

# Asset pricing in global scenario: a bibliometric analysis

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## Abstract

**Purpose** – This study aims to organise and present the development of asset pricing models in the international environment. The stock market integration and cross-listing lead us to another objective of bibliometric analysis for “International Asset Pricing” to provide a complete overview and give scope and directions for future research.

**Design/methodology/approach** – Web of Science database is used to search with “International Asset Pricing.” Of 3,438 articles, 2,487 articles are selected for the final bibliometric analysis. Various research such as citation analysis, keyword analysis, author’s and corresponding author’s analysis have been conducted.

**Findings** – The bibliometric analysis finds that the USA comes out to be the country where the maximum research was conducted on the topic. The keyword analysis was also analysed to evaluate the significant areas of the research. Risk, return and international asset pricing are the most frequently used keywords. The year 2020 has the maximum number of published research articles and citations due to the change in the market structure worldwide and the effect of Covid-19 across the world.

**Originality/value** – The present paper provides the collection, classification and comprehensive analysis of “International Asset pricing,” which may help the academicians, researchers and practitioners for future research for the relevant subject area.

**Keywords** Bibliometric analysis, International asset pricing, Conditional CAPM, Arbitrage pricing theory, CAPM, Portfolio theory

**Paper type** Research paper

## Introduction

Financial market integration of stock markets worldwide appears to be a key and critical aspect of economic development. Every country across the globe depends on one another for its success (Pirinsky & Wang, 2011). The contemporary period is of globalisation, and the removal of international barriers resulted in the seamless movement of capital and trade. Economic ties have grown stronger as the world has evolved into a global community. The financial market structure of every country has a significant impact on determining asset pricing. It is crucial to business profitability and the stability and expansion of the financial markets. The entire value of a company’s outstanding shares is used to calculate the country’s stock market capitalisation. Multiply the stock market price by the number of shares outstanding to get a company’s market capitalisation (Ray, 2012). Market capitalisation is an essential factor to consider while deciding the asset pricing strategy to be followed, as it aids in selecting the appropriate valuation method (Ali Khravish, Zakaria

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Siam, & Jaradat, 2010). Various research have been conducted on asset pricing (Christensen & Feltham, 2009; Connor & Sehgal, 2001; Fama & French, 2015; Greenwood, Hanson, & Liao, 2018; Guasoni & Wong, 2020; Karolyi & Stulz, 2002; Khudoykulov, 2020; Krause, 2001; Patro, 2001; Ranjan Dash & Mahakud, 2013; Sehgal & Tripathi, 2006; Sehrawat, Kumar, Nigam, Singh, & Goyal, 2020; Stulz, 1981; Taneja, 2010) in domestic as well in an international setting, but still there is a lot problem at the time of selecting the suitable model for the study. The current research focuses on the three aspects of asset pricing. The first is the development of various asset pricing models over time. The second aspect is crucial, which deals with the theoretical background of the model “how these models perform in domestic and international settings.” The third aspect, which is also the most important, focuses on the bibliometric analysis of 2,487 research articles from 2001 to 2021. The study focused on the area where more research is needed in international asset pricing.

### Justification of the study

Asset pricing emerged as a well-versed and predominant area in corporate finance and stock analysis; asset-pricing models have been a vital area of research in finance (Khudoykulov, 2020). The underlying worth of an asset must be distinguished from the market price of that asset. As described by Adam Smith, the natural price can be used to identify the fundamental value, and it defines the genuine price as providing a reasonable profit to the owner (Krause, 2001).

Various researchers have looked into multiple aspects of asset pricing theory, supplementing the field with better risk-return explanations like the efficient market hypothesis (Fama, 1970), arbitrage pricing theory (APT) (Roll & Ross, 1980) and the inter-temporal capital asset pricing model (CAPM; Merton, 1973). Raei *et al.* (2011) in his paper discussed the development of consumption-based CAPM (Breedon, Gibbons & Litzenberger, 2016; Chen, 2003; Darrat, Li & Park, 2011), downside-CAPM (Bawa & Lindenberg, 1977; Harlow & Rao, 1989), adjusted CAPM where liquidity risk estimated in investor's Beta (Amihud & Mendelson, 1989; Pástor & Stambaugh, 2000; Acharya & Pedersen, 2005), revised CAPM in which Beta is revised including financial and operating leverage (Rahnamaie Roodposhti *et al.*, 2009; Moradian *et al.*, 2010), consumption CAPM in which Beta is explained in terms of growing consumption in the market (Iqbal & Brooks, 2007). The international asset pricing model (IAPM) has been popularised in recent years due to its innovative implementations. Firstly, it helps the firms to cross-list their assets in a relatively segmented market which helps in integrating the international capital markets. Secondly, firms with non-tradable assets indirectly benefit from global integration in terms of lower cost of capital and higher asset prices, without incurring any additional cost due to the international pricing spillover effect. As a result, “International Asset Pricing” was chosen as a significant aspect, and further analysis will provide new dimensions in the field.

This study examines the following research questions related to asset pricing published between 2001 and 2021.

- RQ1. What is the pattern of publication and citations during these years?
- RQ2. Who are the most influential authors in the field of asset pricing in terms of the number of publications and citations?
- RQ3. Which asset pricing articles are most cited in the journals?
- RQ4. What are the main dimensions of changes occurred in the international asset pricing during these periods?

RQ5. Which are the most prominent keywords used in the articles and areas which are less explored in this period?

### Conceptual development of model

Several authors have studied asset pricing in a national and international setting, including the research of Bai and Green (2020), Buckberg (1995), De Santis and Gerard (1997), Harshita *et al.* (2015), Harvey (1991), Musawa *et al.* (2020), Singh and Yadav (2015), Wang *et al.* (2013) in which they talked about the importance of using the international version of CAPM for valuing the asset pricing models. Researcher's also focussed on the market structure of economies, whether the world market is segmented or integrated (Errunza & Miller, 2016; Errunza, Losq, & Padmanabhan, 1992; El Hedi Aroui, Rault, Sova, & Teulon, 2013; Patro, 2001; Pirinsky & Wang, 2011; Stulz, 1995; Thomadakis & Usmen, 1991). Cross-listing of shares is another important phenomenon in assessing the pricing of assets in an international setting. We must have to consider the cross-listed share, which is internationally tradable and non-cross-listed shares which are non-tradable assets, and they both occur within the same economy; now the question arises whether the non-tradable assets should also be priced according to the world systematic risk or it should be priced according to domestic pricing portfolios (Alpanda & Kabaca, 2020; Fama & French, 1992; Hail & Leuz, 2009; Li, 2019). Most of the asset pricing models have been tested in the domestic setting and in the closed economies in which assets are priced in the domestic setting and assets are just diversified in the domestic assets. Fama *et al.* (1973) and Roll & Ross (1980) show the single economy test of CAPM and APT. Various anomalies are seen in single-country studies, like mispricing the securities, seasonal variation, size of the firms and dividend yields (Korajczyk & Viallet, 1989). The International CAPM model is a financial model that helps investors evaluate the return they seek for a certain level of risk, including foreign risk associated with various currencies (Stulz, 1981). Alternative domestic and foreign asset pricing models' price performance. The models are compared when pricing assets in the domestic economy and pricing assets across economies in their international form (Lee, Ng, & Swaminathan, 2016). In International CAPM, apart from the compensation for the time value of money and premium for taking the market risk, investors also get the reward for exposure to foreign currency (Buckberg, 1995). It accounts for the sensitivity to changes in foreign currency when the investor holds the assets.

Despite being prominent features of the theory, it helped in understanding the IAPM because if the risk commands the price, then the linkage among the markets can be studied for the firms operating in these markets.

### Research methodology

A systematic and repeatable approach to locating, analysing and synthesising an existing body of knowledge is known as a literature review. A literature review informs the researcher about the study that has already been done; the direction in which the body of knowledge moves; and what can be investigated further. Conducting comprehensive research is difficult without a thorough understanding of the available literature. As a result, in management, a comprehensive systematic literature evaluation is required. Systematic literature reviews are commonly used by researchers and practitioners because they are more transparent and evidence-based.

As a result, we employ bibliometric analysis to give a holistic view of asset pricing theory, filling a vacuum in asset pricing research. This study includes a thorough review of the available literature, which aids in identifying current research areas and future scope. We followed the steps outlined in the subsections below in this study.

### *Data collection*

Before going for bibliometric analysis, a detailed literature review is being conducted to assess the various asset pricing models, and their latest development and development over time. The current list considers the articles published in the past 20 years between (2001 and 2021); for that, we adopted the Web of Science (WOS) as our source database. WOS database was chosen because it encompasses various areas related to the field of research, as well as being considered a prestigious database that hosts publications from the Journal Citation Reports (Zhu & Liu, 2020). Therefore, WOS is postulated as a relevant database to extract documents related to the state of the article analysed in this study (Marín-Marín, Moreno-Guerrero, Dúo-Terrón, & López-Belmonte, 2021). Additionally, there is a study about asset pricing that is already available in the Scopus database (Ali & Bashir, 2021). As these databases are different in terms of publications, so they will give a different result if we take WOS database for retrieving the articles. The sample is collected from WOS based on the following criteria:

- (1) First, we searched the WOS database with the key term “International Asset Pricing” as the primary key term. The initial results were 3,438 articles.
- (2) The analysis was conducted from 2001 to 2021 in order to capture the most recent trends and developments. Between 1989 and 2000, only 20 research publications were found on the concept, and that too were scattered throughout the period concerned. The field received its most substantial research contribution after the year 2000 and henceforth.
- (3) The related business domain is the key to accurate analysis, so for that, the disciplines of Economics, Business Finance and Management are considered.
- (4) To enhance the study’s reliability, only the published research articles are included, and the conference papers, thesis and books are excluded from the list.
- (5) The list of the relevant research papers related to International Asset Pricing has been exported from the WOS database in .txt format. After that, the papers were downloaded from the respective databases, i.e. ProQuest, Science Direct, JSTOR, Emerald Insight and Google Scholar (Figure 1).

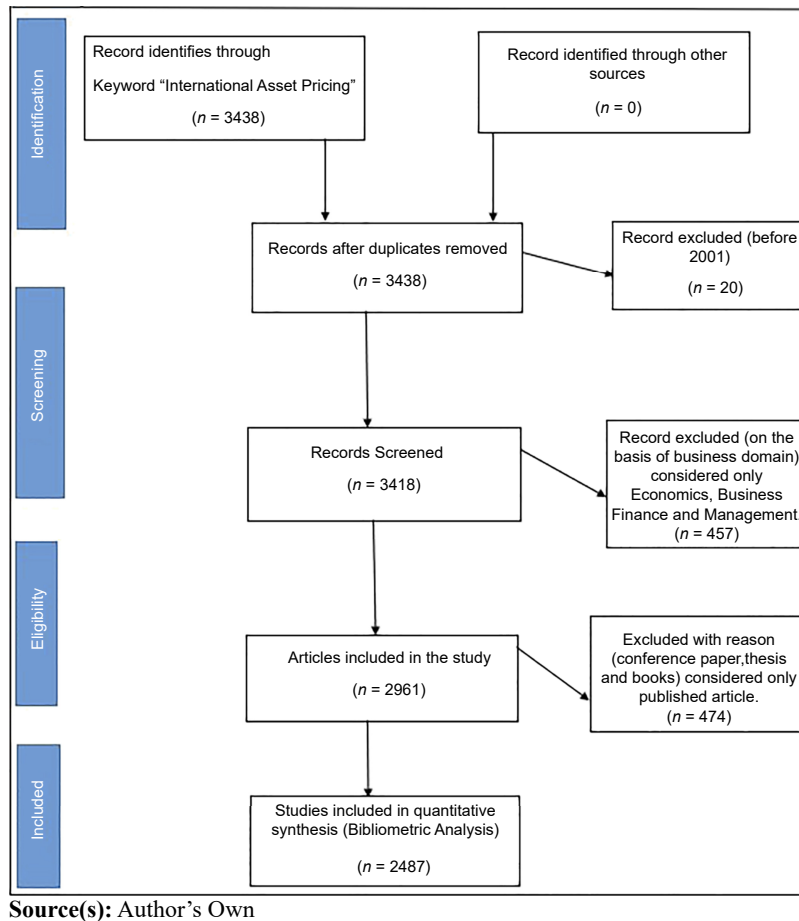
Based on the criteria mentioned above, 2,487 articles are obtained, which are used for further analysis. The open-source software VOS viewer is being used for the analysis.

### **Data analysis**

To find the important keywords and network diagrams of co-authorship, the data is analysed using the open-source software VOS viewer and Biblioshiny. The publication year, most cited document, authors with the most numbers of research articles and the pioneer publisher in the field of International Asset Pricing are shown with the help of a line graph, bar graph, network tree and tables. Table 1 provides a brief summary of the data for the period 2001–2021, which is represented by the total number of publications (2,487), the annual growth rate of the publication (9.21%) and the average number of citations per document (16.34). The classification of research papers is based on the number of published research articles (2,214), published book chapters (10), early access articles (69) and review articles (193), which provide information on the sample’s composition.

### *Thematic mapping*

We employed the theme mapping technique to split the research papers into relevance degree (centrality) and development degree (Density), which provides better insights into the area



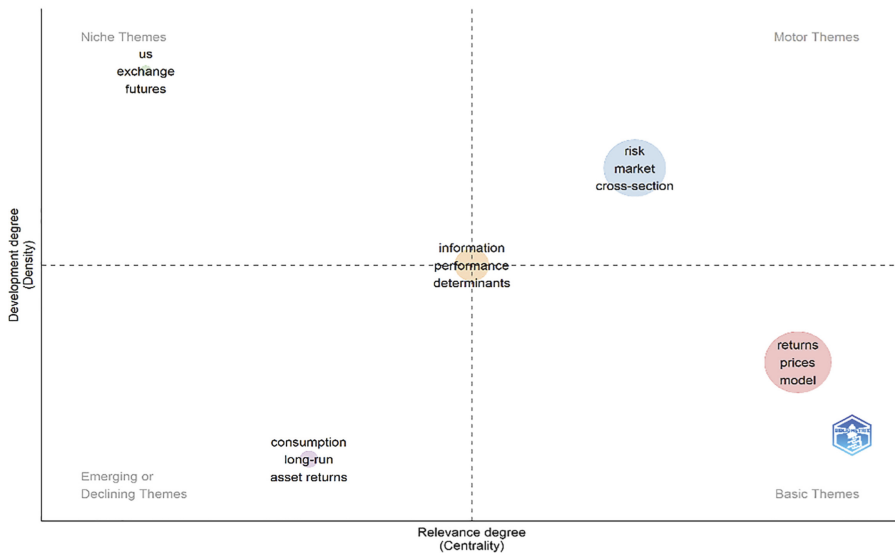
**Figure 1.** Flowchart according to PRISMA model

Timespan	Sources (journals, books, etc)	Documents	Annual growth rate %	Average citations per doc	Research article	Book chapter	Early access article	Review article
2001:2021	319	2,487	9.21	16.34	2,214	10	69	193

**Source(s):** The authors

**Table 1.** Main information about data

where the most focus is presented in Figure 2. The first quadrant presents the niche theme, with the exchange rate, US market and futures as the three main aspects; the second quadrant presents the motor themes, which are extremely pertinent to studies, such as risk, market and cross-section. The emerging themes, where the least amount of research has been done, are shown in the third quadrant constitute consumption, long-run and asset return. The basic themes, which are primarily asset returns, prices and various models of asset pricing, which is the study's core theme, are shown in the fourth quadrant. The central area which is a cross-



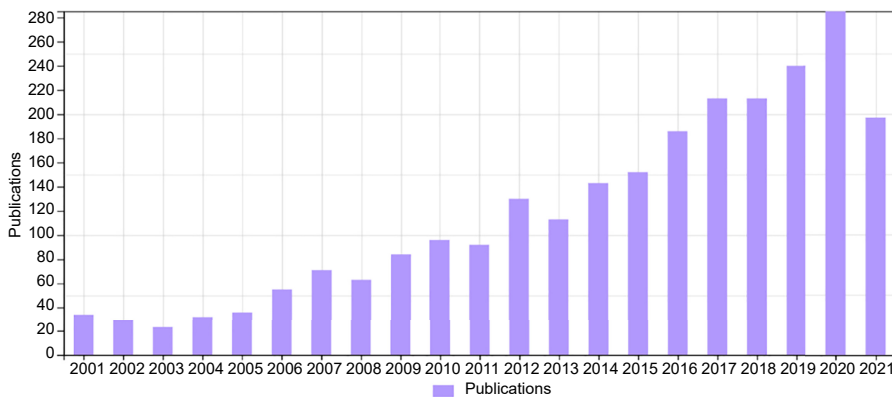
**Figure 2.** Thematic mapping for the article type classification

Source(s): Analysis Output

section of these four quadrants shows information, performance and determinants as the key factor of the study.

*Publication year*

The publication trend of the international pricing is given in Figure 3. The earliest publication in WOS is in the year 1989. But significantly fewer research papers were published between the period 1989 and 2000. Although the research publication rate was slow during these years, the trend surged after 2013. The publication in International Asset Pricing increased over time and reflected a remarkable increase of attention towards the development of pricing models.



**Figure 3.** Publications over the years

Source(s): Web of Science

Figure 2 shows the citation trend which also shows an uprising trend which shows the importance of this topic in the current time. A good number of papers published in the past few years is also reflected in the citation graph.

*Bibliometric analysis*

We classified our study into four areas for bibliometric analysis: authors, keywords, journals and title and abstract text analysis. For clarity, these categories are further subdivided into many subcategories.

*Authors*

In terms of citations, Table 1 summarises the most prominent authors in international asset pricing. The authors’ publications give a thorough development in this area by showing the development of international asset pricing from a different perspective. By undertaking diverse empirical tests and outcomes, these authors have contributed to the development of pricing models, providing a stronger foundation for future research.

From 2001 to 2021, Zaremba and Adam published the maximum number of articles (26), followed by Wang and Xingchun, who published 18 papers, being the second most productive author in the field of International Asset Pricing, as shown in Figure 3.

*Author’s impact*

The author’s impact in the area can be evaluated through the citations of their papers (Figure 4). Table 2 shows that Maggiori and Motto have the highest citation of 277 with an average of 55.4 citations per article, making them the most impactful authors in the International Asset Pricing field, followed by Ramdorai Tarun with a total citation of 240 with an average of 48 citations per articles.

*Corresponding author’s country*

Figure 6 shows the corresponding author’s country and visualises the linkages of authors from the major countries. The USA has the associations for the maximum countries, including England, Australia and China which shows a strong association and a weak link to the countries like Chile, Indonesia and Argentina.

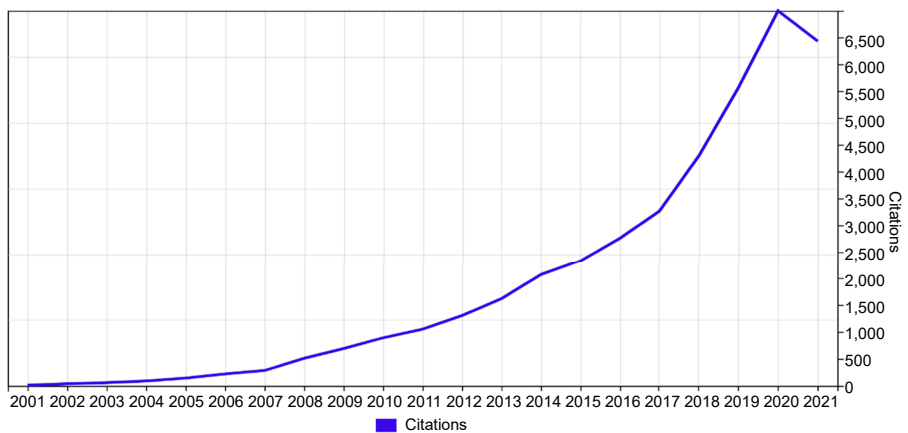


Figure 4.  
Citations over the years

Source(s): Web of Science

The data from the table helps to comprehend the contribution of a country to the overall research as well as the level of collaboration between scholars from different countries. It is possible to establish which countries publish the most research on a certain topic, as well as the authors' desire to collaborate, based on this information. The information in the table can be used to determine a country's contribution to the overall study as well as the level of collaboration between researchers from other countries. It is possible to establish which countries publish the most research on a certain topic, as well as the authors' desire to collaborate, based on this information. Table 2 reveals that the USA has published the most articles (860) and has the highest number of citations (21,995), followed by England published 382 articles with citations 7,415 showing the level of awareness of International Asset Pricing in the developed stock market. In contrast, the stock market that is still emerging has published fewer articles and very weak collaboration and linkages to other countries, as depicted in Figure 6.

### Keywords

Each subfield of a research topic can be investigated further in multiple dimensions using various frameworks and methodologies. Every domain can be explored further in other dimensions utilising different frameworks and appropriate procedures. As a result, the literature develops several relevant keywords that emphasise the relevance of research in the field. As a result, the depth and breadth of the research field can be determined using keyword analysis. In a nutshell, keyword analysis establishes a relationship between study subfields and emphasises their importance. Figure 5–7 suggests the most frequent keywords across the author's keywords, keyword plus and all keywords. The keywords help the researcher decide their topic accordingly, whether to choose the selected topic or drop it. The first-word cloud of all keywords shows that "Risk" is the most used keyword in the cloud. As risk is a crucial part of the valuation and in International Asset Pricing, risk acts as one of the most important criteria. The research being conducted across the theme of risk. Other frequently

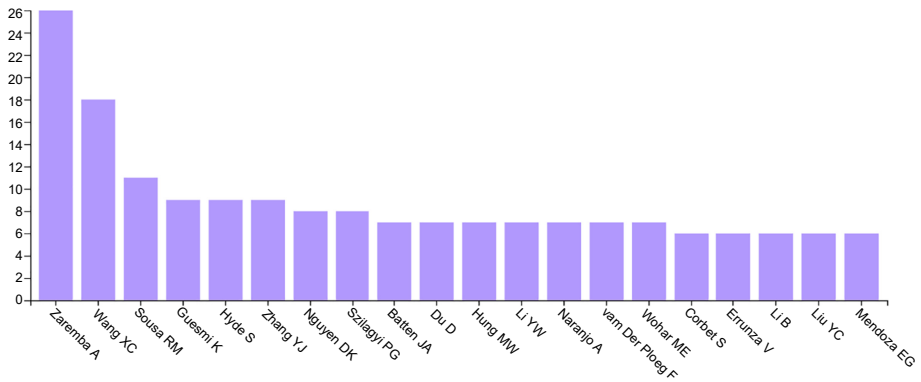
Author	Documents	Citations
Maggiori, Matteo	5	277
Ramadorai, Tarun	5	240
Duc Khuong Nguyễn	8	213
Sousa, Ricardo M	11	189
Wohar, Mark E	6	183
Mendoza, Enrique G	5	177
He, Xue-Zhong	5	164
Rebucci, Alessandro	5	156
Hyde, Stuart	8	129
Zaremba, Adam	26	128
Guesmi, Khaled	9	128
Szilagyi, Peter G	8	122
Hammoudeh, Shawkat	5	122
Batten, Jonathan A	7	117
Wang, Xingchun	18	104
Limkriangkrai, Manapon	5	99
Wei, K. C. John	5	95
Bredin, Don	5	82
Naranjo, Andy	6	72
Koutmos, Dimitrios	5	68

Source(s): The authors

**Table 2.**  
Most relevant authors  
in terms of citations

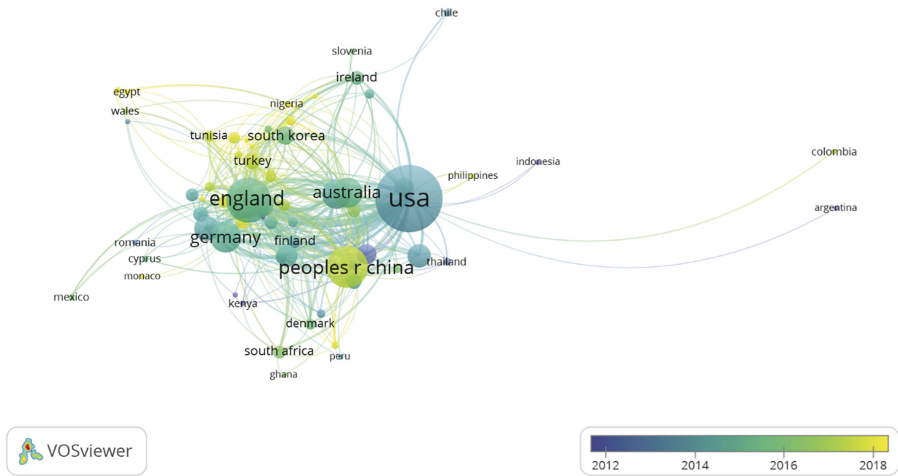


**Figure 5.**  
Most relevant authors  
in terms of the number  
of articles published



Source(s): Web of Science

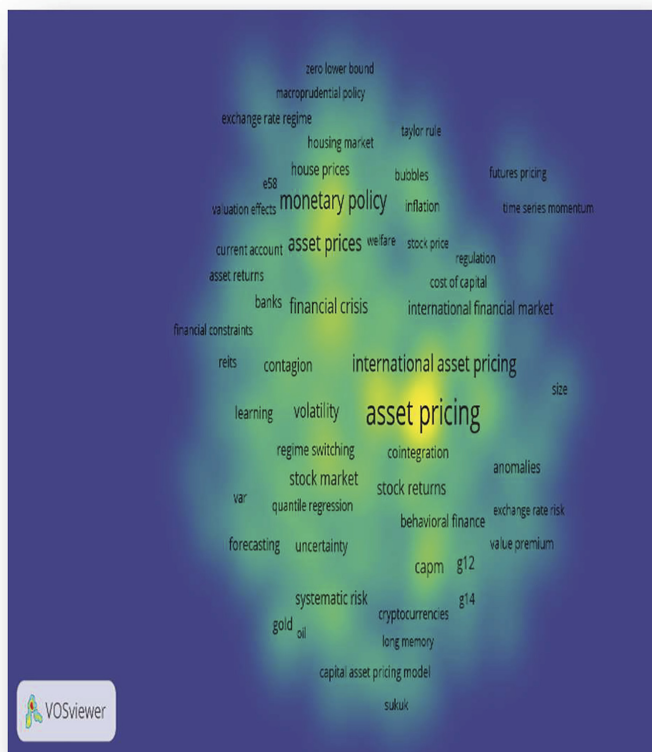
**Figure 6.**  
Corresponding  
author's country



used keywords are return, volatility, cross-section and stock prices. The second cloud shows asset pricing and international asset pricing as the most used keyword, which is also the research theme. The third figure, which is a network visualisation of the keywords, concludes that international asset pricing goes with the theme of the volatility of the stock market, the cross-section of stock price movement, risk and return as a crucial factor, financial crisis as a significant event and monetary policies of the countries, market information and equilibrium. These are some of the essential areas which are being studied over time. But some areas are rising in the current years, and the works are not much conducted in these areas: asymptotic theory, cryptocurrencies, rational bubbles, fiscal policy, endogenous growth, co-variance matrix, risk premia idiosyncratic risk and stochastic dominance (Figure 8).

*Journals*

Table 3 shows the top 10 publishers in the field of economics, finance and management. These publishers are shown in terms of their publications regarding the topic. Elsevier is a leading



**Source(s):** Analysis Output

**Figure 7.**  
Word cloud of all the  
keywords

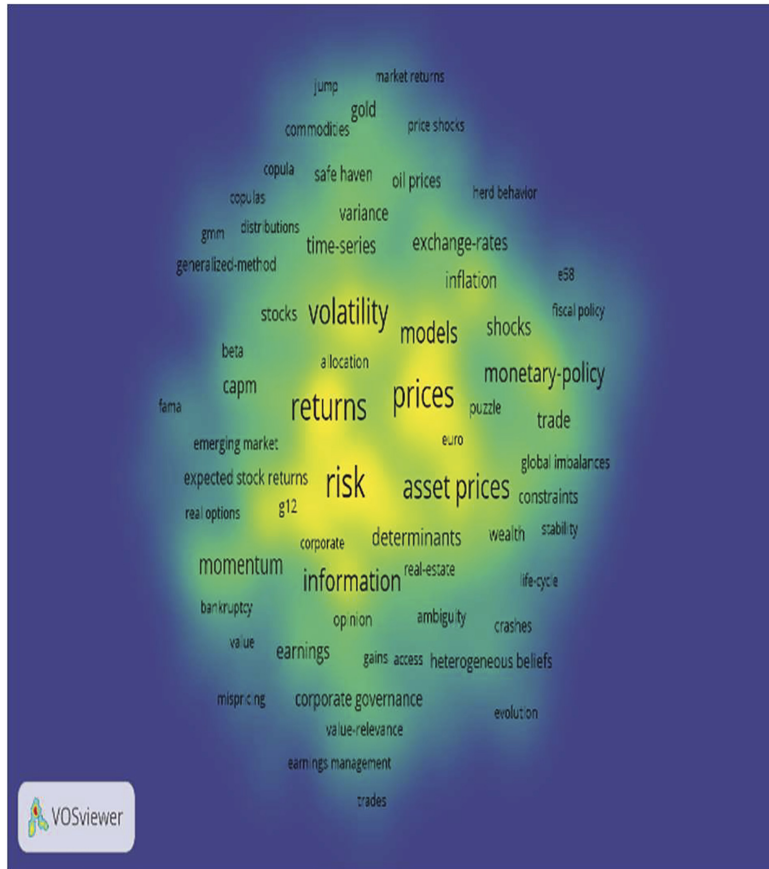
publisher in this field which published 1,287 journal articles in the past 20 years in international pricing, followed by Wiley (406), Taylor and Francis (169) and Springer (142). Table 4 shows the top 10 best journals in the field of International Asset pricing regarding the number of articles published.

### *Title and abstract analysis*

Knowing the concentration of sectors in which the studies are mainly conducted is crucial for forming new research topics. It gives the direction to researchers for better framing. For this purpose, the text analysis is undertaken for the titles of research papers and their abstract. Figure 9 depicts the network visualisation, it is presented to focus on the most relevant areas.

From Figure 11, it is clear that the studies related to the cross-section of stock return, international evidence, pricing of assets, monetary policies impact, valuation and risk are critical areas of research where most topics are being researched.

Figure 10 shows the network diagram of the frequent words used in the abstracts of the authors that shows the three clusters consisting of Red (1), Green (2) and Blue (3), showing the different linkages path, models, financial crisis, monetary policy and asset prices are the primarily used words in Cluster 1. In Cluster 2, investor, strategy, value, investment and



**Figure 8.**  
Word cloud of author's  
keywords

**Source(s):** Analysis Output

funds are the most often used words, while factor model, stock return and stock market are the essential words used in Cluster 3 (Figure 11).

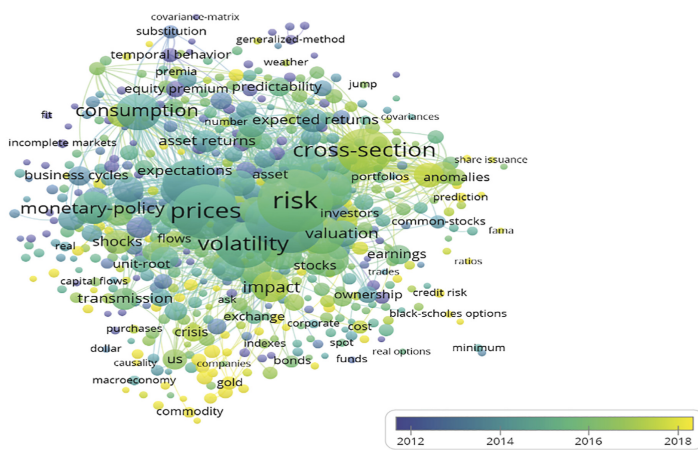
#### *Recent trends in publication*

The area of international asset pricing has seen various developments in recent years, including studies related to investing and investment behaviour (Chauhan, Ahmad, Aggarwal, & Chandra, 2020; Dharani, Hassan, & Paltrinieri, 2019; Javed, Husain, & Ali, 2020; Keshari & Gautam, 2022; Pandey & Sehgal, 2019), showing the role of faith and investor sentiment in asset pricing (Anand, Basu, Pathak, & Thampy, 2021; Kazmaier & van Vuuren, 2020; Zhang, Gong, Wang, & Ye, 2021). On the other hand, studies have focused on the use of machine learning, deep learning and encoders in asset pricing, which gives better insights and accurate results regarding the dimensions of asset pricing (Gu, Kelly, & Xiu, 2020, 2021; Lettau & Pelger, 2020). In recent years, the domestic asset pricing model (CAPM) and more advanced models like the IAPM, the conditional asset pricing model (Co-CAPM), the liquidity adjusted CAPM and the Fama–French three-factor and five-factor models have been used a lot (Fama & French, 2015; Joshi & Joshi, 2021; Kumar & Misra, 2019; Lewellen & Nagel, 2016).

Country	Documents	Citations
USA	860	21,995
England	382	7,415
People's Republic of China	343	3,905
France	180	2,471
Australia	178	2,470
Germany	188	2,722
Canada	163	2,440
Italy	117	1,380
Switzerland	87	1,126
Netherlands	78	2,020
Singapore	44	1,198
Turkey	51	371
Spain	76	918
Taiwan	112	1,040
Ireland	41	794
Scotland	47	441
Japan	72	630
New Zealand	36	1,034
Portugal	28	462
South Korea	66	562

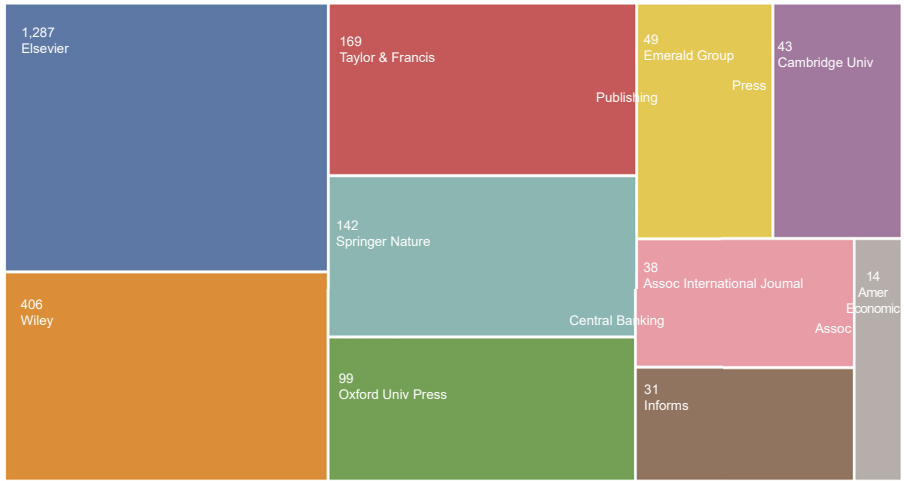
**Source(s):** The authors

**Table 3.**  
Countries with number of documents and citations



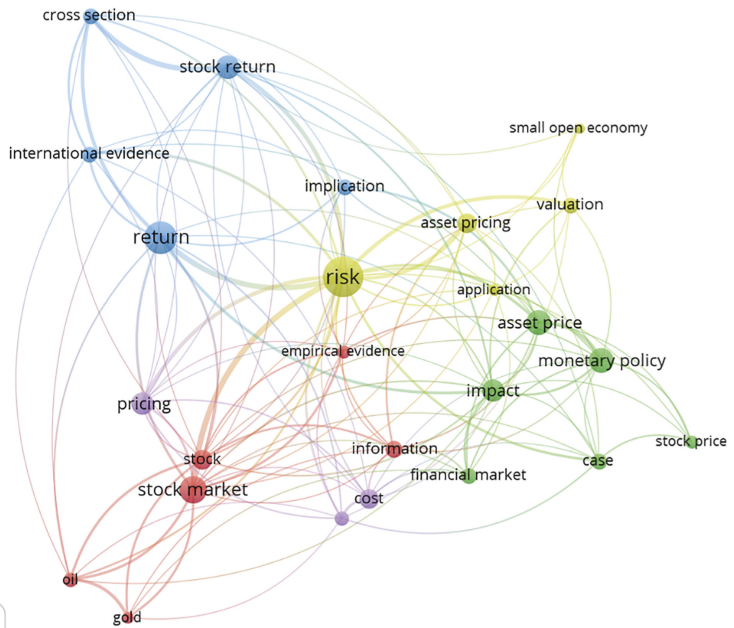
**Figure 9.**  
Network analysis keyword plus

Market structure and co-integration of stock markets are another yet very important phenomena in asset pricing. Researchers have extensively considered these areas to uncover new dimensions in asset pricing (Caporale, Gil-Alana, & You, 2022; Greenwood *et al.*, 2018; Guasoni & Wong, 2020; Joshi & Joshi, 2021). Cross-listing and tradable assets have also given a strong basis to the development of asset pricing models, and recent studies have focused on these dimensions in detail to encourage global investing and better diversification of portfolios (Alpanda & Kabaca, 2020; Li, 2019; Adler & Dumas, 2016; Das & Barai, 2017).



**Figure 10.**  
Publishers with  
number of publications

Source(s): Analysis Output



**Figure 11.**  
Network diagram of  
title analysis

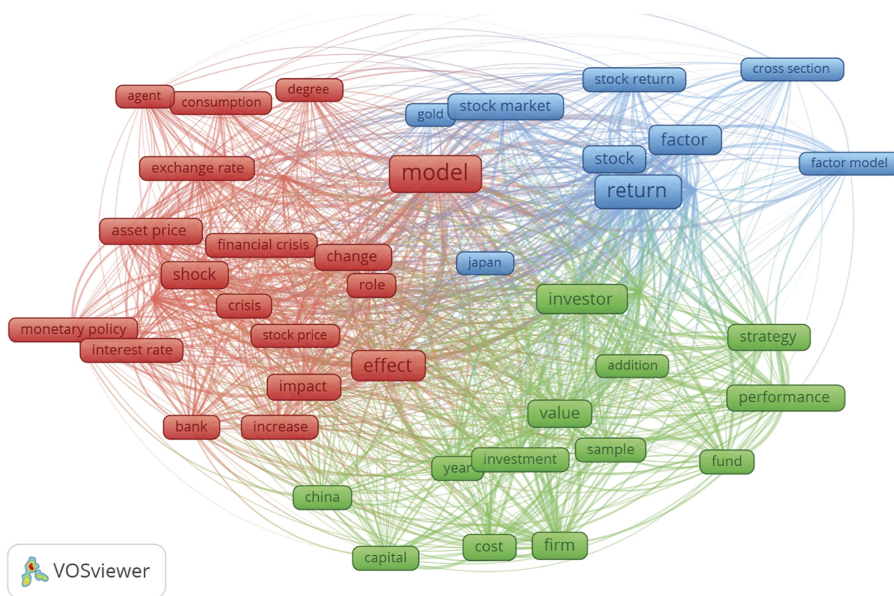


Source(s): Analysis Output

*Citation analysis*

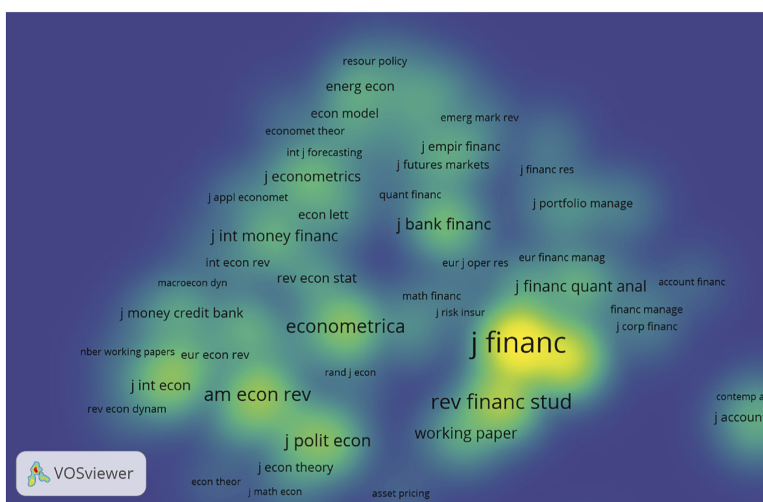
Citations measure an article's, author's and Journal's influence in academics. Authors with highly cited works are thought to be significant in their fields of study, and journals are ranked based on the number of citations they receive. Citations are seen as feedback from

the academic community, and they are used to assess the quality and contribution of a given publication in a given field. The journals which meet the criteria are presented below. The below density diagram shows the most cited research journals with a minimum of 100 citations in International Asset Pricing. *Journal of Finance* (10,667) is the most influential journal in terms of citations, followed by the *Journal of Financial Economics* (6,604) and *Review of Financial Studies* (4,423) (Figures 12 and 13).



**Figure 12.**  
Network diagram of  
abstract analysis

Source(s): Analysis Output



**Figure 13.**  
Citation analysis of  
journals

Source(s): Analysis Output

Table 4 presents the top 10 most cited research articles of International Asset Pricing. The articles are ranked in terms of citations from highest to lowest. The article “Size, Value and Momentum” in international stock returns published in the *Journal of Financial Economics* is the most cited. In this paper, Fama and French (2012) empirically tested whether traditional asset pricing models represent the value and momentum patterns in international average returns and whether asset pricing appears to be integrated across countries. It was the first study to examine the three-factor and four-factor global asset pricing models on size-B/M and size momentum portfolios returns. The study also compared the local and domestic versions of CAPM and with the given cases explains which model performs better in the case of the integration of the global market. Later, many researchers applied the same models to different countries’ portfolios and popularised this methodology. A common pattern has been found in the average returns of developed markets. Betting against Beta is the second most cited paper authored by Frazzini and Pedersen (2014), which presented a model for leverage with margin constraints that vary across investor and time. The paper became popular among the investors due to its implications, because their findings are evidently consistent with five central predictions. They use the international model for pricing the securities as the use of betting against the beta factor involves 20 countries in their study. Findings show that the high-beta asset portfolios have much less alphas and Sharpe ratios than low-beta asset portfolios and the increased funding liquidity risk compresses beta towards one. The findings of the study give very interesting results and open up the different dimensions of the studies for the researchers. The increased number of citations received by these papers reflects their importance and contribution to asset pricing research. The articles’ authors are well-known in their fields and have contributed relevant literature (Table 5).

### Findings

The analysis reveals the USA as the top country in terms of publication, followed by England, China, France, Australia and other European countries. Very little presence has been seen from countries of emerging economies as India is at 26th rank in terms of publication – finding is consistent with the research of Ali and Bashir (2021). The author and article-based analysis show Fama and French, Frazzini and Pedersen, Gorton and Rouwenhorst, RJ Shiller published the most influential paper in the study. Zaremba and Adam and Wang and Xingchun are the most productive authors in terms of the most influential author. These outcomes also emphasise that they mainly belong to the developed nations, which shows that the research is concentrated primarily in those areas.

Furthermore, the keyword analysis shows risk, return, volatility, cross-section, monetary policy, market information and equilibrium are some main dimensions of international asset

Publication titles	Record count
<i>Journal of International Money and Finance</i>	155
<i>International Review of Financial Analysis</i>	125
<i>International Review of Economics Finance</i>	105
<i>International Journal of Finance Economics</i>	100
<i>Journal of Banking Finance</i>	82
<i>Research in International Business and Finance</i>	74
<i>Journal of International Financial Markets Institutions Money</i>	64
<i>Journal of Financial Economics</i>	63
<i>Journal of International Economics</i>	63
<i>Journal of Economic Dynamics Control</i>	49

**Source(s):** The authors

**Table 4.**  
Top 10 journals in  
terms of publications

Article title (journal)	Author and year	Total citations	TC per year	Contribution
Size, Value and Momentum in international stock returns	Fama and French (2012)	661	66.1	A common pattern has been found in the average returns of developed markets
Betting against Beta	Frazzani and Pedersen (2014)	519	64.88	Examined that high-beta asset portfolios have much less alphas and Sharpe ratios than low-beta asset portfolios
Facts and Fantasies about commodity future	Gorton and Rouwenhorst (2006)	519	32.44	The study contributes that a long position in commodities futures carries a positive risk premium and is consistent with Keynes' theory of normal backwardation
From efficient market theory to behavioural Finance	Shiller (2003)	517	27.21	If speculative bubbles persist for a long time, it may be difficult to determine the fundamental relations and, as a result, the efficient markets theory may produce significantly inaccurate interpretations of events at the time of major stock market bubbles
Stock market Predictability: Is it there?	Ang and Baeckart (2007)	512	34.13	Dividend yields have no predictive potential for long-term return series; they can only predict short-term excess returns along with the short rate. The short rate strongly predicts returns negatively over short time horizons
Time Series momentum	Moskowitz <i>et al.</i> (2012)	451	45.1	The low exposure to standard asset price variables, a diversified portfolio of time series momentum techniques across all asset classes generates significant anomalous returns and outperforms during extreme markets
Real-time price discovery in global stock, bond, and foreign exchange	Andersen <i>et al.</i> (2007)	426	28.4	News causes conditional mean jumps; as a result, fundamentals affect high-frequency stock, bond and exchange rate dynamics
Explosive behaviour in 1990s NASDAQ: When did Exuberance escalate asset values?	Phillips <i>et al.</i> (2011)	393	35.73	Given the enormous amount of money that has been created and then destroyed in the Nasdaq market, the existence of exuberance or "bubble" activity may be self-evident to certain economists
A rational expectations model of financial contagion	Kodres & Pritsker (2002)	344	17.2	The study contributes in understanding the financial market contagion and for this developed a multiple asset rational expectations model for pricing the assets

(continued)

**Table 5.**  
Top 10 most cited articles



Article title (journal)	Author and year	Total citations	TC per year	Contribution
Empirical tax research in accounting	<a href="#">Shackelford and Shevlin (2001)</a>	335	15.95	The study contributes in three key study areas: (1) the coordination of tax and non-tax elements; (2) the effects of taxes on asset values; and (3) the taxation of multijurisdictional

**Table 5.** Source(s): The authors

pricing. Keyword network visualisation shows the international asset pricing goes with the theme of the volatility of the stock market, the cross-section of stock price movement, risk and return as a crucial factor and financial crisis as a significant event, whereas it gives us the direction to the emerging areas where less research has been conducted over the period and needs to assess in future; these include asymptotic theory, cryptocurrencies, rational bubbles, fiscal policy, endogenous growth, co-variance matrix, risk premia idiosyncratic risk and stochastic dominance.

### Managerial implications

The study explains the background of various asset pricing models and the development of an international version of CAPM. The paper answers the question, “How does international asset pricing develop over time?” An understanding of these models will help the finance manager in decreasing the equity cost by comparing the local and domestic versions of asset pricing models. The criticism of the single-factor model “CAPM” gives rise to the conditional CAPM and multifactor model “Arbitrage Pricing Theory”. Multifactor APT model incorporates the macroeconomics factors and these factors influence the decision of raise capital from abroad and application of these models will help the managers in risk valuation and management. Researchers also explained the international version of CAPM and APT ([Buckberg, 1995](#); [Korajczyk & Viallet, 1989](#); [Lee \*et al.\*, 2016](#); [Solnik, 2018](#); [Stulz, 1981](#)). The study implicates and gives direction to the future of international asset pricing by using modern techniques for the calculation of their assets and encourages cross-border listing. IAPM model will give managers of the companies a better edge to value their assets and also help them raise capital outside of the domestic market. For investors, the study will help in identifying the best market where they can diversify their risk and make their portfolio optimised.

### Conclusion

Asset pricing is a fundamental concept in financial market theory and a well-studied phenomenon in finance ([Khudoykulov, 2020](#)) which have different but essential functions in investing. When asset pricing valuation is done in a global scenario, the importance of the study becomes more critical. As research is a never-ending phenomenon, and a lot of research has been conducted in this area. Still, in the current dynamic world where things are happening quickly, the study needs continuous improvement. The inadequacy of contemporary models to adequately explain returns was one of the motivators for developing various forms of asset pricing models. By altering the list of explanatory variables, each subsequent model seeks to provide a more comprehensive explanation.

Anomaly patterns in returns, observed from time to time, drive the identification of additional explanatory variables (Harshita *et al.*, 2015). Though it is highly researched, the publications rose in the past few years from 2015. Still, the publications are maximum in 2020, which shows the new opportunity and importance of this area. As a result, the purpose of this research is to examine the evolution of international asset pricing and to identify areas for further research. The study identifies and highlights the most important research articles, authors and keywords based on a literature review and bibliometric analysis of 2,487 documents published over the past 20 years (2001–2021), accessed from the WOS database, to provide a new direction for future research in international asset pricing. The abstract network analysis reveals that many research works have been conducted, including Japan as a country, but Japan does not contribute much to publishing papers. This may happen due to the language constraint; many of the documents are published in the Japanese language.

### Suggestions for future research

Regarding the scope of future research, the study gives the following directions to researchers:

Firstly, the study shows that “International Asset Pricing” is a well-established phenomenon in developed stock markets. The studies are mainly concentrated in the USA and other European countries. Still, there is much scope for the study in emerging markets to examine IAPMs and check the performance of developing markets in this integrating market structure.

Secondly, the keyword analysis emphasises the development of specific areas that are prominent in the current time and can provide new aspects to the asset pricing literature, such as rational bubbles, fiscal policy, endogenous growth, co-variance matrix, risk premia, idiosyncratic risk and stochastic dominance and the introduction of cryptocurrencies, so this can also be one of the crucial aspects for analysing asset pricing considering these trending areas of research.

Thirdly, the stock markets are interdependent and co-integrated in the current context due to the flow of money across borders, cross-listed stocks and cross-section returns. As a result, the issue of international politics and economic stability will open new areas of research.

In addition to the above, many instances affected the stock market worldwide, like the Global Financial Crisis (2007–2009), the European Bond Crisis (2012–2014) and the recent occurrence of Covid-19 across the world. At these events, a surge in the literature can be seen as these events affect the market and its spillover effect is visible across the globe, which can be seen in the last year as well where the maximum number of research papers have been published worldwide.

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