Loan Loss Provisions, Earnings Management, Credit Risk, Bibliometric Analysis, Behavioural Accounting, Banking

INTRODUCTION

Loan Loss Provisions (LLPs) are a critical component of banking operations, as they reflect the estimated potential losses from credit risk. LLP not only serve as a risk management tool but also play a significant role in determining the quality of financial reporting and the stability of financial institutions. In recent years, the importance of LLP has increased, particularly after the implementation of forward-looking standards such as IFRS 9, which require banks to adopt expected credit loss (ECL) models rather than incurred loss approaches (A. Beatty & Liao, 2014; Bushman & Williams, 2013)

From a traditional perspective, LLP determination is largely driven by quantitative risk indicators, including non-performing loans (NPL), credit risk exposure, and macroeconomic conditions (Bikker & Metzemakers, 2005; Laeven & Majnoni, 2003). These models emphasize statistical accuracy and predictive capability, often relying on econometric or machine learning approaches to estimate future credit losses. However, such approaches tend to overlook the role of managerial discretion and behavioural factors in shaping provisioning decisions.

A substantial body of literature highlights that LLPs can be used as tools for earnings management and income smoothing. Studies such as those by (Healy & Wahlen, 1999) and (Ahmed

et al., 1999) demonstrate that managers may adjust LLP to achieve desired financial reporting outcomes, particularly in response to regulatory pressures or market expectations. Similarly, (Leventis et al., 2011) and (Kanagaretnam et al., 2004) find that banks engage in discretionary provisioning practices to smooth income and signal financial stability. These findings indicate that LLP is not purely a technical calculation but also a behavioural outcome influenced by managerial incentives and judgment.

In this context, the perspective of behavioural accounting becomes highly relevant. Behavioural accounting emphasizes how cognitive biases, heuristics, and psychological factors influence accounting decisions and financial reporting processes (Birnberg, 2011). For instance, managerial overconfidence, risk perception, and subjective judgment can significantly affect the estimation of credit losses, particularly under uncertainty (Kahneman & Tversky, 1979; Libby et al., 2002). Despite its relevance, the integration of behavioural accounting into LLP risk modelling remains limited and fragmented.

The rapid development of research in this area is evident from bibliometric data. Based on a dataset of 581 Scopus-indexed articles published between 2016 and 2026, there has been a significant increase in studies examining LLP, particularly in relation to earnings management, credit risk, and regulatory frameworks. Bibliometric network visualization reveals that key themes such as earnings management, income smoothing, and banking dominate the literature, while behavioural dimensions remain underexplored. This suggests that existing research is still heavily grounded in quantitative and financial paradigms, with limited theoretical integration of behavioural perspectives.

Moreover, the adoption of IFRS 9 has increased reliance on forward-looking estimates, thereby increasing managerial judgment and subjectivity in LLP determination (Novotny-Farkas, 2016). This shift further reinforces the need to incorporate behavioural insights into risk modelling frameworks. Without considering behavioural factors, LLP models may fail to capture the true underlying risks and may lead to biased or inconsistent financial reporting outcomes.

Despite the growing body of literature, several research gaps remain. First, there is a lack of comprehensive studies that integrate behavioural accounting variables into LLP risk models. Second, existing studies tend to focus on developed economies, leaving emerging markets relatively underexplored. Third, methodological approaches are predominantly quantitative, with limited use of mixed-method or experimental designs to capture behavioural dynamics. Therefore, this study aims to address these gaps by conducting a bibliometric analysis of LLP research and proposing a conceptual integration of behavioural accounting into risk modelling frameworks. Specifically, this study seeks to: (1) map the intellectual structure and research trends of LLP literature; (2) identify dominant themes and theoretical gaps; and (3) propose future research directions that incorporate behavioural dimensions into LLP modelling.

By bridging the gap between financial risk modelling and behavioural accounting, this study contributes to developing a more comprehensive and realistic framework for understanding loan loss provisions. Such integration is expected to enhance the accuracy, transparency, and reliability of financial reporting, as well as support better decision-making in the banking sector.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Loan Loss Provision (LLP)

Loan Loss Provisions (LLPs) are an essential component of banking operations, as they reflect the estimated potential losses from credit risk. LLP serves not only as a mechanism for risk mitigation but also as an important determinant of financial reporting quality and banking stability. Early studies conceptualize LLP as a function of objective credit risk indicators such as non-performing loans (NPL), loan growth, and macroeconomic conditions (Bikker & Metzemakers, 2005; Laeven & Majnoni, 2003).

The introduction of IFRS 9 has significantly transformed the LLP framework by shifting from an incurred loss model to an expected credit loss (ECL) approach. This transition requires forward-looking estimates and increases reliance on managerial judgment, thereby introducing greater subjectivity into the provisioning process (Novotny-Farkas, 2016). Consequently, LLP is no longer purely a mechanical calculation but also reflects discretionary decision-making.

Earnings Management dan Income Smoothing

A substantial body of literature suggests that LLP is frequently used as a tool for earnings management and income smoothing. Managers may adjust LLP to achieve specific financial reporting objectives, such as stabilizing earnings or meeting regulatory expectations (Healy & Wahlen, 1999).

(Ahmed et al., 1999) provide evidence that banks use LLP for both earnings and capital management. Similarly, (Kanagaretnam et al., 2004) and (Leventis et al., 2011) find that LLP is employed to smooth income and signal financial stability to stakeholders. These findings imply that LLP decisions are not solely driven by risk considerations but are also influenced by managerial incentives and discretionary behaviour.

Risk Modelling in LLP Determination

Risk modelling in LLP determination uses quantitative methods to estimate expected credit losses. Common variables include the probability of default (PD), the loss given default (LGD), the exposure at default (EAD), and macroeconomic indicators such as GDP growth and unemployment rates (A. Beatty & Liao, 2014).

Recent advancements have introduced more sophisticated techniques, including econometric models and machine learning approaches, to improve predictive accuracy. However, these models typically assume rational decision-making and often neglect the influence of behavioural factors. As a result, they may fail to fully capture the complexity of managerial decision-making in LLP estimation.

Behavioural Accounting Perspective

Behavioural Accounting provides a complementary perspective by emphasizing the role of psychological and cognitive factors in accounting decisions. According to (Birnberg, 2011) accounting practices are not purely technical but are shaped by human behaviour and judgment.

Theoretical foundations such as *prospect theory* (Kahneman & Tversky, 1979) suggest that individuals make decisions based on perceived risks rather than objective probabilities. In the context of LLP, managers may exhibit biases such as overconfidence, conservatism, or risk aversion when estimating provisions (Libby et al., 2002). Despite its relevance, the application of behavioural accounting in LLP research remains limited and fragmented.

Banking Regulation and Corporate Governance

Banking regulations and corporate governance mechanisms play a crucial role in shaping LLP practices. The implementation of IFRS 9, regulatory supervision, and audit quality can significantly influence managerial discretion in provisioning decisions (Bushman & Williams, 2013). Empirical evidence suggests that stronger governance structures are associated with more transparent and conservative LLP practices. Conversely, weak regulatory oversight may increase the likelihood of opportunistic behaviour through discretionary provisioning. Therefore, institutional factors are essential in understanding LLP dynamics.

RESEARCH METHODS

Research Design

This study adopts a **bibliometric research design** to systematically analyze the development of research on Loan Loss Provisions (LLP). Bibliometric analysis is widely used to map the intellectual structure of a research field, identify emerging trends, and uncover relationships among key

concepts (Donthu et al., 2021). This approach is particularly suitable for examining large volumes of academic publications and identifying theoretical gaps. The study combines **descriptive bibliometric analysis** and **network visualization analysis** to explore patterns, clusters, and conceptual relationships within LLP research.

Data Collection Method

The data for this study were collected from the Scopus database, widely regarded as one of the most comprehensive sources of peer-reviewed academic publications. The dataset consists of 581 articles published between 2016 and 2026. The data collection process was conducted systematically by using a combination of relevant keywords, including “loan loss provisions,” “earnings management,” “credit risk,” “banking,” and “expected credit loss.” These keywords were applied to the title, abstract, and keyword fields to ensure that the selected articles were highly relevant to the research topic.

To ensure the dataset's quality and relevance, specific inclusion and exclusion criteria were applied. Only peer-reviewed journal articles written in English and directly related to LLP and banking risk were included. Meanwhile, conference papers, book chapters, and unrelated studies were excluded. After applying these criteria, a final dataset of 581 articles was obtained and used for further analysis.

Data Analysis

The data analysis in this study was conducted using bibliometric techniques combined with network visualization analysis. Initially, a descriptive bibliometric analysis was conducted to examine publication trends, keyword frequencies, and the distribution of research themes within the LLP literature. This step provides a comprehensive overview of how research on loan loss provisions has evolved over time, particularly regarding key themes such as earnings management, credit risk, and banking performance.

Furthermore, network visualization analysis was conducted with VOS-viewer to explore relationships among keywords via co-occurrence mapping. In this visualization, each node represents a keyword, the size of the node indicates its frequency, and the links between nodes represent the strength of relationships. The clustering technique groups keywords into thematic areas, highlighting major streams of research such as financial reporting, risk modelling, regulatory frameworks, and governance.

Based on the bibliometric findings and cluster interpretation, this study identifies several critical research gaps in the existing literature. These gaps are derived from the dominance of quantitative approaches, limited behavioural integration, and a lack of interdisciplinary perspectives in LLP research. The identified gaps serve as the foundation for proposing future research directions, particularly in integrating behavioural accounting into risk modelling frameworks.

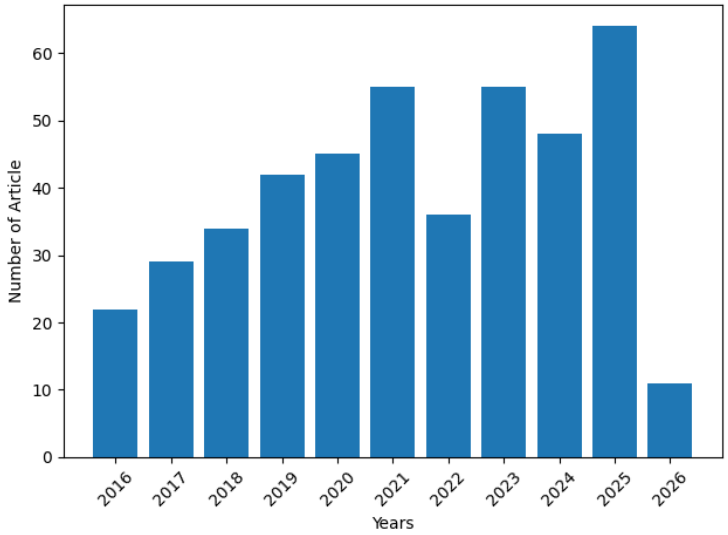


Figure 1. Inflation Rate 2015 – 2024

Figure 1 the distribution of research articles on Loan Loss Provisions (LLP) from 2016 to 2026, showing a general upward trend in publication volume over time. In the early years, the number of articles is relatively low, indicating the research field's initial development phase. A noticeable increase occurs in subsequent years, reflecting growing academic interest, particularly in credit risk, financial reporting, and regulatory changes. The trend continues to rise and stabilizes in recent years, suggesting that LLP research has entered a more mature stage. However, variations across years indicate that research growth is not entirely consistent, highlighting potential research gaps and opportunities for further exploration in underrepresented periods.

Table 1. Evolution of Loan Loss Provision Articles 2016-2026

Year	Publication	Percentage (%)
2016	22	4.99
2017	29	6.58
2018	34	7.71
2019	42	9.52
2020	45	10.20
2021	55	12.47
2022	36	8.16
2023	55	12.47
2024	48	10.88
2025	64	14.51
2026	11	2.49

Source: Results of bibliometric metadata processing (2025)

Table 1 presents the distribution of research publications on Loan Loss Provisions (LLP) from 2016 to 2026, showing a generally increasing trend over time. The number of publications grows steadily from 22 articles (4.99%) in 2016 to a peak of 64 articles (14.51%) in 2025, indicating rising academic interest in the field. Although there are some fluctuations, such as a decline in 2022 and a lower count in 2026, the overall pattern suggests continuous development and expansion of LLP research. This trend highlights the growing relevance of LLP studies, particularly regarding credit risk, financial reporting, and regulatory changes, while also indicating potential research gaps in years with lower publication activity.

RESULTS AND DISCUSSION

Citation Mapping

Citation mapping in VOS-viewer is an analytical method for determining relationships between cited and citing documents. Citation analysis helps authors assess the impact and influence of a particular work or researcher within their field of study. Meanwhile, co-citation analysis is a science mapping technique based on the assumption that publications frequently cited together share thematic similarities (Bahrul et al., 2024). In VOS-viewer citation analysis, several units of analysis can be examined, including documents, sources (e.g., journals), authors, organizations, and countries. This study will use two types of analysis: document analysis and source analysis. These analyses are essential for identifying the most frequently cited articles and journals related to the evolution of loan loss provisions research.

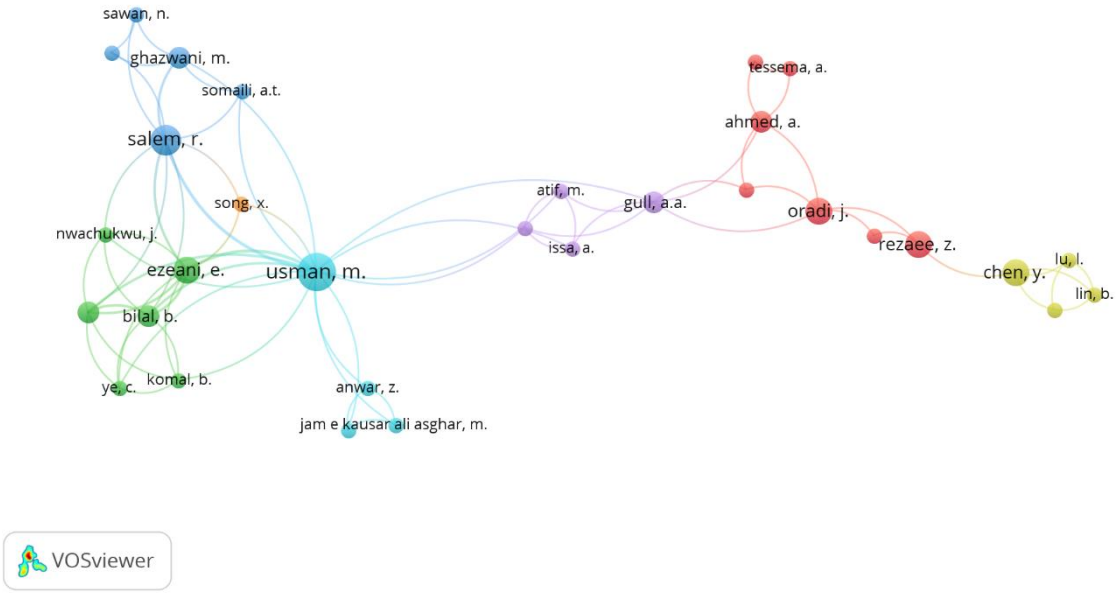


Figure 2 Visualization of the most authored document data

The citation-mapping visualization in Figure 2, generated using VOS-viewer, reveals the structure of scholarly collaboration and influence among authors in the field. The network is divided into several clusters, each representing groups of authors who are closely interconnected through co-citation relationships. Prominent authors such as *Usman, M.,* and *Salem, R.* appear as central nodes with strong linkages, indicating their significant influence and frequent citation within the literature. These central authors act as intellectual hubs, connecting multiple clusters and facilitating the diffusion of knowledge across different research streams. Meanwhile, smaller clusters, such as those involving *Ahmed, A.,* and *Rezaee, Z.*, or *Chen, Y.*, suggest more specialized or emerging research niches with relatively limited connections to the broader network. Overall, the visualization highlights a mix of well-established, influential scholars and fragmented subgroups, indicating both maturity in core research areas and opportunities for further integration and interdisciplinary collaboration in the study of loan loss provisions and related topics.

Analysis of the Most Cited LLP Research Theme

In this study, researchers utilize the Average Citations per Paper (ACPP) metric, calculated by dividing the total number of citations by the total number of articles. A higher ACPP value indicates an article's more significant influence or impact within the LLP field. The results of the ACPP calculation are presented in the following table 2.

Table 2. Average results average citations per article from 2016 to 2026

Year	Number of Document	Number of Citation	ACCP
2026	11	2	0,18
2025	57	77	1,35
2024	51	210	4,12
2023	41	347	8,46
2022	29	237	8,17
2021	45	675	15
2020	47	687	14,62
2019	34	573	16,85
2018	31	762	24,58
2017	27	917	33,96
2016	18	385	21,39

Table 2 presents the bibliometric data from 2016 to 2026 and reveals a dynamic landscape in loan loss provision research, characterized by a significant peak in scholarly impact in 2017, which recorded the highest Average Citations per Paper (ACCP) of 33.96. While the volume of publications shows a steady upward trend in recent years, reaching a peak of 57 documents in 2025, the total citation counts and ACCP for more recent periods naturally appear lower because new research takes time to accumulate citations. This contrast between growing document volume and the high historical impact of earlier works suggests that, while the field is expanding in output—likely driven by global interest in IFRS 9 implementation and post-pandemic risk modelling—there is a critical need for new, high-impact theoretical frameworks to overcome the current stagnation in the growth of fundamental research. These findings provide a strong empirical basis for integrating behavioural accounting into traditional risk models to address the identified theoretical gaps and revitalize the field's academic influence.

Furthermore, citation analysis by source (i.e., journals) using VOS-viewer visualization yields results that are broadly consistent with the document-based analysis.

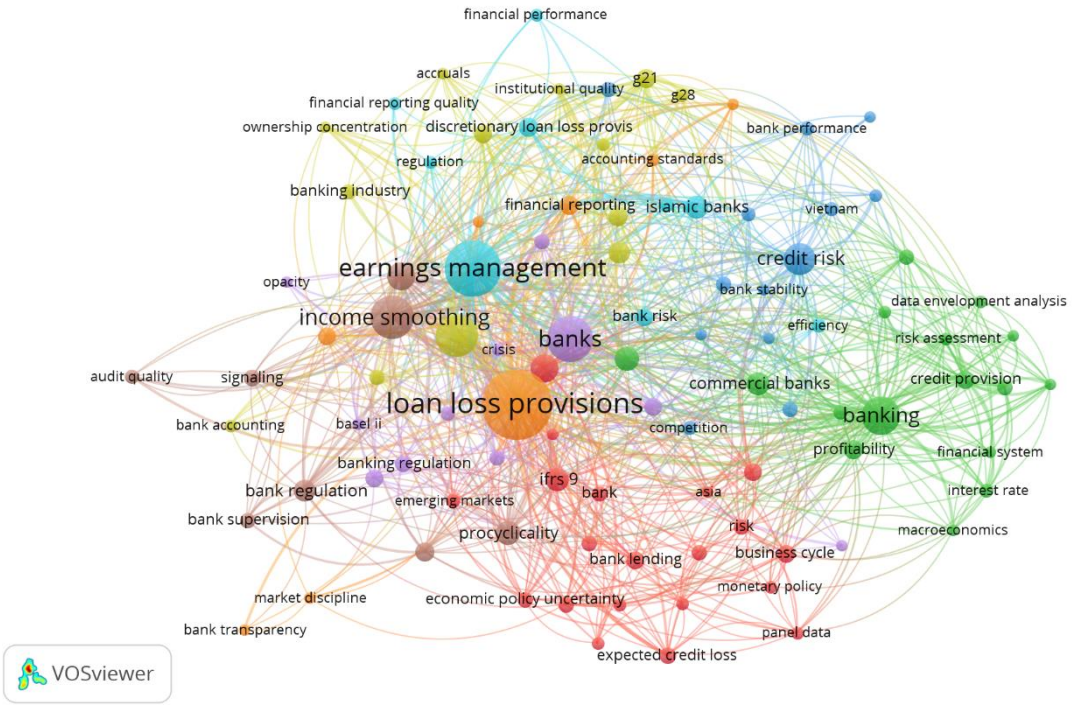


Figure 3 Visualization of document citations

The VOS-viewer author network visualization in Figure 3, the intellectual backbone of the field, where prominent scholars such as (Salem et al., 2021) emerge as central figures due to their significant citation impact and publication volume across the 333 analysed documents. The distinct color-coded clusters reveal specialized research groups that collaborate with and cite one another's work, bridging the gap between traditional risk modelling and behavioural accounting, as evidenced by the dense connections between the (Salem et al., 2021) and (Gull et al., 2018) This author-based citation analysis underscores the collaborative nature of the high-impact research—averaging 18.65 citations per paper—that defines the current landscape of loan loss provisions and managerial discretion. By mapping these influential authors, the network provides a clear view of the scholars driving the "Behavioural Prudence" framework, whose work is essential for addressing the stagnation in fundamental research identified in the bibliometric data. Analysis of the Most Cited Articles in the LLP Research Theme.

Analysis Based on the Number of Author Citations

This study employs bibliometric analysis to assess authors' individual contributions to internal audit research, based on the number of published articles and citation counts. Table 3 was viewed by the research authors in the most-cited articles listed.

Table 3. List of the 10 most cited authors

Writer	Number of Article	Number of Quotes
Lobo, Gerald J.	17	1.506
Kanagaretnam, Kiridaran	16	1.227
Beatty, Anne	3	790
Bushman, Robert M.	2	603
Williams, Christopher D.	2	603
Laeven, Luc	2	490
Ahmed, Anwer S.	1	466
Ozili, Peterson K.	21	446
Norden, Lars	2	381
Anandarajan, Asokan	3	323

Source: Results of bibliometric metadata processing (2025)

The table identifying the **10 most-cited authors** reveals the primary intellectual leaders driving research on loan loss provisions and managerial discretion, with (Kanagaretnam et al., 2004) and (Kanagaretnam et al., 2004) emerging as the most influential figures, with 1,506 and 1,227 citations, respectively. While (Ozili, 2017; Ozili & Outa, 2017) is the most prolific author, with 21 unique articles in this dataset, his lower total citation count relative to his output suggests that much of his work is more contemporary and still in the early stages of accumulating global impact. In contrast, scholars like (Ahmed et al., 1999) and (A. L. Beatty et al., 2002) demonstrate immense scholarly weight per paper, with their foundational studies on capital management and earnings declines remaining critical reference points in the field. This distribution underscores that, while the volume of literature is expanding due to prolific recent contributors, the theoretical core of the discipline remains heavily anchored in the high-impact findings of a few key experts on bank transparency and the reporting quality of financial institutions.

Citation Analysis Based on Country Statistics

The country-based citation analysis in this study offers insights into the geographic distribution of loan loss provisions research. The data highlight the contributions of various countries to academic publications and assess their impact based on the number of citations received by LLP-related articles.

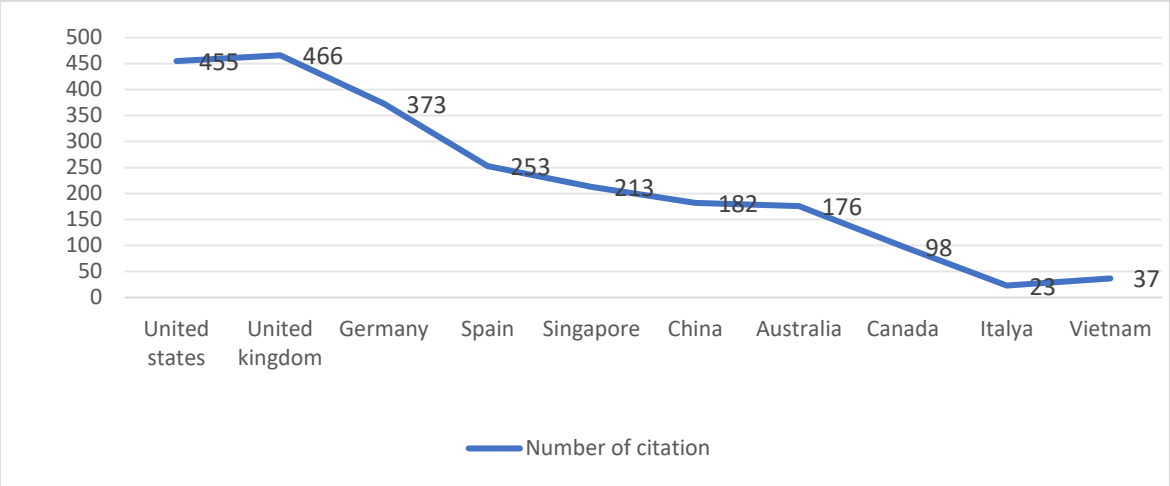


Figure 4. Most cited country statistics

The line graph titled "Figure 4. Most cited country statistics" illustrates the geographical distribution of academic influence in the field of loan loss provisioning research, with the United Kingdom and the United States emerging as the preeminent leaders with 466 and 455 citations, respectively. This dominance is followed by a strong European presence from Germany (373) and Spain (253), alongside notable Asian contributions from Singapore (213) and China (182). The data reveal a significant concentration of high-impact scholarly work in a few key Western and developed economies, with citation counts decreasing sharply for nations such as Canada (98), Vietnam (37), and Italy (23). This statistical profile underscores that the core intellectual development of risk modelling and behavioural accounting frameworks remains heavily anchored in these top-tier countries, which host the high-impact authors and foundational studies identified in the broader bibliometric analysis.

CONCLUSION

This bibliometric study of 581 Scopus-indexed articles published between 2016 and 2026 provides a comprehensive map of the intellectual landscape surrounding Loan Loss Provisions (LLP). The analysis reveals that LLP serves as a central hub in the banking literature, primarily associated with earnings management, income smoothing, and credit risk. While publication volume has steadily increased, peaking in 2025, the research remains heavily dominated by quantitative and regulatory paradigms, particularly regarding IFRS 9 and Expected Credit Loss (ECL) models.

A critical finding of this study is the significant theoretical gap in the systematic integration of behavioural accounting into LLP risk modelling. Although managerial discretion is implicitly acknowledged in studies of income smoothing, current risk models often assume rational decision-making, thereby neglecting the influence of cognitive biases and psychological factors.

Furthermore, the geographical distribution of research impact is highly concentrated in the United Kingdom and the United States, leaving emerging markets underexplored. To address the current stagnation in the growth of fundamental research, this study proposes a shift toward a "Behavioural Prudence" framework. Future research should move beyond mechanical calculations to incorporate behavioural variables, ensuring that LLP practices become more accurate, transparent, and reflective of the complex realities of managerial judgment in the banking sector.

BIBLIOGRAPHY

Ahmed, A. S., Takeda, C., & Thomas, S. (1999). Bank loan loss provisions: a reexamination of capital management, earnings management and signaling effects. Journal of Accounting and Economics, 28(1), 1–25. https://doi.org/10.1016/S0165-4101(99)00017-8

Bahrul, B., Fitriana, F., & Santoso, R. A. (2024). Aiming For The Future Of Bibliometric Forecast Research In Fraud Prevention: A Review Of Digital Economy Exploration. Al-Kharaj: Journal of Islamic Economic and Business, 5(4). https://doi.org/10.24256/kharaj.v5i4.4451

Beatty, A. L., Ke, B., & Petroni, K. R. (2002). Earnings Management to Avoid Earnings Declines across Publicly and Privately Held Banks. The Accounting Review, 77(3), 547–570. https://doi.org/10.2308/accr.2002.77.3.547

Beatty, A., & Liao, S. (2014). Financial accounting in the banking industry: A review of the empirical literature. Journal of Accounting and Economics, 58(2–3), 339–383. https://doi.org/10.1016/j.jacceco.2014.08.009

Bikker, J. A., & Metzemakers, P. A. J. (2005). Bank provisioning behaviour and procyclicality. Journal of International Financial Markets, Institutions and Money, 15(2), 141–157. https://doi.org/10.1016/j.intfin.2004.03.004

Birnberg, J. G. (2011). A Proposed Framework for Behavioral Accounting Research. Behavioral Research in Accounting, 23(1), 1–43. https://doi.org/10.2308/bria.2011.23.1.1

Bushman, R. M., & Williams, C. D. (2013). Delayed Expected Loss Recognition and the Risk Profile of Banks. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2226964

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. Journal of Business Research, 133, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Gull, A. A., Nekhili, M., Nagati, H., & Chtioui, T. (2018). Beyond gender diversity: How specific attributes of female directors affect earnings management. The British Accounting Review, 50(3), 255–274. https://doi.org/10.1016/j.bar.2017.09.001

Healy, P. M., & Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting. Accounting Horizons, 13(4), 365–383. https://doi.org/10.2308/acch.1999.13.4.365

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. Econometrica, 47(2), 263. https://doi.org/10.2307/1914185

Kanagaretnam, K., Lobo, G. J., & Mathieu, R. (2004). Earnings Management to Reduce Earnings Variability: Evidence from Bank Loan Loss Provisions. Review of Accounting and Finance, 3(1), 128–148. https://doi.org/10.1108/eb043399

Laeven, L., & Majnoni, G. (2003). Loan loss provisioning and economic slowdowns: too much, too late? Journal of Financial Intermediation, 12(2), 178–197. https://doi.org/10.1016/S1042-9573(03)00016-0

Leventis, S., Dimitropoulos, P. E., & Anandarajan, A. (2011). Loan Loss Provisions, Earnings Management and Capital Management under IFRS: The Case of EU Commercial Banks. Journal of Financial Services Research, 40(1–2), 103–122. https://doi.org/10.1007/s10693-010-0096-1

Libby, R., Bloomfield, R., & Nelson, M. W. (2002). Experimental research in financial accounting. Accounting, Organizations and Society, 27(8), 775–810. https://doi.org/10.1016/S0361-3682(01)00011-3

Novotny-Farkas, Z. (2016). The Interaction of the IFRS 9 Expected Loss Approach with Supervisory Rules and Implications for Financial Stability. Accounting in Europe, 13(2), 197–227. https://doi.org/10.1080/17449480.2016.1210180

Ozili, P. K. (2017). Bank earnings smoothing, audit quality and procyclicality in Africa. Review of Accounting and Finance, 16(2), 142–161. https://doi.org/10.1108/RAF-12-2015-0188

Ozili, P. K., & Outa, E. (2017). Bank loan loss provisions research: A review. Borsa Istanbul Review, 17(3), 144–163. https://doi.org/10.1016/j.bir.2017.05.001

Salem, R., Usman, M., & Ezeani, E. (2021). Loan loss provisions and audit quality: Evidence from MENA Islamic and conventional banks. The Quarterly Review of Economics and Finance, 79, 345–359. https://doi.org/10.1016/j.qref.2020.07.002