

A Bibliometric Analysis of Asset-Backed Securities in Structured Finance

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ABSTRACT

This study presents a comprehensive bibliometric analysis of research on asset-backed securities (ABS) within the field of structured finance. Using data extracted from the Scopus database, the study examines publications spanning from 2000 to 2024. VOSviewer were utilized to analyze keyword co-occurrence, citation patterns, author collaboration networks, and thematic trends. The keyword network visualizations reveal that “asset-backed securities,” “financial crisis,” and “structured finance” are central themes, with strong linkages to topics such as credit ratings, collateralized debt obligations, and mortgage-backed securities. Temporal overlay analysis indicates a shift in scholarly focus from crisis-related themes in the early 2010s to financial innovation, liquidity, and security design in recent years. Co-authorship and international collaboration maps highlight key contributors, notably scholars like Gorton and Fabozzi, and dominant research hubs in the United States, the United Kingdom, and China. Emerging themes such as green ABS and fintech integration suggest new frontiers in structured finance research. The study offers critical insights into the intellectual structure and evolving trends of ABS scholarship, providing a foundation for future research and policy development.

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1. INTRODUCTION

Asset-backed securities (ABS) represent a significant innovation in modern financial markets, playing a crucial role in structured finance. ABS are financial instruments backed by a pool of assets, typically loans, receivables, or other financial obligations, which generate cash flows over time [1]. These securities provide liquidity to financial institutions by converting illiquid assets into tradable instruments. The growth of ABS has been fueled by the increasing complexity of global financial markets,

advancements in financial engineering, and the demand for diversified investment opportunities. The securitization process, which underpins ABS, enables lenders to transfer credit risk while enhancing capital efficiency [2]. Consequently, ABS have become an integral component of structured finance, influencing investment strategies and risk management practices worldwide.

The historical evolution of ABS traces back to the 1970s in the United States, where mortgage-backed securities (MBS) emerged as the earliest form of securitization [3]. Over time, the scope of ABS expanded to

encompass various asset classes, including auto loans, credit card receivables, and student loans [4]. The increasing sophistication of financial markets has facilitated the proliferation of structured products, making ABS a key tool for capital market financing. The role of rating agencies, regulatory frameworks, and investor sentiment have all shaped the development of the ABS market [5]. As financial markets evolve, ABS continue to adapt to changing economic conditions, regulatory landscapes, and technological advancements.

Despite the benefits associated with ABS, the 2008 global financial crisis exposed significant vulnerabilities within the securitization market. The widespread issuance of subprime mortgage-backed securities (MBS) contributed to systemic financial instability, triggering a liquidity crisis that affected global economies [6]. The crisis highlighted deficiencies in risk assessment, regulatory oversight, and financial modeling associated with structured finance instruments. In response, policymakers implemented stringent regulations, such as the Dodd-Frank Act and Basel III, to enhance transparency, mitigate systemic risks, and improve investor confidence in ABS markets [7]. These regulatory measures have had profound implications on the securitization industry, influencing the issuance, pricing, and risk management of ABS.

Recent developments in structured finance have been driven by advancements in financial technology (fintech), data analytics, and machine learning [8]. The integration of artificial intelligence (AI) and blockchain technology has the potential to enhance transparency, streamline securitization processes, and improve risk assessment methodologies [9]. Additionally, the emergence of green and sustainable ABS reflects the growing emphasis on environmental, social, and governance (ESG) considerations in investment decision-making [10]. These innovations signal a transformation in the ABS landscape, where

financial technology and sustainability are reshaping the future of structured finance.

Given the increasing complexity and evolving nature of ABS markets, bibliometric analysis provides a valuable approach to understanding research trends, scholarly contributions, and emerging themes in this domain. Bibliometric analysis employs quantitative methods to assess the impact of academic publications, identify influential authors, and map the intellectual structure of a research field [11]. By analyzing bibliometric data, scholars and practitioners can gain insights into the evolution of ABS research, uncover knowledge gaps, and inform future research directions. This study aims to contribute to the literature by systematically examining the academic landscape of ABS in structured finance through a bibliometric approach.

Despite the extensive research on ABS and their role in structured finance, there remains a need for a systematic evaluation of scholarly contributions and research trends in this field. Existing literature often focuses on specific aspects of ABS, such as risk management, regulatory impacts, and market dynamics, but lacks a comprehensive bibliometric analysis that synthesizes research output and identifies key intellectual contributions. Understanding the evolution of ABS research, the most influential studies, and the thematic patterns can provide valuable insights for academics, policymakers, and industry practitioners. Addressing this gap, this study seeks to apply bibliometric techniques to analyze the body of knowledge on ABS, providing a structured overview of its development and future directions. The objective of this study is to conduct a bibliometric analysis of asset-backed securities in structured finance.

Introduction to Asset-Backed Securities (ABS) in Structured Finance

Asset-backed securities (ABS) have evolved as a pivotal component of modern financial markets, providing liquidity and diversification opportunities for investors [12]. The process of securitization enables financial institutions to convert pools of

illiquid assets, such as loans and receivables, into tradable securities, thereby enhancing capital efficiency and risk transfer mechanisms [13]. The development of ABS has been driven by financial innovation, regulatory changes, and advancements in risk management techniques, making it an essential tool in structured finance. Over the past few decades, the increasing complexity of financial markets and globalization has further fueled the expansion of ABS. The development of structured finance instruments has facilitated broader participation by institutional investors and created new investment opportunities beyond traditional debt and equity markets [14]. The evolution of ABS has not only enhanced market liquidity but also introduced sophisticated financial structuring techniques that allow risk segmentation and improved credit allocation.

Furthermore, technological advancements have played a significant role in shaping the ABS landscape. The advent of digital platforms, artificial intelligence (AI), and blockchain technology has introduced new dimensions to securitization, improving efficiency and transparency in financial transactions [15]. With automated data analysis and machine learning applications, ABS markets are becoming increasingly data-driven, allowing for more precise risk assessments and pricing models. The expansion of ABS has also brought forth challenges, particularly in terms of regulatory compliance and market stability. As seen during the 2008 financial crisis, excessive securitization of low-quality assets without adequate oversight can lead to systemic risks and financial contagion [16]. The post-crisis regulatory landscape has attempted to address these issues through stricter disclosure requirements, enhanced risk retention rules, and improved credit rating methodologies [17]. These measures have reshaped ABS markets, ensuring greater accountability and sustainability in structured finance.

Historical Evolution of ABS

The origins of securitization trace back to the 1970s, with the emergence of mortgage-backed securities (MBS) in the United States [18]. Initially, the securitization market was dominated by residential mortgages, but it gradually expanded to include diverse asset classes such as auto loans, credit card receivables, and commercial real estate [19]. Over the decades, the ABS market has grown significantly, fueled by increasing investor demand and evolving financial regulations [20]. The historical progression of ABS highlights the continuous adaptation of financial markets to economic shifts and regulatory interventions.

Risk and Return Characteristics of ABS

A critical aspect of ABS is their risk-return profile, which is influenced by the underlying asset pool, credit enhancements, and structural features of the securities [21]. Credit risk, prepayment risk, and liquidity risk are among the key factors affecting ABS performance. Studies have shown that risk mitigation techniques such as tranching and over-collateralization play a vital role in maintaining ABS stability [22]. Additionally, the diversification benefits of ABS have been explored in portfolio management strategies, with empirical evidence suggesting that ABS can enhance risk-adjusted returns for institutional investors [23].

The Role of ABS in the 2008 Financial Crisis

The global financial crisis of 2008 exposed vulnerabilities within the ABS market, particularly in the subprime mortgage-backed securities segment [24]. The excessive issuance of poorly underwritten mortgage loans, coupled with inadequate risk assessment models, led to widespread defaults and market disruptions [25]. Researchers have extensively analyzed the role of ABS in the crisis, highlighting the failures of credit rating agencies, regulatory lapses, and financial engineering complexities [26]. Post-crisis reforms, including the Dodd-Frank Act and Basel III, have sought to enhance transparency, strengthen risk controls, and restore investor confidence in ABS markets [27].

components of asset-backed securities. These clusters point to the integration of financial engineering and credit analytics into ABS-related research, especially concerning how these instruments were rated, structured, and traded before the financial downturn.

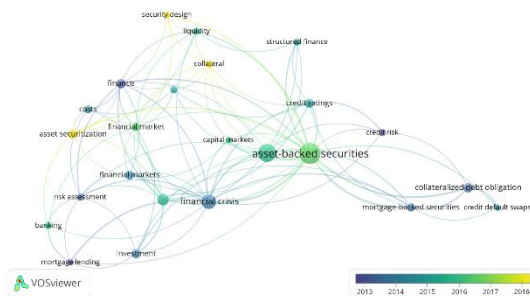


Figure 2. Overlay Visualization

Source: Data Analysis, 2025

This overlay visualization provides a temporal analysis of keyword co-occurrence related to asset-backed securities. The color gradient—from dark blue to yellow—indicates the average publication year in which each keyword appeared, ranging approximately from 2013 to 2018. Central to the network is the term "asset-backed securities," appearing prominently in green, which indicates that this keyword has been steadily discussed around the midpoint of the analyzed timeframe. Closely connected terms such as financial crisis, credit ratings, and structured finance also fall within the green zone, suggesting that these topics were central to the discourse between 2014 and 2016.

Notably, earlier topics (shown in blue) such as mortgage-backed securities, credit default swaps, collateralized debt obligation, and finance reflect the influence of the 2008 financial crisis and its aftermath on the scholarly dialogue during the early 2010s. These terms likely represent foundational concerns in the literature, focusing on risk management and the financial instruments that contributed to the crisis. Their early appearance suggests a period of reflection and investigation into the causes of systemic failure, which dominated initial research efforts in this field.

Conversely, more recent terms (shown in yellow), such as liquidity, security design, and collateral, indicate a shift in

research focus toward the structural and operational aspects of asset-backed securities. These newer keywords reflect a growing academic interest in improving the robustness and transparency of financial instruments post-crisis. The emergence of these terms highlights a trend toward innovation and risk mitigation in financial engineering, suggesting a maturing field that has moved from retrospective analysis to prospective enhancement of financial practices.

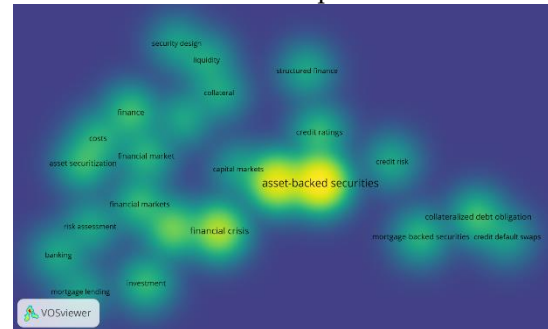


Figure 3. Density Visualization

Source: Data Analysis, 2025

This heatmap visualization shows the density of keyword occurrences within the research landscape on asset-backed securities. The brighter yellow areas indicate high-frequency keywords and strong co-occurrence relationships, while the darker blue and purple areas represent lower densities. At the core of the map is "asset-backed securities," which appears as the most prominent term, surrounded by intense yellow regions. This reflects its central role in the literature and its strong linkages with key associated concepts such as financial crisis, capital markets, and credit ratings. The peripheral regions of the map, including terms like mortgage lending, banking, security design, and credit default swaps, are shown in cooler green and blue shades, suggesting they are less frequently discussed but still relevant to the thematic structure. The presence of several high-density nodes around financial crisis and structured finance indicates that these topics are also heavily studied, likely due to their significance during and after the 2008 financial collapse.

3.2 Co-Authorship Network Visualization

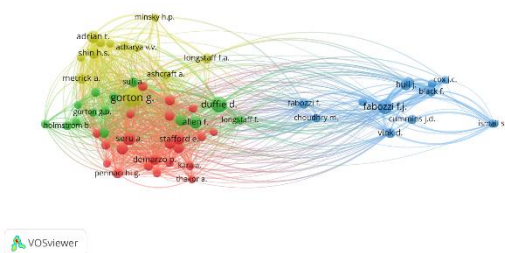


Figure 4. Author Visualization
Source: Data Analysis, 2025

This co-authorship or co-citation network visualization maps the intellectual structure of influential authors in the field of asset-backed securities. The visualization is color-coded into clusters, with each cluster representing a group of authors frequently cited together or collaborating within similar thematic areas. At the core of the red cluster is Gorton, G., a central and highly connected figure, indicating his pivotal role in shaping the discourse, particularly around financial crises and securitization. Other prominent figures include Duffie, D., Fabozzi, F. J., and Adrian, T., each anchoring their respective clusters (green, blue, and yellow), which likely focus on different but interconnected subtopics such as structured finance, risk modeling, and regulation. The blue cluster, for example, including authors like Hull, J. and Fabozzi, F., may represent a focus on quantitative modeling and financial derivative

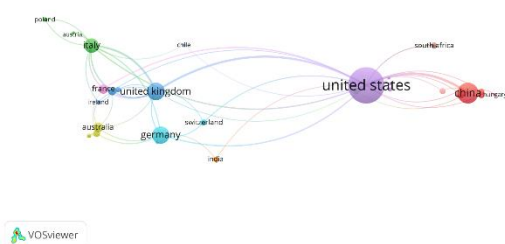


Figure 5. Author Visualization
Source: Data Analysis, 2025

This country collaboration map shows the international co-authorship patterns in the field of asset-backed securities research. The United States dominates the network, represented by the largest and most

central node, indicating its leading role in both producing research and collaborating internationally. Strong linkages connect the U.S. with countries like the United Kingdom, Germany, China, and France, reflecting extensive transatlantic and Asia-Pacific academic partnerships. The map also reveals regional clusters, such as European collaborations (e.g., Italy, Germany, France, and the UK) and emerging ties from countries like India, South Africa, and Chile. China's prominent node and connections to the U.S. and several European nations suggest its growing influence in the research landscape.

DISCUSSION

Thematic Concentrations and Core Research Areas

The keyword co-occurrence network (Figure 1) clearly positions "asset-backed securities" at the center of academic inquiry, reinforcing its conceptual significance and centrality within the literature. The strong linkages with keywords such as "financial crisis," "credit ratings," "structured finance," and "collateralized debt obligation" suggest that much of the discourse remains anchored in the events and consequences of the 2008 global financial crisis. This cluster highlights how the crisis served as a catalytic event, prompting a surge in academic investigations into the causes, mechanisms, and aftershocks of securitization practices. The green cluster, centered around the "financial crisis," underscores the academic community's preoccupation with the systemic risks posed by ABS, particularly those tied to subprime mortgages. This finding aligns with previous literature asserting that ABS, especially mortgage-backed securities, played a central role in transmitting risk throughout the financial system (Brunnermeier, 2009; Gorton, 2010). The scholarly focus on "banking," "risk assessment," and "mortgage lending" within this cluster further reveals a concerted effort to understand and prevent similar crises in the future. Simultaneously, the red and blue clusters reflect an equally strong interest in the structural mechanics of ABS. Keywords such as "finance," "liquidity," "collateral," and "security design" suggest a growing emphasis

on the technical and operational aspects of structured finance. This evolution in focus indicates that, beyond post-crisis analysis, scholars are increasingly concerned with refining financial instruments to enhance transparency, efficiency, and resilience.

Temporal Shifts and Emerging Trends

The overlay visualization (Figure 2) provides a chronological dimension to the analysis, revealing how academic interest has evolved over time. Early research themes (2008–2013), represented in darker blue, concentrated heavily on crisis-related issues, such as mortgage-backed securities, credit default swaps, and financial instability. These topics were predominant in the immediate aftermath of the global financial crisis, reflecting a reactive wave of scholarship aimed at diagnosing failures in securitization and regulation. As the field matured, newer themes emerged (2015–2020), indicated in yellow and green hues. These include terms like "liquidity," "collateral," and "security design," suggesting a forward-looking perspective aimed at reforming and strengthening ABS markets. This shift signifies the transition from retrospective critique to proactive innovation. The emergence of these topics also reflects broader trends in financial regulation and the increasing application of fintech solutions in structured finance, as noted by [28], [29]. Moreover, the visualization supports the notion that structured finance is gradually integrating environmental, social, and governance (ESG) principles, as seen in the rise of terms associated with sustainable and green ABS. Although still in a nascent stage, this thematic area represents a promising direction for future research, particularly as global financial systems align with sustainability goals.

Keyword Density and Scholarly Focus

The density visualization (Figure 3) further reinforces the importance of core ABS themes. The bright yellow concentration around "asset-backed securities" and "financial crisis" confirms their status as the most heavily examined topics. The clustering of keywords such as "credit ratings," "capital

markets," and "structured finance" in high-density zones reflects the foundational pillars of ABS literature. However, the presence of lower-density areas—like "banking," "mortgage lending," and "credit default swaps"—suggests potential underexplored niches within the broader field. These less prominent areas could offer valuable opportunities for future investigation, especially as new financial instruments and regulatory contexts emerge. Identifying and exploring these gaps may allow researchers to provide fresh insights into how ABS can evolve in more sustainable and stable directions.

Intellectual Structure and Collaboration Patterns

The co-authorship network (Figure 4) highlights the intellectual leadership and collaborative dynamics within ABS scholarship. Authors such as Gorton, Fabozzi, Duffie, and Hull appear as central figures in the network, indicating their influential roles in advancing knowledge on securitization, risk modeling, and regulatory response. These scholars' works often serve as foundational texts, cited across various thematic areas, from crisis analysis to financial innovation. The clustering of authors into thematic groups also reflects the interdisciplinary nature of ABS research. For example, the grouping of Hull and Fabozzi likely represents a technical, quantitative orientation, whereas authors such as Gorton and Adrian may be more closely associated with macro-financial perspectives. These intellectual silos, while productive, also highlight the need for cross-disciplinary engagement to address the multifaceted challenges and opportunities presented by ABS.

The country collaboration map (Figure 5) reveals the global scope of ABS research, with the United States leading in both volume and centrality. The strong ties between the U.S., U.K., Germany, China, and France demonstrate the cross-border relevance of ABS and the value of international academic cooperation. Emerging nodes such as India and South

Africa suggest a diversification of research sources, indicating that ABS-related issues are of growing concern in developing and transitional economies. These trends may point to the globalization of structured finance and the increasing adoption of ABS frameworks in varied economic contexts.

Implications for Future Research and Policy

This bibliometric analysis suggests several implications for future research. First, there is a clear opportunity to deepen exploration into ESG-aligned ABS and the role of sustainable finance in securitization. As regulatory frameworks and investor preferences increasingly prioritize sustainability, research in this area will become vital for aligning structured finance with long-term social and environmental goals. Second, the integration of fintech into ABS processes remains a fertile ground for academic inquiry. Technologies such as blockchain, AI, and big data analytics offer promising tools for improving transparency, reducing risk, and enhancing operational efficiency. Future studies can explore the practical applications, limitations, and regulatory implications of these innovations. Lastly, more comparative and cross-country

studies are needed to understand how ABS operates in different regulatory, cultural, and economic environments. Given the international nature of ABS markets, such research can inform best practices, highlight contextual risks, and support the development of globally consistent policy frameworks.

4. CONCLUSION

The bibliometric visualizations and analyses reveal a vibrant and evolving field of research around asset-backed securities in structured finance. The findings underscore the centrality of crisis-related themes, the emergence of innovative and sustainable finance topics, and the influential roles played by leading scholars and nations. As ABS markets continue to adapt to technological, regulatory, and societal shifts, the scholarly community is well-positioned to contribute to more robust, transparent, and inclusive financial systems. Future research that bridges technical, regulatory, and ethical considerations will be critical in shaping the next generation of structured finance instruments.

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