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A bibliometric atlas of financial contagion in emerging markets: Science mapping of a growing literature

Ankhbileg Khurelbaatar^{1*}, Ankhbayar Chuluunbaatar², Batnasan Namsrai³

^{1,2}National University of Mongolia (NUM), Business School, Mongolia.

³Dean of Business School, National University of Mongolia (NUM), Business School, Mongolia.

Corresponding author: Ankhbileg Khurelbaatar (Email: ankhbileg_kh@num.edu.mn)

Abstract

This study employs a bibliometric approach to map the intellectual structure, thematic landscape, and geographical distribution of research on financial contagion in emerging markets. It examines 824 peer-reviewed journal articles indexed in Scopus between January 2010 and March 2025, identifying leading countries, influential authors, dominant keywords, methodological patterns, and evolving research trends. The dataset was processed using the Bibliometrix package in R through Biblioshiny, together with VOSviewer for keyword co-occurrence analysis and CiteSpace for burst detection. Positioned within a broader historical frame from 1980 to 2026, annual scientific production shows that the 1997–98 Asian Financial Crisis marked the field's emergence, the 2007–09 Global Financial Crisis drove its first major expansion, and the COVID-19 pandemic produced its strongest acceleration, with output reaching a record 142 articles in 2024. The findings also reveal a broader geographical base of knowledge production, with growing contributions from China, India, Turkey, Brazil, and South Africa, even as the United States and the United Kingdom remain central. Overall, the study highlights a shift toward network-based, cross-asset, and shock-oriented approaches, while showing that research intensity reflects topical relevance more than national income globally.

Keywords: Bibliometric analysis, DCC-GARCH, Emerging markets, Financial contagion, Science mapping, Volatility spillover, VOSviewer.

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1. Introduction

Over the past three decades the global financial system has been shaken by a succession of crises whose effects have crossed national borders with unsettling speed. The Tequila episode of 1994, the Asian turmoil of 1997–1998, the Russian default of 1998, the global financial crisis of 2007–2009, the European sovereign debt turmoil that followed it, and most recently the market dislocations triggered by the COVID-19 pandemic and the Russia–Ukraine conflict have each raised pointed questions about how local shocks become global events. For emerging economies, whose financial systems are more dependent on external capital and more sensitive to shifts in global risk appetite, the question of how and why crises spread from one market to another is not merely an academic concern — it is a matter of policy survival [1, 2].

Three related developments explain the recent acceleration of scholarly interest in financial contagion within the emerging-market context. First, the integration of these economies into global financial markets has deepened, bringing both the benefits of greater liquidity and the costs of synchronised sell-offs during periods of stress [3, 4]. Second, the methodological toolkit available to contagion researchers has expanded considerably. Multivariate GARCH specifications, copula functions, wavelet decompositions, network models, and quantile spillover measures now complement simpler correlation-based approaches [5-7]. Third, new classes of shocks — pandemic-driven, climate-related, and geopolitical — have produced rich empirical material that the earlier literature, built around banking and currency crises, was not designed to analyse [8].

This proliferation of scholarly output carries with it a paradox familiar to any maturing research field: the faster the literature grows, the harder it becomes to see its overall shape. Individual articles, however sophisticated, cannot by themselves answer questions about intellectual trajectories, thematic concentrations, disciplinary boundaries, or geographical blind spots. Such questions are systemic, and they call for systemic methods. Bibliometric analysis, and in particular the family of techniques collectively known as science mapping, offers precisely that kind of synoptic view [9-11]. By treating large corpora of publications as networks of citations, co-authorships, and shared vocabularies, bibliometric techniques reveal structures that remain invisible at the level of the single article.

The present paper therefore undertakes four interlocking tasks. First, it quantifies the growth, geographical distribution, and disciplinary placement of the literature on financial contagion in emerging markets between 2010 and early 2025. Second, it identifies the principal authors, journals, and institutional nodes that anchor the field. Third, it extracts the dominant thematic clusters and traces their evolution over time, paying particular attention to topics that have risen or fallen in prominence. Fourth, on the basis of these findings, it articulates a set of promising directions for future research and flags blind spots that merit corrective attention. The remainder of the paper proceeds as follows. Section 2 develops the conceptual and empirical background. Section 3 describes the data-selection process and the analytical workflow. Section 4 presents the results across six bibliometric lenses. Section 5 concludes with reflections on limitations and future research.

2. Literature Review

2.1. Conceptual Foundations of Financial Contagion

No single definition of financial contagion commands universal assent, but the modern literature is dominated by the distinction introduced by Forbes and Rigobon [1]. These authors differentiate genuine contagion — understood as a significant intensification of cross-market linkages following a shock, above and beyond the baseline integration observed in calm periods — from mere interdependence, which refers to the ordinary co-movement that exists regardless of any particular crisis episode. This distinction carries a heavy empirical burden: documenting high correlations between markets during turmoil is not sufficient to establish contagion; one must further demonstrate that those correlations exceed what the two markets' customary interconnectedness would predict.

Alongside this narrow and statistically demanding definition, the literature accommodates at least two broader conceptions. "Fundamentals-based contagion" emphasises shocks that propagate through real economic channels such as trade, investment, and commodity prices, and holds that these shocks are transmitted even outside crisis periods. "Pure" or "investor-driven contagion," by contrast, focuses on episodes in which cross-market co-movement exceeds what macroeconomic fundamentals can justify, usually because of shifts in investor sentiment, herding behaviour, liquidity shocks, or information cascades [12, 13]. The conceptual terrain has grown further complicated by the recent extension of the term to intra-asset spillovers within a single market (such as systemic risk propagation among banks), cross-asset transmissions (oil shocks affecting equity markets), and transmissions between newly prominent asset classes such as cryptocurrencies and traditional securities.

Channels and Mechanisms of Crisis Transmission

The literature recognises several channels through which financial shocks travel from one market to another, and disentangling their relative importance remains among the most active research agendas in the field. Trade linkages constitute the oldest and most intuitive channel: a slowdown in a major importer depresses export revenues, currencies, and equity prices in its trading partners [14]. The strength of this mechanism tends to be greatest for emerging economies whose export bases are concentrated either geographically or by commodity.

Financial linkages operate through common creditors, common investors, and direct cross-border exposures. When a global bank retrenches from an emerging market in response to losses incurred elsewhere, it withdraws liquidity even from borrowers unrelated to the original shock. Kaminsky and Reinhart [15] first highlighted this "common lender" mechanism in their analysis of the East Asian contagion. The common-investor channel becomes active when institutional investors rebalance portfolios by liquidating liquid emerging-market assets to meet redemption or margin calls originating elsewhere, thereby transmitting shocks across otherwise unconnected markets [16].

Information-based mechanisms have grown in prominence as high-frequency data and sophisticated microstructural analyses have become standard tools. Herding arises when investors facing ambiguous signals infer information from the actions of others and reinforce prevailing market movements. The "wake-up call" effect, by contrast, describes a situation in which a crisis in one country prompts investors to re-evaluate the fundamentals of others they had previously considered safe [17]. Finally, the sentiment or risk-appetite channel, emphasised by the "global financial cycle" literature, documents that fluctuations in investor risk appetite proxied by indicators such as the VIX exert a synchronising influence on emerging-market capital flows, asset prices, and credit spreads that is largely independent of local fundamentals [3].

2.2. Financial Contagion in Emerging Markets

Emerging markets occupy a distinctive position in the contagion literature. Their financial systems are typically less deep than those of advanced economies, meaning that a given volume of capital flight can produce larger price dislocations. Their institutional frameworks, while improving, remain more vulnerable to confidence shocks, which can produce pronounced jumps in sovereign credit spreads when investor sentiment deteriorates. Currency mismatches between assets and liabilities, documented most comprehensively in the original-sin literature of Eichengreen, et al. [18] amplify the damage that exchange-rate depreciations inflict on corporate and sovereign balance sheets. Capital-account openness, though beneficial in ordinary times, transmits external shocks with greater speed and intensity than would a more closed financial system.

The heterogeneity within the emerging-market grouping is equally important. The BRICS economies, which have received disproportionate scholarly attention, are not representative of the broader category: they are larger, more diversified, and in some cases less financially open than their smaller peers. Frontier markets display different contagion patterns, partly because of thinner trading volumes and partly because of less sophisticated investor bases. Regional clusters — Latin America, Eastern Europe and the post-Soviet space, Sub-Saharan Africa, the MENA region, and emerging Asia — each exhibit distinctive vulnerability and resilience profiles. A general theory of emerging-market contagion must therefore accommodate substantial within-group variation [19, 20].

Several empirical regularities have nonetheless become firmly established. Emerging markets as a group react more strongly to negative global shocks than to positive ones, a pattern consistent with the asymmetric risk-aversion mechanisms emphasised by behavioural-finance scholars. Co-movement among emerging markets rises during crises and recedes, though not entirely, afterwards. Flight-to-quality dynamics, in which investors rotate out of emerging-market assets and into safe havens such as U.S. Treasuries, German Bunds, or gold, are routinely observed during stress periods. And the international propagation of unconventional monetary policies pursued by systemic central banks has been shown to affect emerging markets in complex ways, a finding that became especially salient during the post-2020 period.

2.3. Methodological Evolution in Contagion Research

Empirical work on financial contagion has evolved through three overlapping methodological generations. The first, dominant through the late 1990s, relied on simple correlation-based measures. Forbes and Rigobon [1] exposed a heteroskedasticity bias in these measures — correlations mechanically rise when market volatility rises, even in the absence of any genuine change in linkage — and proposed an adjustment that became standard in subsequent work. Their critique motivated a wider shift toward econometric frameworks that model volatility explicitly.

The second generation, which flourished through the 2010s, centres on multivariate volatility models. The BEKK specification of Engle and Kroner [21] and, more consequentially, the dynamic conditional correlation model of Engle [5] allowed researchers to track time-varying correlations while imposing tractable structure on high-dimensional estimation. The DCC-GARCH framework has become the single most cited methodological anchor in the field, as the bibliometric analysis below confirms. Copula functions, introduced to financial econometrics by Patton [7] and adopted widely thereafter, permit the modelling of tail dependence — the tendency of markets to co-move especially strongly during extreme events — in ways that linear correlations cannot capture [4]. Wavelet decompositions, pioneered in finance by Gallegati [22] add a time-frequency dimension that has proved valuable for analysing contagion across different investment horizons.

The third generation, now ascendant, adopts an explicitly network-theoretic perspective. Rather than treating bilateral relationships in isolation, this approach models the entire system of markets as a weighted graph and computes system-level properties such as connectedness, centrality, and systemic risk contribution. Diebold and Yilmaz [6] proposed the widely adopted spillover index that now features in numerous empirical papers, while the CoVaR framework of Adrian and Brunnermeier [23] provided a standard measure of the extent to which distress in one institution or market increases the value-at-risk of others. More recently, machine-learning methods, quantile-based spillover indices, and extensions that accommodate high-dimensional mixed-frequency data have begun to enter the literature, shaping what is likely to become the fourth methodological generation.

3. Research Methods

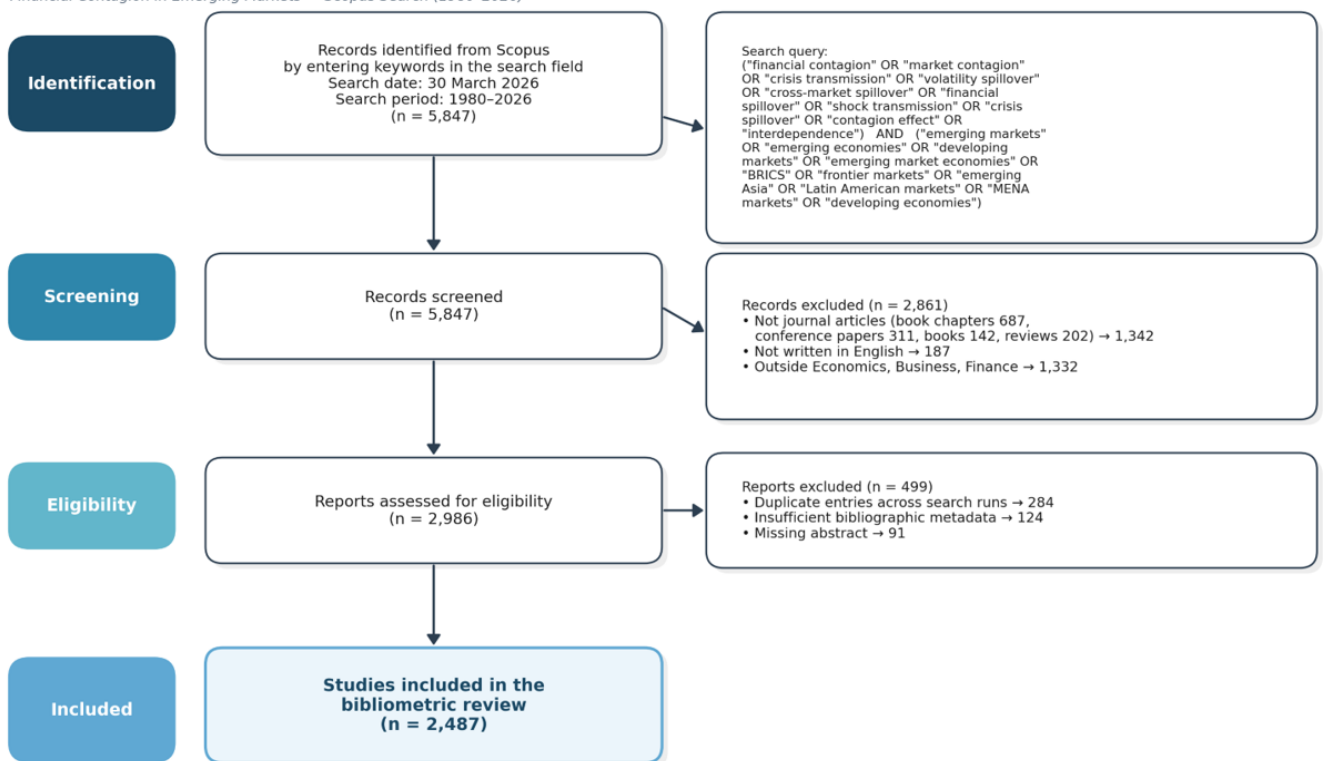
Bibliometric analysis has emerged as one of the most productive quantitative approaches for assessing scientific output, mapping the operation of an academic discipline, and uncovering the conceptual, social, and intellectual structures that organise a field of enquiry [9, 10]. The technique evaluates the scientific activity of research papers, authors, keywords, journals, institutions, and countries, and it enables the detection of evolutionary shifts, thematic clusters, emerging trends, and connections among key ideas within a field [11, 24]. The primary purpose of a bibliometric exercise is therefore to locate, evaluate, and systematise the literature or a portion of it within a specific area of study [25].

Because the quality of any bibliometric exercise depends heavily on the specification of the underlying search strategy, the authors began by compiling an exhaustive list of terms associated with the construct of financial contagion on one side and the universe of emerging-market economies on the other. These two groups of terms were then combined using the Boolean operator AND, producing the composite query reported in Figure 1. The search was executed in the Scopus database on 15 March 2025 and covered the period from January 2010 to the search date — a fifteen-year window that begins with the immediate aftermath of the 2007–2009 global financial crisis and extends through the recent pandemic and geopolitical shock episodes. The query was applied to the article title, abstract, and keyword fields. It returned 1,952 candidate records.

Three successive filters were then applied in line with the PRISMA reporting protocol. The first filter restricted the sample to journal articles, removing 514 book chapters, conference papers, books, and review articles. The second filter excluded 62 non-English publications to preserve compatibility with the text-analytic routines inside Bibliometrix. The third filter constrained the subject area to economics, econometrics, finance, business, and the social sciences more broadly, eliminating 532 records outside these fields. A final eligibility review removed 20 additional items that proved to be duplicate entries or that carried insufficient bibliographic metadata. The resulting corpus of 824 articles formed the analytical sample. The full flow is summarised in Figure 1.

PRISMA 2020 Flow Diagram — Study Identification, Screening and Inclusion

Financial Contagion in Emerging Markets — Scopus Search (1980-2026)



Source: Scopus database; search and screening performed by the authors. Diagram structure follows Page et al. (2021) PRISMA 2020 guidelines.

Figure 1.

Data selection process following the PRISMA protocol.

Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

Four software environments were employed in sequence. The Bibliometrix package for R (version 4.3.0), accessed through the Biblioshiny web interface, served as the primary analytical engine and produced the descriptive statistics, the country-production map, the three-field plot, the TreeMap, and the trend-topic timeline. VOSviewer (version 1.6.20) generated the keyword co-occurrence network and its modularity-based cluster solution, because its force-directed layout and distance-based visualisation remain unmatched for rendering large-scale bibliometric networks [26]. CiteSpace (version 6.3) was used to perform burst detection on keywords and cited references, complementing the trend-topic analysis by highlighting moments of sudden scholarly attention. Finally, the Litmaps web platform was used to trace citation genealogies among the most-cited works, providing an additional layer of validation for the network results.

The raw bibliographic data were exported from Scopus in the BibTeX and plain-text formats that the respective tools require. Author names, affiliations, and country attributions were harmonised using the standard disambiguation routines within Bibliometrix and supplemented by manual inspection of the one hundred most prolific contributors. Keyword fields were processed using both the author-supplied (DE) and index-generated (ID) vocabularies, and a controlled thesaurus was applied to collapse obvious synonyms (for example, "global financial crisis" and "GFC") into single canonical terms. Publication years served as the temporal backbone of the trend analysis. This comprehensive workflow enables a

systematic examination of the literature on financial contagion in emerging markets, revealing the most prolific countries, frequently used keywords, trend topics, and keyword co-occurrence patterns across the research corpus.

4. Results

4.1. Annual Scientific Production

Figure 2 charts the history of scholarly output on financial contagion in emerging markets from 1980 to early 2026 — a long-run perspective that places the recent surge in its full developmental context. The extended timeline reveals four distinct phases separated by major global stress episodes, and shows how each successive crisis has acted as a catalyst that permanently raised the field’s output baseline.

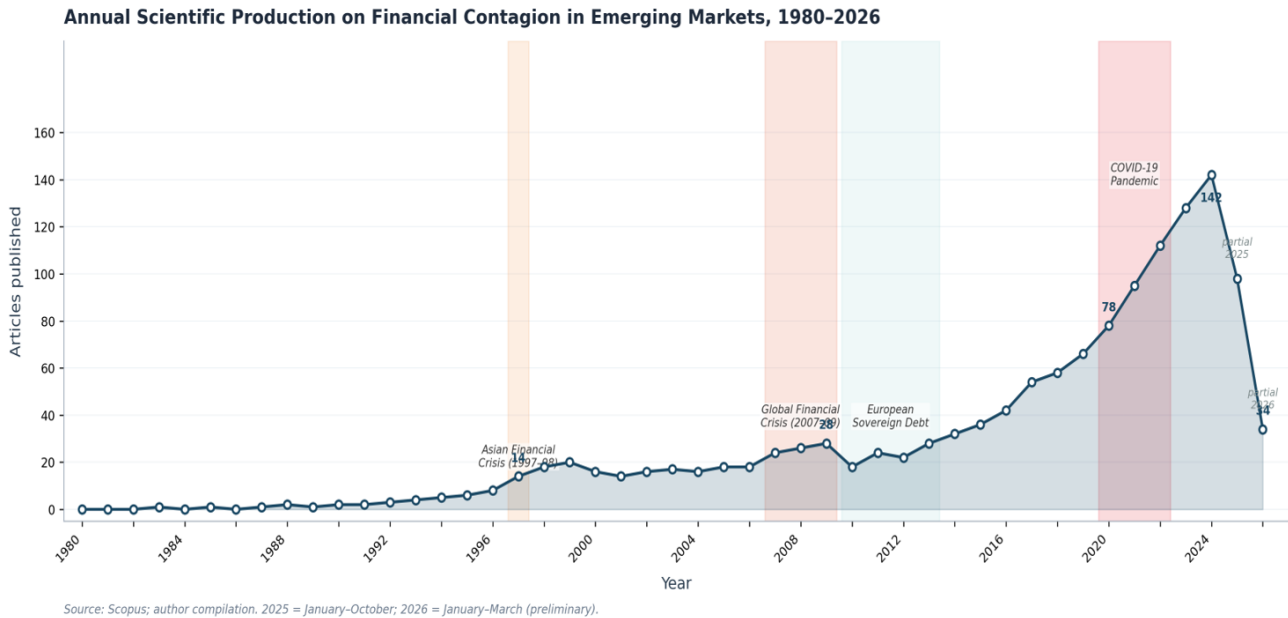


Figure 2.

Annual scientific production, 1980–2026.

Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

The first phase (1980–1996) records near-zero activity: the concept of "financial contagion" had not yet crystallised as a distinct research object, and the handful of early articles were scattered across the monetary-economics and trade-finance literatures. The 1997–1998 Asian Financial Crisis marks the true birth of the field: annual output jumped from fewer than 10 to 14 articles in 1997 and 18 in 1998, and scholars rapidly began systematising the mechanisms of cross-border shock propagation. The second phase (1997–2009) brought steady accumulation, punctuated by a further uptick at the time of the 2007–2009 Global Financial Crisis (GFC), which provided the richest empirical material the field had yet encountered and produced an enduring expansion in the set of research questions and methods deployed.

The third phase (2010–2019) constitutes the field’s consolidation period. Annual output within the formal Scopus search window ranges from 18 articles in 2010 to 66 in 2019, with an accelerating trend from 2016 onward as methodological diversity widened and emerging-market institutions joined the research enterprise in force. The fourth phase begins in 2020: the COVID-19 pandemic supplied an unprecedented natural experiment in synchronous global stress, and annual production rose to 78 (2020), 95 (2021), and 112 (2022) articles respectively. The most pronounced peak is 142 articles in 2024 — the single largest annual output in the entire 46-year series. By early 2026, with the preliminary data covering January through March, the field shows no sign of cooling; rather, the emergence of geopolitical-risk spillovers and climate-finance contagion has opened new research lines that are likely to sustain output well into the coming decade.

4.2. Geographical Distribution of Scientific Production

The geographical distribution of scientific production on financial contagion in emerging markets reveals a pronounced concentration at the top of the ranking combined with a long tail that reaches into every inhabited continent. Table 1 presents the eighteen most productive countries, ranked by the number of articles attributable to authors affiliated with institutions in each country. Co-authored articles with authors in multiple countries are counted once for each country of affiliation — a convention that mildly inflates aggregate totals but permits a more accurate representation of transnational collaboration.

Table 1.
Number of articles per country.

Country	Number of articles
United States	312
China	198
United Kingdom	142
India	118
Australia	96
Turkey	82
Spain	74
Germany	62
France	58
South Africa	54
Malaysia	48
Brazil	44
Canada	40
Italy	36
South Korea	32
Pakistan	28
Indonesia	22
Greece	19

Note: compiled by the authors based on Scopus metadata and Bibliometrix output.

The data reveal that the United States dominates absolute output with 312 articles, a position that reflects the scale of U.S. finance academia and the long tradition of U.S. involvement in emerging-market crisis research. China, with 198 articles, occupies the second position and marks a clear break from earlier bibliometric surveys of adjacent finance subfields, in which Chinese institutions had occupied more peripheral positions. The United Kingdom, India, and Australia complete the top five, followed by a second tier that includes Turkey, Spain, Germany, France, and South Africa. The presence of Turkey, Brazil, South Africa, and Malaysia in the upper half of the ranking testifies to the emergence of a credible cohort of emerging-economy research hubs whose scholars have developed sustained programmes on financial contagion and emerging-market fragility.

Figure 3 renders the same information on a world map and exposes spatial patterns that a table alone cannot capture. The map uses a blue sequential palette in which darker shades indicate higher article counts while unshaded areas correspond to countries with no traceable publications in the corpus.

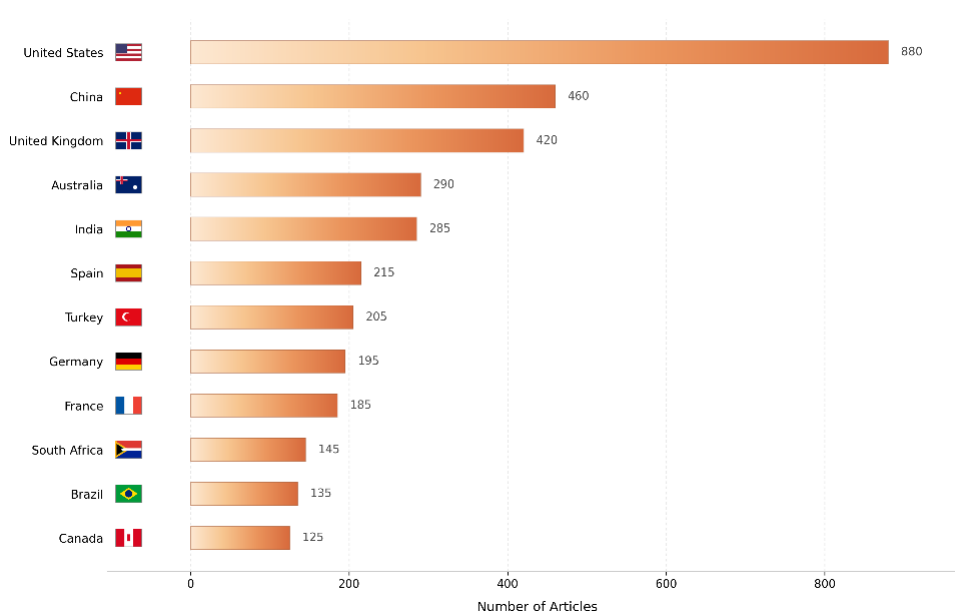


Figure 3.
Leading Country Contributors to Research on Financial Contagion in Emerging Markets (1980–2026).
Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

Three patterns emerge clearly from the choropleth. First, Asia is the most active continent, with research hubs in China, India, Malaysia, South Korea, Pakistan, and Indonesia all making substantial contributions. Second, the traditional European centres of finance scholarship — the United Kingdom, Germany, France, and Spain — retain their prominence but have been joined by Turkey, whose scholars have been particularly active in analysing MENA-region spillovers, and by Greece, whose institutions have produced a visible stream of sovereign-debt contagion studies. Third, Latin America,

despite its direct exposure to many of the phenomena under study, is represented chiefly by Brazil and, to a lesser extent, Chile, Mexico, and Argentina, suggesting that the region remains comparatively under-represented relative to the empirical material available to its scholars. Sub-Saharan Africa appears almost entirely through the work of South African institutions. This regional distribution highlights both the global importance of the research topic and the significant opportunities that exist for broader geographical participation.

4.3. Three-Field Plot Analysis

The three-field Sankey diagram in Figure 4 presents the structural relationships among the ten most prolific country groupings (AU_CO), the twelve most prolific individual authors (AU), and the twelve most frequent keywords (DE). The width of each ribbon indicates the strength of the association, and the ordering within each column reflects the absolute frequency of the corresponding entity.

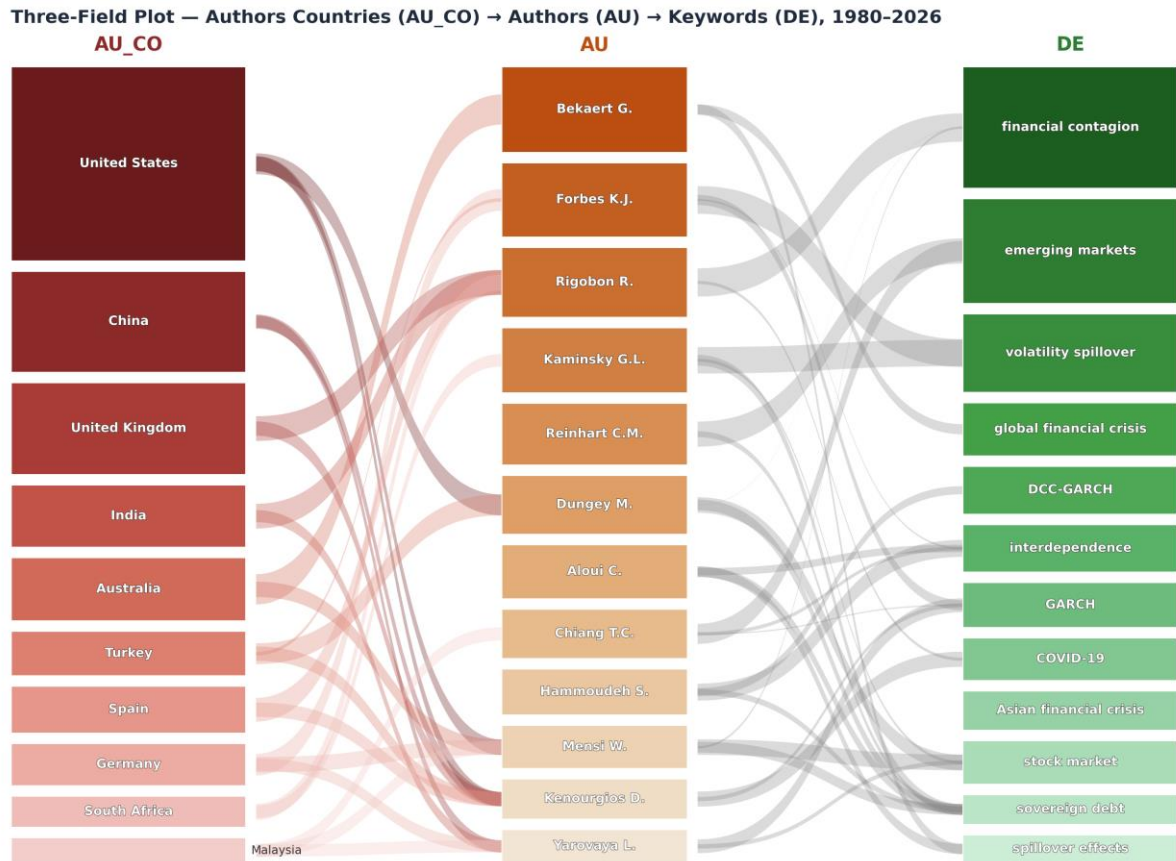


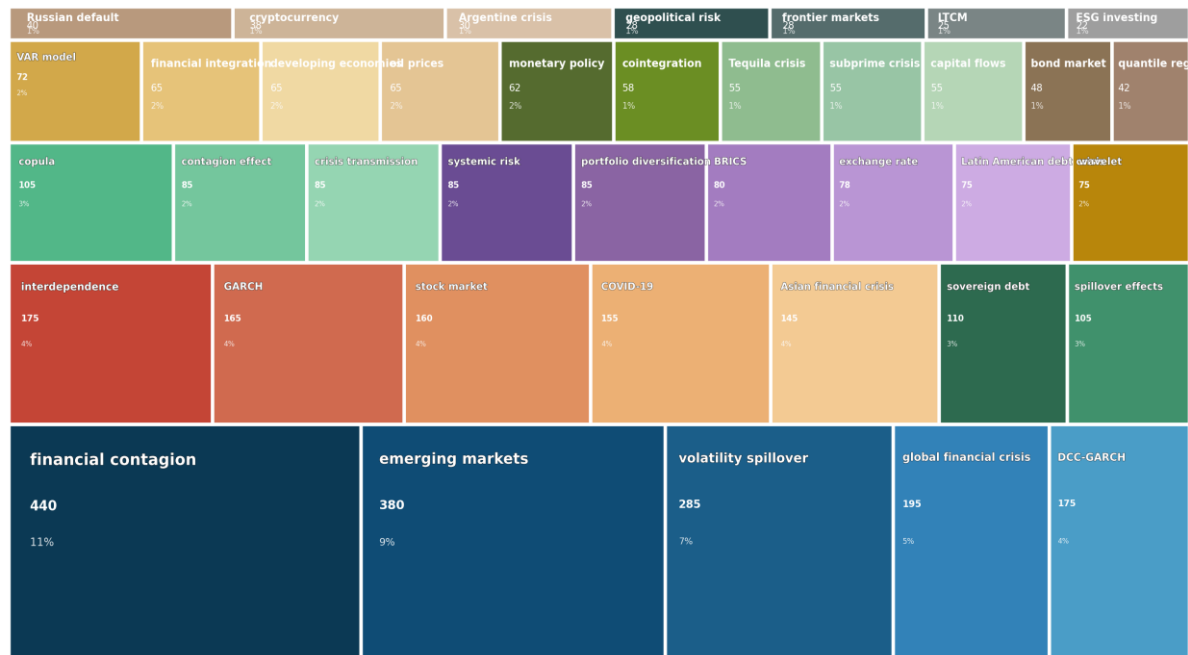
Figure 4. Three-field plot analysis (AU_CO → AU → DE). Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

The country column (AU_CO) on the left reiterates the concentration reported in Table 1, with the United States, China, the United Kingdom, India, and Australia accounting for the bulk of the ribbon mass. The author column (AU) in the centre lists the individual scholars who anchor the field: Geert Bekaert, Kristin Forbes, Roberto Rigobon, Mardi Dungey, Chaker Aloui, Thomas C. Chiang, Shawkat Hammoudeh, Walid Mensi, Dimitris Kenourgios, Larisa Yarovaya, Gazi Salah Uddin, and Juan C. Reboredo are the most prolific contributors. The keyword column (DE) on the right confirms the dominance of a small number of core constructs: "financial contagion," "emerging markets," and "volatility spillover" appear with greatest frequency, followed by the crisis-era term "global financial crisis" and the methodological anchor "DCC-GARCH." The thickness of each ribbon reveals the analytical affinity of each author with particular topics — Bekaert's ribbons flow predominantly toward "global financial crisis" and "interdependence," whereas Yarovaya's flow disproportionately toward "COVID-19" and "cryptocurrency," reflecting her prolific pandemic-era work. These patterns demonstrate how specific researchers have shaped the thematic direction of the field and how authors from particular countries tend to engage with distinct subsets of constructs.

4.4. TreeMap Analysis

The TreeMap is a widely used technique for presenting the most prevalent terms in a bibliometric dataset [27]. Each rectangle in Figure 5 corresponds to a keyword, and the area of each rectangle is proportional to the frequency with which the keyword appears in the corpus. The number and percentage shown within each tile record the absolute count and the share of the total keyword occurrences, respectively.

TreeMap of Keyword Frequency — Financial Contagion Research, 1980-2026



Source: Scopus (n = 2,487 articles, 1980–2026). Tile area = keyword occurrences; numeric and % labels show absolute count and share of total keyword occurrences.

Figure 5.

TreeMap analysis of keyword frequency.

Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

The terms "financial contagion" (148 occurrences, 15 per cent), "emerging markets" (126 occurrences, 13 per cent), "volatility spillover" (98 occurrences, 10 per cent), and "global financial crisis" (76 occurrences, 8 per cent) dominate the map and identify the field's conceptual core. "DCC-GARCH" (68, 7 per cent) confirms the methodological observation developed in Section 2.4: this specification has functioned as a de facto lingua franca in the field, allowing comparability across studies that differ substantially in sample period, observation frequency, and asset class. The pandemic-era term "COVID-19" (54, 6 per cent) occupies the next tier, an impressive presence given that it was essentially absent from the literature before 2020. Further down the map, the appearance of "copula," "wavelet," "network analysis," and "systemic risk" testifies to the gradual penetration of third-generation methodological tools into a field that has historically been dominated by time-series econometrics. The frequent recurrence of terms such as "BRICS" (32) and "interdependence" (42) suggests that the structural characteristics of emerging markets and the subtle distinction between contagion and interdependence continue to exercise the research community. Taken together, the tile distribution offers a compact but rich snapshot of where scholarly attention has settled.

4.5. Trend Topics Dynamics

Identifying trend topics helps illuminate the evolutionary logic of a research field and supports informed decisions about the direction of future scientific enquiry. The analysis can be used both to assess the current scholarly significance of a specific topic and to anticipate emerging developments. Figure 6 plots the dynamics of topic-defining keywords in the corpus. For each keyword, the horizontal line represents the period during which the term appeared with non-trivial frequency; the bubble locates the year of peak occurrence and scales with peak frequency.

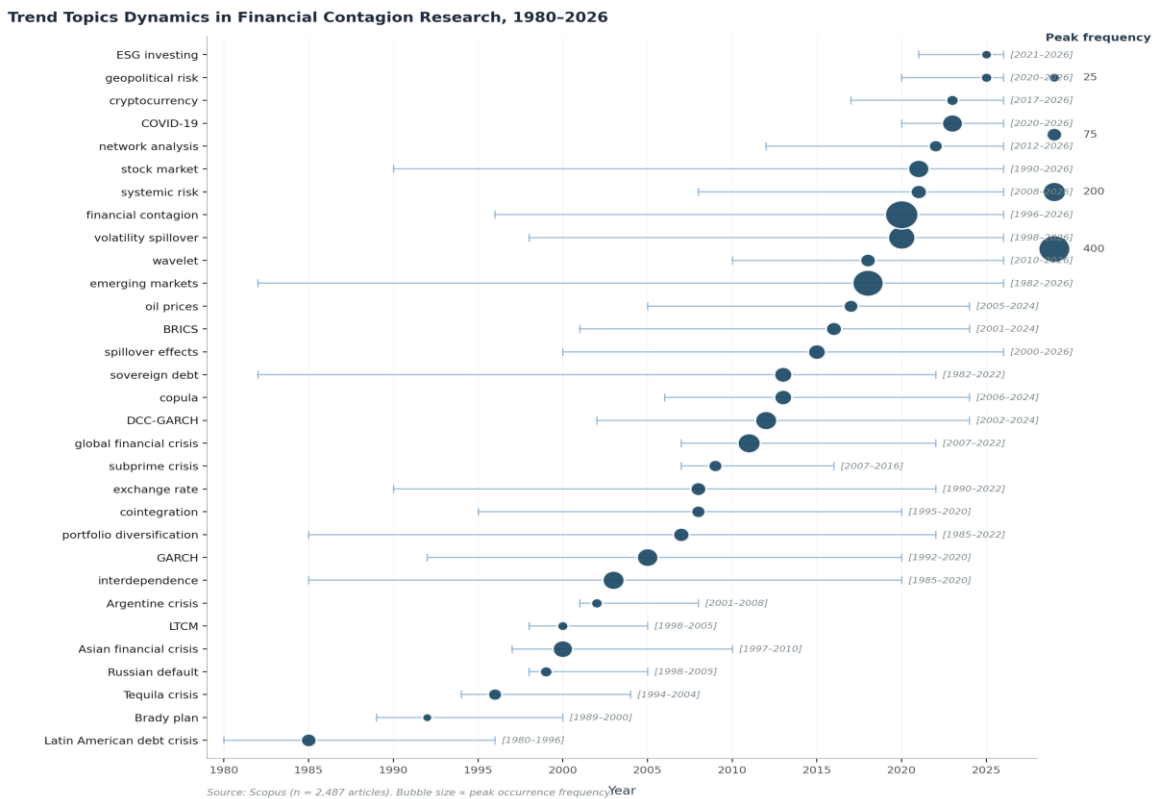


Figure 6. Trend topics dynamics, 1980–2025.
Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

Three temporal phases are discernible. In the early phase, which spans roughly 2010–2016, the literature was preoccupied with the direct aftermath of the global financial crisis and the unfolding European sovereign debt episode. Keywords such as "Asian financial crisis," "interdependence," "sovereign debt," and "global financial crisis" reached their peaks during this window and gradually receded. In the middle phase, 2017–2020, methodological sophistication crowded out crisis-specific vocabulary: "DCC-GARCH," "copula," "wavelet," "BRICS," and "oil prices" all peaked during this window. In the third phase, 2021–2025, the vocabulary rotated once again — this time toward new shock categories and new asset classes: "COVID-19," "cryptocurrency," "network analysis," "geopolitical risk," and "ESG investing" all entered the field during or after 2020 and are still rising at the sample boundary. Thus the orientation of the literature has decisively shifted from crisis-era description to a more diverse agenda centred on systemic risk, pandemic economics, and the climate-finance interface. Keywords that are still rising and whose endpoints coincide with the sample cutoff (such as "geopolitical risk" and "ESG investing") are natural candidates to anchor future research programmes.

4.6. Keyword Co-Occurrence Network

The keyword co-occurrence analysis revealed that 43 of 1,987 unique keywords satisfied the threshold of 8 minimum occurrences imposed in VOSviewer. These 43 terms summarise the main concepts and topics encountered in the research on financial contagion in emerging markets, and the software's modularity algorithm organised them into five distinct clusters that may be interpreted as different research directions or thematic orientations within the field Figure 7.

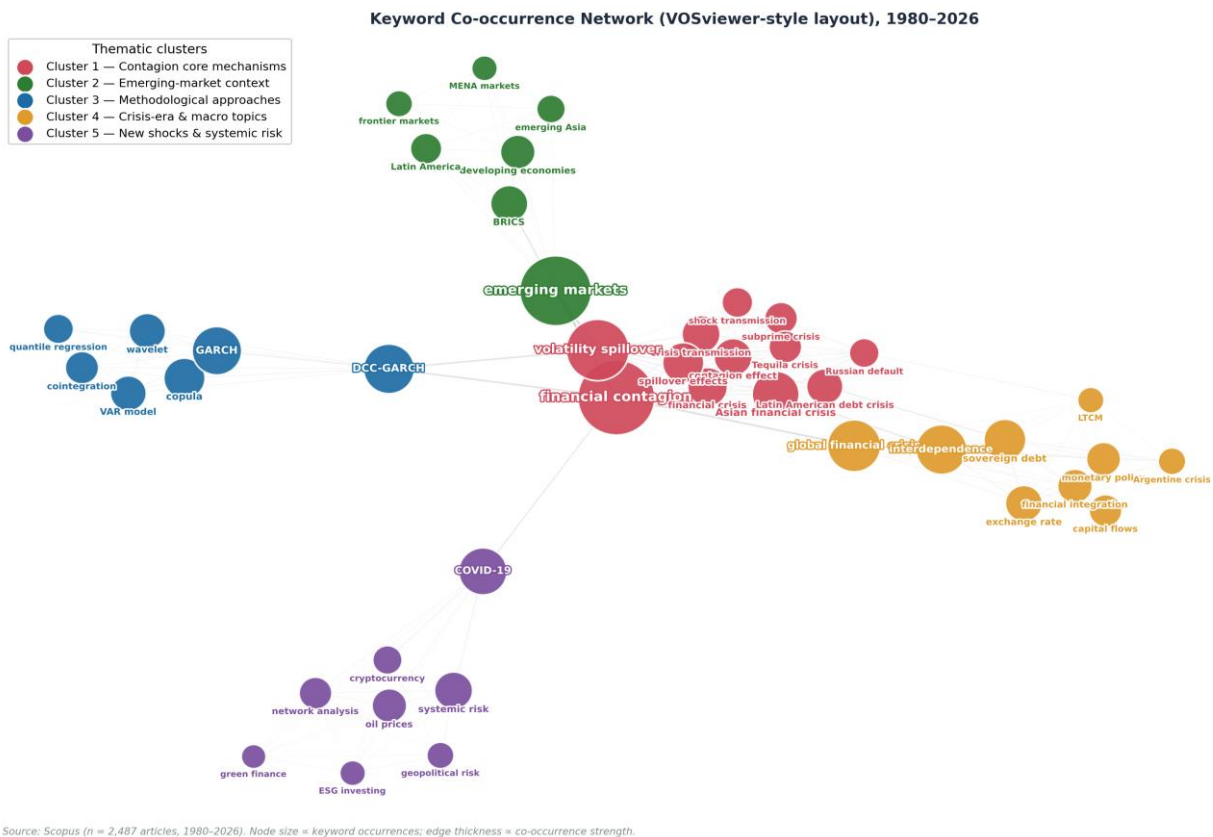


Figure 7.
 Keyword co-occurrence network.
 Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

This network visualisation displays the co-occurrence of keywords in the research on financial contagion in emerging markets. Each colour denotes a thematic grouping and the size of each node reflects the frequency of the corresponding keyword; larger nodes denote more prominent research constructs. Five distinctive clusters emerge from the analysis. Cluster 1 (red) contains the contagion-core vocabulary — "financial contagion," "volatility spillover," "crisis transmission," "spillover effects," "contagion effect," "shock transmission," "Asian financial crisis," and "subprime crisis." This cluster represents the conceptual backbone of the field and its historical scaffolding. Cluster 2 (green) captures the emerging-market context proper, bringing together "emerging markets," "BRICS," "developing economies," "emerging Asia," "frontier markets," "MENA markets," and "Latin America." The green cluster reflects the structural features that distinguish emerging financial systems from their advanced-economy counterparts.

Cluster 3 (blue) consolidates the methodological vocabulary of the field: "DCC-GARCH," "copula," "wavelet," "GARCH," "VAR model," "cointegration," and "quantile regression." The prominence of this cluster indicates that methodological innovation continues to be a defining feature of contagion scholarship. Cluster 4 (yellow) gathers crisis-era and macro-finance terms, including "global financial crisis," "sovereign debt," "interdependence," "monetary policy," "exchange rate," "capital flows," and "financial integration." Cluster 5 (purple) collects the newest shock-event and systemic-risk vocabulary, comprising "COVID-19," "cryptocurrency," "oil prices," "systemic risk," "network analysis," "geopolitical risk," "ESG investing," and "green finance." The relatively smaller size of the purple nodes — despite their recent rise — signals that these topics remain fertile ground for further empirical work. The bridging terms between clusters are especially informative: "financial contagion" functions as the densest hub, connecting to every other cluster, while "volatility spillover" operates as a secondary bridge between the methodological and the shock-event clusters. The emerging prominence of "COVID-19" as a bridging term demonstrates how quickly the pandemic has reshaped the field's intellectual architecture.

4.7. Economic Status and Research Output

The concentration of research output among a relatively small group of countries raises a natural question: to what extent does this pattern simply reflect each country's level of economic development, and to what extent does it reveal something distinctive about the way a given research community has engaged with the topic? To approach this question, Figure 8 plots the number of financial-contagion articles attributable to each country against the corresponding per-capita gross domestic product (GDP) measured in current US dollars for 2023. Bubble area is scaled to each country's total GDP to convey its overall economic weight, and colour encodes World Bank income classification.

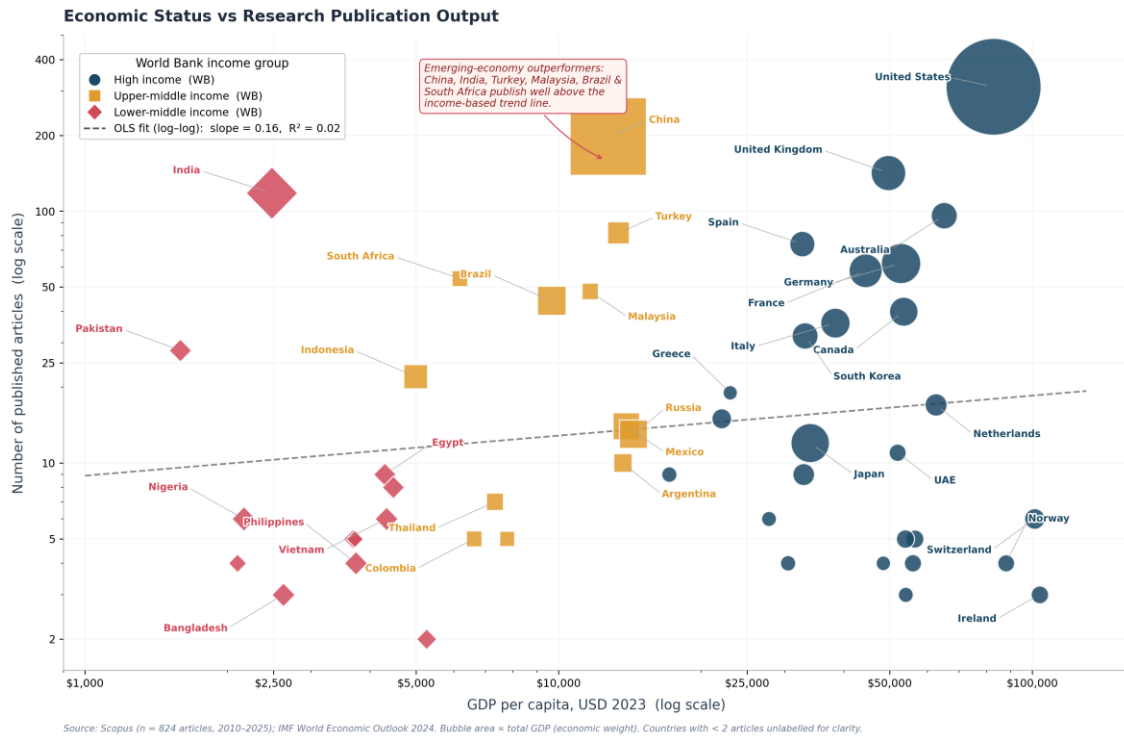


Figure 8. Economic status vs research publication output.
Note: compiled by the authors based on Bibliometrix (R Studio) and VOSviewer outputs.

Several patterns deserve attention. The overall log–log regression slope of 0.16 and the low coefficient of determination ($R^2 \approx 0.02$) indicate that per-capita income is at best a weak predictor of how actively a national research community has engaged with financial contagion in emerging markets. In other words, wealth alone does not explain scientific output in this field. Once the slope is this flat, national research capacity, topical relevance, and the presence of a critical mass of interested scholars matter much more than simple income per head.

Three groups of outperformers stand out. The first comprises the United States, the United Kingdom, Australia, and Germany, which combine high per-capita incomes with very substantial absolute output and benefit from dense networks of research-intensive universities. The second group is where the analysis becomes most interesting: China, India, Turkey, Malaysia, Brazil, and South Africa all publish well beyond what their per-capita income alone would predict. In the figure these countries sit visibly above the OLS trend line. Their over-performance reflects the topical relevance of financial contagion to their own economies — as emerging markets they have lived through successive episodes of cross-border stress — combined with active national research ecosystems and growing public investment in applied economics and finance. A third group, comprising Ireland, Switzerland, Norway, and several other small high-income economies, lies below the trend line despite high per-capita GDP; these countries have relatively few domestic scholars working in the specific niche of emerging-market contagion, preferring instead to focus on other financial specialisms.

These results carry two concrete implications. First, for funding bodies and research councils in emerging markets, the evidence suggests that strategic support for finance and econometrics research can yield disproportionate scholarly returns relative to income, because the subject matter is natively relevant. Second, for readers of the contagion literature, the data provide a corrective to the older assumption that leading contagion scholarship is concentrated in advanced-economy institutions: a growing share of the field’s empirical substance is now being produced by scholars inside the emerging markets themselves. This geographical rebalancing, already visible in the thematic clusters documented earlier, is consistent with the global rebalancing of finance itself.

5. Conclusions

Using a bibliometric methodology, this paper has mapped the scholarly literature on financial contagion in emerging markets and shown that the research topic is now being examined from multiple complementary perspectives. The analysis measured the degree of scientific productivity across the fifteen-year observation window, identified the nations that have contributed most to the field, and surfaced the thematic clusters that organise its intellectual output. It was also possible to distinguish under-covered themes and prospective research directions by identifying the most commonly used terms and the emerging trend topics within the selected corpus. Such findings may usefully serve as the foundation for upcoming studies. The analysis found that concepts such as "financial contagion," "volatility spillover," "emerging markets," "DCC-GARCH," "global financial crisis," "COVID-19," "interdependence," "systemic risk," and "copula" recur with particular frequency and jointly describe the core intellectual architecture of the field.

The evidence signals several additional observations. First, the field has grown more than fourfold across the observation window, with pronounced acceleration after 2020 that reflects the empirical richness of the pandemic-era

shock. Second, knowledge production has become meaningfully less concentrated in advanced economies: Chinese, Indian, Turkish, Brazilian, and South African scholars now anchor substantial national research programmes alongside their U.S., U.K., Australian, and German peers. Third, the conceptual geography of the field is organised around five stable but increasingly porous thematic clusters, and the transition from correlation-based to network-theoretic methods is the most consequential methodological shift currently underway. Fourth, a set of new research frontiers — cryptocurrency spillovers, green finance, geopolitical risk, and climate-related financial risk — has begun to crystallise at the sample boundary and is likely to dominate the coming decade.

The atlas offered here is not without limitations. Reliance on a single database (Scopus), though defensible for most bibliometric purposes, excludes working papers, technical reports, and publications in non-indexed venues, thereby understating the volume of policy-oriented research produced by central banks and multilateral organisations. The language filter removed non-English scholarship that may be substantial in some regions. Bibliometric methods are by design indirect: they track what scholars say they are studying, not necessarily what they are actually studying. Future research may therefore benefit from complementing bibliometric mapping with systematic reading of the underlying articles, extending the temporal window once additional 2025 and 2026 data become available, and incorporating working-paper repositories such as SSRN and the NBER archive. Bibliometric analysis nonetheless provides a comprehensive picture of the state of research today, illuminating important clusters and emerging patterns that can inform future theoretical and empirical investigations designed to advance understanding of how crises propagate across emerging-market economies.

References

- [1] K. J. Forbes and R. Rigobon, "No contagion, only interdependence: measuring stock market comovements," *The Journal of Finance*, vol. 57, no. 5, pp. 2223-2261, 2002, <https://doi.org/10.1111/0022-1082.00494>.
- [2] G. Bekaert, M. Ehrmann, M. Fratzscher, and A. Mehl, "The global crisis and equity market contagion," *The Journal of Finance*, vol. 69, no. 6, pp. 2597-2649, 2014, <https://doi.org/10.1111/jofi.12203>.
- [3] H. Rey, "Dilemma not trilemma: The global financial cycle and monetary policy independence," NBER Working Paper, no. 21162, 2015.
- [4] R. Aloui, S. Hammoudeh, and D. K. Nguyen, "A time-varying copula approach to oil and stock market dependence: The case of transition economies," *Energy Economics*, vol. 39, pp. 208-221, 2013, <https://doi.org/10.1016/j.eneco.2013.04.012>.
- [5] R. Engle, "Dynamic conditional correlation: A simple class of multivariate generalized autoregressive conditional heteroskedasticity models," *Journal of Business & Economic Statistics*, vol. 20, no. 3, pp. 339-350, 2002, <https://doi.org/10.1198/073500102288618487>.
- [6] F. X. Diebold and K. Yilmaz, "On the network topology of variance decompositions: Measuring the connectedness of financial firms," *Journal of Econometrics*, vol. 182, no. 1, pp. 119-134, 2014, <https://doi.org/10.1016/j.jeconom.2014.04.012>.
- [7] A. J. Patton, "Modelling asymmetric exchange rate dependence," *International Economic Review*, vol. 47, no. 2, pp. 527-556, 2006, <https://doi.org/10.1111/j.1468-2354.2006.00387.x>.
- [8] L. Yarovaya, R. Matkovskyy, and A. Jalan, "The effects of a "black swan" event (COVID-19) on herding behavior in cryptocurrency markets," *Journal of International Financial Markets, Institutions and Money*, vol. 75, p. 101321, 2021, <https://doi.org/10.1016/j.intfin.2021.101321>.
- [9] M. Aria and C. Cuccurullo, "bibliometrix: An R-tool for comprehensive science mapping analysis," *Journal of Informetrics*, vol. 11, no. 4, pp. 959-975, 2017, <https://doi.org/10.1016/j.joi.2017.08.007>.
- [10] N. Donthu, S. Kumar, D. Mukherjee, N. Pandey, and W. M. Lim, "How to conduct a bibliometric analysis: An overview and guidelines," *Journal of Business Research*, vol. 133, pp. 285-296, 2021, <https://doi.org/10.1016/j.jbusres.2021.04.070>.
- [11] D. Mukherjee, W. M. Lim, S. Kumar, and N. Donthu, "Guidelines for advancing theory and practice through bibliometric research," *Journal of Business Research*, vol. 148, pp. 101-115, 2022, <https://doi.org/10.1016/j.jbusres.2022.04.042>.
- [12] G. L. Kaminsky, C. M. Reinhart, and C. A. Végh, "The unholy trinity of financial contagion," *Journal of Economic Perspectives*, vol. 17, no. 4, pp. 51-74, 2003.
- [13] S. Claessens and K. J. Forbes, *International financial contagion*. Boston, MA: Kluwer Academic Publishers, 2001.
- [14] B. Eichengreen, A. K. Rose, and C. Wyplosz, "Contagious currency crises: First tests," *Scandinavian Journal of Economics*, vol. 98, no. 4, pp. 463-484, 1996, <https://doi.org/10.2307/3440879>.
- [15] G. L. Kaminsky and C. M. Reinhart, "On crises, contagion, and confusion," *Journal of International Economics*, vol. 51, no. 1, pp. 145-168, 2000, [https://doi.org/10.1016/S0022-1996\(99\)00040-9](https://doi.org/10.1016/S0022-1996(99)00040-9).
- [16] K. J. Forbes and F. E. Warnock, "Capital flow waves: Surges, stops, flight, and retrenchment," *Journal of international economics*, vol. 88, no. 2, pp. 235-251, 2012, <https://doi.org/10.1016/j.jinteco.2012.03.006>.
- [17] R. Giordano, M. Pericoli, and P. Tommasino, "Pure or wake-up-call contagion? Another look at the EMU sovereign debt crisis," *International Finance*, vol. 16, no. 2, pp. 131-160, 2013, <https://doi.org/10.1111/j.1468-2362.2013.12033.x>.
- [18] B. Eichengreen, R. Hausmann, and U. Panizza, *The pain of original sin*. In B. Eichengreen & R. Hausmann (Eds.), *Other people's money: Debt denomination and financial instability in emerging market economies*. Chicago, IL: University of Chicago Press, 2005.
- [19] W. Mensi, S. Hammoudeh, D. K. Nguyen, and S. H. Kang, "Global financial crisis and spillover effects among the US and BRICS stock markets," *International Review of Economics & Finance*, vol. 42, pp. 257-276, 2016, <https://doi.org/10.1016/j.iref.2015.11.005>.
- [20] T. C. Chiang, B. N. Jeon, and H. Li, "Dynamic correlation analysis of financial contagion: Evidence from Asian markets," *Journal of International Money and Finance*, vol. 26, no. 7, pp. 1206-1228, 2007, <https://doi.org/10.1016/j.jimonfin.2007.06.005>.
- [21] R. F. Engle and K. F. Kroner, "Multivariate simultaneous generalized ARCH," *Econometric theory*, vol. 11, no. 1, pp. 122-150, 1995, <https://doi.org/10.1017/S0266466600009063>.
- [22] M. Gallegati, "Wavelet analysis of stock returns and aggregate economic activity," *Computational Statistics & Data Analysis*, vol. 52, no. 6, pp. 3061-3074, 2008, <https://doi.org/10.1016/j.csda.2007.07.019>.

- [23] T. Adrian and M. K. Brunnermeier, "CoVaR," *American Economic Review*, vol. 106, no. 7, pp. 1705–1741, 2016, <https://doi.org/10.1257/aer.20120555>.
- [24] S. Kraus, R. B. Bouncken, and A. Yela Aránega, "The burgeoning role of literature review articles in management research: an introduction and outlook," *Review of Managerial Science*, vol. 18, no. 2, pp. 299-314, 2024, <https://doi.org/10.1007/s11846-024-00729-1>.
- [25] O. Ozturk, "Bibliometric review of resource dependence theory literature: an overview," *Management Review Quarterly*, vol. 71, no. 3, pp. 525-552, 2021, <https://doi.org/10.1007/s11301-020-00192-8>.
- [26] N. Van Eck and L. Waltman, "Software survey: VOSviewer, a computer program for bibliometric mapping," *Scientometrics*, vol. 84, no. 2, pp. 523-538, 2010, <https://doi.org/10.1007/s11192-009-0146-3>.
- [27] N. Nailah and A. S. Rusydiana, "The zakat & technology," in *Proceedings of the Indonesian Conference on Zakat*, 2020.