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MAPPING THE SPEED OF CAPITAL STRUCTURE ADJUSTMENT:A SYSTEMATIC AND STRUCTURAL SYNTHESIS OF FOUR DECADES OF EVIDENCE

Nida Mahmood (corresponding author)
PhD Scholar, Institute of Business Management and Administrative Sciences
nidajalal@outlook.com
Muhammad Farooq Shabbir
Assistant professor, Institute of Business Management and Administrative Sciences
Farooq.Shabbir@iub.edu.pk
Haider Mahmood
Research Scholar, Faculty of Management Sciences
Haider.mahmood7666@gmail.com

Abstract
This paper seeks to provide a systematic literature review on the speed of adjustment (SOA) of capital structure between 1984 and 2025, providing the major themes and recommending the potential areas that can be used in future investigation. Unlike the general reviews of capital structure, the study is concerned with the sub-area of speed of adjustments and its changing dynamics. The review uses systematic method to select and analyze the related studies and apply bibliometric tools and systems thinking approach to reviewing, identifying current trends of research and new research directions. The results indicate that there has been a drastic evolution in the concept of SOA, especially in terms of dynamic models that analyze how the adjustment costs, economic environments, corporate governance, and other factors affect the financial policies of firms. This study provides novel insights to understand the intellectual structure of the field by utilizing the co-citation analysis, keyword network, and clusters of themes, and highlights the gaps in the research and introduces the future research directions The study is done through published works present in the SCOPUS database, while studies that were not considered during the study may or may not affect the conclusions. The review is also using an innovative "systems engineering thinking approach" to establishing literature gaps, which makes a multidisciplinary contribution to the research work on the topic of capital structure adjustment.

Keywords: Capital structure dynamics, Speed of adjustment (SOA), Systematic literature review (SLR), Co-citation and thematic clustering, Systems thinking and Emerging themes

1. Introduction

Capital structure of a firm remains a key area of financial decision making showing how the managers weigh risk and returns to shareholders over the years. Since the seminal work of Modigliani & Miller (1958) that was then put forward as the proposition that capital structure is irrelevant in the ideal market, this topic has attracted increasing academic interest. Their pioneering efforts gave birth to a body of work that critiqued the ideal market understanding and brought into development an array of theories that have explicated the behavior of firm financing (Rajan, 2012). As a result there has been an explosion in the number of capital structure theories that have been created each one striving to better reflect the highly flexible nature of corporate finance.

Broadly, the literature on this area has developed two strands of thought; static and dynamic theories of framework. Static theoretical models like the classical trade-off theory look at capital structure decision in a one period optimization model. On the other hand, dynamic

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theories take into consideration the intertemporality financing decisions, including tracking changes in value of assets and changes in firm-specific environment over time. The trade off theory was first refined by Modigliani & Miller (1963) where firms were seen strategic use of debt so as to exploit the tax shield, but only up to a point where the cost of distress was still within grasp (Kraus & Litzenberger, 1973). The agency cost theory (Jensen & Meckling, 1976) describes how the incentives of the managers and shareholders (Harris & Raviv, 1991) and the shareholders and creditors (Stulz, 1990) are misaligned to result in agency costs. In support of this, the pecking order theory by Myers (1984) establishes a sequence of finances that will minimize underinvestment risk. The published reviews of the capital structure also remain scarce (Kumar et al., 2017; Martinez et al., 2019) and to our knowledge, do not explicitly address dynamic capital structure models.

In order to overcome the aforementioned drawbacks thereof, researchers have resorted to other more dynamic theoretical frameworks that more accurately mirror corporate practices in the real world. Among them, the dynamic trade-off theory (Fischer et al., 1989) is prominent, according to which the firms make deviations with respective reference to target leverage ratios, compensating those by readjustment over time once the gains of the compensation offset the adjustment cost. In contrast to its static version, this one takes into account the ongoing change in external and internal environment of a firm and the practical relevance of analyzing deviation and rebalancing behavior. The speed of adjustment (SOA) concept has been emerged as an empirical research tool in this regard as it establishes how fast a company tends to regain its target leverage level following deviation, and balances the costs and benefits of doing so.

Although dynamic theories and SOA frameworks on empirical capital structure research gain more and more importance, there is lack of structured reviews to synthesize this literature. Thus, the given research carries out a Systematic Literature Review (SLR) aiming at analyzing only studies that investigated the speed of adjustment to target capital structure. To get the trends and thematic development since 1984 through to 2025, we incorporate elements of bibliometric approach in analyzing the scope and depth of the literature work. Also, a particular systems thinking lens is utilized to conceptualize cross-referencing connections between different conceptual themes and strands of theory. As a two-prong approach, it will help us to determine the current gaps in knowledge and delineate principle areas that need to be researched in the future within the realm of dynamic capital structure.

2. Rationale and Motivation for the Study

Capital structure has been the subject of tremendous research worldwide with lots of contributions to the field of corporate finance since the work of Modigliani & Miller (1958) presented the theory of irrelevance, which has paved ways to numerous studies in the field. Since then, capital structure determinants have been investigated in many studies and their connections to many variables, including the taxation (Faccio & Xu, 2015), firm profitability (Danis et al., 2014; Frank & Goyal, 2015) macroeconomic variables (Bolton & Huang, 2018), equity market dynamics (Geske et al., 2016), growth options (Purnanandam & Rajan, 2016), and credit risk (Ambrose et al., 2019). Within this wider discourse, academics have increasingly sought to know more about leverage dynamics in a varying market scenario specifically the aspect of capital structure adjustment in a changing environment. The speed of adjustment (SOA) concept was first mentioned by Myers in his popular debate on the capital structure puzzle, whereby companies find it necessary to reduce the differences between their current and ideal leverage levels because of the inevitable shocks and changing strategic decisions.

Various modeling frameworks have been adopted to investigate this dynamic behavior, including the market timing hypothesis (Baker & Wurgler, 2002), continuous time approaches (Titman & Tsyplakov, 2007), behavioral perspectives (Vasiliou & Daskalakis, 2009), and hierarchical frameworks (Kayo & Kimura, 2011). Nonetheless, the partial adjustment model

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(Flannery & Rangan, 2006) remains the most prevalent in capturing the realignment of leverage in response to adjustment costs and firm-specific deviations from optimal targets. Over the decades, empirical and theoretical explorations of SOA under the dynamic trade-off theory have continued to develop, adding granularity and scope to the subject. While review articles exist on broader capital structure themes (see Table 1), very few, if any, have distinctly focused on systematically synthesizing the literature surrounding the *speed* of capital structure adjustment. This motivates the need for a structured synthesis, especially one that integrates both qualitative depth and quantitative mapping of the evolution in this field.

This study aims to fill that void through a systematic literature review (SLR), leveraging a structured protocol to categorize, assess, and consolidate existing empirical and theoretical findings related to capital structure adjustment speeds. While bibliometric approaches have recently gained prominence in finance literature reviews, evident in topics such as artificial intelligence and machine learning applications (Goodell et al., 2021), transfer pricing (Kumar et al., 2021), bank marketing (Kumar et al., 2022), and economic modeling (Pattnaik et al., 2022) the systematic literature review offers a more content-focused, interpretive mapping of key themes, methodologies, and knowledge gaps. Furthermore, to explore research trajectories and identify potential areas for future inquiry, we incorporate principles from systems thinking, which enhances the analytical depth by connecting thematic clusters to broader research frameworks.

This review is inclusive of all studies addressing SOA in capital structure, irrespective of the econometric model, theoretical lens, or contextual variable used. To ensure comprehensive coverage, the review spans over four decades (1984–2025), offering an extensive perspective on the progression and transformation of research in this domain. In doing so, the review not only aims to consolidate key knowledge but also to provide a structured guide for researchers seeking to navigate and contribute to this evolving field.

To frame our inquiry and ensure a rigorous synthesis, the following research questions (RQs) are developed to align with the objectives of an SLR:

RQ1. How has the literature on capital structure adjustment evolved in terms of publication trends and preferred academic outlets from 1984 to 2025?

RQ2. Who are the most influential authors, institutions, and nations contributing to the SOA discourse?

RQ3. Which studies have emerged as the most impactful in this field, and how are these distributed based on variables examined and country-specific classifications?

RQ4. What major intellectual themes and theoretical clusters emerge from the existing SOA literature?

RQ5. What are the persistent gaps and underexplored areas that offer scope for future research advancement?

The subsequent sections of this paper are organized as follows: Section 3 outlines the methodology applied in this review; Section 4 presents a synthesis of key findings and thematic insights; Section 5 provides an integrative discussion; and Section 6 concludes with future directions and implications for scholarly work.

Table 1

Reviews on Capital Structure Research

Author(s)	Objective(s) of the Paper	Type of Review
Istaitieh & Rodríguez-Fernández (2006)	To explore the relationship between capital structure and factor product markets	Systematic Literature Review (1977–2004)

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Author(s)	Objective(s) of the Paper	Type of Review
Kumar et al. (2017)	To examine the current literature with a specific focus on the variables influencing capital structure	Systematic Literature Review & Meta-analysis (1972–2013)
Sibindi (2016)	To analyze the various theories of capital structure	Systematic Literature Review (1958–2015)
Martinez et al. (2019)	To categorize and summarize the capital structure literature relevant to SMEs	Systematic Literature Review (1959–2018)
Kumar et al. (2020)	To identify key contributors and present the evolving dynamics of capital structure in SMEs	Systematic Literature Review & Bibliometric Analysis (1931–2019)
Bajaj et al. (2020)	To analyze research trends in capital structure theories	Systematic Literature Review (1999–2019)

Note: This table provides a brief summary of literature reviews in capital structure, their objectives and the review methods utilized.

3. Research Methodology

This study adopts a structured and transparent three-step review process based on the approach of Hong et al. (2012), the three stages include the relevant academic sources, choose the appropriate research papers, and analyze the final set of studies to answer the five research questions based on the speed of capital structure adjustment (SOA).

3.1 Identification of Academic Journals

In the initial stage, pertinent literature was retrieved in the SCOPUS database which is highly ranked and credible source of peer influencing scholarly material (Ellegaard & Wallin, 2015). The application of SCOPUS in the studies involving systematic reviews linked to capital structure has already been used (Martinez et al., 2019), and hence it would fit into this study as well. A set of keywords was carefully constructed in the search performed on 5th, July 2025 i.e., "Speed of adjustment" AND "Capital structure" OR "Capital structure adjustment" OR "Target leverage" OR "Partial adjustment" OR "Heterogeneity" OR "Dynamic capital structure". The terms were used in the title, abstract and keywords of the research paper to determine that only literature that had direct connection to SOA was retrieved. The process led to retrieval of 312 articles that have been published between 1984 and 2025. Although most of these papers were relevant, some unrelated studies were also captured due to overlapping terms and were filtered out in the next phase.

3.2 Selection of Target Research Papers

In the second step, every one of the 312 articles was evaluated separately. Abstracts were read carefully, only to be sure that the emphasis of the given research was on adjusting capital structure but not on any other related issues (dividend policy, inventory dynamics, valuation of IT assets, inflationary expectations, or pricing of agricultural products). Research involving dynamic models but did not emphasize on the capital structure issue was also not added. Following this screening exercise; 86 papers were excluded and the final sample became 226 research papers that were subsequently subjected to examine analysis. The process of inclusion and exclusion has been described in Table 2.

Table 2

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Research Papers Selection Process

Search Engine	Search Input	Subject Area	Publication Type	Year of Publication	Exclusion Criteria	Papers for Content Analysis
Scopus	"Speed of Adjustment" AND "Capital Structure" OR "Capital Structure Adjustment" OR "Target Leverage" OR "Partial Adjustment" OR "Dynamic Capital Structure" in title, abstract, keywords	Economics, finance, econometrics, business management, accounting	Research papers published in journals and in press from January 1984 to June 2025	January 1984 to June 2025	Research papers related to SOA of any variable other than capital structure (e.g., dividends, inventory, business values of IT, etc.)	Papers after elimination of irrelevant studies.
					Studies on partial adjustment and dynamic models unrelated to capital structure	
					Papers unrelated to the topic of capital structure adjustments or dynamic models	
					Final papers for content analysis after exclusion of irrelevant data.	
	N = 276	*N* = 276	*N* = 276	*Y*=40½	*N*=88	*N*=188

Note: N = Number of research papers Y=Number of Years

3.3 Analysis Method

We applied both bibliometric and systems thinking methodologies in order to interpret the obtained data and answer the formulated RQs. Bibliometric, also known as statistical bibliography, are mathematical and statistical indicators that are applied to scholarly publications, journals and books (Pritchard, 1969). Bornmann & Leydesdorff (2014) state that the application of bibliometric is specifically helpful in terms of skewed data and its availability. A system thinking, or cross-functional approach, is a concept that helps in recognizing all the patterns and dynamic structures of a complex system (Hossain et al., 2020). According to Biloslavo (2004) systems thinking is a theoretical framework which describes the most important data points in a system future knowledge-building uses with relevance tools.

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In this review paper, we have used BibExcel (Garfield, 2009) in order to have more customizable options to conduct a statistical analysis across a small network, and in order to use Gephi (Bastian et al., 2009) as a means of conducting network analysis that has more powerful visualization and statistical capabilities.

Bibliometric research is still rather new in the sphere of business research, and its efficiency rises when a variety of different analytical methods are used, instead of a narrow context, which often provides mere background of the research niche (Donthu et al., 2021). In order to comprehensively answer the research questions we have used different analytical approaches. To answer RQ1, investigation of the development of the capital structure adjustment literature regarding the patterns of publications and scholarly source in interested period 1984-2025, we used trend analysis in order to evaluate the development of research over time. Further, the leading research outlets were discovered through studying the impact factor and rankings according to the Australian Business Deans Council (ABDC) and the Chartered Association of Business Schools (ABS) (Goyal & Kumar, 2021). To address RQ2, which aims to find out the most influential authors, institutions and countries, we divided the analysis in three parts including productive authors, affiliated institutions, and leading countries. The influential authors were determined according to the number of citation and the number of publications. Analysis of the affiliated institutions and countries was conducted with the help of the "Biblioshiny" tool in R (Ingale & Paluri, 2022). To answer RQ3, which explores the most influential studies in the field and their distribution according to the variables and country-specific classification, citation analysis and PageRank were applied (Xu et al., 2018). These procedures were useful in making us identify those studies that contributed highly to the research pool and gave us a hint in the classification of variables and the distribution of countries. To answer RQ4 that involved establishing major intellectual themes and theoretical groupings in the literature, we utilized co-citation analysis in order to determine field structure at the intellectual level. The emerging themes were determined based on keyword frequency and content analysis of the clusters (Kumar et al., 2020). Lastly, in RQ5, that is, in reference to the ongoing lacks and under-researched areas in the area, we mapped out the research landscape to point out potential areas of development in the future.

4. Findings

4.1 Publication Trend

This section answers the first research question (RQ1), i.e. analyzing the temporal trend of the number of publications on capital structure adjustment. This review shows the published study trend between the period of 1984-2025. The first papers were published in 1984 but scholarly interest in this field persisted at a low level until 2004. Early literature normally addressed long run leverage targets as part of the financial strategy in U.S corporations. Conversely, research that seemingly started to appear around 2004 started to focus on the dynamic nature of capital structure adjustment, as firms were expected to converge to target leverage levels through time. The subject gained largely stable attention in almost twenty years, presumably because of changing economic conditions in the world, and frequent financial shocks, which highlighted the necessity of models that could describe dynamics of leverage in the environment of uncertainty. The rapid increase can be viewed in the beginning of the 2015, where 15 publications were made within one year. Since then, the number of publications per year continued being higher than ten, indicating the rising popularity of capital structure adjustment as an area of importance in research. Such growth indicates that although the field had a slightly sluggish beginning, it has experienced a healthy momentum over the last ten years, and a visible positive trend regarding scholarly work in this field.

4.2 Leading Journals – Establishments and Quality Assessment

The second part of the RQ1 is the identification of the most significant academic journals, which also contributed to the literature on capital structure adjustment, through the assessment

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of the quality of journals according to the commonly accepted metrics. In total 170 articles had to be reviewed, published in 114 various academic journals. Table 3 presents a list of ten journals that jointly published 38 articles (a total of 22% of the entire sample), so they are considered to be the core of this research stream.

The quality of each journal was determined by three main indicators such as Impact Factor (IF), ranking in ABDC, and ranking in ABS. The IF, created by Garfield (1979), is an established measure of journal quality showing the frequency in which the articles published in a certain journal have been cited. Clarivate (previously ISI) calculates it on an annual basis, and can be considered a good proxy to use in estimating the impact of a journal on the academic community. In brief, the IF is set to the number of citations in a specific year to the articles published in the journal in the previous two years. The IF refers to the scope and use of content on the journal whereas it does not take into consideration subjective reputation as well as peer perception.

Complementing the IF, the ABDC and ABS rating provide more general evaluations of the quality of journals in terms of editorial quality, international scope and peer-reviewed status. Such rankings serve to categorize journals by grouping them into levels of quality, which would guide researchers about the right journals to publish their work in. Out of all the reviewed outlets, the Journal of Corporate Finance turned out to be the most significant, with the greatest number of relevant publications and the highest indicators of IF, ABDC, and ABS ratings.

It is also noteworthy to note that there are a small number of high-impact journals that dominate the area, yet there are a large number of journals that have published only one or two articles in the area. The trend points to the phenomenon of concentration of research output within the narrow range of prominent outlets whereas the rest of the journal environment has demonstrated lesser levels of interest in the subject.

Table 3

Key Research Journals and Their Quality Evaluation

S. No.	Sources	Impact Factor	ABDC Ranking	ABS Ranking	Publisher	TPA
1	Journal of Corporate Finance	4.249	A*	4	Elsevier	7
2	Accounting and Finance	2.942	A	2	John Wiley & Sons, Inc.	4
3	European Journal of Finance	1.217	A	3	Taylor and Francis Online	4
4	Journal of Financial and Quantitative Analysis	2.707	A*	4	Cambridge University Press	4
5	Research in International Business and Finance	4.091	B	2	Elsevier	4
6	Emerging Markets Review	4.073	A	2	Elsevier	3
7	Finance Research Letters	5.596	A	2	Elsevier	3
8	International Review of Economics and Finance	2.522	A	2	Elsevier	3
9	International Review of Financial Analysis	5	A	3	Elsevier	3
10	Journal of Banking and Finance	3.07	A*	4	Elsevier	3

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S. No.	Sources	Impact Factor	ABDC Ranking	ABS Ranking	Publisher	TPA

Notes: TPA refers to the total number of published articles. The ABDC ranking scale has a system in which they rank journals as A, A, B, and C whereby A pertains to the top 5-7%, A to 15-25%, B to 35-40%, and the remaining is C. The ABS ranks journals on a four point scale.

4.3 Leading Authors, Institutions, and Predominant Countries

To address RQ2, this section identifies the most influential contributors to the literature on the speed of capital structure adjustment (SOA), including key authors, affiliated institutions, and countries. The analysis was conducted using the "Biblioshiny" interface within the Bibliometrix package in R, which helped generate rankings and frequency metrics from the selected dataset. Based on the final pool of 226 articles gathered from 1984 to 2025, a total of 160 unique authors were found to have contributed to this area of research.

Table 4

Most Productive Authors

Authors	Total Published Articles (TPA)	Total Number of Citations (TNC)
Hussain, H.I.	7	49
Haron, R.	6	58
Bai, M.	4	7
Chipeta, C.	4	26
Serrasqueiro, Z.	4	19
Shamsudin, M.F.	4	21
Wang, W.	4	56
Bajaj, Y.	3	16
Chua, M.	3	1
Drobetz, W.	3	230
Hou, G.	3	1
Kashiramka, S.	3	16
Nassir, A.M.	3	1
Nguyen, T.	3	4
Singh, S.	3	16

Table 4 showcases the leading authors by examining both the number of total published articles (TPA) and the total number of citations (TNC). This dual parameter approach was adopted to provide a more balanced view of author productivity and influence. For instance, Hussain was the most productive in terms of quantity, contributing seven papers, followed by Haron with six. However, Haron's work appears to have greater impact when viewed from the citation perspective. Therefore, evaluating authors solely based on the number of publications may overlook their actual contribution to the field.

Interestingly, Flannery and Rangan, despite having only two and one paper(s) respectively, stand out for their remarkable citation counts of 921 and 730. This contrast demonstrates that papers with limited quantity may still have substantial scholarly value due to their influence

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and recognition in subsequent studies. Hence, citation count remains a vital metric in identifying impactful authors, even when publication volume is comparatively low.

The analysis also examined institutional and geographic patterns to determine where the majority of influential SOA research is being produce. Universities such as the University of the Witwatersrand (6 papers), University of Waikato (5 papers), and International Islamic University (5 papers) were among the most frequently appearing institutions. In terms of citation influence, the University of Florida emerged as the leading institution with a total citation count of 1,249, indicating high-impact contributions despite fewer publications.

Geographic analysis revealed that the United States leads with 33 focused publications, followed by Malaysia (26 papers) and the United Kingdom (18 papers). On the other hand, Portugal and the Netherlands contributed a modest four papers each. When aggregated by region, Asia accounted for 61 papers and Europe for 48, confirming that researchers from developing and emerging economies are playing a growing role in this field. This reflects an increasing scholarly focus on understanding how market imperfections and economic volatility influence capital structure adjustments in different contexts.

Table 5
Affiliated Institutions

Institutions	Total Published Articles (TPA)	Total Number of Citations (TNC)
University of the Witwatersrand, Johannesburg	6	52
The University of Waikato	5	7
International Islamic University Malaysia	5	40
University of Florida	4	1,249
Universiti Kuala Lumpur	4	37
University of New Orleans	4	51
Universidade da Beira Interior	4	19
Universiti Malaya	4	11
Universiti Putra Malaysia	4	4
Florida International University	3	132
Central University of Finance and Economics, China	3	121
Cleveland State University	3	43
Taylor's University Malaysia	3	28
Universiti Teknologi MARA	3	18

4.4 Prominent Studies: A Citation-Based Overview

In response to RQ3, this section explores which individual studies have emerged as the most influential within the SOA literature by analyzing citation patterns and document-level prominence. Citation analysis serves as a widely accepted method in bibliometric reviews for evaluating the academic reach of publications over time (Tsay, 2009). A higher citation count usually indicates that a study has played a pivotal role in shaping subsequent research in the field.

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Table 6 presents the 15 most cited documents in our dataset along with their respective journals, local citations (from within the selected dataset), and global citations (overall academic citation count). Two studies stand out prominently: "Partial Adjustment towards Capital Structures" by Flannery & Rangan (2006), and "Testing Theories of Capital Structure and Estimating the Speed of Adjustment" by Huang & Ritter (2009), with global citations of 730 and 323 respectively. These studies are frequently referenced as foundational work in both empirical modeling and theoretical understanding of capital structure adjustment mechanisms.

While citation count provides insights into a study's popularity and recognition, it does not always reflect the level of prestige or scholarly interconnectedness of the publication (Cheng et al., 2009). To further understand document influence from a network perspective, we used Gephi, a visualization tool, to map citation relationships and highlight central papers in the literature. Although our analysis does not employ complex centrality formulas, Gephi's visual output enables us to identify which papers are most frequently cited by other influential studies indicating their central role in shaping academic discourse. Ying et al. (2016) is at the top of the list with highly academic ties and followed closely by Yasmin and Rashid (2018). Particularly, the article by Warr et al. (2012) appears both in the most-cited and most-central categories, supporting the claim of its wide and profound influence. The visual mapping contains 144 nodes and 2,925 citation links (edges), and the interconnections are the strongest between the top 30 studies. These strongly interlinked papers give an indication of the subjects and techniques that have found the most resonance throughout the world research.

In sum, citation volume and network positioning have been employed in simplified less technical, beginner-friendly methods to determine the core inquiry studies in the SOA literature. This two-pronged approach allows having a balanced view on how some papers have directed scholarly achievements in this area.

Table 6

Highly Referenced Publications in the Field

Authors (Year)	Source Journal	LC[1]	GC[2]	TNC/PY[3]
Flannery & Rangan (2006)	*Journal of Financial Economics*	108	733	45.62
Huang & Ritter (2009)	*Journal of Financial and Quantitative Analysis*	79	322	24.86
Jalilvand & Harris (1984)	*The Journal of Finance*	27	214	5.62
Faulkender et al. (2012)	*Journal of Financial Economics*	68	192	19.11
DeAngelo et al. (2011)	*Journal of Financial Economics*	15	147	13.45
Drobetz & Wanzenried (2006)	*Applied Financial Economics*	62	146	9.18
Cook & Tang (2010)	*Journal of Corporate Finance*	49	144	11.93
Hovakimian & Li (2012)	*Journal of Corporate Finance*	34	97	8.74
Dang et al. (2012)	*Journal of Empirical Finance*	22	84	8.83
Strebulaev & Whited (2012)	*Foundations and Trends in Finance*	0	76	6.81
Elsas & Florysiak (2011)	*International Review of Finance*	33	66	6.08
Qian et al. (2009)	*China Economic Review*	12	58	4.32
Warr et al. (2012)	*Journal of Financial and Quantitative Analysis*	18	57	5.51
Chang et al. (2014)	*Journal of Banking and Finance*	14	54	6.62

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Authors (Year)	Source Journal	LC[1]	GC[2]	TNC/PY[3]
Belkhir et al. (2016)	*Emerging Markets Review*	7	46	7.51

LC indicates local citations, **GC** denotes global citations, and **TNC/PY** shows average citations per year since publication.

4.5 Sample Statistics and Bibliometric Insights

In this section, the second part of RQ3 is discussed and provides a systematic map of the empirical literature of capital structure adjustment since 1984 and in future up to 2025. The results are based on a large amount of academic literature devoted to the study of leverage adjustment behavior with the application of wide range of firm-, industry-, and country-level determinants. These determinants are discussed in the context of varied socio-economic settings, which provide an understanding about the various ways through which these theories of capital structure have been empirically tested. The sample statistics derived from the reviewed literature are visualized using basic bibliometric tools, where the initial categorization of studies was done manually through detailed examination of titles, abstracts, and full texts to ensure thematic accuracy.

The key variables driving capital structure and speed of adjustment (SOA) decisions were generally classified into three main types: company-specific, industry-specific, and country-specific. A study was counted in a category if it incorporated at least one of these dimensions, irrespective of overlaps. Based on the aggregate analysis, approximately 70% of the selected studies emphasized company-specific variables such as profitability, firm size, growth opportunities, and ownership structure. These factors appear to dominate the empirical landscape, indicating a significant inclination toward firm-level explanations of capital structure behavior. Country-level variables, including inflation, interest rates, and legal systems, accounted for around 24% of the studies, while industry-level determinants represented only 6% of the sample. This distribution highlights a research gap, suggesting the need for increased focus on sector-specific attributes in future SOA inquiries, particularly as industry dynamics may entail unique financial constraints or competitive pressures that affect adjustment behavior.

The studies were also categorized based on the type of economy under investigation. A considerable portion, about 38%, focused on emerging markets, underscoring the growing scholarly interest in understanding capital structure decisions within rapidly evolving and less predictable financial systems. These studies reflect the increasing recognition of dynamic economic contexts in shaping leverage behavior. In contrast, developed economies comprised 30% of the data, while cross-country studies made up 32%. Within the developed group, the U.S. market received significant attention, with 21 studies solely centered on the U.S. economy. This can be attributed to the fact that it is a benchmark market, i.e. high quality financial structures, superior regulatory frameworks, and comparatively cheaper adjustment prices (Öztekin & Flannery, 2012). The dominance of the U.S. market in empirical tests renders it a useful example to compare and extrapolate particularly to developing nations which seek to copy capital structure efficiency.

4.5.1 Co-Citation Analysis

This subsection answers the RQ4 by answering the intellectual structure of the capital structure adjustment research co-citation analysis. Firstly developed by Small (1973), this approach determines which thematic interconnections exist within the area through the study of the pairs of works that are referred to in subsequent publications. As Culnan (1987) observes, co-citation is the conceptual proximity of two studies mentioned together, and is an indication of the relevance perceived by these studies that are cited together in the context of research field. The co-citation mapping allows identifying influential works, contributory theoretical frameworks, and upcoming subfields by following citation patterns of researchers through the review period.

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4.5.2 Network Visualization and Cluster Analysis

To further investigate the co-citation patterns, a fundamental bibliometric network was constructed with the help of BibExcel (Garfield, 2009), and its visualization was done by means of Gephi. The complexity of the network consisting of many nodes and ties and links led to community detection to interpret the interrelationships meaningfully. Therefore, the co-citation network was clustered and thus forming groups of what is known as communities of papers that co-cited by citing pattern or a thematic connection. A cluster is essentially a subset of studies that collectively form a meaningful grouping due to their conceptual proximity. As networks often demonstrate uneven density, the clustering approach was essential to avoid excessive overlap and thematic dilution.

In order to make the network structure easier to understand and emphasize powerful research topics, the Louvain community detection algorithm was used. This algorithm is preferred due to its ease in processing big, weighted networks (Blondel et al., 2008) and more excellent capability to identify distinct clusters as compared with other algorithms (Lancichinetti & Fortunato, 2009). Although the algorithm typically outputs modularity score indicating the strength of division among communities, this review avoids presenting any technical formulations to maintain methodological accessibility. The modularity-based clustering resulted in five distinct communities, of which three presented cohesive and interpretable sub-themes.

The top three clusters were selected for detailed review. Within each, the most influential 20 studies were included to represent thematic cohesion and avoid network complexity. The selection of leading studies within each cluster was guided by PageRank scores, ensuring that only the most impactful works were visualized. As observed, the number of linkages within each successive cluster declined, suggesting that themes identified in the first cluster were relatively more developed or popular among researchers. This trend also implies potential for conceptual enrichment in the subsequent clusters, underscoring the importance of thematic diversification in future studies.

The evolution of these clusters over time reveals how research interest has shifted across decades, with certain themes gaining prominence during specific economic cycles. The timeline of cluster emergence and development, offering a historical perspective on the intellectual trajectory of the field. Overall, the bibliometric analysis provides both a quantitative and qualitative mapping of the capital structure adjustment literature, enabling researchers to understand dominant paradigms while identifying underexplored avenues for future investigation.

4.6 Content Analysis

The section is related to the second part of RQ4 and aims at determining dominant intellectual themes of the bibliometric dataset. This analysis is aimed at addressing the conceptual evolution and the conceptual framework of the literature on the speed of adjustment (SOA) of capital structure between 1984 and 2025. By manual analyzing the patterns of key words, similarities, and cross-themes between the clusters we characterize the key trends in which the SOA literature has developed.

4.6.1 Cluster 1: Influence of Institutional and Economic Environment on SOA

Cluster 1 is the most prevailing theme cluster particularly emerging mostly thereafter 2010 and going along that curve till the year 2025. It involves 57 studies, and they are mostly focused on Asian and European settings. The focus of this cluster is on the examination of the institutional environment, macroeconomic factors, and the firm-specific factors in the determination of the pace of capital structure adjustment. The institutional context within which firms exist plays a pivotal role in influencing their adjustment process (Vallelado & Saona, 2011). For example, Touil & Mamoghli (2020) shown that a favorable institutional environment enhances the profitability of the firm and assisting in faster adjustment of leverage deviations. In a similar

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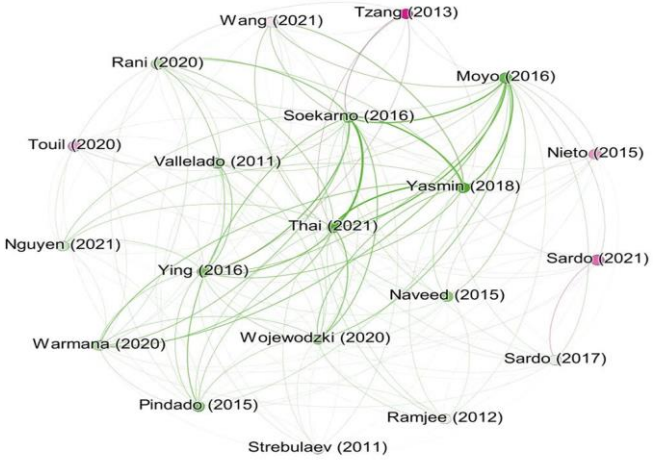
context, Chipeta & Deressa (2016) contended that economies with less developed financial markets generally show slower leverage adjustment, while well-established legal structures support faster SOA. However, the role of financial liberalization on SOA remains insufficiently studied in prior literature. Chipeta et al. (2012) observed that during the post-liberalization phase the decrease in transaction cost significantly affect the leverage adjustment procedure. Consistent with Ameer (2013) identified that countries which enforce proper laws for creditor rights shows higher SOA in the post liberalization period than those with less developed legal system. Eventually, research intention has increasingly focused on how different economic conditions influence the capital structure dynamics patterns. For instance, Soekarno et al. (2015) and Coldbeck & Ozkan (2018) found that 2008 global financial crisis accelerated the leverage adjustments process, a pattern that persisted into the recovery period. Tzang et al. (2013) also observed that in economic downturn, firms irrespective of their leverage level are more likely to adjust their capital structures quickly. On the other hand, in favorable economic condition, under-leveraged firms showing faster leverage adjustment pattern than to over-leveraged firms. Whereas a study conducted by Nguyen et al. (2021), shown that firms at either end of the leverage range, high or low, tend to adjust more quickly toward their optimal leverage than moderately leveraged firms. Similarly Yasmin & Rashid (2018) revealed that financially conservative firm exhibit faster adjustment pattern, taking immediate corrective measure when its leverage falls below the target leverage level, because of financial constraints. Conversely, over-leveraged or less conservative firms exhibit slower adjustment pattern due to timing issues and additional cost involved in achieving target leverage level (Abdeljawad & Nor, 2017). Studies have also delved into how initial public offerings (IPOs) affect the leverage adjustment. A study by Chipeta (2016) revealed that firms issuing IPOs tend to adjust their capital structures more swiftly than those issuing seasoned equity. While Gombola et al. (2019) stated that firms usually set a target capital structure during the IPO stage and tend to maintain this structure for approximately ten years after being listed.



Notes: This figure presents the Cluster 1 network analysis designed in Gephi. Nodes = 20; edges = 151

Figure 1. Capital Structure Adjustment-Cluster 1

Research in this domain also investigated the impact of both firm-level and industry-level variables in explaining the leverage dynamics. Novaria & Viverita (2019) claimed that both internal and external factors are pivotal in explaining the variations in optimal capital structure. Factor like firm size, tangibility, profitability, and growth opportunities has been widely acknowledged as significant drivers for leverage adjustment (Fitzgerald & Ryan, 2019; Rani et al., 2020). Alongside these, qualitative variables also gained scholarly attention due to their strong explanatory power. As study by Matemilola et al. (2015) asserted that unobservable managerial characteristics like managerial ability can substantially influence the deviation from

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target capital structure. Supporting this view, Chua et al. (2020) argued that CEO characteristics especially educational qualifications and experience may considerably affect the speed of adjustment of capital structure.

4.6.2 Cluster 2: Theoretical Frameworks, Adjustment Costs, SMEs, and Governance Factors

Cluster 2 emerged around 2005 and saw its peak in 2012. It contains 53 publications primarily focusing on developing and emerging markets. Key themes include theoretical underpinnings like the dynamic trade-off theory and pecking-order theory (POT), adjustment costs, corporate governance, and the financial behavior of small and medium enterprises (SMEs). Aybar-Arias et al. (2012) reported that SMEs generally exhibit rational inclination while going for adjusting its leverage towards optimal leverage. While, Serrasqueiro et al. (2012) contended that family ownership may impede this leverage adjustment process due to its related adjustment cost. Building on this perspective, Serrasqueiro et al. (2022) revealed that SMEs often deviate from optimal leverage for prolonged period, particularly when the estimated costs of financial distress or misalignment outweigh the potential gains, including transaction costs. Mukherjee & Wang (2013) highlighted that over-levered firms are more susceptible to bankruptcy and reduced tax-shield benefits, prompting stronger incentives to return to the optimal capital structure. Correspondingly, DeAngelo et al. (2011) claimed that firms sometimes deliberately deviate from target capital leverage, not just because of transaction costs, rather to grasp favorable investment opportunities. Aderajew et al. (2018) investigated the leverage pattern of farm businesses and observed a notable persistence in capital structure, indicating slower speed of adjustment due to adjustment cost. They also underscored the relevance of pecking-order theory (POT), indicating that these firm do prefer to rely on internal financing through retained earnings rather than debt financing. While West et al. (2021) argued that policy measures aimed at reducing cashflow volatility and firm debt level could accelerate the speed of adjustment. Additionally, Flannery & Rangan (2006) explored the relevance of both of POT and the market timing theory, which posits that managers strategically time securities issuance contingent on favorable market trends. Their findings showing quicker adjustment towards the firm's target leverage, thereby signifying that the dynamic trade-off theory could outperform POT and market timing under particular circumstances. Likewise, Elsas & Florysiak (2015) empirically validated the dynamic trade-off theory, showing that firms adjust more rapidly when the cost of deviation and risk of default are high. Financial constraint also having significant impact over the adjustment pattern. According by Hussain et al. (2016), these constraints having a pivotal role in shaping the adjustment speed as well as the level of deviation from its optimal leverage. On the other hand, Warr et al. (2012) highlighting the significance of stock mispricing in the speed of adjustment process, indicating that firms with higher leverage are more prone to issuing equity when it is overvalued, thereby speeding up their adjustment procedure. Meanwhile, Yin & Ritter (2020) argued that stock price changes could result in potential upward bias in SOA estimations, because of their passive affects. The macroeconomic setting has also been acknowledged as key factor in shaping the leverage adjustment dynamics. Wanzenried & Bern (2006) reported that both inflation and economic growth can enhance the SOA by alleviating the associated risk of market imperfections. Similarly Kang et al. (2018) observed that high level of GDP growth tend to accelerate the speed of adjustment process. Furthermore, Drobetz & Wanzenried (2006) highlighted that favorable economic indicators like wider term spread is significantly associated with higher SOA. Furthermore the interplay between the corporate governance and Speed of adjustment has been increasingly explored. According to Liao et al. (2015), firms with well established corporate governance system adjusted more quickly towards their target capital structure aligning with shareholders interests. Consistent with Gyimah et al. (2021) also contended that a good governance system minimizes the monitoring cost for bondholders, helping streamline capital.

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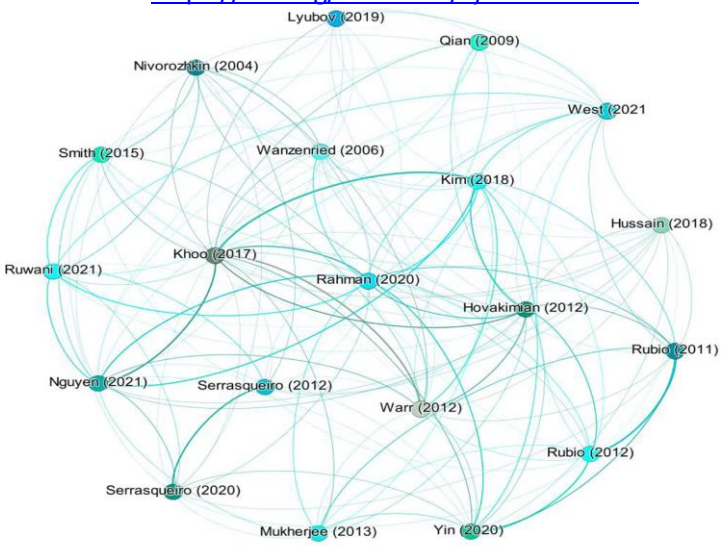

Notes: This figure presents the Cluster 2 network analysis designed in Gephi. Nodes = 20; edges = 139

Figure 2. Capital Structure Adjustment-Cluster 2

4.6.3 Cluster 3: Financial Institutions, Asymmetries, and Firm-Specific Behavior

Cluster 3, although relatively smaller with 29 studies, focuses on the specific SOA behavior of financial institutions, asymmetric adjustment patterns, and various firm-level dynamics. It gained relevance post-2011. According to Wojewodzki et al. (2020), demonstrated that credit rating exert minimal effect on speed of adjustment, indicating that such external monitoring indicator may not significantly influence the leverage adjustment pattern. Correspondingly, Jouida & Hellara (2018) revealed that the strategic diversification either operationally or geographically, having a pivotal role in managing the debt level and the leverage adjustment towards optimal level. Whereas, Vo et al. (2022) investigated how firms respond in crisis, focusing on COVID-19 pandemic, and found that firms based in severely impacted countries by the crises were faster in adjusting their leverage. Complementing these insights, Jonghe & Öztekin (2015) noted that banks generally exhibit quicker adjustment behavior during periods of economic distress. However, this rapid adjustment is constrained when banks approach the regulatory minimum capital ratios, which slows down the adjustment process, as shown by (Bakkar et al., 2019). This literature stream also sheds light on the asymmetric dynamics of leverage, influenced by variables such as debt covenants, leverage indicators, and the broader institutional context. Nguyen et al. (2020) concluded that the cost associated with adjusting short-term debt is relatively lower than for long-term debt, implying a higher SOA for short-term instruments. Devos et al. (2017) provided evidence that firms with debt covenants adjust their capital structure at a rate approximately 10% to 13% slower than those without such covenants. They also highlighted an asymmetric impact of covenants, with over-leveraged firms exhibiting significantly faster adjustment speeds than under-leveraged ones. The institutional environment further explains this asymmetry; Belkhir et al. (2016) demonstrated that stronger institutional quality facilitates greater access to external finance, thereby enabling a quicker convergence toward target leverage levels.

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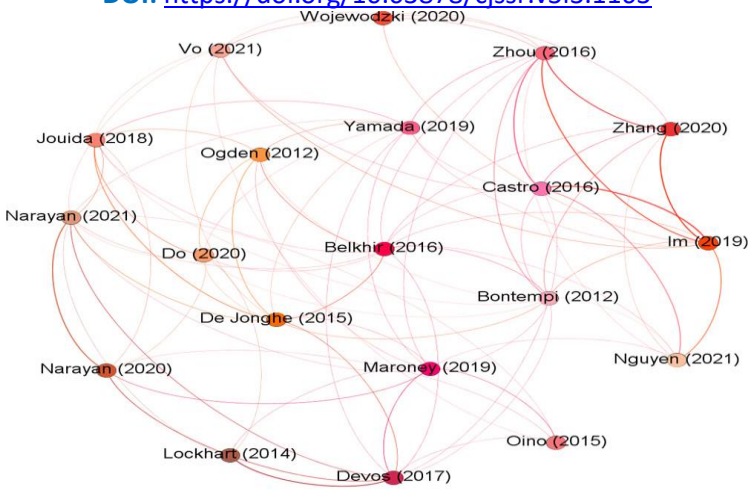

Notes: This figure presents the Cluster 3 network analysis designed in Gephi. Nodes = 20; edges = 85

Figure 3. Capital Structure Adjustment-Cluster 3

Additionally, the literature explores how firm-specific factors influence SOA. Profitability, in particular, has been shown to be pivotal, Castro et al. (2016) discovered that profitable firms, especially during the transition from growth to maturity, adjust their leverage more dynamically, identifying profitability as a key determinant of SOA. Supporting the pecking-order theory, Oino & Ukaegbu (2015) confirmed a negative relationship between profitability and leverage levels. Zhou et al. (2016) observed that firms more sensitive to deviations from their optimal leverage tend to adjust more rapidly. Zhang et al. (2020) reported that companies experiencing cash flow volatility tend to accelerate leverage adjustments due to lower adjustment costs. Moreover, Do et al. (2020) revealed that foreign ownership contributes to reducing adjustment costs and enhancing SOA, thereby influencing firms' capital structure decisions. In the context of the energy industry, Narayan & Nasiri (2020) found that rising oil prices negatively affect SOA, whereas market liquidity has a positive influence. Although substantial research has shed light on how businesses approach their target leverage, the speed of adjustment (SOA) remains a critical and underexplored area in capital structure studies (Huang & Ritter, 2009). This gap is particularly noticeable when it comes to examining SOA through the lens of CEO characteristics and external governance factors. Building on this, we now propose the research hypotheses that will be tested in the empirical section of our study.

Collectively, these clusters will give a multi-faceted and more textured insight into the manner in which firms dynamically reactor their capital structures based on the institutional, macroeconomic, theoretical, and firm-specific forces. The present thematic analysis does not only describe the history of SOA publications but also poses a basis to answer the other research gaps indicated in the later section.

4.7 Analysis of Author Keywords

In order to answer RQ4 in regard to key intellectual themes and groupings of theory in the SOA literature, a similarity analysis of author-designated keywords was provided. Author keywords give the indications of how scholars structure their research and what they regard as the most important aspects. These keywords represent the main topics and the changing scope of focus in the field of the capital structure adjustment (Pesta et al., 2018).

A total of 443 unique keywords were obtained in the 226 review studies chosen in this review. To enhance the meaning and usability of the thematically representation, the list of keywords was reduced to top 30 most frequent ones to be visualized in the form of the keyword network. It is worth noting that the most common term was speed of adjustment which was mentioned 95 times and capital structure was mentioned 90 times and both the terms were mentioned jointly in 51 papers. This proves the relevance of these two themes in terms of focus in the

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wider literature. The other commonly applied terminologies are leverage, target leverage, and dynamic capital structure. Furthermore, panel data also appeared in 13 articles, and it is consistent with the interests of researchers focused on dynamic adjustment models.

The theories like trade-off theory and dynamic trade-off theory also took center stage with conjectures that many scholars want to prove the use of target leverage by adopting these theories (Etudaiye-muhtar & Ahmad, 2015; Vo et al., 2022) Despite these two theories being similar in concept, they are applied differently and their usage in the literature provides evidence of how researchers have positioned themselves differently. The overall keywords analysis demonstrates the maturity of some of the themes along with the emerging interest in others, which means that future exploration based on narrow research could be conducted.

4.8 What Is Studied and What Is Not Studied? A System Thinking Perspective

To find the answer to RQ5, concerning gaps and underexplored components in the literature, a more comprehensive system thinking approach has been used. It is a systems engineering based approach that enables a comprehensible holistic view of different parts of research interacting with each other (Chen, 1975). System thinking is useful not only in assessing what has been done in previous researches but also in outlining what has not been done (Arnold & Wade, 2015). Instead of utilizing complicated programs to model systems, this review created a manually made framework to sort out themes, variables, and the literature gaps in an illustrative manner. Such conceptual architectural design of an idea makes it easier to follow the flow of ideas and interrelationship without necessarily using advanced computing tools. This manually made framework uses nodes (indicating major areas of research) and their connections to help determine overlooked areas of research (Squires et al., 2010).

The framework of capital structure's speed of adjustment (SOA) literature illustrates the comprehensive relationships and factors influencing the adjustment process toward target leverage. The "Speed of Adjustment (SOA) towards target leverage," which is determined by various influences such as company-specific factors (liquidity, firm size, profitability, and others), as well as heterogeneity factors, including the type of companies (MNCs, SMEs, banks, family businesses). The impact of macroeconomic conditions, such as economic growth, business cycles, and inflation, also plays a significant role in shaping adjustment speed. The process is influenced by external factors like financial securities, corporate governance, mergers & acquisitions (M&A), and ownership structure. Estimators used in the literature include Quantile Regression, GMM, and Dynamic Panel models (DPF) and Fixed effect Model. The system also examines industry-specific elements like textiles, manufacturing, financial services, and others, each contributing to the overall speed of adjustment, either by rapid or slow progression. This framework highlights the complex interplay of various elements in the dynamic adjustment of capital structure.

Under this system-based outline, all the body of literature has been classified into some major thematic paths. The principal one is the first path as it includes methodological decisions made, e.g., the methods of estimation and model form applied in the former literature. Many of the studies used panel data and dynamic models, such as partial adjustment models, but the entire range of methodologies is still focused on a small set of popular methodologies. The second route in this scheme lays emphasis on heterogeneity, where the studies have been done on differences by industry and by type of firms. Even some literature has been carried out on how these variations affect the rate of adjustment. The third path explores macroeconomic conditions like financial crises, changes in economic policy, or institutional conditions that can influence the speed of adjustment of its capital structure by firms. The fourth thematic path involves firm-specific variables of profitability, asset composition and size. There are tons of studies that have been carried out on these determinants or combinations of them. The fifth path that potentially is of interest is associated with qualitative considerations of factors that led to this finding, such as the level of CEO education, being a woman or the length of

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experience as a manager. Finally, the sixth path encompasses peculiarities such as corporate governance, ownership pattern, the influence of COVID-19, and situations such as mergers and acquisition. These factors commonly play the role of the contextual variables added to the existing models to produce the unique evidence. The relationship of these aspects to capital structure choices has meant different results between different regions and periods of time. This system thinking method of synthesis does not only sketch out what has already been covered in these thematic areas but also points out to the areas that still need adequate exploration. By way of example, there should be more empirical research in emerging economies, and one should explore more behavioral factors such as managerial overconfidence, or risk aversion. Table 8 presents a summary of these gaps and suggestions for future research.

Table 7

Identified Research Gaps and Suggested Future Directions

Observed Gap in Literature	Potential Avenues for Future Research
-The link between individual firm-level characteristics and the speed at which firms adjust their leverage has received little scholarly focus.	• Conduct in-depth research on the influence of conditional factors, firm-specific ones, on the speed of adjustment of leverage, asset tangibility, non-debt tax shields, and financial conservatism.
-There is little research on the effect of change in tax regimes on adjustment behavior.	• Investigate the relationship between taxation regimes and SOA including comparisons in different taxation regimes.
-There are few cross-country studies that associate leverage adjustment to corporate governance.	• Examine the impact of corporate governance mechanisms in SOA and how such impact varies across countries.
Few studies are available regarding SOA in context of mergers and acquisitions or in the global shocks like the COVID-19 and the evidence is limited to the cases of a single paper.	• Examine SOA in the context of M&A transactions and in the environment of global turmoil (e.g., pandemics), and then consider ways of coping with volatility in financing decisions.
-Little attention has been paid to sectoral differences in SOA, either within countries and across countries.	• Examine cross-industry differences in SOA within a single country and compare them to trends in other countries, comparing developed and emerging markets.

Note: The table provides significant literature gaps in the existing body of research on the speed of capital structure adjustment (SOA) and recommends areas on which future research should be focused.

5. Discussion

This section presents consolidated findings based on the research questions framed in this study. Addressing RQ1, the publication trend reveals a gradual but notable evolution in the volume of studies focused on the speed of adjustment (SOA) in capital structure. The earliest relevant publication appeared in 1984, but the topic received very limited attention for nearly two decades. A renewed interest in SOA emerged post-2004, with publications increasing steadily through to 2025. This trend reflects the growing academic interest in dynamic capital structure theories over time. Notably, the *Journal of Corporate Finance* has emerged as a leading journal contributing significantly to this field, reaffirming its relevance in corporate finance research. In response to RQ2, bibliometric results highlight Hussain and Flannery as among the most influential authors in SOA literature. At the institutional and national levels, the *University Of The Witwatersrand* and the *United States* stand out for their significant

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research contributions. These findings point to concentrated academic activity in certain regions and institutions, offering a foundation for future collaborative or comparative studies across different geographies. Regarding RQ3, the analysis identifies several high-impact publications in the field. For example, "Partial adjustment towards target capital structures" by Flannery and Rangan (2006), and "Determinants of capital structure: A comparison between industrial and consumer sectors in China" by Ying et al. (2016) are two key contributions widely cited in the literature. A thematic overview of these studies shows that a large proportion of impactful research has emerged from emerging economies. This suggests increasing global attention to capital structure dynamics in diverse financial environments. Moreover, a wide variation exists in the variables studied, indicating that researchers often focus on unique industry-specific or country-specific determinants, leaving room for deeper standardization and comparative analysis. In relation to RQ4, a simplified thematic analysis of the literature revealed several key areas of focus. These include institutional factors influencing SOA, corporate governance mechanisms, adjustment costs, macroeconomic uncertainties, and firm-level characteristics. These themes often overlap and form intellectual clusters. For instance, one major cluster consists of studies exploring the role of institutional environments and economic conditions in shaping leverage adjustments. Another cluster focuses on governance structures and decision-making behavior under uncertain market conditions. A third, smaller group primarily examines SOA patterns among financial firms, especially in the context of firm-specific determinants. The co-occurrence of keywords such as "speed of adjustment" and "capital structure" further reinforces these thematic linkages and research priorities. In addressing RQ5, a simplified version of the systems thinking approach was used to identify persistent research gaps and future directions. While not employing technical diagrams, a conceptual framework was developed to map how various themes interrelate and where disconnects or underexplored nodes exist. For example, studies rarely integrate behavioral finance insights into SOA discussions or explore cross-industry dynamics in depth. This highlights key opportunities for future researchers to expand the scope and interdisciplinary depth of the literature.

6. Conclusion

Capital structure adjustment remains a key concern in corporate finance, especially as firms operate in environments that deviate from ideal market conditions. The idea that companies tend to adjust their leverage towards an optimal target ratio has generated a large body of empirical research. This process of adjustment, commonly known as the speed of adjustment (SOA), has come to be key in the existing studies on how firms react to the financing frictions and market volatility. This study seeks to address the gap in the literature by conducting a systemic literature review on the studies on SOA, which have been published between 1984 and 2025. Using a combination of citation tracing, keyword search, author mapping, and cluster identification, the review is based on the development that has occurred in this field of research over the years. Software like BibExcel and Gephi were useful in handling the information and making an interpretation but the analysis was not complex by using complicated statistical analytical tools and complex visualizations. The resulting discoveries enable the detection of major publication patterns, the leading contributors, the prominent studies and new emerging themes. It is interesting to note that five major intellectual clusters were identified in the literature indicating five distinct dimensions of the SOA debate including institutional settings and firm characterization, market dynamics, theoretical foundations, and institutional dynamics. Several notable patterns emerge from our review regarding how firms approach capital structure rebalancing. For instance, there is growing support for asymmetric SOA behavior, with firms adjusting at different speeds depending on whether they are above or below their target leverage. Adjustment behavior is also influenced by financial flexibility, institutional configurations, and capital market maturity. Furthermore, certain external forces,

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such as credit rating agency actions or regulatory shifts, can meaningfully alter the cost-benefit calculus associated with leverage adjustments. These insights highlight the importance of examining how frictions, adjustment costs, and signaling mechanisms interact in shaping capital structure dynamics. Moreover, the literature appears to overlook the broader consequences of SOA decisions especially in terms of firm valuation impacts, stakeholder welfare, and long-term strategic orientation. Our findings also suggest that despite rising interest in SOA scholarship, some thematic streams remain geographically constrained, often limited to a single-country context. Notably, the empirical evidence remains concentrated in developed economies, especially the United States, Europe, Australia, and parts of East Asia, while emerging markets like Pakistan, Vietnam, and Brazil are relatively underrepresented despite their growing relevance. This opens a valuable avenue for cross-country comparative studies, especially in environments sharing similar institutional or financial characteristics. Furthermore, while the trade-off theory forms the primary conceptual base in most studies, we observe increasing integration of pecking order, market timing, and behavioral perspectives. Future research could build upon these theoretical overlaps to develop more integrated or dynamic frameworks that better capture real-world capital structure adjustment behavior. In addition, a systems thinking conceptual map was used to define connections between themes and gaps where more attention should be paid to them. This review adds values to the current body of knowledge because it presents a comprehensive picture of SOA research through the use of bibliometric, a methodology that has not been frequently used in the study topic. Unlike in previous studies which presented SOA as one of the areas within the broader debate on capital structure, the study under consideration brings out SOA as one of the key focus areas. The results will benefit the scholars by providing an overview of the most important intellectual discoveries and pointing to the avenues of future study. The study is not, however, without the following limitations. It relies exclusively on data that is drawn and analyzed out of SCOPUS, so any further high-quality works that are not in this database were excluded, which may affect the overall comprehensiveness of the results. Furthermore, system thinking was an effective conceptual framework, but the idea it added was implemented in an oversimplified way without sophisticated modeling. Future researchers can extend this study to develop the review approaches representing systematic literature review (SLR), the methods of a meta-analysis that quantifies the study or structured review to go deeper into the methodological development. In summary, this review serves as a good foundation to the various scholars and operational practitioners who may want to do further research on the evolving arena of capital structure adjustment, and call upon future researches to be based on more varied databases and critical review methods.

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