# Momentum Investment Strategies across Time and Trends: A Review and Preview

# Dipendra Karki\*

Faculty of Management, Tribhuvan University, Nepal Email: dipendra.karki@ncc.tu.edu.np

## Prajjwol Bikram Khadka

Faculty of Management, Pokhara University, Nepal Email: prajjwolkhadka2@gmail.com

Corresponding Author\* **Types of Research:** Review

Received: January 5, 2024; Revised & Accepted: March 23, 2024 Copyright: Karki, & Khadka (2024)

This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.

## Abstract

**Background:** This study provides a bibliometric analysis of momentum investment strategies, examining their historical evolution, behavioral dynamics, and the challenges faced by professionals in equity markets. It aims to explore the persistent profitability of momentum strategies amidst market fluctuations and the significant influence of behavioral biases on trading decisions.

**Methods:** Employing a Bibliometric Analytical framework, the study systematically maps the knowledge structure of momentum investment strategies. It utilizes the Dimensions database for scholarly journal searches and examines peer-reviewed research publications spanning from 1993 to 2024. This method enables the identification of key research works, emerging trends, and an assessment of the literature's impact.

**Results:** The research reveals the persistent profitability of momentum strategies despite market changes, highlighting the significant role of behavioral biases in trading decisions. This work contributes to both academic discourse and practical investment strategy development, offering insights into exploiting momentum's transformative potential in dynamic equity markets.

**Conclusion:** This study contributes to both academic discourse and practical investment strategy development by offering evidence-based insights into the effectiveness of momentum

strategies. It identifies research gaps, suggests new directions for future studies, and analyzes collaboration networks to enhance interdisciplinary research efforts.

**Novelty:** The utilization of a Bibliometric Analytical framework in studying momentum investment strategies brings a novel approach to the field. This method not only offers a systematic mapping of knowledge but also facilitates the identification of influential research works and emerging trends, guiding both academic research and practical applications.

Keywords: momentum, portfolio, returns, strategy, stock market

#### Introduction

Throughout history, researchers have embarked on a quest to solve the mysteries of market behavior, presenting various theories to explain and predict the complex dynamics of financial systems. Among these, the Efficient Market Hypothesis (EMH), put forward by Fama (1970), stands as a prominent theoretical framework guiding empirical studies in finance. The EMH posits a crucial principle: past prices, in an efficient market, should not be predictive of future success. However, a paradox emerges as past prices seemingly contradict this principle, often exhibiting an incredible ability to forecast future expected performance - a phenomenon termed "momentum."

A pivotal milestone in the exploration of momentum came with the groundbreaking study of Jegadeesh and Titman (1993). Their comprehensive study of the U.S. marketplace spanning from 1965 to 1989 provided compelling evidence of the momentum effect. It revealed that stocks with robust past performance consistently outperformed those with poor past performance in subsequent periods, showcasing approximately the monthly one percent of average excess returns. This discovery prompted a vigorous debate, questioning whether the persistent and robust momentum effect contradicts the principles of the EMH. The discourse surrounding momentum extended outside U.S. markets, encouraging international studies to corroborate and extend these findings. Momentum, it turned out, exhibited remarkable robustness not only across U.S. and foreign equity markets but also within diverse industries, countries, and various asset classes (Geczy & Samnov, 2012). The driving force behind this enduring phenomenon, according to researchers in financial economics, can be attributed to cognitive biases embedded in behavioral economics (Barberis et al., 1998; Devkota et al, 2023). The rationale behind this phenomenon is that investors, driven by irrationality, do not promptly integrate new information into their transaction prices due to their underreaction to it. Even in scenarios where traders are assumed to be perfectly rational, recent research contends that momentum can persist, adding a layer of complexity to the understanding of this phenomenon (Crombez, 2001).

Academic researchers studying into the momentum effect examined stock data spanning over two centuries, revealing a significant and robust historical performance record (Geczy & Samnov, 2012). The sustainability of momentum as an active investment strategy is dependent on the returns being driven by inherent human bias, making it a compelling subject of exploration. The objective of the momentum investing strategy is to profit from the persistence of current market trends. This strategy involves a speculator initiating a long position in an asset whose price is

rising, or initiating a short sale of a security whose price has been falling. The fundamental assumption is founded on the belief that a trend is more likely to persist than to reverse once it has become established. Diverging from the long-term focus of value investing, momentum emerges as a short-term strategy, indifferent to operational performance from a pricing perspective. The framework of momentum investing interacts with the area of technical trading analysis, which has received substantial study. Past studies offer divergent perspectives, with some asserting that past information is insufficient for predicting future prices, while others argue that technical analysis, particularly when non-public information is taken into account, can yield substantial gains (Jensen & Bennington, 1970; Neftci, 1991; Treynor & Ferguson, 1985; Bessembinder & Chan, 1995). The collision of these viewpoints emphasizes the multifaceted nature of momentum investing. Recognizing the inherent biases in human decision-making processes, Gray and Vogel (2016)

advocate for automation, contending that a systematic approach, as exemplified by technical analysis, can mitigate these biases and protect investors from their own behavioral errors (Gray & Vogel, 2016). Despite their popularity in practical trading scenarios, technical trading tools have received remarkably little attention in academic literature, leaving their empirical performance unexplored.

Viewed through this broader perspective, this study aims to explore the evolution of momentum investment research while identifying prevalent studies and emerging themes within the field of momentum investing. This study serves as a detailed roadmap for aspiring scholars in the field. Beginning with an extensive literature survey and bibliometric analysis, the study finds both existing and emergent themes in momentum investing. Notably, it contributes to the literature in two key ways: enhancing the systematic literature review methodology and structuring knowledge in the field. Furthermore, the study proposes potential future research based on this structured framework. The subsequent sections of this paper are organized as follows: Section 2 describes the study materials and methodology, Section 3 presents the results and discussion of the bibliometric analysis, and Section 4 concludes the study with key insights, recommendations, and suggestions for future research.

## **Materials & Methods**

The research design employed in this study is primarily exploratory, with the doctrinal method serving as the cornerstone for achieving its objectives. To investigate the set objective, a comprehensive review of existing literature and empirical evidence was conducted, employing a systematic methodological approach suggested by Tranfield et al. (2003). This study adopts a positivist perspective, following the tradition set by Buchanan (2008) in prior review-based research. This approach embraces a fixed reality and employs deductive reasoning, reflecting an 'ontological' standpoint as explained by Travers (2001), to ensure a systematic exploration grounded in empirical evidence.

### **Chronological Literature Review**

The momentum investment strategy has become a focal point of financial literature due to its persistent profitability, challenging the foundations of the efficient markets hypothesis (EMH).

A historical exploration reveals the evolution of momentum and its challenges to established investment philosophies.

#### The Market's Oldest Religion: Technical Analysis

The origins of momentum can be drawn to the 17th century with the publication of "Confusion De Confusiones" in 1688 by the prosperous Dutch merchant Joseph de la Vega. This work was one of the oldest in the field of stock trading, and described phenomena such as excessive trading, overreaction, under-reaction, and the disposition effect, establishing the foundation for behavioral finance. The discoveries of Vega (1688) reflected concepts that were later published in current finance journals. The Dojima Rice Market in Japan, founded in 1697, was one of the first futures markets, demonstrating the convergence of market forces and agricultural products. Munehisa Homma, an eighteenth-century businessman, wrote his trading rules in 1755 in a book titled "The Fountain of Gold- the Three Monkey Record of Money", highlighted the significance of emotions in influencing the fluctuations of rice prices by analyzing historical pricing patterns to make forecasts about the future (Marshall et al., 2006). In the early 1900s, Edwin Lefevre's "Reminiscences of a Stock Operator" showcased Jesse Livermore's effective utilization of technical indicators (Lefevre, & Lowenstein, 2006).

However, in the early 20th century, doubts emerged regarding the efficacy of technical analysis. Investors initiated the process of examining fundamental analysis, carefully analyzing a company's financial statements to make more informed decisions. This shift gave rise to value investing, advocated by Benjamin Graham. Graham (1973) argued that buying stocks beneath their intrinsic value, computed through fundamental analysis, could yield higher risk-adjusted returns. His philosophy emphasized the direct link between a company's performance and its stock's future price patterns.

#### A New Religion Emerges: Fundamental Analysis

Benjamin Graham's influence strengthened fundamental analysis as a prominent investment philosophy. Graham (1973) argued that the performance of a stock is closely linked to the success or failure of the underlying firm. Gonedes (1972) expanded on this perspective, claiming that investors exhibit a predictable response to accounting figures, such as earnings and dividend announcements. Klarman (1991) challenged the idea of predicting market movements, considering it to be pointless. The author emphasized that investing based on predictions is speculative and likely to lead to losses over time. Klarman advocated for fundamental analysis, emphasizing that the underlying fundamentals of the company are the sole valid indicators for gaining an understanding of future stock prices. He disregarded price action as aimless and insignificant, emphasizing the irrationality of attempting to forecast the behavior of market participants. Malkiel (1996) also criticized technical analysis, arguing that the central proposition of charting is fundamentally flawed. Fundamental analysts, he argued, possess superior information and rationality. Notably, the prophetic aspect of stock pricing has gained attention from both academics and practitioners (Karki, 2018). In the context of evolving financial markets, Dahal et al. (2020) and Karki et al. (2021) have emphasized the importance of digital literacy and the adoption of management tools to rationalize decisions.

Fundamentalists tend to ignore technical analysis, despite its historical efficacy and the abundance of scholarly evidence confirming its merits (Karki et al., 2023). The value-investing ideology, advocated by fundamental analysts, remained consistent in its belief that thorough analysis of a company's fundamentals would guide prudent investment decisions. This perspective, although widely held among value investors, has initiated a continuous discussion between fundamental analysts.

#### The Age of Evidence-Based Investing

In the field of investment strategies, a basic dichotomy exists between value investors, who prioritize fundamentals with the belief that prices will follow, and technical investors, who believe that prices lead and potentially even drive fundamentals. This dichotomy, however, is not a hard line, as an emerging body of academic research suggests that both fundamental and technical strategies can be effective. The age of evidence-based investing acknowledges that these strategies, including value and quality (fundamental) and momentum and trend-following (technical), may coexist and contribute to investment success.

Earnings-related strategies, rooted in the works of Graham and Dodd (1940), advocate for investing in stocks with low earnings multiples. The theoretical relationship between financial statements and equity prices (Nichols & James, 2004) emphasizes the significance of earnings in determining share value. Empirical evidence consistently explores the impact of earnings on stock returns, forming a cornerstone of evidence-based investing. Contrary to viewing fundamental and technical analyses as conflicting, an evidence-based investor recognizes them as complementary approaches aiming to exploit market inefficiencies resulting from biased decision-making (Karki, 2020; 2022). In this evolving era of investing, a prominent focus is on constructing effective active momentum strategies. However, the term "momentum strategies" can be confusing, given the diverse approaches to measuring momentum. Two distinct categories help clarify the complexities of momentum strategies:

- i. Time-series momentum (Also known as absolute momentum): This approach calculates momentum based on a stock's past returns, independently evaluated without considering other stocks' returns.
- ii. Cross-sectional momentum (Initially termed relative strength): Cross-sectional momentum measures a stock's performance relative to other stocks, providing a comparative measure within the market.

In simple terms, evidence-based investing believes that fundamental and technical analysis, along with some additional strategies such as momentum, can be used effectively. It emphasizes a comprehensive understanding of market dynamics, in which diverse methodologies combine to exploit inefficiencies and capitalize on the decisions of market participants.

## Methodology

The study employs electronic database searches as well as backward and forward reference searches to ensure that all relevant papers are included (Eduardsen & Marinova 2020). The present analysis makes use of the Dimensions bibliometric database. Dimensions is a partially

free scholarly resource published by Digital Science in January 2018. It offers a vast selection of academic resources and is popular among researchers. Dimensions incorporates journal articles and citation counts, making it a potential new source of impact statistics (Thelwall, 2018). Dimensions database is utilized for bibliometric analysis since it provides the most comprehensive journal coverage when compared to Web of Science and Scopus (Thelwall, 2018).

To ensure comprehensive coverage of relevant research, the study initially identified all pertinent momentum investing keywords and search queries utilizing VOSviewer. Keywords related to momentum investing include; Momentum effect, Momentum investing, Cross-sectional momentum, Time-series momentum, Dual momentum, Relative momentum. The study executed search queries employing various combinations of these keywords.

## **Data Analysis**

The data analysis was conducted using the Dimensions database for scholarly journal searches. Peer-reviewed research papers ranging from 1993 to 2024 were considered for the analysis. The selected papers are subjected to bibliometric analysis in this study. The bibliometric analysis uses a variety of evaluative and relational methodologies to identify journals and papers on a specific subject, influential authors, and the intellectual and social structure of that field (Dzikowski 2018; Bhatt et al. 2020). Data analysis consists of co-authorship analysis, citation analysis, and bibliometric coupling.

### **Co-Authorship Analysis**

The following co-authorship analysis provides a quantitative assessment of collaboration networks in the field of momentum investment strategies. It lists authors, their respective document counts, citation numbers, and total link strength, offering insights into the most influential contributors and their collaborative relationships (Martinez-Lopez et al., 2018). This analysis helps identify key researchers, understand the structure of academic collaboration, and highlights the interconnectedness of scholars within this research domain, thereby underlining the collective efforts driving advancements in momentum investment strategies.

Rank	Author	Documents	Citations	Total Link Strength
1	andrew clare	11	92	26
2	james seaton	9	69	26
3	stephen thomas	8	63	24
4	peter n. smith	7	62	20
5	ron bird	10	624	11
6	david blitz	12	464	10
7	andreas schrimpf	7	132	10
8	pim van vliet	5	363	8
9	felix schindler	4	79	8

Table 1. Co-Authorship Analysis

10	paul woolley	4	43	8
11	tim alexander kroencke	4	79	8
12	adam zaremba	16	138	7
13	sanjay sehgal	9	74	7
14	russ wermers	8	1976	7
15	laurens swinkels	13	205	6
16	emilios c. galariotis	12	38	6
17	kris boudt	8	6	6
18	anadi canepa	4	18	6
19	athman bouguettaya	4	434	6
20	frank s. skinner	3	6	6
21	maría de la o gonzález	3	6	6
22	omar a. esqueda	3	5	6
23	tibebe a. assefa	3	5	6
24	owain ap gwilym	2	7	6
25	satish thosar	2	11	6
26	xue-zhong he	2	11	6
27	tony key	6	25	5
28	gianluca marcato	5	25	5
29	brahim medjahed	3	424	5
30	mehmet umutlu	3	27	5
31	qi yu	3	355	5
32	matthias x. hanauer	2	10	5
33	abdullah ejaz	5	14	4
34	anchor y. lin	5	82	4
35	ali m. parhizgari	4	5	4
36	ivelina pavlova	4	5	4
37	peggy e. swanson	4	82	4
38	petr polak	4	4	4
39	benedict peeters	3	5	4
40	giang t. nguyen	3	4	4
41	andreas karathanasopoulos	2	14	4
42	mark grinblatt	2	1597	4
43	milan vidojevic	2	5	4
44	sheridan titman	2	1597	4
45	david turnock	11	66	3
46	christian walkshäusl	8	78	3
47	asgar ali	4	16	3
48	doron avramov	3	337	3
49	janice phoeng	3	2	3

50	jonathan whitaker	3	71	3	
51	k. n. badhani	3	9	3	
52	nicolae muica	3	18	3	
53	sakshi jain	3	52	3	
54	sebastian lobe	3	52	3	
55	asheesh pandey	4	24	2	
56	jacob gyntelberg	2	8	2	
57	liam tjong-a-tjoe	2	78	2	
58	przemysław konieczka	2	13	2	
59	vibhuti vasishth	2	2	2	

The bibliometric map generated by VOSviewer illustrates three distinct clusters, as depicted in Figure 1. A cluster represents a grouping of closely connected nodes, with each node assigned to a single cluster. The number of clusters is determined by a resolution parameter (Eck & Waltwan, 2013). For instance, in Figure 1, author David Blitz, associated with cluster 1, is highlighted, showcasing 464 citations (links), 10 strengths, and 12 documents.

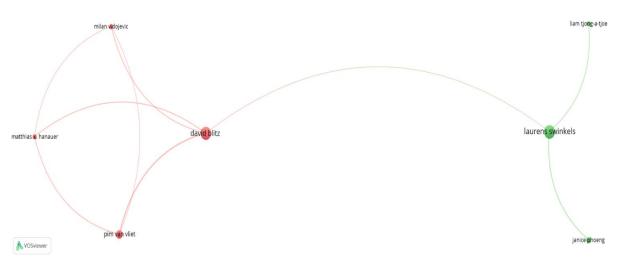


Figure 1. Bibliometric map of co-authorship from VOSviewer using author names.

#### **Citation Analysis**

The assessment of a publication's influence is a prevalent objective of citation analysis (Xu et al. 2018). Citation analysis focuses on evaluating the impact and reach of scholarly work within the field of momentum investing strategies. The document specifies a minimum criterion of five citations for a document to be included in the analysis, suggesting a focus on influential research. This approach enables the identification of highly cited documents and authors, highlighting their significance in advancing the understanding of momentum investing. The analysis appears to employ a detailed bibliometric method, capturing the breadth of research impact through citations. Such an approach is crucial for understanding the field's development,

recognizing key contributors, and identifying foundational studies that have shaped momentum investment strategies over time.

### Citation-Documents

Citation-Documents focuses on analyzing documents based on their citation impact within the field of momentum investing strategies. It specifies a minimum threshold of 5 citations for a document to be considered in this analysis. Each document is assigned an ID and listed along with its citation count and the number of links it has within the bibliometric network, indicating its influence and connectivity in the research landscape. This effectively showcases the impact of seminal works and authors in the domain, providing a quantitative measure of their contribution and significance. Through this analysis, it highlights the foundational and influential documents that have shaped the current understanding and future direction of momentum investing research.

Rank	Document	Citations	Links
1	mark grinblatt (1995)	1363	5
2	a. abada (2019c)	519	1
3	ron bird (2007)	464	0
4	adrian john bevan (2014)	366	0
5	a. abada (2019a)	364	1
6	martti raidal (2008)	359	1
7	david blitz (2007)	341	10
8	qi yu (2006)	317	1
9	doron avramov (2006)	286	0
10	mark grinblatt (1994)	234	0
11	a. abada (2019b)	133	0
12	brahim medjahed (2005)	79	0
13	tim alexander kroencke (2013)	64	1
14	ralph assmann (2020)	60	0
15	anchor y. lin (2003)	56	1
16	doron avramov (2005)	51	0
17	laurens swinkels (2007)	50	0
18	sebastian lobe (2014)	46	1
19	peter schmidt (2019)	45	0
20	ron bird (2004)	44	0
21	david blitz (2008)	44	3
22	adam zaremba (2015a)	41	3
23	laurens swinkels (2002)	37	2
24	laurens swinkels (2004)	36	2
25	david blitz (2012)	34	4

Table 2. Citation- Documents Analysis

26	sanjay sehgal (2011)	33	1
27	ron bird (2013)	33	0
28	andrew clare (2013)	31	0
29	paul woolley (2003)	29	1
30	emilios c. galariotis (2014)	29	1
31	qi yu (2010a)	28	0
32	laura andreu (2013)	28	3
33	christian m. rogerson (2004)	27	1
34	russ wermers (2007)	27	2
35	ron bird (2003)	27	0
36	adam zaremba (2015b)	25	2
37	andrew clare (2014)	25	0
38	christian m. rogerson (2003)	23	1
39	andrew clare (2010)	23	1
40	christian m. rogerson (1996)	21	0
41	asheesh pandey (2015)	19	0
42	david turnock (1997)	17	0
43	guglielmo maria caporale (2020)	17	0
44	christian m. rogerson (2012)	17	0
45	christian m. rogerson (2005)	16	0
46	david blitz (2015)	15	2
47	peggy e. swanson (2005)	14	2
48	adam zaremba (2019)	14	2
49	sanjay sehgal (2009)	14	1
50	tim alexander kroencke (2011)	13	0
51	gianluca marcato (2005a)	13	0
52	adam zaremba (2018)	13	2
53	sarah azzi (2006)	13	0
54	david blitz (2018)	12	1
55	torsten paul ake åkesson (2007)	12	1
56	anadi canepa (2019)	12	0
57	adam zaremba (2017)	12	1
58	gianluca marcato (2005b)	12	0
59	christian walkshäusl (2020)	11	0
60	etienne nel (1996)	11	0
61	david turnock (2001)	10	0
62	cristi spulbar (2019)	10	1
63	adam zaremba (2016b)	10	0
64	carlotta accettura (2023)	10	2
65	qi yu (2010b)	10	1

66	ron bird (2005)	10	1
67	asgar ali (2020)	9	2
68	vasile surd (2000)	9	0
69	christian walkshäusl (2018)	8	1
70	anchor y. lin (2009)	8	0
71	nicolae muica (1998)	8	0
72	nerissa c. brown (2007)	8	1
73	chunhua lan (2015)	7	1
74	jacob gyntelberg (2011)	7	0
75	david turnock (1988)	7	0
76	manish bansal (2021)	7	1
77	nicolae muica (2000)	7	0
78	adam zaremba (2016a)	6	0
79	jeffrey l. fox (1995)	6	0
80	anadi canepa (2020)	6	0
81	steve thomas (2012)	6	0
82	adam zaremba (2014)	6	0
83	vanja piljak (2017)	5	2
84	alex plastun (2019)	5	0
85	david blitz (2021)	5	1
86	david blitz (2016)	5	1
87	owain ap gwilym (2011)	5	0
88	david blitz (2013)	5	2
89	sanjay sehgal (2013)	5	2
90	christian walkshäusl (2014)	5	0

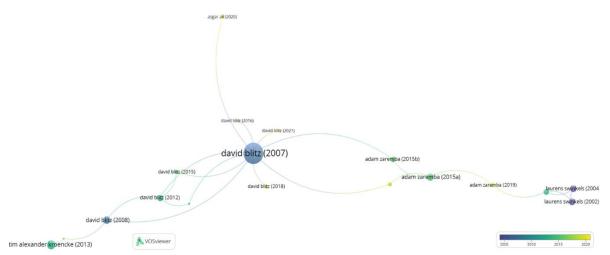


Figure 2. Bibliometric map of Citations-Documents from VOSviewer.

#### Citation-Authors

Citation-Authors focuses on identifying and evaluating the contributions of various authors within the field of momentum investing strategies. This lists authors who have been significantly cited in the literature, indicating their influence and contribution to the research area. Each author is presented with the number of documents they have authored, the total citations received, and their total link strength, which may indicate the breadth of their research impact and collaboration network. This analysis aims to highlight key contributors, understand collaboration patterns, and identify influential research within the momentum investing domain. By examining the citation patterns and the collaborative networks among authors, the study provides insights into the intellectual structure and evolution of momentum investing research.

Rank	Author	Documents	Citations	Total Link Strength
1	russ wermers	8	1976	3
2	ron bird	10	624	0
3	david blitz	12	464	20
4	pim van vliet	5	363	17
5	laurens swinkels	13	205	11
6	adam zaremba	16	138	15
7	andreas schrimpf	7	132	2
8	christian m. rogerson	8	122	0
9	andrew clare	11	92	17
10	anchor y. lin	5	82	3
11	christian walkshäusl	8	78	0
12	sanjay sehgal	9	74	2
13	james seaton	9	69	14
14	david turnock	11	66	0
15	stephen thomas	8	63	14
16	peter n. smith	7	62	14
17	emilios c. galariotis	12	38	1
18	gianluca marcato	5	25	0
19	tony key	6	25	0
20	abdullah ejaz	5	14	1
21	benjamin r. auer	6	7	12
22	andrew phiri	5	6	0
23	kris boudt	8	6	0

Table 3. Citation- Authors Analysis

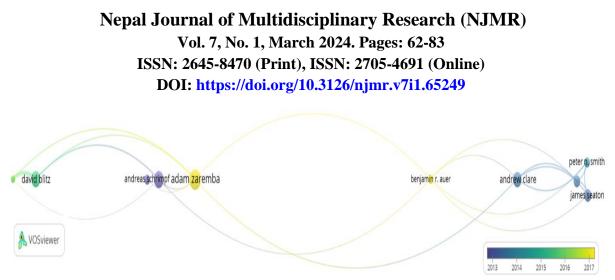


Figure 3. Bibliometric Map of Citations-Authors from VOSviewer.

### 2.3.3 Bibliographic Coupling

The document includes a section on bibliographic coupling, focusing on documents with a minimum of five citations. Bibliographic coupling occurs when two documents cite the same earlier works, suggesting a thematic similarity or shared research foundation between them. This metric is used to analyze the interconnectedness of research within the field of momentum investment strategies, highlighting clusters of research that share common references. The emphasis on documents with at least five citations ensures that the analysis focuses on more influential and potentially impactful research within the domain.

Rank	Document	Citations	Total Link Strength
1	mark grinblatt (1995)	1363	36
2	a. abada (2019c)	519	243
3	ron bird (2007)	464	71
4	adrian john bevan (2014)	366	63
5	a. abada (2019a)	364	182
6	martti raidal (2008)	359	69
7	david blitz (2007)	341	32
8	qi yu (2006)	317	28
9	doron avramov (2006)	286	154
10	mark grinblatt (1994)	234	0
11	a. abada (2019b)	133	163
12	brahim medjahed (2005)	79	14
13	tim alexander kroencke (2013)	64	181
14	ralph assmann (2020)	60	7
15	anchor y. lin (2003)	56	128
16	doron avramov (2005)	51	159
17	laurens swinkels (2007)	50	61
18	sebastian lobe (2014)	46	194
19	peter schmidt (2019)	45	224

 Table 3. Bibliometric Coupling Analysis

20	ron bird (2004)	44	172
20	david blitz (2008)	44	78
21	adam zaremba (2015a)	41	226
22	laurens swinkels (2002)	37	74
23	laurens swinkels (2002)	36	299
25	david blitz (2012)	34	113
26	sanjay sehgal (2011)	33	375
27	ron bird (2013)	33	40
28	andrew clare (2013)	31	56
29	paul woolley (2003)	29	7
30	emilios c. galariotis (2014)	29	376
30	qi yu (2010a)	28	23
32	laura andreu (2013)	28	100
33	christian m. rogerson (2004)	27	1
33	russ wermers (2007)	27	155
35	ron bird (2003)	27	0
36	adam zaremba (2015b)	25	222
37	andrew clare (2014)	25	91
38	christian m. rogerson (2003)	23	3
39	andrew clare (2010)	23	94
40	christian m. rogerson (1996)	21	0
41	asheesh pandey (2015)	19	236
42	david turnock (1997)	17	0
43	guglielmo maria caporale (2020)	17	100
44	christian m. rogerson (2012)	17	1
45	christian m. rogerson (2005)	16	0
46	david blitz (2015)	15	105
47	peggy e. swanson (2005)	14	127
48	adam zaremba (2019)	14	234
49	sanjay sehgal (2009)	14	303
50	tim alexander kroencke (2011)	13	141
51	gianluca marcato (2005a)	13	105
52	adam zaremba (2018)	13	256
53	sarah azzi (2006)	13	25
54	david blitz (2018)	12	119
55	torsten paul ake åkesson (2007)	12	16
56	anadi canepa (2019)	12	1
57	adam zaremba (2017)	12	97
58	gianluca marcato (2005b)	12	0
59	christian walkshäusl (2020)	11	103

60	etienne nel (1996)	11	1
61	david turnock (2001)	10	0
62	cristi spulbar (2019)	10	102
63	adam zaremba (2016b)	10	0
64	carlotta accettura (2023)	10	9
65	qi yu (2010b)	10	5
66	ron bird (2005)	10	18
67	asgar ali (2020)	9	158
68	vasile surd (2000)	9	0
69	christian walkshäusl (2018)	8	148
70	anchor y. lin (2009)	8	118
71	nicolae muica (1998)	8	0
72	nerissa c. brown (2007)	8	0
73	chunhua lan (2015)	7	121
74	jacob gyntelberg (2011)	7	0
75	david turnock (1988)	7	0
76	manish bansal (2021)	7	101
77	nicolae muica (2000)	7	0
78	adam zaremba (2016a)	6	0
79	jeffrey l. fox (1995)	6	0
80	anadi canepa (2020)	6	43
81	steve thomas (2012)	6	74
82	adam zaremba (2014)	6	0
83	vanja piljak (2017)	5	33
84	alex plastun (2019)	5	7
85	david blitz (2021)	5	203
86	david blitz (2016)	5	163
87	owain ap gwilym (2011)	5	23
88	david blitz (2013)	5	81
89	sanjay sehgal (2013)	5	252
90	christian walkshäusl (2014)	5	107

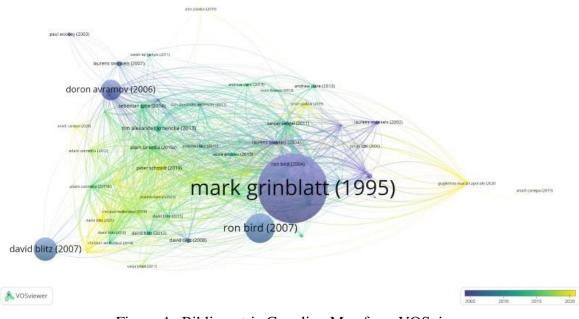


Figure 4. Bibliometric Coupling Map from VOSviewer.

### **Results & Discussion**

The data analysis illustrates a thorough examination of the field's scholarly landscape, emphasizing co-authorship networks, citation impacts, and bibliographic coupling. It highlights the significant contributions of key researchers and their interconnections, underlining the collaborative nature of the momentum investing domain. Additionally, the analysis sheds light on the most influential works and authors through citation metrics, offering insights into the foundational studies shaping the understanding of momentum investing. This approach not only identifies the pivotal contributions to the field but also underscores the thematic similarities and shared research foundations among influential documents, facilitating a deeper understanding of momentum investing's intellectual structure and evolution.

#### **Empirical Evidence on Momentum Investment Strategies**

The discourse on momentum investing revolves around three key explanations: data-snooping effects, risk-based factors, and behavioral influences on investor decisions. Early concerns about data-snooping effects were raised by Lo and MacKinlay (1990a), emphasizing the need for rigorous methodologies to distinguish true momentum effects from statistical noise. Meanwhile, risk-based explanations, initially explored by Levy (1967) and later questioned by Jensen and Bennington (1970), led to a broader investigation into the risk factors associated with momentum, challenging traditional models like the CAPM (Capital Asset Pricing Model). Grinblatt and Titman (1989) observed behavioral biases favoring relative strength, setting the stage for Jegadeesh and Titman's seminal work in 1993, which documented significant momentum profits and challenged traditional risk models. Subsequent research by Rouwenhorst (1998), Moskowitz and Grinblatt (1999), and Grundy and Martin (2001) further reinforced the robustness of momentum effects across different markets and sectors.

Behavioral theories, such as those presented by Barberis et al. (1998) and Daniel et al. (1997), highlight psychological biases driving momentum but face challenges in explaining its time horizon. Technical analysis tools, explored by Sullivan et al. (1995) and Chong and Ip (2009), have shown promise in mitigating behavioral biases. Despite ongoing debate, momentum remains a puzzle that challenges conventional financial theories, as acknowledged by Fama and French (2016).

#### **Momentum and Market Anomalies**

The efficient-market hypothesis (Fama, 1970) faces a significant challenge with the anomaly of momentum, where asset prices persistently trend upward or downward despite market efficiency expectations. Jegadeesh and Titman's (1993) seminal work on cross-sectional momentum laid the foundation for exploring this phenomenon. According to this study, cross-sectional momentum involves buying assets with top relative performance and short-selling those with the poorest relative performance, irrespective of market direction.

**Cross-sectional Momentum:** Expanding on cross-sectional momentum, Avramov et al. (2017) examined 15 anomalies in their study titled "Scaling Up Market Anomalies." Spanning U.S. stocks from 1976 to 2013, they evaluated the profitability and robustness of these strategies, sorting stocks into deciles based on momentum for each anomaly. Remarkably, their findings show significant outperformance of the momentum strategy across diverse anomalies, with 13 out of 15 long-short strategies yielding positive Fama-French three-factor adjusted returns. The study highlights the strategy's resilience post-2000 and its effectiveness in mitigating risks through diversification. Moreover, it underscores the influence of investor sentiment on momentum strategies, providing valuable insights for understanding market dynamics (Avramov et al., 2017; Karki, 2017; Joshi et al., 2023; Karki & Khadka, 2023).

**Time Series Momentum**: Moskowitz et al. (2012) introduced time-series momentum, focusing on tracking asset trends independently to capitalize on ascending patterns and short-sell descending ones. Unlike cross-sectional momentum, it prioritizes absolute performance, making it distinct. Analyzing data from 1985 to 2009, the study reveals that time-series momentum exhibits minimal correlation with broad bond and stock markets, offering diversification benefits beyond traditional portfolios (Moskowitz et al., 2012).

**Enduring Premia and Strategic Implementation**: The investigation of cross-sectional and time-series momentum identifies enduring premia applicable across diverse assets and timeframes. Avramov et al. (2017) emphasize the sustained positive risk-adjusted returns and noise mitigation of combined momentum strategies, ensuring practical viability.

**Pervasiveness and Persistence:** The literature review underscores the pervasive and persistent nature of momentum premiums, positioning them as enduring anomalies with strategic diversification potential (Karki et al., 2023). These insights invite further exploration and application in both academic and practical realms.

The bibliometric analysis reveals several noteworthy insights into the evolution and research trends within momentum investing. Since Jegadeesh and Titman's seminal work in 1993, momentum investing research has seen remarkable growth, particularly after 2001. However, existing studies predominantly focus on specific versions of momentum, such as cross-

sectional momentum, with limited comprehensive analyses covering all types of momentum strategies (Gupta et al. 2010; Lim et al. 2018). While numerous studies examine the profitability of alternative momentum versions compared to traditional approaches, there is a dearth of research exploring the underlying reasons for the observed profitability (Andrei & Cujean 2017; Chang et al. 2018). Additionally, academic discourse on momentum explanations oscillates between rational and behavioral perspectives, with recent attention turning toward reconciling these viewpoints through progressive rationality and multidimensionality (Zoghlami, 2013; Xu et al., 2022). Looking ahead, there is considerable scope for future research to explore combining momentum strategies with other investment approaches, as evidenced by successful combinations reported in prior studies (Asness et al., 2013; Avramov et al., 2017).

## **Conclusion & Recommendation**

This study meticulously evaluates the efficacy and enduring nature of momentum investment strategies, challenging traditional financial paradigms and suggesting a reconsideration of market efficiency concepts. Through a detailed bibliometric analysis coupled with empirical evidence, the study has demonstrated the robust profitability of momentum strategies across diverse market scenarios, thereby underscoring the limitations of conventional financial theories in fully explaining market dynamics. The investigation highlights the pivotal role of behavioral biases in the persistence of momentum effects, indicating that psychological factors significantly contribute to market anomalies. Furthermore, the resilience and adaptability of momentum strategies in the face of evolving market conditions suggest their potential as a valuable component of investment portfolios. This research paves the way for future research into the complex interactions between investor psychology, market efficiency, and investment strategies, advocating for the development of advanced models that can more accurately capture the multifaceted nature of financial markets. In essence, the findings reiterate the relevance of momentum investing within financial literature and practice, encouraging further exploration into the behavioral foundations of financial market anomalies. As this study only employed the Dimensions database for literature searches, it acknowledges the limitation of exclusivity to a single bibliometric source. Future research endeavors can enhance search breadth by incorporating multiple bibliometric databases, thereby enriching the depth and diversity of findings

#### Acknowledgment

This research was funded by the University Grants Commission under UGC Award Number: PhD-77/78-Mgmt-01; therefore, the Authors would like to extend their gratitude to the University Grants Commission, Nepal for their support.

#### References

Andrei, D., & Cujean, J. (2017). Information percolation, momentum, and reversal. *Journal of Financial Economics*, *123*(3), 617–645. https://doi.org/10.1016/j.jfineco.2016.05.012

- Asness, C. S., Moskowitz, T.J., & Pedersen, L.H. (2013). Value and momentum everywhere. *The Journal of Finance*, 68(3), 929–985. https://doi.org/10.1111/jofi.12021
- Avramov, D., Cheng, S., Schreiber, A., & Schemer, K. (2017). Scaling up market anomalies. *The Journal of Investing*, *26*(3), 89-105. https://dx.doi.org/10.3905/joi.2017.26.3.089
- Barberis, N., Shleifer, A. & Vishny, R. (1998). A model of investor sentiment. Journal of Financial Economics, 49(3), 307-343. https://dx.doi.org/10.1016/s0304-405x(98)00027-0
- Bessembinder, H. & Chan, K. (1995). The profitability of technical rules in the Asian stock markets. *Pacific Basin Finance Journal*, 3(2-3), 257–284. https://doi.org/10.1016/0927-538X(95)00002-3
- Bhatt, Y., Ghuman, K., & Dhir, A. (2020). Sustainable manufacturing. Bibliometrics and content analysis. *Journal of Cleaner Production*, 260, 120988. https://doi.org/10.1016/j.jclepro.2020.120988
- Buchanan, D. (2008). You stab my back, I'll stab yours: Management experience and perceptions of organizational, political behavior. *British Journal of Management*, 19(1), 49-64. https://doi.org/10.1111/j.1467-8551.2007.00533.x
- Chang, R.P., Ko, K. C., Nakano, S., & Ghon Rhee, S. (2018). Residual momentum in Japan. J. of Empirical Finance, 45, 283–299. https://doi.org/10.1016/j.jempfin.2017.11.005
- Chong, T.T.-L. & Ip, H. (2009). Do momentum-based strategies work in emerging currency markets? *Pacific Basin Finance Journal*, *17*(4), 479–493. https://dx.doi.org/10.1016/j.pacfin.2008.11.002
- Crombez, J. (2001). Momentum, Rational Agents and Efficient Markets. *The Journal of Psychology and Financial Markets*, 2(4), 190-200. https://dx.doi.org/10.1207/s15327760jpfm0204\_3
- Dahal, R. K., Bhattarai, G., & Karki, D. (2020). Management accounting techniques on rationalize decisions in the Nepalese listed manufacturing companies. *Researcher: A Research Journal of Culture and Society*, 4(1), 112-128. https://dx.doi.org/10.3126/researcher.v4i1.33816
- Daniel, K., Hirschleifer, D., & Subrahmanyam, A. (1997). A theory of overconfidence, selfattribution, and security market under and over-reactions. *University Library of Munich, Germany*, 1-45. Available at SSRN: https://dx.doi.org/10.2139/ssrn.2017
- Devkota, N., Kumari, A., Upretee, S., Basyal, D. K., Mahato, S., Karki, D., . . . Dhakal, K. (2023). Farmers' perspectives on sugarcane management in Nepal: Empirical evidence from logistic regression model. *Journal of Agriculture and Crops*, 9(2), 222-232. https://doi.org/10.32861/jac.92.222.232
- Dzikowski, P. (2018). A bibliometric analysis of born global firms. *Journal of Business Research*, 85, 281–294. https://doi.org/10.1016/j.jbusres.2017.12.054
- Eck, N. J. V., & Waltman, L. (2014). Visualizing bibliometric networks. *Measuring Scholarly Impact: Springer*, 285–320. https://dx.doi.org/10.1007/978-3-319-10377-8
- Eduardsen, J., & Marinova, S. (2020). Internationalization and risk: literature review, integrative framework, and research agenda. *Int Bus Rev*, 29:101688.

https://doi.org/10.1016/j.ibusrev.2020.101688

- Fama, E. & French, K. (2008). Dissecting anomalies. *The Journal of Finance*, 63(4), 1653-1678. https://dx.doi.org/10.1111/j.1540-6261.2008.01371.x
- Fama, E. F., & French, K. R. (2016). Dissecting anomalies with a five-factor model. *Review* of *Financial Studies*, 29(1), 69–103. https://dx.doi.org/10.1093/rfs/hhv043
- Fama, E.F. (1970). Efficient capital market, a review of theory and empirical work. *The Journal of Finance*, 25(2), 383–417. https://dx.doi.org/10.2307/2325486
- Geczy, C., & Samonov, M. (2013). 212 years of price momentum (The world's longest backtest: 1801-2012). SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2292544
- Gonedes, N. J. (1972). Efficient capital markets and external accounting. *The Accounting Review*, 47(1), 11-21. http://www.jstor.org/stable/244562
- Graham, B., & Dodd, D. (1940). Security Analysis: Principles and Technique. New York: McGraw-Hill.
- Graham, B. (1973). The Intelligent Investor. Rev. Ed., Thomas Press India (2003).
- Gray, W.R., & Vogel, J.R. (2016). *Quantitative momentum: A practitioner's guide to building a momentum-based stock selection system*. New York: Wiley.
- Grinblatt, M. & Titman S. (1989). Mutual fund performance: An analysis of quarterly portfolio holdings. *Journal of Business*, 62(3), 393-416. https://dx.doi.org/10.1086/296468
- Grundy, B. D., & Martin, J. S. (2001). Understanding the nature of the risks and the source of the rewards to momentum investing. *The Review of Financial Studies*, 14(1), 29–78. http://www.jstor.org/stable/2696756
- Gupta, K., Locke, S., & Scrimgeour, F. (2010). International comparison of returns from conventional, industrial, and 52-week high momentum strategies. J. of Intl. Finan. Mkts., Instt. and Money, 20(4), 423–435. https://dx.doi.org/10.1016/j.intfin.2010.06.002
- Jegadeesh, N., & Titman, S. (1993). Returns to buying winners and selling losers: Implications for stock market efficiency. *The Journal of Finance*, 48(1), 65-91. https://dx.doi.org/10.1111/j.1540-6261.1993.tb04702.x
- Jensen, M.C. & Benington, G.A. (1970). Random walk and technical theories: Some additional evidence. *The Journal of Finance*, 25(2), 469–482. https://dx.doi.org/10.2307/2325495
- Joshi, S. P., Dahal, R. K., Ghimire, B., & Karki, D. (2023). Self-control and job-seeking behaviors among Nepalese Fresh Graduates. *Hong Kong Journal of Social Sciences*, *61*(Spring/Summer), 2023, 826-836. https://doi.org/10.55463/hkjss.issn.1021-3619.61.73
- Karki, D. (2017). Structural equation modeling of latent variables affecting stock prices: Evidence from Nepal. *Tribhuvan University Journal*, 31(1-2), 25-44. https://doi.org/10.3126/tuj.v31i1-2.25329
- Karki, D. (2018). Fundamentals of Common Stock Pricing: Evidence from Commercial Banks of Nepal. *NCC Journal*, *3*(1), 44–64. https://doi.org/10.3126/nccj.v3i1.20247

- Karki, D. (2020). The stock market's reaction to unanticipated catastrophic event. *Journal of Business and Social Sciences Research*, 5(2), 77–90. https://doi.org/10.3126/jbssr.v5i2.35236
- Karki, D. (2022). Navigating the new normal: Performance of stock market during pandemic. *Pravaha*, 28(1), 119-132. https://doi.org/10.3126/pravaha.v28i1.57979
- Karki, D., & Khadka, U. (2023). Nexus between consumer ethnocentrism and purchase intentions. *Interdisciplinary Journal of Innovation in Nepalese Academia*, 2(2), 217– 232. https://doi.org/10.3126/idjina.v2i2.59501
- Karki, D., Dahal, R. K., Bhattarai, G., Balla, S., & Lama, A. (2023). Performance evaluation of technical analysis in the Nepalese stock market: Implications for investment strategies. *Quest Journal of Management and Social Sciences*, 5(1), 69-84. https://doi.org/10.3126/qjmss.v5i1.56295
- Karki, D., Magar, S. R., Devkota, N., Parajuli, S., & Paudel, U. R. (2021). Online shopping in Kathmandu Valley: Users' knowledge, challenges and way forward. *The Journal of Social Sciences Research*, 7(3), 135-144. https://dx.doi.org/10.32861/jssr.73.135.144
- Klarman, S. (1991). *Margin of Safety -Risk-Averse Value Investing Strategies for the Thoughtful Investor Posted*. 1st edn. Harper Collins, New York.
- Lefevre, E., & Lowenstein, R. (2006). Reminiscences of a stock operator. John Wiley & Sons.
- Levy, R. (1967). Relative strength as a criterion for investment selection. *Journal of Finance*, 22(4), 595-610. https://dx.doi.org/10.1111/j.1540-6261.1967.tb00295.x
- Lim, B.Y., Wang, J., & Yao, Y. (2018) Time-series momentum in nearly 100 years of stock returns. J. Banking & Finance, 97, 283–296. https://doi.org/10.1016/j.jbankfin.2018.10.010
- Lo, W. A., & MacKinlay, A. C. (1990a). Data-snooping biases in tests of financial asset pricing models. *The Review of Financial Studies*, *3*(3), 431–67. https://dx.doi.org/10.1093/rfs/3.3.431
- Malikiel, B. (1996). A Random Walk Down Wall Street: The Time-Tested Strategy for Successful Investing. W. W. Norton & Company, New York.
- Marshall, B.R., Young, M.R., & Rose, L.C. (2006). Candlestick technical trading strategies: Can they create value for investors? J. Bank. Finance, 30(8), 2303–2323. https://dx.doi.org/10.1016/j.jbankfin.2005.08.001
- Martinez-Lopez, F. J., & Merigo, J. M., Valenzuela-Fernandez, L., & Nicolas, C. (2018). Fifty years of the European journal of marketing: A bibliometric analysis. *Eur. J. Marketing*, 52(1–2), 439–468. https://dx.doi.org/10.1108/EJM-11-2017-0853
- Maskowitz, T.J., Ooi, Y.H., & Pedersen, L.H. (2012). Time series momentum. *Journal of Financial Economics*, *104*(2), 228-250. https://dx.doi.org/10.1016/j.jfineco.2011.11.003
- Neftçi, S. N. (1991). Trading rules in financial markets and Wiener-Kolmogorov prediction theory: A study of "technical analysis". *Journal of Business*, 64(4), 549–571. https://dx.doi.org/10.1086/296551
- Nichols, D. C. & James, W. M. (2004). How do earnings numbers relate to stock returns?

Accounting Horizons, 18(4), 263–286. https://doi.org/10.2308/acch.2004.18.4.263

- Rouwenhorst, K.G. (2002). International momentum strategies. Journal of Finance, 53(1), 267-284. https://doi.org/10.1111/0022-1082.95722
- Sullivan, R., & Timmerman, A. (1999). Data-snooping, technical trading rule performance, and the Bootstrap. *Journal of Finance*, 54(5), 1647–1691. https://dx.doi.org/10.1111/0022-1082.00163
- Thelwall, M. (2018). Dimensions: A competitor to Scopus and the Web of Science? *Journal of Informetrics*, *12*(2), 430-435. https://doi.org/10.1016/j.joi.2018.03.006
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207–222. https://dx.doi.org/10.1111/1467-8551.00375
- Travers, M. (2001). *Qualitative Research through Case Studies*. SAGE Publications Ltd. https://dx.doi.org/10.4135/9781849209724
- Treynor, J. L., & Ferguson, R. (1985). In defense of technical analysis. *Journal of Finance*, 40(3), 757–773. https://dx.doi.org/10.1111/j.1540-6261.1985.tb05000.x
- Vega, J. (1688). Confusion de Confusiones. Via https://babel.hathitrust.org/cgi/pt?id=uc1.32106019504239&seq=13
- Xu, X., Chen, X., & Jia, F. (2018). Supply chain finance: a systematic literature review and bibliometric analysis. Int J Prod Econ, 204, 160–173. https://doi.org/10.1016/j.ijpe.2018.08.003
- Xu, F., Zhao, H., & Zheng, L. (2022). Investment-Momentum: A Two-Dimensional Behavioral Strategy. *International Journal of Finance and Economics*, 27(1), 1191-1207. https://doi.org/10.1002/ijfe.2208
- Zoghlami, F. (2013). Momentum effect in stocks' returns between the rational and the behavioural financial theories. *International Journal of Finance and Banking Studies*, 2(1), 1–10. https://dx.doi.org/10.20525/ijfbs.v2i1.136