

Bibliometric Analysis of Macroeconomics and Stock Returns: World Scientific Publications in 1987-2024

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Abstract

This study aims to determine the growth rate of scientific publications related to "financial distress". In this study, the authors used quantitative methods that were used in bibliometric. Researchers searched for and collected data obtained from the Scopus database using the keyword financial distress in the period 1987-2024. Data is downloaded in CSV (Comma Separated Values) format files from all journals for which data has been collected and analyzed using R Studio. The results obtained were that the researchers found that in 1987-2024 there were 735 research journal documents that had been published. In 735 the document was published in the form of articles, books, book chapters, conference papers, editorials, erratums, notes, reviews and level surveys. From the results obtained, it is hoped that this research can become a benchmark for further research on financial distress.

Keyword: Macroeconomics, Stock Returns, Bibliometric Analysis

1. Introduction

The link between macroeconomics and stock returns has emerged as an important issue in financial economics, particularly in efforts to understand how economic factors impact the pricing and returns on financial assets. Changes in macroeconomic variables such as inflation, interest rates, and economic growth can cause uncertainty in the stock market, influencing investment choices.

According to Akbar et al. (2012), the correlation between macroeconomic growth and stock market performance is a common research topic. Stock markets are heavily influenced by the broader economy and can be used to forecast future economic situations (Fama, 1990; Binswanger, 2000). Each country and stock exchange market has distinct factors that influence its performance. As a result, reactions to the identical factors under consideration may differ.

The trend of increased study on the relationship between macroeconomics and stock returns has grown more obvious in recent years. This study seeks to determine how macroeconomic factors such as inflation, interest rates, and currency rates affect stock market performance.

Bibliometric analysis provides an orderly structure for analyzing and quantifying the influence of scientific work, as well as discovering collaboration links between scholars. According to Daulay (2018), bibliometrics is a quantitative approach used to locate academic papers connected to citations and scientific subjects, primarily in libraries or other domains. This study seeks to present a complete picture of the global economy in the macroeconomics and stock return literature, as well as to identify significant trends and developments that happened over the selected time period.

In this way, it is hoped that the findings of this bibliometric analysis will provide valuable insights for researchers, academics, and practitioners interested in understanding the relationship between macroeconomics and stock returns, as well as serve as a foundation for financial sector research and business decisions.

2. Literature Review

2.1 Stock Return

Stock return theory: portfolio selection is a theory first created by Harry Markowitz in 1952 which states that when making an investment, invest in various kinds of securities and must diversify the portfolio to minimize the risk of investing and maximize returns, aka rewards from the investment (Harry M., 1970). This concept is central in modern portfolio theory because in investing, there are high risks associated with it and are beyond the control of the investor. This concept is also based on the saying "never put all your eggs in one basket" which basically means don't put your future in the same basket because if it falls, your hopes will be lost and cause big losses (Fabozzi, 2013). Markowitz also stated that the greater the investment risk taken, the greater the reward that will be received so that to maximize return on investment (ROI), asset and investment diversification must be implemented.

2.2 Arbitrage Pricing Theory (APT)

Arbitrage Pricing Theory (APT) is a model that states that the return of a financial asset is affected by various macroeconomic factors that cannot be eliminated through diversification, such as inflation, economic growth, interest rates, and exchange rates. Unlike CAPM, which focuses on a single market risk factor, APT allows the use of multiple economic variables to better understand their influence on stock returns. For example, research such as that conducted by Binswanger (2000) shows that stock market movements are often linked to changes in real economic activity, which can affect returns through these economic factors. As such, APT provides a framework for investors and researchers to estimate asset returns based on relevant economic conditions, which serves as a tool in investment planning and risk management.

2.3 Efficient Market Hypothesis (EMH)

The Efficient Market Hypothesis (EMH) theory states that stock prices always reflect all available information, whether historical, public, or private. The theory is divided into three forms: weak, semi-strong, and strong, each with different levels of information reflection. In the semi-strong form, the EMH states that stock prices immediately adjust to new information released, such as changes in macroeconomic indicators or monetary policy announcements. This suggests that investors cannot consistently earn more than the market average using public information, as stock prices already reflect that information. This theory implies that in an efficient market, an active investment strategy that seeks to utilize public information may not generate higher returns than a passive investment strategy (Fama, 1990).

3. Material and Method

This research uses research methods with a quantitative approach to bibliometric studies. The research object is macroeconomics and stock returns. The type of data used is secondary data. The source of data collection comes from searches of national and international journals indexed by Scopus. Data analysis tools use R-Studio. Data collection techniques include: (1) opening the Scopus website, then searching for data based on keywords and data filters according to needs, namely "macroeconomics and stock returns" over the entire year

(2018-2023); (2) download a CSV (Comma Separated Values) format file with all the data that has been displayed; (3) enter the CSV data file into the VOS Viewer software and upload it via the biblioshiny R Studio web interface; and (4) download or save the analysis results in the required menu. The research steps are summarized as follows:

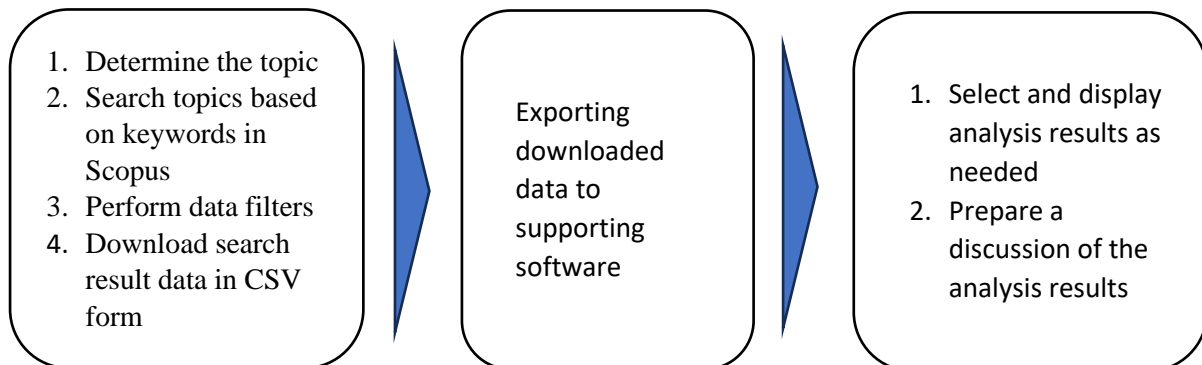


Figure 1. Research Model

4. Result

4.1 Main information

This section explores the annual global scientific development concerning Macroeconomics and Stock Returns, examining the volume of publications by country, title, source, active institution or affiliation, as well as by keyword network, author citation network, and international collaboration networks.

The author presents findings in a tabular format, indicating a total of 735 documents published from 1987 to 2024. These publications involved 1,547 authors worldwide, with 120 of the documents authored by a single researcher. This study includes a comprehensive range of document types, allowing for a thorough overview of research growth in this field. The dataset encompasses eight document types: articles, books, book chapters, conference papers, notes, reviews, and short survey.

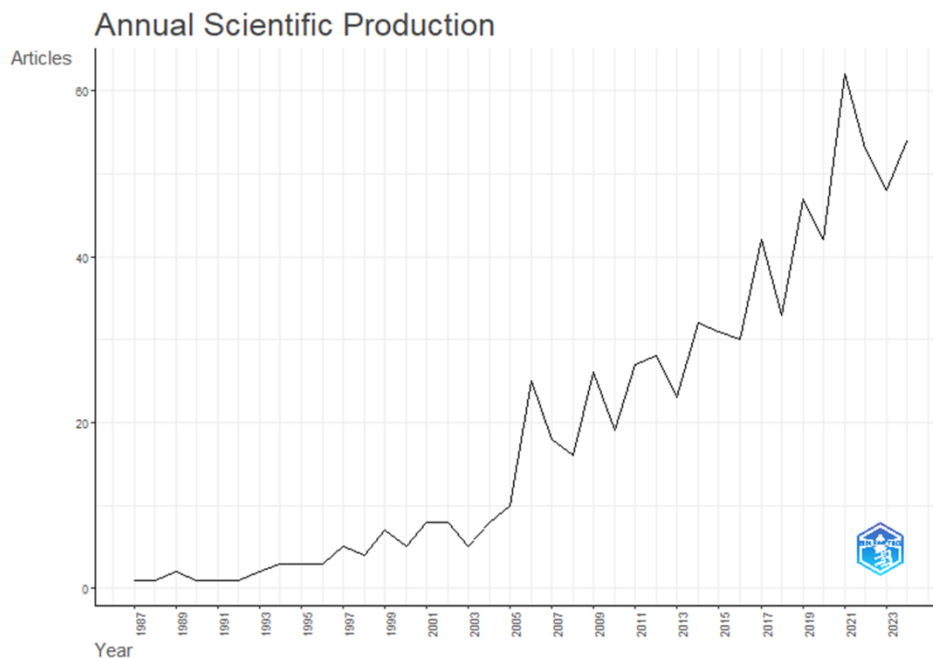
Table 1. Recapitulation of Main Data

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	1987:2024
Sources (Journals, Books, etc)	349
Documents	735
Annual Growth Rate %	0
Document Average Age	8.97
Average citations per doc	30.5
References	27857
DOCUMENT CONTENTS	
Keywords Plus (ID)	742
Author's Keywords (DE)	1830
AUTHORS	
Authors	1547

Authors of single-authored docs	120
AUTHORS COLLABORATION	
Single-authored docs	129
Co-Authors per Doc	2.46
International co-authorships %	26.12
DOCUMENT TYPES	
article	662
book	1
book chapter	13
conference paper	34
letter	2
retracted	1
review	21
short survey	1

Source: *Output Biblioshiny*

4.2 Number of Publications Each Year



The publication data from 1987 to 2024 reveals a discernible upward trend in research focusing on the relationship between macroeconomic variables and stock returns. In the initial years (1987-2000), annual publication rates remained low and stable, averaging fewer than 5 publications per year. However, interest in this topic began to intensify in the early 2000s, especially following significant economic events such as the Asian financial crisis of 1997 and the global financial crisis of 2008, which spurred researchers to examine how macroeconomic factors impact stock markets more closely.

Between 2006 and 2010, there was a notable surge in publication activity, peaking in 2009 with 26 publications. This increase aligns with the heightened global stock market volatility following the 2008 financial crisis, as investors and policymakers sought a more thorough understanding of how indicators like inflation, interest rates, and economic growth

influence the stock market. This growing demand for data-driven insights spurred an increase in research and publications in this area.

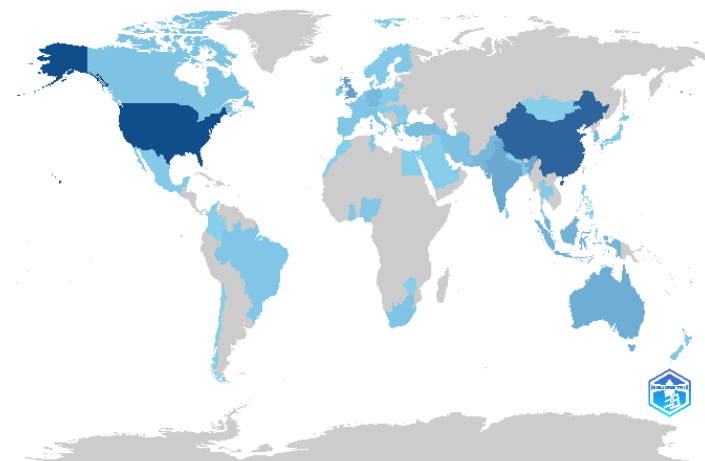
In the 2010s, publication trends continued to rise steadily as the global economy became increasingly complex, shaped by factors such as technological advancements, globalization, and shifts in monetary policies across nations. From 2014 to 2019, publication numbers stabilized at an average above 30 per year, reflecting sustained interest in this research area. Another significant spike occurred in 2020 amid the COVID-19 pandemic, which caused unprecedented economic challenges and volatility in stock markets worldwide. Publications peaked in 2021 with 62 studies, illustrating the academic community’s rapid response to the pandemic’s economic impacts.

In subsequent years, publication rates have remained high, with 54 publications recorded in 2024. This ongoing trend indicates that the relationship between macroeconomic factors and stock returns remains a relevant and prioritized research focus. Given the increasing complexity of the global economy and persistent stock market volatility, research in this area is likely to continue expanding. Such studies not only provide crucial insights into current market dynamics but also serve as valuable references for more effective financial policy-making in the future.

4.3 Production of Scientific Articles by Country

From 1987 to 2024, 66 nations contributed to research articles about financial distress. This condition demonstrates that the issue of shares is of interest to many governments throughout the world. The United States produced the most scientific contributions with 310 articles, China with 253 publications, and the United Kingdom with 107 publications, followed by a number of other nations. Indonesia ranks ninth, with 62 publications. The figure below depicts the distribution of scientific publications among nations; the deeper the hue, the more scientific papers are produced.

Country Scientific Production



The following table reinforces the information revealed in the scientific production map above, regarding the detailed number of scientific publications related to financial distress issues carried out by various countries.

Negara	Artikel	Negara	Artikel	Negara	Artikel	Negara	Artikel
USA	310	PORTUGAL	22	CYPRUS	9	CROATIA	3
CHINA	253	FRANCE	21	LITHUANIA	9	DENMARK	3

UK	107	SPAIN	20	NETHERLANDS	9	ISRAEL	3
INDIA	87	BRAZIL	18	POLAND	9	LEBANON	3
AUSTRALIA	74	FINLAND	18	SWEDEN	9	BAHRAIN	2
MALAYSIA	65	NIGERIA	18	THAILAND	9	KUWAIT	2
INDONESIA	62	SINGAPORE	18	BELGIUM	6	LUXEMBOUR G	2
PAKISTAN	53	GHANA	16	CZECH REPUBLIC	6	MONGOLIA	2
GERMANY	50	NORWAY	14	EGYPT	6	NEPAL	2
SOUTH KOREA	47	TUNISIA	14	JORDAN	6	QATAR	2
GREECE	44	IRELAND	13	SLOVENIA	6	AUSTRIA	1
TURKEY	40	NEW ZEALAND	13	CHILE	5	COLOMBIA	1
IRAN	32	UNITED ARAB EMIRATES	13	PHILIPPINES	5	MOROCCO	1
CANADA	26	ROMANIA	12	HUNGARY	4	SRI LANKA	1
ITALY	25	BANGLADESH	11	IRAQ	4	ZIMBABWE	1
SOUTH AFRICA	23	JAPAN	10	SAUDI ARABIA	4		
SWITZERLAND	23	MEXICO	10	BULGARIA	3		

Source; Output Biblioshiny

Based on the data disclosed above, it can be concluded that the topic of macroeconomics and stock returns is one of the topics discussed by world researchers. In the last five years, it has been revealed that 66 countries have studied macroeconomic and stock return topics, followed by other similar topics.

4.4 Source Title

Scientific articles act as academic contributions to accelerate technical progress in solving various problems. The impact of this contribution will be felt after the article is published. The following is data regarding the distribution of journal sources for scientific publications related to macroeconomics and stock returns. Among the ten journals, the following are the main sources that are most relevant to the issue being researched.

Table 3. Most Relevant Source/Journal Title

Sources	Articles
Journal Of Banking And Finance	21

Journal Of Financial Economics	19
Applied Financial Economics	13
International Review Of Economics And Finance	13
International Review Of Financial Analysis	13
Emerging Markets Finance And Trade	12
Journal Of Empirical Finance	12
North American Journal Of Economics And Finance	12
Journal Of Risk And Financial Management	11
Applied Economics	9

Source: *Output Biblioshiny*

4.5 Active Institution in Macroeconomics and Stock Returns Issues

The data obtained from Scopus offers insights into educational institutions with active engagement in publishing research on macroeconomics and stock returns. Broadly, if the data is fully disclosed, out of the 735 documents published on Scopus, 663 institutions are actively involved in scientific publications on these topics. Below is a summary of the 10 institutions with the highest number of publications on macroeconomics and stock returns. This group is predominantly made up of universities from the United States, China, the United Kingdom, and India.

Table 4. 10 Institutions with the most Macroeconomics and Stock Returns Scientific Publications

Article Publisher Institution/Institution	Articles
Southwest Jiaotong University	24
Central University Of Financial and Economics	15
University Of Pretoria	13
City University Of New York	10
Notreported	10
Sungkyunkwan University	10
University Of Ibadan	10
Widyatama University	10
Xiamen University	10
Islamic Azad University	9

Source: *Output Biblioshiny*

4.6 Keyword Network

Keywords used by scientific publications related to macroeconomics issues and stock returns can be described through analysis carried out through the following R-Studio application:

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