

Navigating the Irrational: A Review of Behavioural Finance Theory and Practice

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Abstract

Behavioural finance challenges the traditional economic assumption of rationality by integrating elements of psychology into finance theory. This paper provides a detailed overview of behavioural finance, including its key concepts, applications, critiques, and challenges. Through the identification of cognitive biases, heuristic shortcuts, and behavioural phenomena, behavioural finance offers insights into investor behaviour, personal finance decisions, and corporate finance strategies. Drawing from research in this field, the paper explores the influence of human behaviour and emotions on financial decision-making processes. Additionally, it discusses the implications of behavioural finance for policymakers, investors, and financial practitioners. Through a review of influential academic sources and thematic analysis of keyword frequencies, the paper highlights the interdisciplinary nature of behavioural finance research and its significance in understanding financial markets and economic outcomes.

Keywords: Behavioural finance, Finance theory, Financial decision-making, Cognitive biases, Heuristics

1. Introduction

Behavioural finance is a fascinating field that blends elements of psychology with traditional finance theory to better understand how individuals make financial decisions. Here's a detailed overview: Behavioural finance challenges the traditional economic assumption that individuals are rational actors who always make decisions in their best financial interest. Instead, it recognizes that human behaviour and emotions play a significant role in shaping financial decisions, often leading to deviations from rationality (Barberis & Thaler, 2003), (Ullah et al., 2023) & (Barberis & Thaler, 2003).

Heuristics and Biases: Behavioural finance identifies various cognitive biases and heuristic shortcuts that influence decision-making. Examples include overconfidence, loss aversion, anchoring, and herding behaviour.

Prospect Theory: Proposed by Daniel Kahneman and Amos Tversky, prospect theory suggests that individuals make decisions based on perceived gains and losses relative to a reference point, rather than absolute outcomes. Loss

aversion, where losses loom larger than equivalent gains, is a central tenet of this theory. **Framing:** The way information is presented, or framed, can significantly impact decision-making. People may react differently to the same information depending on how it is presented, leading to irrational choices (Kediya et al., 2023), (Thaler, 2005) & (Khan et al., 2023). **Market Efficiency:** Behavioural finance challenges the efficient market hypothesis, which posits that asset prices reflect all available information. Behavioural economists argue that markets are not always efficient due to the presence of irrational investors. **Herd Behaviour:** Individuals often mimic the actions of others, especially in uncertain situations. Herd behaviour can lead to market bubbles and crashes as investors follow the crowd rather than conducting independent analysis (Barber & Odean, 1999), (Singh et al., 2023) & (Paul et al., 2023).

2. Applications

Investment Behaviour: Behavioural finance provides insights into investor behaviour, explaining phenomena such as stock market bubbles, irrational exuberance, and panic selling during market downturns. Understanding these behaviours can help investors make more informed decisions and avoid common pitfalls (Singh et al., 2023) & (Paul et al., 2023).

Personal Finance: Behavioural finance principles are relevant to personal financial decision-making, including savings, budgeting, and retirement planning. For example, individuals may procrastinate saving for retirement due to present bias, preferring immediate gratification over long-term financial security (Vissing-Jorgensen, 2003), (Singh & Khan, 2023) & (Farmer & Geanakoplos, 2009)

Corporate Finance: Behavioural finance influences corporate decision-making, particularly in areas such as capital budgeting, mergers and acquisitions, and risk management. Managers' overconfidence or risk aversion can impact strategic choices and organizational outcomes (Dhale et al., 2022).

Policy Implications: Behavioural finance insights have implications for policymakers seeking to design effective

regulations and interventions. Nudges, or subtle changes in choice architecture, can encourage desired behaviours such as saving for retirement or opting for healthier lifestyles (Prechter Jr & Parker, 2007).

2.1 Critiques and Challenges

While behavioural finance offers valuable insights into human behaviour, it has faced criticism for its lack of predictive power and the subjective nature of identifying biases. Critics argue that behavioural biases may cancel each other out in aggregate, making it difficult to consistently exploit them for financial gain (Pressman, 1998).

3. Results and Discussion

The search string used was TITLE-ABS-KEY (behavioural AND finance) AND (LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (DOCTYPE , "ar")) and database used is Scopus.

3.1 Most Influential Sources

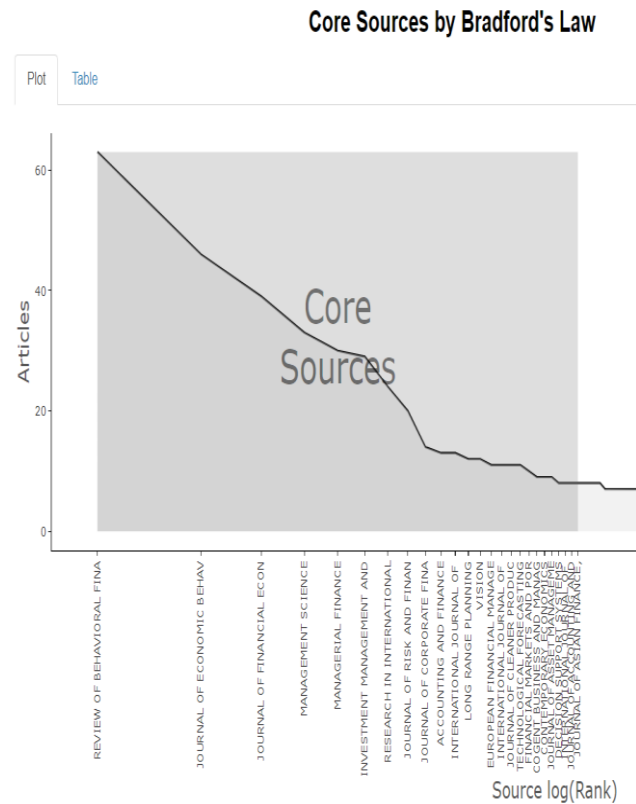


Figure 1. Most Popular Sources

The Figure above provides a ranking of academic journals based on the frequency of citations in the field of finance. Topping the list is the "Review of Behavioural Finance," indicating its prominence as a leading source for research on behavioural finance theories and applications. Following closely is the "Journal of Economic Behaviour and Organization," emphasizing the intersection of economics and behavioural aspects in decision-making. Notably, traditional finance journals like the "Journal of Financial Economics" and "Management Science" also hold significant positions, reflecting the ongoing relevance of fundamental financial principles. Overall, the rankings suggest a robust scholarly interest in understanding human behaviour's impact on financial markets and decision-making processes, underscoring the interdisciplinary nature of contemporary finance research.

3.2 Most Global Cited documents

Figure 2 is a screenshot of a table titled "Most Global Cited Documents". The table has three columns: "Paper", "DOI", and "Total Citation". The data is as follows:

Paper	DOI	Total Citation
FAMA EF, 1998, J FINANC ECON	10.1016/s0304-405x(98)00026-9	2271
DE BONDT WFM, 1987, J FINANC	10.1111/j.1540-6261.1987.tb04569.x	1139
ASNESS CS, 2013, J FINANC	10.1111/jofi.12021	1127
VENKATESH V, 2001, MIS QUART MANAGE INF SYST	10.2307/3250959	950
FERNANDES D, 2014, MANAGE SCI	10.1287/mnsc.2013.1849	918
ZHANG XF, 2006, J FINANC	10.1111/j.1540-6261.2006.00831.x	855
GRAHAM JR, 2013, J FINANC ECON	10.1016/j.jfineco.2013.01.010	548
THOMAS LC, 2000, INT J FORECAST	10.1016/S0169-2070(00)00034-0	534
LUO X, 2013, INF SYST RES	10.1287/isre.1120.0462	471
HIRSHLEIFER D, 2003, EUR FINANC MANAGE	10.1111/1468-036X.00207	468

Figure 2. Most global cited documents

The table presents a selection of papers along with their total citations and average citations per year. Fama and French's seminal 1998 paper in the "Journal of Financial Economics" stands out with the highest total citations, indicating its enduring influence on academic research in finance. Asness et al.'s 2013 paper in the same journal follows closely, notable for its relatively high citations per year, suggesting sustained relevance over time. De Bondt and Thaler's 1987 paper in the "Journal of Finance" remains influential decades later, with a considerable total citation count. Fernandes' 2014 paper in "Management Science" demonstrates strong impact with a high average citations per year, indicative of its recent significance in the field. Other notable papers include those by Venkatesh et al. (2001) in "MIS Quarterly," Zhang et al. (2006) in the "Journal of Finance," and Graham et al. (2013) in the "Journal of Financial Economics," all contributing significantly to their respective domains within finance and related fields.

4. Genesis for cluster analysis

4.1 Trees

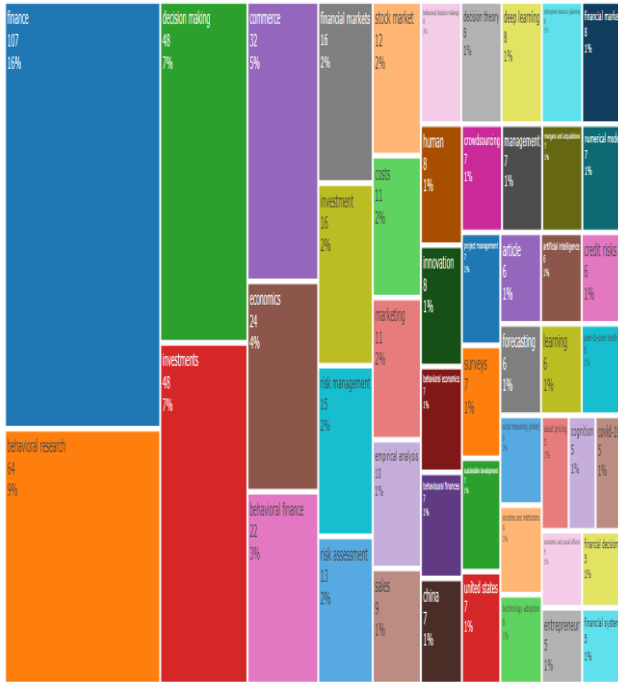


Figure 3: Tree Map

The data provided presents the frequency of different keywords appearing in academic publications. "Finance" emerges as the most prevalent keyword, indicating its overarching presence in scholarly research. "Behavioural research" follows closely, reflecting the growing interest in understanding human behaviour across various disciplines. "Decision making" and "investments" tie for the third position, highlighting the importance of decision-making processes in financial contexts and the study of investment strategies. "Commerce" and "economics" demonstrate moderate frequencies, underscoring their relevance to finance-related studies. "Behavioural finance" appears with a substantial count, indicating a specific focus on the psychological aspects of financial decision-making. "Financial markets" and "investment" tie with lower frequencies, suggesting a narrower focus on these topics within the academic literature. Overall, the data provides insights into the prevalent themes and areas of research within the field of finance and related disciplines.

4.2 Factor Analysis

The Figure 4 shows is a conceptual structure map generated using Multiple Correspondence Analysis (MCA), a technique used in bibliometrics to analyze the intellectual structure of a research field. Conceptual Structure Map - method: MCA: This denotes the type of map (conceptual structure) and the method used to create it (Multiple Correspondence Analysis) (Singh et al., 2022).

Dim 1 (25%) & Dim 2 (17.24%): These represent the two main dimensions used to plot the keywords on the map. Each dimension captures a certain percentage of the variance in the data, explaining the clustering of terms. Clusters: Terms are grouped together based on their co-occurrence within the same research papers. Terms that appear closer together tend to be more thematically similar.

Top Left (Dim 1: Positive, Dim 2: Positive): This area includes terms like "entrepreneur", "strategic planning", "public policy", and "sustainable development". These terms likely relate to broader societal and economic responses to COVID-19. Top Right (Dim 1: Positive, Dim 2: Negative): This area includes terms like "information technology", "investment", "human", and "behavioural finance". This cluster possibly refers to the financial and human aspects of the pandemic. Bottom Left (Dim 1: Negative, Dim 2: Positive): Here, we see terms like "information management", "artificial intelligence", "learning", and "deep learning". This cluster likely represents the application of artificial intelligence and data science in managing information during the pandemic.

Bottom Right (Dim 1: Negative, Dim 2: Negative): This area groups terms like "financial system", "stock market", "United States", and "empirical analysis". This cluster possibly refers to the financial markets' response to the pandemic, particularly in the US.

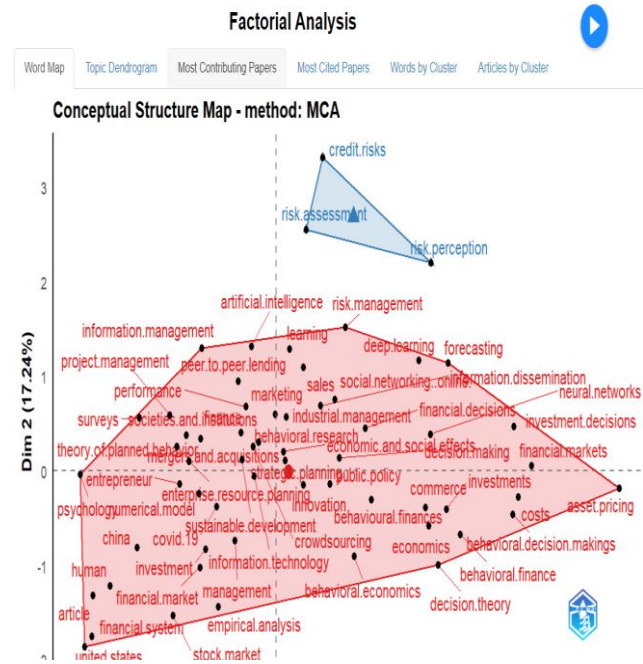


Figure 4: Factor Analysis-Conceptual Structure Map

5. Thematic Map



Figure 5: Thematic Map

The author has found following clusters based on above thematic map figure number 5

5.1 Entrepreneurial Finance Cluster:

Research in entrepreneurial finance focuses on understanding the financial decision-making processes unique to entrepreneurial ventures. Scholars investigate how entrepreneurs fund their ventures, make investment decisions, manage risks, and structure their capital. Topics within this cluster may include venture capital financing, angel investing, crowdfunding, initial public offerings (IPOs), and the impact of financial decisions on firm performance and growth. Additionally, studies in this cluster may explore the role of factors such as innovation, entrepreneurship, and technology in shaping financial strategies for startups and small businesses.

5.2 Behavioural Finance Cluster:

Behavioural finance examines the psychological factors that influence financial decision-making, often deviating from the assumptions of traditional finance theory. Researchers in this cluster investigate various behavioural biases, such as overconfidence, loss aversion, and anchoring, and their implications for asset pricing, investment behaviour, and market efficiency. Studies may also explore behavioural phenomena such as herding behaviour, investor sentiment, and market bubbles. By integrating insights from psychology and economics, scholars in behavioural finance aim to enhance our understanding of market anomalies, investor behaviour, and the dynamics of financial markets (Shefrin & Statman, 2011).

5.3 Financial Markets Cluster:

The financial markets cluster encompasses research on the structure, functioning, and efficiency of financial markets. Scholars in this cluster analyze the behaviour of financial assets, including stocks, bonds, derivatives, and currencies, as well as the mechanisms driving their prices and returns. Topics within this cluster may include market microstructure, liquidity provision, market efficiency, trading strategies, and the impact of information dissemination on market dynamics. Additionally, studies may explore the role of institutional investors, market sentiment, and regulatory policies in shaping market behaviour and outcomes.

5.4 Personal Finance Cluster:

Personal finance research focuses on the financial decisions and behaviours of individuals and households. Scholars in this cluster investigate topics such as financial literacy, budgeting, saving, investing, retirement planning, and debt management. Studies may examine how demographic factors, socio-economic status, and psychological traits influence financial decision-making and outcomes. Additionally, research in personal finance may explore the effectiveness of financial education programs, the use of financial services, and the impact of technology on personal financial management (Thaler, 1999).

5.5 Corporate Finance Cluster:

Corporate finance research examines the financial decisions made by corporations, including investment, financing, and dividend policies. Scholars in this cluster investigate topics such as capital structure, mergers and acquisitions, corporate governance, and corporate social responsibility. Studies may explore how firms raise capital, allocate resources, and create value for shareholders. Additionally, research in corporate finance may analyze the impact of corporate policies on firm performance, stakeholder interests, and market valuation (Olsen, 1998).

5.6 Behavioural Economics Cluster:

Behavioural economics integrates insights from psychology and economics to study how individuals make economic decisions. Researchers in this cluster investigate behavioural biases, decision-making heuristics, and deviations from rationality in economic behaviour. Topics within this cluster may include bounded rationality, choice architecture, nudging, and the role of emotions in decision-making. Studies may also explore how behavioural insights can inform public policy, consumer behaviour, and market outcomes.

5.7 Investor Behaviour Cluster:

Investor behaviour research focuses on understanding how investors make decisions in financial markets. Scholars in this cluster analyze topics such as investor psychology, sentiment, and biases, as well as the influence of social

factors and information cascades on investment decisions. Studies may examine individual and institutional investors' trading behaviour, portfolio choices, and performance. Additionally, research in investor behaviour may explore the impact of market anomalies, trading strategies, and financial innovations on investor outcomes and market dynamics.

These clusters represent key areas of research within finance, economics, and behavioural sciences, addressing various aspects of financial decision-making, market behaviour, and economic outcomes. Scholars in these fields aim to advance our understanding of the complexities of financial markets, individual and organizational behaviour, and the interplay between psychological factors and economic rationality.

6. Conclusion

In conclusion, the field of behavioural finance offers valuable insights into the psychological factors influencing financial decision-making. By challenging the assumption of rationality in traditional finance theory, behavioural finance recognizes the significant role of human behaviour and emotions in shaping financial decisions. Through the identification of cognitive biases, heuristic shortcuts, and behavioural phenomena, researchers in this field aim to enhance our understanding of market dynamics, investor behaviour, and the efficiency of financial markets. From investment behaviour to personal finance and corporate decision-making, behavioural finance has wide-ranging applications across various domains. However, it is not without its critiques and challenges, including questions about its predictive power and the subjective nature of identifying biases. Nevertheless, the interdisciplinary nature of behavioural finance research continues to drive innovation and advancement in the field of finance.

References

- [1] Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, 1, 1053-1128.
- [2] Ullah, I., Shukla, J. V., & Singh, D. K. (2023, April). The Applications, Opportunities and Challenges of IoT in Supply Chain Management: Insights from Literature Review. In 2023 11th International Conference on Emerging Trends in Engineering & Technology-Signal and Information Processing (ICETET-SIP) (pp. 1-5). IEEE.
- [3] Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, 1, 1053-1128.
- [4] Kediya, S. O., Dhote, S., Singh, D. K., Bidve, V. S., Pathan, S., Mohare, R. V., ... & Suchak, A. (2023). Are AI and Chat Bots Services Effects the Psychology of Users in Banking Services and Financial Sector. *Journal for ReAttach Therapy and Developmental Diversities*, 6(9s (2)), 191-197.
- [5] Thaler, R. H. (Ed.). (2005). *Advances in behavioral finance*, Volume II. Princeton University Press.
- [6] Khan, S., Singh, D. K., Singh, M., & Mena, D. F. (2023). Automatic Signature Verifier Using Gaussian Gated Recurrent Unit Neural Network. *IET Biometrics*, 2023.
- [7] Barber, B. M., & Odean, T. (1999). The courage of misguided convictions. *Financial Analysts Journal*, 55(6), 41-55.
- [8] Singh, D. K., Khan, S., Thakre, L., Mukkawar, V. V., & Shukla, J. V. (2023, April). Global Trends of IOT in Pharmaceutical Industry: A Bibliometric Analysis of Scopus Database. In 2023 11th International Conference on Emerging Trends in Engineering & Technology-Signal and Information Processing (ICETET-SIP) (pp. 1-6). IEEE.
- [9] Paul, R., Mishra, A. S., Singh, D. K., Rathi, R., & Ponnam, A. Perception of Value Dimensions across Customer Satisfaction and Loyalty Levels.
- [10] Singh, D. K., Khan, S., Thakre, L., Mukkawar, V. V., & Shukla, J. V. (2023, April). Global Trends of IOT in Pharmaceutical Industry: A Bibliometric Analysis of Scopus Database. In 2023 11th International Conference on Emerging Trends in Engineering & Technology-Signal and Information Processing (ICETET-SIP) (pp. 1-6). IEEE.
- [11] Paul, R. I. K., Ponnam, A., Rubal, R., & Singh, D. K. (2023). How Perceived Value Advances Loyalty Progression? Evidence from Indian Quick Service Restaurants. *Academy of Marketing Studies Journal*, 27(S3).
- [12] Vissing-Jorgensen, A. (2003). Perspectives on behavioral finance: Does "irrationality" disappear with wealth? Evidence from expectations and actions. *NBER macroeconomics annual*, 18, 139-194.
- [13] Singh, D. K., & Khan, S. (2023). Exploring the Consumer Perception of Generic Medicine in Eastern Maharashtra during the Covid-19 Pandemic: An Empirical Analysis. *International Journal*, 11(2).
- [14] Farmer, J. D., & Geanakoplos, J. (2009). The virtues and vices of equilibrium and the future of financial economics. *Complexity*, 14(3), 11-38.
- [15] Dhale, S., Kawadkar, H., Dubey, V., & Singh, D. K. Adoption of Virtual Reality (VR) and Augmented Reality (AR) in the Marketing Sphere.
- [16] Prechter Jr, R. R., & Parker, W. D. (2007). The financial/economic dichotomy in social behavioral dynamics: the socionomic perspective. *The Journal of Behavioral Finance*, 8(2), 84-108.
- [17] Singh, D. K., Ghosh, S., Khan, S., & Nimbarte, M. An In-Depth Analysis of Quantum Computing Frameworks: Exploring Prominent Platforms.
- [18] Asthana, P. K., & Singh, D. K. Analytical Study of Investor's Behavioral Decision-Making During Post COVID 19 Era.
- [19] De Bondt, W. F., & Thaler, R. H. (1995). Financial decision-making in markets and firms: A behavioral perspective. *Handbooks in operations research and management science*, 9, 385-410.
- [20] Singh, D. K., Nimbarte, M., & Dhale, S. Unveiling the Research Landscape of the Metaverse in Asia.
- [21] Mahajan, J., Mahajan, R., & Singh, D. K. (2022). Metamorphosing Indian blockchain ecosystem. *International Journal Of Engineering And Management Research*, 12(1), 77-87.
- [22] Meltzer, A. H. (1982). Rational expectations, risk, uncertainty, and market responses. *Crises in the Economic and Financial Structure*, Lexington, Mass.: Lexington Books.

- [23] Kediya, S. O., Singh, D. K., Shukla, J., & Nagdive, A. S. (2021, November). Analytical Study of Factors Affecting IoT in SCM. In 2021 International Conference on Computational Intelligence and Computing Applications (ICCICA) (pp. 1-4). IEEE.
- [24] De Bondt, W. F., Muradoglu, Y. G., Shefrin, H., & Staikouras, S. K. (2008). Behavioral finance: Quo vadis?. *Journal of Applied Finance (Formerly Financial Practice and Education)*, 18(2).
- [25] Singh, D. K., Kediya, S., Shukla, S., & Dhale, S. (2023). An Empirical Study on Consideration of Technical and Fundamental Analysis by Retail Investors. *Academy of Marketing Studies Journal*, 27(5).
- [26] Vissing-Jorgensen, A. (2003). Perspectives on behavioral finance: Does "irrationality" disappear with wealth? Evidence from expectations and actions. *NBER macroeconomics annual*, 18, 139-194.
- [27] Singh, D. K., Kediya, S., Band, G., & Shukla, S. (2023). An Insight into Student' s Acceptance of Various Digital Platforms using TAM Model across the Indian States during the Pandemic. *Academy of Marketing Studies Journal*, 27(5).
- [28] Patel, J., Zeckhauser, R., & Hendricks, D. (1991). The rationality struggle: Illustrations from financial markets. *The American Economic Review*, 81(2), 232-236.
- [29] Khan, S., & Singh, D. K. (2023). Robotic Process Automation as an Emerging Technology in Tourism, Hotels, and Food Service. In *Handbook of Research on Innovation, Differentiation, and New Technologies in Tourism, Hotels, and Food Service* (pp. 51-69). IGI Global.
- [30] Singh, D. K., Ansari, S., Sikarwar, A. S., & Kawadkar, H. " BIBLIOMETRIC VISUALIZATION OF MEDIA ETHICS RESEARCH: PATTERNS AND TRENDS.
- [31] Shiller, R. J. (1999). Human behavior and the efficiency of the financial system. *Handbook of macroeconomics*, 1, 1305-1340.
- [32] Singh, D. K., Dhale, S., Joseph, J., & Jain, Y. BIBLIOMETRIC EXPLORATION OF GREENWASHING: MAPPING THE RESEARCH LANDSCAPE AND EMERGING TRENDS.
- [33] Shefrin, H., & Statman, M. (2011). Behavioral finance in the financial crisis: market efficiency, Minsky, and Keynes. Santa Clara University, November.
- [34] Lo, A. W., Repin, D. V., & Steenbarger, B. N. (2005). Fear and greed in financial markets: A clinical study of day-traders. *American Economic Review*, 95(2), 352-359.
- [35] Dhale, S., & Singh, D. K. (2022). e-Pharmacy in India: An Exponential Growth Opportunity. *International Journal*, 10(11).
- [36] Singh, D. K., Mahajan, R., & Mahajan, J. (2022). An Empirical Study of Patient Satisfaction with respect to the services offered by Datta Meghe Institute of Medical Sciences, Wardha. *International Journal*, 10(3).
- [37] Olsen, R. A. (1998). Behavioral finance and its implications for stock-price volatility. *Financial analysts journal*, 54(2), 10-18.
- [38] Galbraith, J. K. (2012). Who are these economists, anyway?. In *Contributions in Stock-flow Modeling: Essays in Honor of Wynne Godley* (pp. 63-75). London: Palgrave Macmillan UK.
- [39] Ritter, J. R. (2003). Behavioral finance. *Pacific-Basin finance journal*, 11(4), 429-437.
- [40] Barberis, N. (2013). Psychology and the Financial Crisis of 2007-2008. *Financial innovation: too much or too little*, 15-28.
- [41] Pressman, S. (1998). On financial frauds and their causes: Investor overconfidence. *American Journal of economics and sociology*, 57(4), 405-421.
- [42] Thaler, R. H. (1999). The end of behavioral finance. *Financial Analysts Journal*, 55(6), 12-17.