

BIBLIOMETRIC ANALYSIS WITH VOSVIEWER: A STUDY OF MOMENTUM STRATEGY IN THE STOCK MARKET

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Abstract

This study aims to identify trends, gaps, and research opportunities related to momentum strategies in the stock market using bibliometric analysis. The analysis was conducted based on data from international journals indexed by Google Scholar collected through Harzing's Publish or Perish software, with a focus on publications from 2021 to 2025. A total of 100 publications were analyzed using the VOSviewer software to visualize the structure and relevance of keywords in the literature. The results show fluctuations in the number of publications in the last five years, with a downward trend in recent years. The most cited publication is "Momentum Factor and the Momentum Factor" by Ehsani & Linnainmaa (2022). Keyword analysis shows that the terms "investment strategy," "momentum factor," and "trading strategy" are the most frequently emerging concepts and occupy a central position in the research map. This study provides a comprehensive mapping of the current state of momentum strategy research and is an important reference for future studies in the field of capital markets.

Keywords:

Bibliometrics; Momentum Strategy; Stock Market

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INTRODUCTION

Investors use a platform or venue as a connector between investors and those seeking funds in a capital market scheme. Investors who wish to invest online must understand and study all aspects of an investment instrument (Wardani & Komara, 2021). In this context, the capital market serves as a platform for the public to invest. The capital market is one of the most important tools in the financial world, enabling investors to allocate and manage assets efficiently. In a market full of obstacles and dynamics, investors must make complex decisions to achieve their investment goals (Afriza, 2024).

One of the most important factors to consider is selecting the best investment strategy to optimize profits and manage risk. In this scenario, active and passive investment techniques have become a major focus of debate and research in the financial sector. Active strategies require investors to select stocks or other assets based on fundamental and technical analysis to outperform the market (Nurtjahjani et al., 2024). One characteristic of investing in the capital market is the ease of forming an investment portfolio. Portfolio formation involves dividing various types of businesses, in this case investments, which also means dividing investment risks. In forming a stock portfolio, there are two types of strategies that investors can implement: active and passive strategies. Active strategies involve stock selection, sector rotation, and momentum strategies.

One common strategy among many investors is the momentum strategy. A momentum strategy is a behavioral investment strategy that uses past equity prices to predict future prices (Wicaksono et al., 2024). Momentum is a stock characteristic that can be used to predict stock returns (Jegadeesh & Titman, 1993). The idea behind a momentum strategy is that investors buy equities when their prices start to rise and sell them when they start to fall. They sell and expect a return on their purchases (Wicaksono et al., 2024). A momentum strategy is a bet on future returns because it uses past data to select stocks to buy (Moskowitz & Daniel, 2016). Momentum is a short-term price trend (Dhankar, 2017). This strategy is based on price continuity, where stocks with good past performance will perform well in the future, and vice versa. Therefore, this strategy creates a winning portfolio containing stocks with good performance and a losing portfolio containing stocks with poor performance. Return momentum is calculated by subtracting the return of the winner portfolio from the return of the loser portfolio (Nanda, 2021).

Research related to the use of momentum strategies in capital markets is still ongoing, so a literature review is needed to identify trends in momentum strategy research in the capital markets to facilitate future researchers in determining research topics. This study aims to identify trends, gaps, and opportunities for momentum strategy research in the capital markets using Vosviewer. Therefore, it is hoped that the results of this study can serve as a reference for other researchers in determining research topics, particularly those related to momentum strategy research in the capital markets.

LITERATURE REVIEW

Momentum strategy in the capital market is a behavioral investment approach that exploits the tendency of stock prices to continue moving in the same direction as past trends. The foundation of this strategy lies in the seminal work of Jegadeesh & Titman (1993), which demonstrated that stocks

with strong past performance tend to generate positive future returns, while poorly performing stocks continue to underperform. This phenomenon is widely known as the price continuation hypothesis.

Subsequent studies, such as Moskowitz & Daniel (2016), highlighted the risk of momentum crashes, periods when momentum strategies fail to deliver positive returns due to sudden market reversals. External factors, including economic policy uncertainty (Galariotis & Karagiannis, 2021) and crises such as the COVID-19 pandemic (Pagano et al., 2021), have also been shown to influence the effectiveness of momentum strategies, particularly through retail investor behavior and heightened market volatility.

Recent research further indicates that momentum strategies are not limited to developed markets like the United States but are also applicable in emerging markets such as India (Dhankar, 2017) and Indonesia (Nanda, 2021). This suggests that momentum strategies are globally relevant, though their effectiveness is shaped by local factors such as regulation, investor characteristics, and macroeconomic conditions.

Theoretically, momentum strategy is closely linked to the Efficient Market Hypothesis (EMH). EMH posits that stock prices fully reflect all available information, making it difficult to achieve abnormal returns. However, the persistence of momentum anomalies challenges this view, as investors often react slowly to new information (Jegadeesh & Kim, 2010). Thus, momentum strategies can be seen as exploiting market inefficiencies.

H1: Momentum strategy has a positive effect on stock returns in the capital market.

H2: External factors such as economic policy uncertainty and crisis conditions (e.g., the COVID-19 pandemic) moderate the relationship between momentum strategy and stock returns.

H3: The effectiveness of momentum strategy differs across markets (emerging vs. developed), influenced by investor characteristics and local regulations.

RESEARCH METHOD

This study employed bibliometric analysis. Bibliometric analysis is used to review publications related to the research scope to identify research trends, concepts, and keywords (Busro et al., 2021; Effendy et al., 2021; van Eck & Waltman, 2017). This study used keywords such as momentum strategy and capital markets linked to Harzing's Publish or Perish, and used databases such as international journals indexed by Google Scholar. The analysis included 100 publications, spanning the last five years, from 2021 to 2025. Furthermore, the data were analyzed using VOSviewer to obtain a

visual data mapping to identify research trends in momentum strategies in the capital market.

FINDINGS AND DISCUSSION

The citation analysis of journals with the 20 highest number of publications in international publications indexed by Google Scholar is shown in table 1.

Table 1.

List of Highly Cited Publications

Sitasi	Authors	Title	Year	Source
258	S Ehsani, JT Linnainmaa	Factor momentum and the momentum factor	2022	The Journal of Finance
158	RD Arnott, V Kalesnik...	Factor momentum	2023	The Review of Financial ...
131	MS Pagano, J Sedunov, R Velthuis	How did retail investors respond to the COVID-19 pandemic? The effect of Robinhood brokerage customers on market quality	2021	Finance Research Letters
124	BT Kelly, TJ Moskowitz, S Pruitt	Understanding momentum and reversal	2021	Journal of financial economics
107	R Cheng, Q Li	Modeling the momentum spillover effect for stock prediction via attribute-driven graph attention networks	2021	Proceedings of the AAAI conference on artificial ...
74	G Baltussen, Z Da, S Lammers, M Martens	Hedging demand and market intraday momentum	2021	Journal of Financial Economics
65	M Medhat, M Schmeling	Short-term momentum	2022	The Review of Financial Studies
60	C Su	A comprehensive investigation into style momentum strategies in China	2021	Financial Markets and Portfolio Management

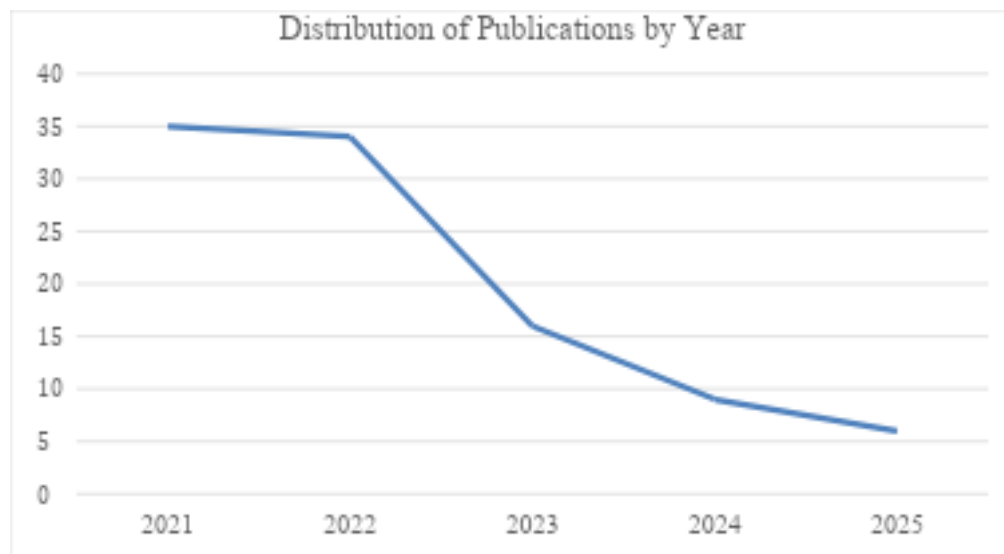
Sitasi	Authors	Title	Year	Source
60	ACW Chui, A Subrahmanyam, S Titman	Momentum, reversals, and investor clientele	2022	Review of Finance
59	B Jia, JW Goodell, D Shen	Momentum or reversal: Which is the appropriate third factor for cryptocurrencies?	2022	Finance Research Letters
57	S Singh, N Walia	Momentum investing: a systematic literature review and bibliometric analysis	2022	Management Review Quarterly
55	D Lou, C Polk	Comomentum: Inferring arbitrage activity from return correlations	2022	The Review of financial studies
51	MX Hanauer, S Windmüller	Enhanced momentum strategies	2023	Journal of Banking & Finance
50	E Meira, FAFS Cunha, RJ Orsato...	The added value and differentiation among ESG investment strategies in stock markets	2023	Business Strategy ...
48	SL Heston, CS Jones, M Khorram, S Li...	Option momentum	2023	The Journal of ...
47	S Papathanasiou, I Dokas, D Koutsokostas	Value investing versus other investment strategies: A volatility spillover approach and portfolio hedging strategies for investors	2022	The North American Journal ...
47	E Galariotis, K Karagiannis	Cultural dimensions, economic policy uncertainty, and momentum investing: international evidence	2021	The European Journal of Finance
45	J Zou, J Lou, B Wang, S Liu	A novel deep reinforcement learning based automated stock trading system using cascaded lstm networks	2024	Expert Systems with Applications

Sitasi	Authors	Title	Year	Source
37	S Zhang	Dissecting currency momentum	2022	Journal of Financial Economics
35	Y Gao, X Han, Y Li, X Xiong	Investor heterogeneity and momentum-based trading strategies in China	2021	International Review of Financial Analysis
35	ME Wu, JH Syu, JCW Lin, JM Ho	Effective fuzzy system for qualifying the characteristics of stocks by random trading	2021	IEEE transactions on fuzzy ...

Note: Table 1 shows information related to highly cited publications on momentum strategies in the capital market. Based on this data, the most cited publication is Sinna & Ehsani, 2022, with 258 citations, followed by Robert et al., 2023, with 158 citations, and Pagano et al., 2021, with 131 citations.

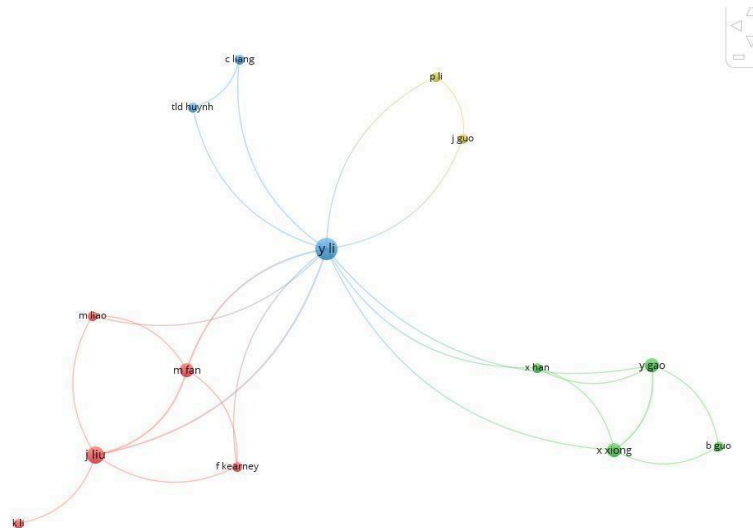
The distribution of publications on momentum strategies in the capital market from the Google Scholar database based on the year of publication is presented in Figure 1. In general, Figure 1 shows that the number of publications between 2021-2025 experienced a decrease in the number of publications towards the final years.

Figure 1.
Distribution of Publications by Year



The citation analysis network structure of the subject publications is shown in Figure 2. The network structure analysis uses a minimum number of publications from one author, which is 2. Of the 100 publications analyzed, 15 authors met the threshold. The network structure classifies the names of authors who receive many citations and are collected in the same cluster. Author names in the middle indicate that the author's publications are frequently cited in various fields and have more detailed connections with other clusters. Overall, the red, blue, and green clusters display larger circles and are more prominent than the others.

Figure 2.
Overlay visualization of author-bibliography pairs



Network structure analysis was carried out to see the relationship between keywords, the visualization of the relationship between words can be seen in Figure 2. The large and small size of the circles in the visualization of each keyword indicates the subjects that are studied more frequently, while the color of the circle on the keyword indicates that the subject is the most popular (Talan, 2021).

Figure 3.
Keyword Network Structure Based on Co-occurrence

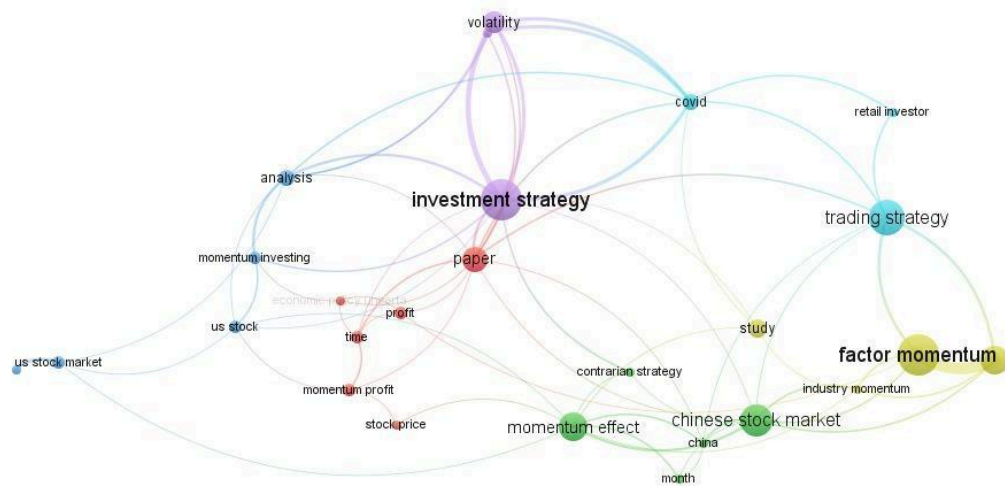
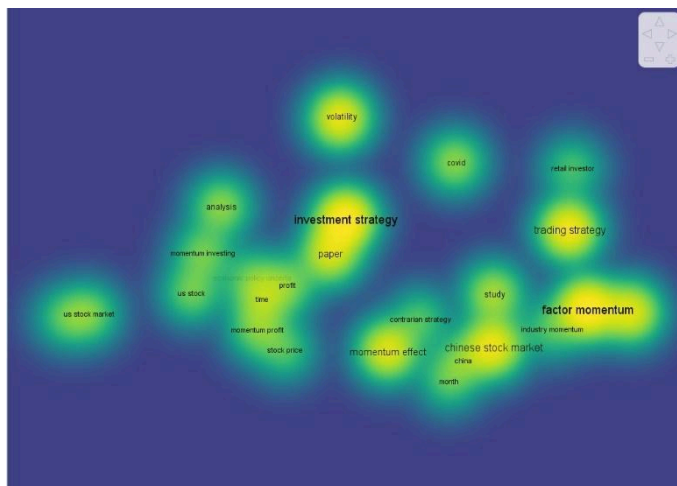


Figure 4.
Density visualization of journal bibliography pairs



Figures 3 and 4 show that investment strategy, momentum factor, and trading strategy, driven by the capital market, are located in the center of the map. These terms represent concepts studied alongside other word clusters and have been identified as the most frequently used keywords. Based on the keyword analysis in Figures 3 and 4, it is known that the research trends for momentum strategies in the capital market are investment strategy, momentum factor, and trading strategy. Details of the network structure keyword clusters can be seen in Table 2.

Table 2.
Keyword Term Clusters

Cluster	Keyword Term
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Cluster 1 (6 Item)	Economic Policy Uncertainty, Momentum Profit, Paper, Profit, Stock price, Time
Cluster 2 (5 Item)	China, Chinese Stock Market, Contrarian Strategy, Momentum Effect, month
Cluster 3 (5 Item)	Analysis, momentum investing, momentum strategy, us stock, us stock market
Cluster 4 (4 Item)	Factor momentum, industry momentum, stock momentum, study
Cluster 5 (3 Item)	Indian Stock Market, Investment Strategy, Volatility
Cluster 6 (3 Item)	Covid, Retail Investor, Trading Strategy

CONCLUSIONS

This study examines the Google Scholar indexed database to determine research trends in momentum strategies in the capital market using descriptive and bibliometric analysis. Vosviewer was used to assist in data analysis and visualization of the required information. The analysis results show fluctuations in the number of publications on momentum strategies in the capital market from 2021 to 2025, but there has been a decline in the number of publications in recent years, resulting in a decline in interest in the study of momentum strategies in the capital market. The most frequently cited publications are articles on Factor Momentum and the Momentum Factor. This study presents an analysis of factors influencing capital market momentum and the momentum of the capital market. Analysis of the network structure results shows that the research trends in momentum strategies in the capital market over the past five years have been investment strategies, factor momentum, and trading strategies driven by the capital market.

LIMITATION & FURTHER RESEARCH

This study has several limitations that should be acknowledged. First, the bibliometric analysis was restricted to publications indexed in Google Scholar between 2021 and 2025, which may not fully capture relevant studies published in other databases such as Scopus or Web of Science. Second, the reliance on Harzing's Publish or Perish and VOSviewer software, while effective for mapping research trends, may introduce methodological constraints related to keyword selection and clustering algorithms. Third, the analysis focused primarily on citation counts and keyword co-occurrence, which may overlook qualitative aspects of momentum strategy research, such as theoretical depth or practical applications in specific markets. These

limitations may have influenced the interpretation of findings and the generalizability of the results.

Future research should address these gaps by expanding the scope of databases and incorporating longitudinal analyses across broader timeframes. Comparative studies between developed and emerging markets could provide deeper insights into the contextual effectiveness of momentum strategies. Additionally, integrating qualitative approaches—such as case studies or interviews with practitioners—would enrich the understanding of how momentum strategies are applied in real-world investment decisions. Further exploration of moderating factors, such as economic policy uncertainty, investor heterogeneity, and technological innovations in trading platforms, could also extend and refine the current findings. By addressing these areas, future studies can contribute to a more comprehensive and nuanced understanding of momentum strategies in the capital market.

AUTHOR CONTRIBUTION

Author

Conceptualisation and Research Design	: Desi Trijayanti and Arief Yulianto
Data Collection and Analysis	: Desi Trijayanti
Methodology	: Desi Trijayanti
Supervision	: Arief Yulianto
Writing Entire Paper	: Desi Trijayanti
Editing and Layouting	: Desi Trijayanti
All Authors have read the final version of the paper.	

Declaration of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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