

MAPPING THE PSYCHOLOGY OF FINANCIAL DECISION-MAKING: A BIBLIOMETRIC AND THEMATIC REVIEW OF BEHAVIOURAL BIAS

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Abstract Cognitive dissonance bias (CDB), first conceptualised by Festinger (1957), refers to the psychological discomfort that arises from inconsistencies between beliefs, attitudes, and outcomes. Although widely recognised in social and consumer psychology, its manifestation in financial decision-making remains underexplored. This study presents a hybrid bibliometric and thematic review of 422 peer-reviewed articles published in Scopus-indexed ABDC A*/A journals, aiming to synthesise the psychological underpinnings of CDB in investment contexts. The review identifies three major research gaps: the limited integration of cognitive and affective mechanisms explaining investor dissonance, weak theoretical linkages between marketing's post-purchase dissonance and financial regret, and the absence of empirically validated interventions to mitigate CDB. Thematic clustering reveals five dominant streams of inquiry: social influence and post-investment dissonance, emotional and market sentiments, cultural variations, emerging market dynamics, and socio-economic moderators. Although recent studies propose behavioural tools such as decision aids, regulatory nudges, and transparency mechanisms, these frameworks largely remain conceptual. Future directions include neuroscientific investigations (fMRI/EEG), artificial intelligence (AI)-based bias detection, and context-specific modelling in sustainable and algorithmic investing. By integrating psychological theory with behavioural finance (BF), this study contributes to a more comprehensive and psychologically grounded understanding of investor decision-making.

Keywords: Behavioural Bias, Investor Psychology, Cognitive Dissonance Bias, Literature Review, Bibliometric Review, Thematic Analysis

INTRODUCTION

Cognitive dissonance, a cornerstone of cognitive psychology, refers to mental discomfort from conflicting beliefs, attitudes, or behaviours (Festinger, 1957). In investment decision-making, cognitive dissonance bias (CDB) arises when investors encounter information contradicting prior choices (Olsen, 2008), particularly post-investment, leading to irrational decisions that harm financial outcomes (Mun, 2023). For instance, investors may retain declining stocks to avoid regret, selectively ignoring adverse information (Yang, 2023) or escalate commitment to underperforming portfolios under public scrutiny, contributing to price momentum (Otuteye & Siddiquee, 2020). These behaviours reflect psychological coping strategies, such as selective exposure or trivialisation (Garrett, 2009). Rooted in marketing post-

purchase dissonance research (Tan et al., 2025), CDB parallels consumer regret after high-stakes purchases, linking psychology, finance, and marketing.

The rise in retail investor participation underscores CDB's impact. In India, 95 million retail investors hold INR36 lakh crore in equities (Ministry of Finance, Government of India, 2024), with global retail investment expected to grow significantly (World Economic Forum, 2022). Investors are 1.5–2 times more likely to sell winners prematurely and retain losers (Parker, 2023), driven by CDB.

Behavioural finance (BF) bridges psychology and finance, challenging the rational investor model of the efficient market hypothesis (EMH), which posits markets fully reflect information. Behavioural scholars such as Thaler (1985) and Statman (1999, 2024) counter this by integrating emotional and expressive benefits like ethical values into utility

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frameworks, highlighting CDB as evidence of irrationality. Yet, CDB's psychological sequence of dissonance arousal from conflicting information and reduction through coping strategies still remains underexplored.

Three enduring gaps persist in CDB research: (1) the absence of a review synthesising the psychological mechanisms underlying dissonance in investment contexts; (2) limited cross-disciplinary integration between marketing's post-purchase dissonance literature and financial decision-making; and (3) a lack of systematically developed and tested mitigation strategies (Kumar & Goyal, 2015). This study addresses these gaps through a hybrid review combining bibliometric mapping and thematic synthesis. Specifically, it (1) traces the intellectual evolution and geographic spread of CDB research; (2) unpacks the psychological processes from dissonance arousal to coping strategies in investment behaviour; and (3) proposes a set of evidence-informed, interdisciplinary tools and future research pathways for bias mitigation. By bridging psychology, finance, and marketing, the review outlines practical mechanisms, such as structured decision prompts, to reduce justification bias (Hilton, 2001), behavioural nudges to counter selective exposure and regulatory disclosures that normalise dissonance acknowledgement (Cai, 2020). While these strategies are conceptual, they offer a foundation for future empirical testing and provide a multidimensional lens through which advisers, institutions, and regulators can begin addressing cognitive dissonance in real-world investment settings.

The paper is structured as follows: Section 2 reviews CDB literature. Section 3 details the methodology, with results and discussion in Section 4. Section 5 focusses on trends and gaps, Section 6 presents implications, and Section 7 concludes with emerging trends and future directions.

LITERATURE REVIEW

Behavioural Finance and Cognitive Dissonance

BF emerged as a direct challenge to the EMH championed by Fama (1970, 1998), who asserted that markets efficiently incorporate all available information through rational investor behaviour. Crucially, Fama defended EMH against observed anomalies, attributing apparent inefficiencies to risk factors rather than psychological mechanisms. This stance was systematically contested by behavioural scholars (Badola et al., 2024) who demonstrated that cognitive biases including CDB produce systematic deviations from rationality (Korteling & Toet, 2020).

Statman's (1999, 2024) "normal investor" model provides the seminal counter-framework to EMH's rational actor. Where traditional finance assumes wealth maximisation as the sole objective, Statman posits that investors pursue expressive benefits such as ethical alignment and emotional utilities like pride, regret avoidance, often prioritising psychological comfort over financial optimisation. This redefinition of rationality is pivotal: when investments underperform, the conflict between self-identity ('competent investor') and outcomes ('poor returns') arouses cognitive dissonance, triggering irrational coping behaviours.

CDB manifests through specific dissonance-arousing elements that generate psychological conflict in investment contexts. Three empirically established triggers precipitate this tension: contradictory information, exemplified by adverse earnings reports undermining an investor's initial purchase rationale; social comparisons, particularly when peer portfolio outperformance highlights personal losses; and expert disconfirmation, such as analyst downgrades invalidating the investor's original convictions (Leković, 2020). These elements collectively induce a state of cognitive discomfort by challenging the coherence between an investor's self-perception and objective evidence of suboptimal outcomes.

This psychological tension subsequently compels investors towards maladaptive coping strategies to restore cognitive equilibrium. These include selective attention to confirming information while disregarding disconfirming data (Otuteye & Siddiquee, 2020), biased self-attribution of outcomes, or escalation of commitment to failing investments. Critically, CDB operates as a latent driver of justification rather than manifesting as an overt decision error like overconfidence (Acciarini et al., 2020). This distinctive characteristic enables CDB to perpetuate market inefficiencies through self-reinforcing cycles of irrational commitment, as investors prioritise psychological comfort over wealth optimisation (Barberis & Thaler, 2003; Oza et al., 2023).

Post-Purchase Dissonance: Cross-Disciplinary Mechanisms and Market Consequences

Post-purchase dissonance constitutes a critical manifestation of CDB emerging when investors encounter information that contradicts their prior investment decisions (Sathya & Gayathiri, 2024). This phenomenon mirrors consumer regret in marketing literature but is intensified in financial contexts by three distinguishing factors: significant financial stakes that amplify loss aversion (Novemsky & Kahneman, 2005),

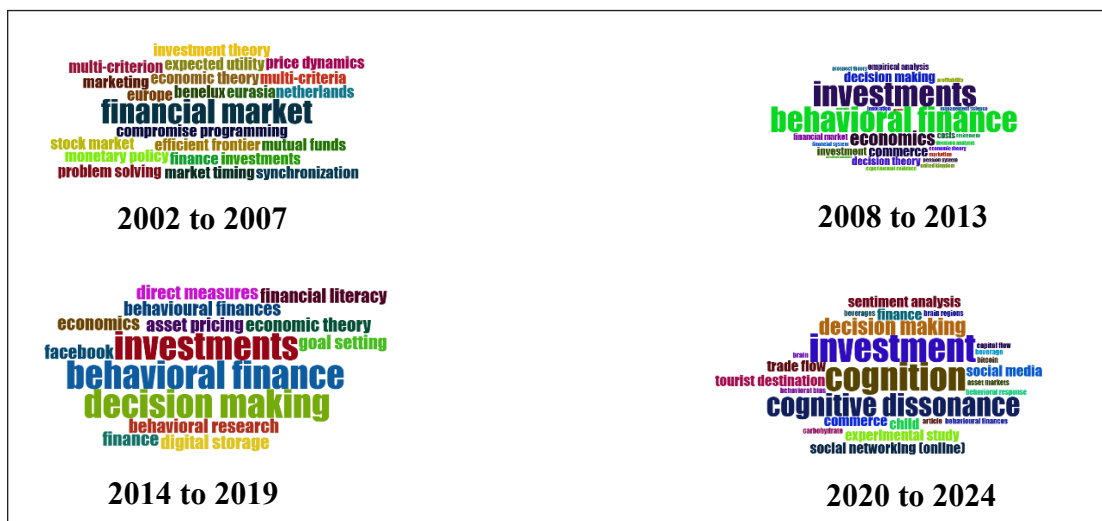
and public accountability for decisions, particularly in social trading environments and identity-driven investments where assets reflect personal values (Kleffel & Muck, 2024). The psychological tension arising from these conditions frequently exceeds conventional buyers’ remorse due to the irreversible nature of financial commitments and reputational exposure.

Investors typically engage in three maladaptive coping strategies to resolve such dissonance. Selective exposure manifests as they actively seek confirmation of information while systematically disregarding contradictory evidence (Metzger et al., 2020). Externalisation involves attributing underperformance to external factors such as market volatility rather than flawed decision-making (Elia et al., 2019), while trivialisation reframes losses as temporary setbacks rather than basic errors. These mechanisms are particularly pronounced in value-expressive investments, where conflicts between ethical convictions and financial outcomes exacerbate cognitive strain.

The market-level consequences of these behaviours are significant. Delayed divestment of underperforming assets distorts price discovery mechanisms and capital allocation efficiency (Zhang et al., 2024). Concurrently, widespread avoidance of dissonant information perpetuates price momentum anomalies by slowing the incorporation of negative news into asset valuations. Despite parallels to consumer regret models in marketing, the financial domain’s unique dynamics, especially concerning liquidity constraints and portfolio interdependence remain inadequately explored through cross-disciplinary lenses, representing a critical research gap.

Changing Landscapes of Trends in Investment Decision-Making

This section incorporates word cloud analysis as a tool to explore trends in research work related to behavioural aspects in investment decision-making. Given the limited number of publications before 2002 based on the keywords, the word cloud covers 2002 to 2024 to ensure meaningful trends can be identified. As depicted in Fig. 1, the results demonstrate that ‘financial market’, ‘investment’, ‘monetary policy’, ‘multiple criterion’ for decision-making and ‘price change’ were focus points during 2002–07. Further, terms such as ‘behavioral finance’, ‘investments’, ‘economics’, and ‘decision-making’ emerged during 2008–13. In subsequent years (2014–19), the key terms identified were ‘behavioral finance’, ‘investments’, and ‘decision-making’. The appearance of supporting terms such as ‘asset pricing’, ‘economic theory’ indicated the blend of behavioural insights with classical economic framework. During 2020–24, terms such as ‘cognition’, ‘investment’, ‘cognitive dissonance’, ‘decision-making’, and ‘sentiment analysis’ emerged very prominently, reflecting their importance in the ongoing research. The outcome of word cloud analysis suggests that ‘investment’, ‘behavioral finance’, and ‘decision-making’ are the most commonly used terms that appeared during the given time periods. This signifies that researchers continue to show their interest in those areas; however, lately, the focus is shifting towards specific constituents of BF such as ‘cognition’ and ‘cognitive dissonance’ in explaining the investment decision-making of investors.



Source(s): Authors’ compilation.

Fig. 1: Chronological Trends in Investment Decision-Making Research

METHODOLOGY

Review of Structure

The review of structure illustrates the importance of merging structural and bibliometric reviews to conduct a comprehensive literature review on CDB in investment settings (Paul & Criado, 2020). A structured review helps in systematically synthesising existing research on theoretical frameworks, methodologies, and variables used in the field (Swain et al., 2023). This method can identify research gaps and improve comprehension of CDB in investment settings.

Bibliometric reviews analyse citation patterns to evaluate the impact, trends, and advancements in research fields. They consider various metrics such as the journal of publication, publication year, and geographical distribution (Paul et al., 2021). The combined approach helps in systematically synthesising existing research, identifying research gaps, and analysing citation patterns to evaluate the impact, trends, and advancements in the field. Combining structural and bibliometric reviews offers a holistic framework for consolidating the vast literature on CDB and its implications for investment choices.

Search Strategy

Keyword Selection

During this phase of the study, a keyword search was carried out using a variety of terms such as ‘behavioral/behavioural finance’, ‘behavioral/behavioural bias’, ‘individual investors’, ‘investment decision’, ‘investment decision-making’, ‘Cognitive Dissonance’, and ‘Cognitive Dissonance Bias’. This extensive approach aimed to encompass a broad range of literature pertaining to the interaction of cognitive dissonance with investment behaviour. The process of identifying relevant keywords began on Google Scholar, utilising the terms suggested by Talwar et al. (2020).

Choice of Database and Articles

The search strategy involved keyword selection and choice of the database for the study. The keywords used aimed to encompass a broad range of literature pertaining to CDB and investment behaviour, and Scopus was selected as the primary database due to its comprehensive coverage in the relevant fields. It approximately covers 95% of peer-

reviewed articles in the fields of business, management, finance, and accounting (de Oliveira et al., 2018). This study evaluates all articles published between 1990 and September 2024 that explore the influence of CDB on the decision-making of individual investors.

Journal Selection and Eligibility Criteria

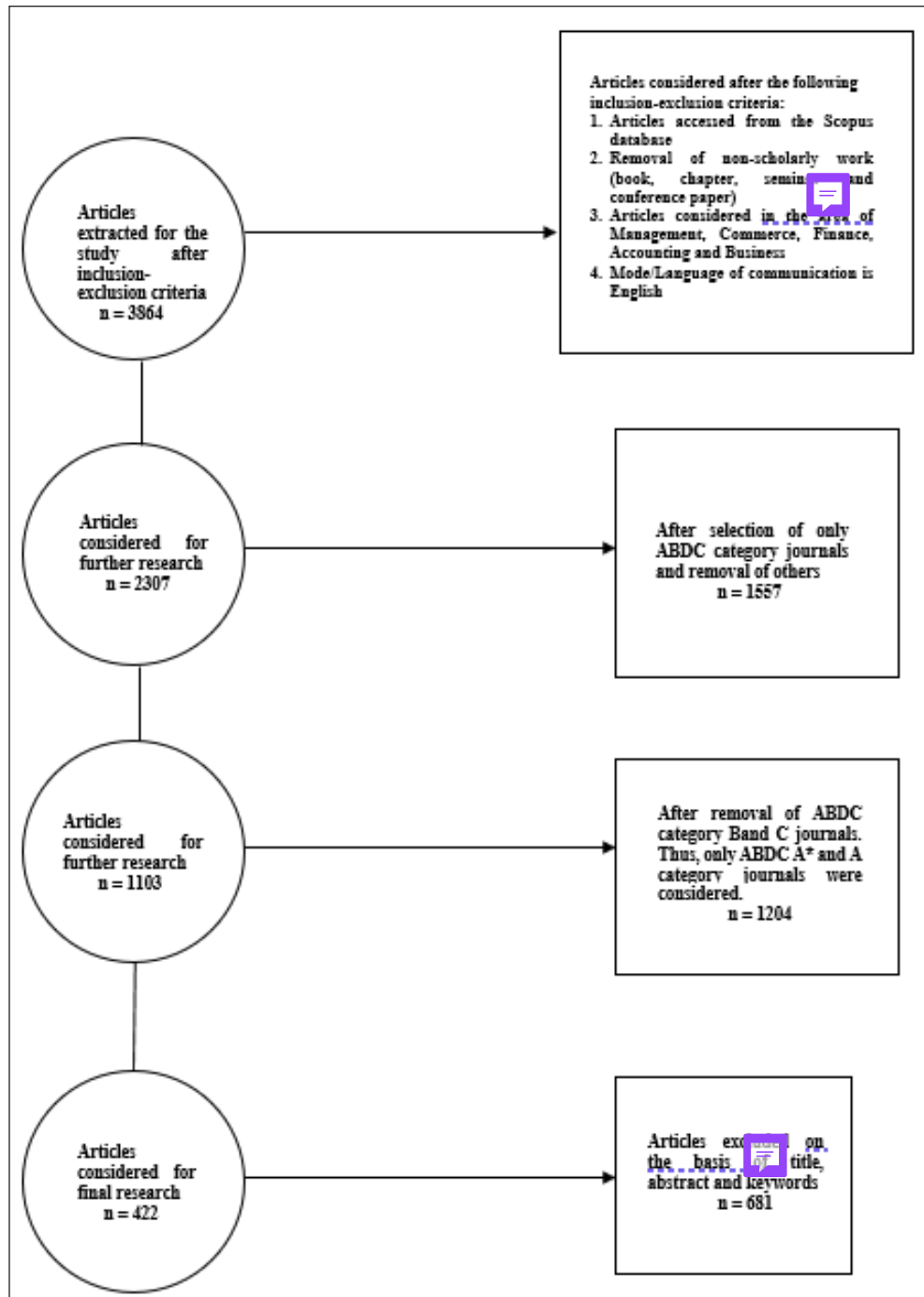
Inclusion and Exclusion Criteria

The journal selection and eligibility criteria involved a rigorous filtering process to include only relevant research papers. A total of 3,864 research papers were collected, and after applying specific inclusion and exclusion criteria, only outstanding research papers were selected for further analysis (see Fig. 2). Initially, 2,307 articles were included due to their inclusion in the Australian Business Deans Council (ABDC) list of journals. It was further narrowed to ABDC A* and A category journals where only 1,204 articles were left. Subsequent examination involved examining titles and abstracts to identify relevant publications in related journals (Selçuk, 2019), resulting in the elimination of an additional 681 studies. This rigorous filtering process culminated in a final collection of 422 outstanding research papers published across 106 academic journals between 1990 and September 2024. The inclusion criteria specified that articles must address topics within management, commerce, finance, accounting, or business and be published in peer-reviewed journals classified as A* or A, while the exclusion criteria eliminated irrelevant articles, non-scholarly works, and duplicates.

Integration of the Literature

The 422 selected articles were thoroughly compiled. Integration of the literature involved compiling the selected articles with general information such as the paper title, author names, journal titles, publication year, volume numbers, abstracts, and references. Content analysis was then conducted on all studies to identify theoretical themes and enhance the understanding of existing literature.

Content analysis helps researchers identify theoretical themes by combining words and phrases with similar meanings into smaller content categories from a large volume of literature. This method enhances the understanding of existing literature by combining complex information into clear themes and concepts.



Source(s): Authors' compilation.

Fig. 2: PRISMA Diagram for Inclusion and Exclusion Criteria

Research Design and Data Collection

Table 1 provides an overview of various research methods employed in studies, highlighting their prevalence and the

underlying literature associated with each method. The most frequently utilised method is the theoretical method, with 52 of 106 studies heavily relying on qualitative approaches, which is further substantiated by literature

from Piccione and Spiegler (2014). Theoretical Models are closely related to Empirical Analysis with 34 studies and Experimental Methods, comprising 28 studies. These methods demonstrate considerable emphasis on controlled experiments and theoretical frameworks, which explore the implications of theoretical underpinnings and experimental designs in understanding complex behaviours and validating theoretical constructs.

Other methods such as Event Studies are less common, although they provide valuable insights in particular areas. Qualitative methods, however, are fewer, with around nine studies emphasising the depth of understanding and context-

specific insights. Furthermore, methods such as Bibliometric and Citation Analysis (1 study) and Modelling (Agent-based and Bayesian) with 4 studies provide additional layers of analysis. Out of 115 studies examined in this section, we did not find any study focused on both systematic literature review and bibliometric analysis. A systematic literature review, combined with bibliometric analysis, is essential to comprehend investment decision-making and CDB. Although qualitative methods provide valuable, context-specific insights, bibliometric analysis quantitatively reveals broader trends and impacts within the literature. This integrated approach enhances the accuracy of findings, ensuring a comprehensive examination of the topic.

Table 1: Research Methods Used in the Analysis of CDB Among Investors

Sr. No.	Prominent Research Method Used	Supporting Literature
1	Agent-Based Model	Axtell et al. (2025); Mastroeni et al. (2023); Sachs et al. (2019)
2	Bayesian model	Lam et al. (2012); Tariq (2025)
3	Bibliometric and citation analysis	Dhingra et al. (2024); Jain et al. (2022); Mundi and Vashisht (2024)
5	Cluster analysis	Kovács et al. (2021)
6	Conjoint analysis	Kakde et al. (2025)
7	Sentiment analysis	Maurya et al. (2025)
8	Empirical analysis (others)	Ashfaq et al. (2024); Pradhan (2021)
9	Event study	Moszoro (2021); Yasmin and Ferdaous (2023)
10	Experimental (others)	Dassani et al. (2022); Vaidis et al. (2024)
11	Qualitative (others)	Ahmad and Wu (2024); Bihari et al. (2021)
12	Review	Karki et al. (2024)
13	Structural Equation Modelling	Mudu (2023); Shunmugasundaram et al. (2025)

Source(s): Authors' compilation.

Theoretical Insights on CDB in Investment Decision-Making

This section provides a comprehensive analysis of various articles in terms of their theoretical foundations. The field of BF draws upon a diverse range of theoretical frameworks to explain investor behaviour and market dynamics.

Table 2 enumerates key theories in this domain, including the Adaptive Market Hypothesis, Agency Theory, Asset Pricing, Bayesian Affect, Behavioural Lifecycle Hypothesis, and Behavioural Portfolio Theory. It is noteworthy that Cognitive Dissonance Theory, extensively cited in existing literature, examines how investors rationalise decisions to reduce cognitive discomfort. It has been extensively endorsed in the literature, indicating a presence in 34 articles. Additional theories include the Cognitive-Affective Model, Disposition

Effect, EMH, Herd Theory, and Prospect Theory. Other relevant frameworks such as Social Cognitive Theory, the Technology Acceptance Model, and the Theory of Planned Behaviour further illustrate the diverse theoretical landscape in this research area.

Interestingly, there were 422 documents selected since 1990 for the study; only a small portion of extant literature has applied a theoretical framework. In the analysis, it was discovered that only 61 papers had employed prominent theories. Theories and theoretical frameworks are essential for any research area as they guide research design, explain phenomena, and integrate findings within the wider literature. These frameworks also highlight gaps in existing research and enhance the credibility of studies by placing them in established contexts. In addition, these frameworks enhance the analysis and provide a foundation for interpreting results and making practical recommendations.

Table 2: Theories Used in the Analysis of CDB Among Investors

Sr. No.	Prominent Theories Applied	Supporting Literature
1	Adaptive Market Hypothesis (Lo, 2004)	Hernández and Valencia (2024); Noreen et al. (2022)
2	Agency Theory (Jensen & Meckling, 1976)	Garcia et al. (2020)
3	Asset Pricing (Treynor et al., 1960)	Gatchev et al. (2023)
4	Bayesian Affect (Hoey, 2010)	Hoey and Schröder (2023)
5	Behavioural Lifecycle Hypothesis (Shefrin & Thaler, 1988)	Fatkhurozi (2024); Yasmin and Ferdaous (2023)
6	Behavioural Portfolio Theory (Statman, 2000)	Li et al. (2023); Majewski and Majewska (2022)
7	Cognitive Ability Theory (Carroll, 1993)	Noch and Rumasukun (2024)
8	Cognitive dissonance theory (Festinger, 1957)	Badola et al. (2022); Li et al. (2023)
9	Disposition Effect (Shefrin & Statman, 1985)	An et al. (2024); Joshipura et al. (2024)
10	Efficient Market Hypothesis (Fama, 1965)	Addo et al. (2025); Corgnet et al. (2023); Corgnet et al. (2024)
11	Herd theory (Tarde & Bon, 19 th century)	Ballis and Verousis, (2022); Chen and Zheng (2022)
12	Prospect Theory (Kahneman & Tversky, 1979)	Yadav (2024); Robalinho et al. (2023)
13	Technology Acceptance Model (Davis, 1989)	Darmansyah et al. (2021); Sharif et al. (2021); Thathsarani et al. (2022)
14	Theory of Planned Behaviour (Ajzen, 1985)	Rout et al. (2018); Yeo et al. (2024)

Source(s): Authors' compilation.

Cognitive Dissonance Theory

Cognitive dissonance theory, introduced in 1957, explains how investors experience psychological discomfort when their actions conflict with their beliefs or information. To reduce this discomfort, they often rationalise poor investment choices, such as holding losing stocks to avoid admitting mistakes. This theory helps explain why investors publicly justify decisions while privately doubting them and how they attribute rationality to their actions to maintain consistency. It also sheds light on post-decision behaviour, emphasising how emotional and cognitive biases influence financial decisions and underscoring the need for strategies to mitigate such biases and promote more rational investment outcomes.

Prospect Theory

Introduced in 1979, it explains how investors make decisions under risk and uncertainty by emphasising loss aversion and reference dependence. It challenges the assumptions of expected utility theory, showing that investors evaluate outcomes relative to perceived gains and losses rather than absolute wealth. The theory clarifies why investors often prefer capital-protected or structured products and why they sell winning assets while holding losing ones, a behaviour known as the disposition effect. Overall, the Prospect Theory provides valuable insights into investor psychology, helping to explain irrational decision-making and guiding strategies to reduce biases and improve financial outcomes.

Herd Theory

The Herd Theory, originating in the 19th century, explains how investors often imitate others' actions rather than relying on independent judgement, especially during periods of uncertainty or market stress. This collective behaviour can amplify market volatility and lead to price movements disconnected from fundamentals. It highlights the role of social influence, information cascades, and reputational concerns in shaping financial decisions. Herding behaviour contributes to irrational market trends, bubbles, and crashes, making it a crucial concept in BF. Understanding this phenomenon is vital for developing policies and strategies that enhance market efficiency and stability.

The Adaptive Market Hypothesis

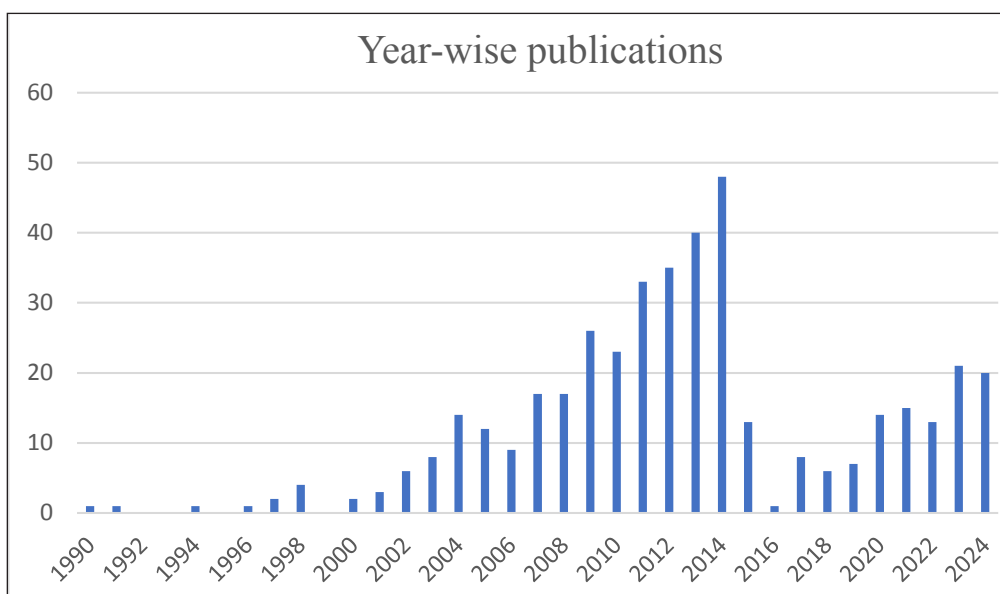
The Adaptive Market Hypothesis (AMH), proposed in 2004, combines evolutionary principles with financial theory to explain how investor behaviour evolves with changing market conditions. It suggests that markets are not always efficient but adapt as investors learn from past experiences and adjust their strategies. This adaptive process reflects shifts in confidence, information processing, and decision-making. AMH bridges traditional finance and behavioural insights, emphasising flexibility over fixed rationality. By recognising that efficiency varies across time and context, AMH provides a dynamic framework for understanding market behaviour and developing more resilient investment strategies.

As highlighted in the literature, theoretical frameworks serve as essential guiding tools for research design, data interpretation, and practical recommendations in the domain of BF. These frameworks not only explain investor behaviour but also identify gaps in existing research, providing a foundation for developing robust investment strategies. The integration of theoretical frameworks into research enhances the credibility of studies and contributes to a deeper understanding of market dynamics and decision-making processes.

RESULT AND DISCUSSION

Fig. 3 showcases the trend in the number of publications in A and A* journals extracted from the Scopus database

from 1990 to 2024. The annual publication count is in single digits during the initial years and crosses the double-digit mark for the first time in 2004. However, a sustained rise is visible from 2010, which reached its maximum level in 2014. Due to significant market fluctuations during this period and investors rethinking their investment decisions, the researchers focused on cognitive dissonance concerning investment behaviour to gain further insights into this field. However, by 2016 publications in this area touched down to the lower levels possibly due to the researchers' shifting focus on other emerging areas in BF. With the turbulence in capital markets caused by events such as the COVID-19 pandemic in 2020, cognitive dissonance again resumed significance in the context of investors and started receiving focus in terms of publications after 2020.



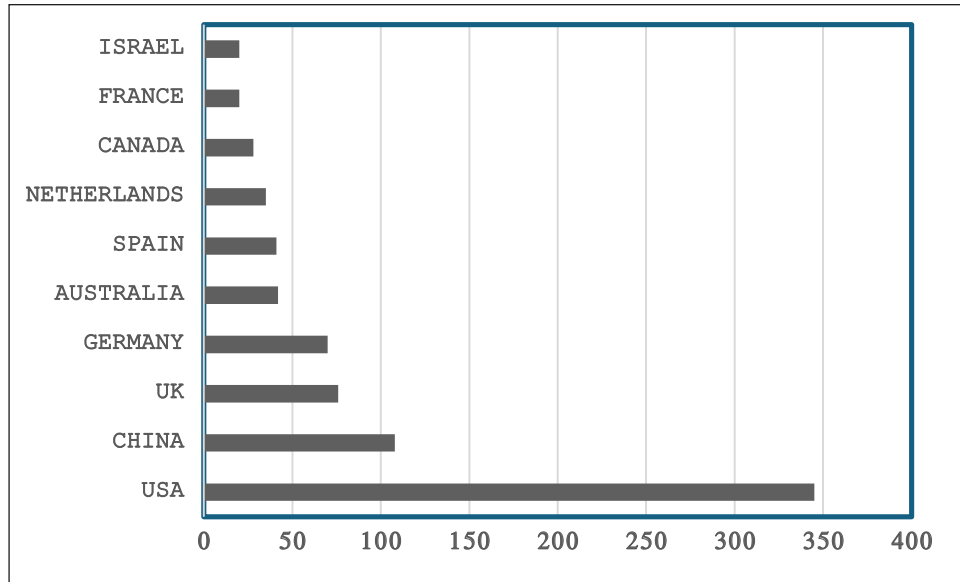
Source(s): Authors' compilation

Fig. 3: Year-Wise Publications

Geographic Distribution of the Articles

Studies examining CDB concerning investment behaviour are becoming increasingly popular worldwide. However, the number of publications is heavily skewed towards developed countries such as the US, the United Kingdom, and Germany as well as the emerging economy of China. The US has the highest contribution (345), followed by China (108) and the UK (76). Collectively, the European countries significantly contribute with publications exceeding 300, which stands next to North American publications (373). Further, Asian countries showcase a growing presence in this field (China

– 108, Israel – 20, India – 15, South Korea – 6); however, they are far behind North America and Europe. Minimal contributions come from South American and African regions, with single-digit publications. A smaller number of publications underlines the limited research focus on BF in those regions. Overall, the publication pattern suggests a disproportionate contribution from different geographic regions wherein the developed economies lead against the emerging economies and the rest of the world. Fig. 4 shows the geographic distribution of research articles among top 10 countries.



Source(s): Authors' compilation.

Fig. 4: Geographical Distribution of the Articles (Top 10)

Most Influential Sources

The field of BF is enriched by several impactful journals, each contributing uniquely to the discipline. Table 3 shows top 10 most influential journals in this field. The Journal of Financial Economics stands out with the highest h-index of 21 and a remarkable 6,427 total citations, followed by the

Journal of Behavioral Finance with an h-index of 19 and 5,123 citations reflecting their significant influence and high-quality research contributions. The table further indicates that although the Journal of Behavioral Finance has a larger number of published papers, it is upstaged by the Journal of Financial Economics in being more impactful in terms of number of total citations received.

Table 3: Top 10 Impactful Journals

Source	h_index	TC	NP
Journal of Financial Economics	21	6,427	22
Journal of Behavioral Finance	19	5,123	45
Journal of Economic Behavior and Organization	17	1,142	24
Journal of Economic Psychology	16	939	20
Journal of Financial Markets	12	887	14
Quantitative Finance	12	668	29
Management Science	10	1,006	13
Finance Research Letters	9	366	16
International Review of Financial Analysis	9	369	16
Journal of Empirical Finance	9	1,830	13

Source(s): Authors' compilation.

Most Influential Authors

Table 4 presents the top 10 most impactful authors who have published their work in the field of BF. HIRSHLEIFER D has the highest h-index of 6, indicating a significant impact

in the field. HIRSHLEIFER D also leads in total citations with 1,516, followed by TEOH SH with 938 citations. YANG C has the highest number of publications (7), but a relatively lower h-index (4) and total citations (62).

Table 4: Top 10 Impactful Authors

Author	h_index	TC	NP
HIRSHLEIFER D	6	1,516	6
HOFFMANN AOI	5	248	5
KUMAR A	5	357	5
LO AW	4	109	4
MUGA L	4	40	4
TEOH SH	4	938	4
YANG C	4	62	7
ASPARA J	3	81	3
BARBER BM	3	500	3
BOHL MT	3	132	3

Source(s): Authors' compilation.

Most Influential Documents

As presented in Table 5, the paper authored by Eugene F. Fama, published in the *Journal of Financial Economics*, is the most cited work that challenges BF. Fama argues that many stock return anomalies can be explained by market efficiency, rather than by investor irrationality. The subsequent papers mentioned in the table are among highly cited documents, such as *Investor Sentiment and the Near-Term Stock Market* by Brown and Cliff (2004) and *Investor Attention, Overconfidence and Category Learning* by Peng and Xiong (2006) that emphasised the role of bounded rationality, sentiments, and behavioural factors and their implications on investment decisions and market movements.

Table 5: Top 10 Impactful Documents

Paper	Total Citations	TC Per Year
Fama (1998), <i>Journal of Financial Economics</i>	2,330	86.30
Brown and Cliff (2004), <i>Journal of Empirical Finance</i>	811	38.62
Peng and Xiong (2006), <i>Journal of Financial Economics</i>	716	37.68
Abreu and Brunnermeier (2002), <i>Journal of Financial Economics</i>	551	25.05
Schmeling (2009), <i>Journal of Empirical Finance</i>	538	33.63
Hirshleifer and Hong Teoh (2003), <i>European Financial Management</i>	492	22.36
Dahlquist and Robertsson (2001), <i>Journal of Financial Economics</i>	488	20.33
Frazzini and Lamont (2008), <i>Journal of Financial Economics</i>	445	26.18
Kaplanski and Levy (2010), <i>Journal of Financial Economics</i>	381	25.40
Daniel et al. (2002), <i>Journal of Monetary Economics</i>	367	15.96

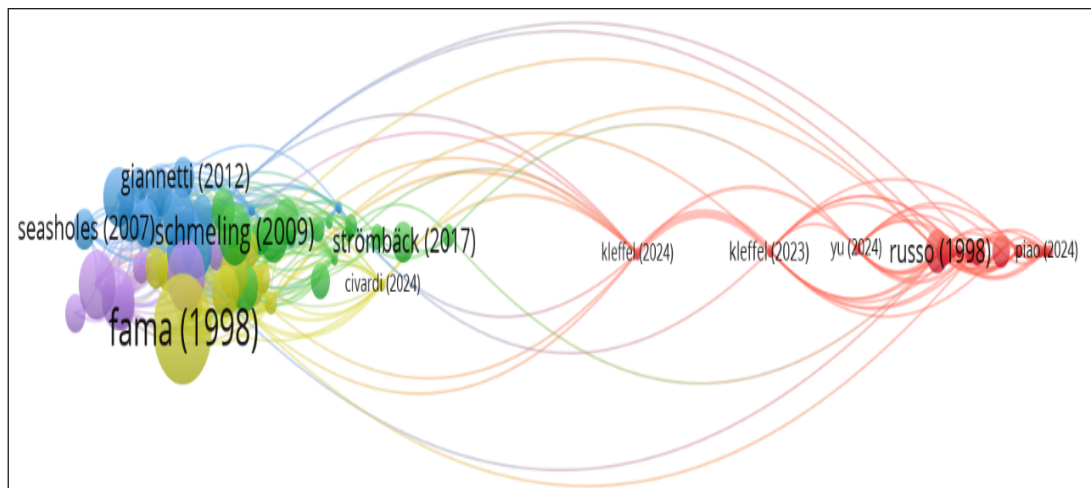
Source(s): Authors' compilation.

Bibliographic Coupling

The process of evaluating the relationship between research papers by looking at the overlap in their cited references is known as bibliographic coupling. Two publications are considered bibliographically connected when they reference one or more of the same sources, indicating a common intellectual basis or thematic relationship. Numerous shared references between two or more publications suggest a stronger connection between the topics covered in such studies (Donthu et al., 2021).

This study has established the default threshold of citations at different levels across the timeline of publication, taking

into account the fact that earlier published papers have more citations while more recent publications take longer to accumulate citations. This ensures that the most recent high-quality publications are not overlooked due to a lack of citations. The default citation threshold, for example, is set at 0 for papers published in 2024, 5 for 2023, 15 for 2022, and 30 for 2021. The criterion is then raised by 10 for each succeeding year. Accordingly, 61 relevant research articles were obtained out of the 422 with a good number of citations over the years. From the obtained set of 61 documents, five themes/clusters were identified for network visualisation (Fig. 5).



Source(s): Authors' compilation using VOSviewer.

Fig. 5: Bibliographic Coupling

Discussion

Theme 1: Social Influence and Post-Investment Dissonance

Social dynamics profoundly interact with cognitive biases, a relationship particularly evident in post-investment cognitive dissonance (Praharaj, 2022). This dissonance frequently intensifies when investors encounter information contradicting their self-perception as prudent decision makers (Kiling & Sarmah, 2025). Specifically, adverse news conflicting with socially reinforced optimistic expectations can trigger significant dissonance among retail investors. Such psychological tension contributes to the well-documented disposition effect (Danbolt et al., 2022), where investors retain losing assets to justify prior choices.

Furthermore, digital algorithms and social media platforms exacerbate this issue by fostering echo chambers that entrench suboptimal investment decisions (Amirinasab et al., 2022). Addressing these psychological challenges requires effective interventions. Structured reflection, such as prompting investors with the question, “Would you purchase this asset today if you have not already purchased it?”, can facilitate a more objective reassessment, decoupling emotion from evaluation. Enhanced regulatory frameworks mandating transparency regarding social sentiment influence on brokerage platforms could further support improved investor decision-making.

Future research should investigate the potential of artificial intelligence (AI)-driven sentiment analysis tools to identify

socially induced cognitive dissonance in real time, enabling novel strategies to mitigate herd behaviour (Sharma & Lodha, 2024). In addition, examining how social network structures modulate cognitive dissonance could yield critical insights for developing rational decision-making support across investor communities.

Theme 2: Sentiments and Crises

Financial crises often catalyse the transformation of market sentiment into potent triggers for cognitive dissonance (Barberis & Xiong, 2012). During such turmoil, investors face a stark dilemma: engaging in panic selling and implicitly acknowledging prior misjudgements or reinforcing existing positions to preserve self-image (Sengupta & Mitra, 2023). This dilemma is amplified by firm-specific sentiment, where personal investment failures provoke stronger emotional responses than broader market declines (Ackert et al., 2003; Badola & Joshi, 2022), potentially leading to maladaptive coping strategies such as denial, blame externalisation, or commitment escalation.

These dynamics highlight a critical disconnect where investors often rationalise irrational behaviours, undermining both individual portfolios and market stability (Shah et al., 2025). Counteracting these psychological obstacles necessitates proactive measures. Regulatory agencies should consider implementing stress tests simulating ‘dissonance shock’ scenarios, equipping investors with strategies to manage emotional responses to volatility. Asset managers could adopt counter-cyclical rebalancing strategies to mitigate sentiment-driven biases.

Educational initiatives focused on helping investors recognise and manage emotional triggers are also vital. The development of sentiment dashboards visualising real-time behavioural biases presents a promising avenue for enhancing decision-making. Future research could explore blockchain technology's potential to reduce sentiment-induced dissonance during crises, thereby bolstering financial system resilience.

Theme 3: Cultural Differences

Cultural background critically influences the experience and management of cognitive dissonance in investment contexts (Altanlar et al., 2019). Collectivist investors may avoid acknowledging losses to preserve social harmony, sometimes neglecting financial statements altogether. Conversely, individualist investors might adopt overconfident recovery strategies to assert autonomy, consistent with Festinger's principle of selective information exposure. These disparities reveal the varied manifestations of CDB across societies and underscore the imperative of integrating cultural considerations into financial practices, given their profound impact on post-investment behaviour and market outcomes (Bolomope et al., 2021).

Navigating these challenges requires culturally nuanced approaches. Global financial institutions should provide advisers with culturally sensitive training, employing conflict-avoidant techniques in collectivist settings, and more assertive methods in individualistic cultures. Financial education campaigns must empower independent analysis to counter culturally ingrained biases. Furthermore, research into cultural shifts, such as rising individualism in traditionally collectivist societies, could inform the design of adaptive financial services promoting rational decision-making across diverse cultural landscapes.

Theme 4: Emerging Markets

Emerging markets, characterised by information scarcity and heightened volatility, often intensify post-decision dissonance among investors (Sankar & Zakkariya, 2016). Individuals may escalate their commitment to underperforming investments to avoid admitting poor choices, reminiscent of buyer's remorse (Loang, 2025). This dissonance is compounded by confirmation bias, where investors reinterpret limited data to support initial decisions (Park et al., 2013). These distinct dynamics necessitate interdisciplinary strategies to mitigate cognitive dissonance and improve investor outcomes.

Addressing these issues requires targeted interventions. Regulatory frameworks enforcing rigorous disclosure requirements can significantly improve information availability, supporting more rational choices. Automated tools such as stop-loss orders can help investors manage emotional distress. Financial education programmes should prioritise fundamental analysis over speculative advice, complemented by behavioural nudges such as mandatory cooling-off periods for high-risk trades to curb impulsivity. Future research could develop AI-driven tools for real-time cognitive dissonance bias detection in emerging markets, enabling timely interventions. In addition, examining the impact of regulatory frameworks on market stability could yield vital insights for formulating investor-protection measures in volatile economic environments.

Theme 5: Socio-Economic and Demographic Factors

Personality traits, notably neuroticism and extraversion, significantly influence dissonance sensitivity in investment behaviour (Aren et al., 2020). Highly neurotic individuals may prematurely recognise losses, heightening dissonance, while extroverted individuals might exhibit overconfidence to alleviate discomfort (Durand et al., 2013). Younger investors often continue investing in losing positions, reflecting Festinger's (1957) effort justification phenomenon, where sunk costs rationalise poor decisions. These behaviours represent varied psychological coping strategies across demographic groups.

Mitigating these behaviours demands tailored interventions accounting for demographic and personality differences. Automated stop-loss strategies offer crucial safeguards for impulsive traders (Vezeris et al., 2018). Financial education initiatives should be adapted to individual personality profiles, incorporating cognitive-behavioural techniques for those with higher neuroticism and fostering diverse perspectives for extroverted individuals.

Regulatory bodies can play an important role by encouraging the inclusion of 'dissonance risk' metrics in fund documents, helping measure behavioural risks linked to investor dissonance. Future research could use agent-based models to show how this bias spreads among investors and explore whether 'dissonance-adjusted' pricing models better reflect market risks in such situations.

Together, these five themes provide a comprehensive overview of the diverse ways CDB manifests in investment decision-making, clarify its psychological drivers, and

suggest targeted strategies for mitigation, thereby supporting the central aims of this review.

TCCM Framework

Theory

Within this framework, several theories are examined to shed light on the psychological factors influencing investment decision-making. One such theory is the Cognitive Dissonance Theory, pioneered by Festinger in 1957, which elucidates the mental discomfort arising when individuals hold contradictory beliefs or values. This theory finds relevance in BF, particularly in explaining irrational investment decisions driven by cognitive dissonance. Likewise, the Prospect Theory, developed by Kahneman and Tversky in 1979, underscores the asymmetric impact of losses and gains on decision-making, crucial in understanding investor behaviour. In addition, the Herd Theory delves into how individuals imitate group actions, leading to market irrationalities and bubbles. The Adaptive Market Hypothesis (AMH) by Andrew Lo proposes market efficiency as dynamic, influenced by participants' behaviours, thereby elucidating the evolving nature of market conditions and strategies. The Disposition Effect, as observed by Joshipura et al. (2024), highlights investors' tendency to sell profitable investments prematurely while holding onto losing ones due to emotional biases such as regret aversion. Collectively, these theories form a robust framework for scrutinising CDB in investment choices, emphasising the importance of addressing psychological biases for informed decision-making.

Characteristics

The study also examines behavioural biases including overconfidence, herding, and cognitive dissonance, and their impact on investment decisions (Kaur & Badola, 2025). Overconfidence bias leads to excessive trading and suboptimal outcomes as investors overestimate their knowledge and abilities. Herding behaviour, characterised by mimicking others' actions, can instigate market bubbles and crashes. CDB compels investors to retain losing investments or dispose of winning ones prematurely to alleviate cognitive discomfort. Moreover, investor sentiment significantly influences market behaviour, especially evident during crises such as the COVID-19 pandemic, underscoring the need to understand and mitigate its effects on investment decisions. Financial literacy plays a key role in counteracting cognitive biases, thereby enhancing investment outcomes. Demographic factors such as age, gender, and cultural

background are also analysed to comprehend their influence on investment behaviour and market implications.

Context

The study's context primarily centres on retail investors globally, including India, exploring the impact of CDB on individual investors with limited financial training who often rely on intuitive or crowd-driven decisions. The research investigates how varying market conditions, particularly high-volatility scenarios such as the COVID-19 pandemic, shape investor behaviour. Geographically, the study considers perspectives from the United States, China, and European countries, elucidating cultural influences on investment behaviours that can vary across regions. Regulatory environments are also examined to ascertain how interventions can bolster market stability and safeguard individual investors.

Method

Methodologically, the study employs a hybrid approach combining bibliometric analysis and a systematic literature review (SLR) following the PRISMA framework. This method offers a quantitative overview of existing research and identifies emerging areas of interest. Content analysis is leveraged to categorise and analyse theoretical themes within the selected articles, providing insights for researchers and practitioners alike. This meticulous approach aims to synthesise existing knowledge and outline future research avenues within the field of BF.

IMPLICATIONS

This review offers significant implications across theoretical, societal, and practical domains within BF. By examining CDB through a multidisciplinary lens, the study contributes to a more comprehensive understanding of how identity, emotion, and perception interact with financial behaviour. In doing so, it challenges conventional notions of investor rationality and points to the need for adaptive frameworks that better capture the psychological realities of decision-making under uncertainty.

Theoretical Implications

Traditional models of financial behaviour, particularly those grounded in the EMH, have long presumed that individuals act as rational agents who revise their beliefs considering new information. However, the persistence of irrational patterns such as the disposition of effect or escalation

of commitment suggests that psychological discomfort, rather than informational limitations, often drives investor responses. This review positions cognitive dissonance not as a sporadic anomaly but as a consistent mechanism that shapes decision-making processes.

By integrating Festinger's (1957) theory of dissonance with Statman's (1999, 2024) model of emotionally expressive investors, the study offers a conceptual synthesis that advances theoretical conversation. It argues that investor behaviour cannot be understood solely through the lens of utility maximisation, as it is not driven by profit alone, but also by psychological needs, especially the desire to stay consistent and protect one's self-image. When investment outcomes conflict with one's self-perception as a competent decision maker, dissonance is triggered, leading to maladaptive strategies such as selective information processing or premature doubling down on underperforming assets.

This understanding calls for a redefinition of rationality in finance, moving beyond binary classifications to a more subtle spectrum that includes emotional and cognitive influences. It also underscores the need to revisit behavioural models that treat biases in isolation, advocating instead for a sequential, dynamic view of decision-making in which dissonance plays a central and structuring role.

Social Implications

The social dimensions of cognitive dissonance are particularly pronounced in the current investment landscape, where retail participation is rising, and decision-making is increasingly embedded in digital and peer-driven environments. In such contexts, investors are not making decisions alone. Their views are shaped by social comparisons, filtered information, and repeated feedback that strengthen their existing beliefs and emotions.

The influence of culture further complicates the dissonance of expression and resolution. In collectivist societies, where maintaining group harmony and face-saving are paramount, investors may be less likely to acknowledge or act upon portfolio losses, instead choosing to avoid confrontation or delay divestment. In contrast, individualist contexts may foster quicker, sometimes excessive, responses to protect self-agency or public identity. These culturally conditioned behaviours highlight the importance of designing financial education and advisory frameworks that are sensitive to local norms and value systems.

Moreover, demographic characteristics such as age, personality traits, and emotional stability modulate how dissonance is experienced and managed. Younger or more

impulsive investors, for example, may exhibit greater susceptibility to escalating behaviours, while more risk-averse individuals may resort to avoidance or blame externalisation. Recognising these patterns reinforces the need for differentiated approaches in investor support mechanisms that consider both psychological predispositions and sociocultural settings.

Practical Implications

From a practical standpoint, the findings suggest a range of interventions that can assist financial advisers, institutions, and regulators in mitigating the adverse consequences of cognitive dissonance. For financial professionals, structured reflection techniques such as prompting investors to assess whether they would still choose the same asset under current conditions, can serve to disrupt habitual justification patterns and restore analytical objectivity.

Investment platforms and digital tools can include automated mechanisms to support such reflection. Features including stop-loss settings, sentiment alerts, or cooling-off functions before high-risk trades can introduce moments of pause and recalibration. These technological nudges, while subtle, may help buffer emotionally driven decisions, especially in volatile market conditions.

Educational initiatives should also evolve to reflect the psychological complexities of financial behaviour. Standard financial literacy programmes, which often emphasise technical knowledge, may fall short if they fail to address emotional regulation, cognitive awareness, and social influence. Programmes tailored to different cultural contexts and personality profiles could be more effective in promoting metacognitive engagement and long-term decision discipline.

At the regulatory level, the inclusion of behavioural risk disclosures, such as warnings about dissonance susceptibility in speculative investment products, could promote greater investor self-awareness. Furthermore, developing policy frameworks that normalise emotional reactions to investment outcomes, rather than stigmatise them, may facilitate earlier and more adaptive corrections in investor behaviour.

CONCLUSION AND FUTURE DIRECTIONS

Conclusion and Discussion

This review reaffirms the significance of CDB as a pervasive and structurally embedded force in investment behaviour.

By tracing its psychological antecedents and behavioural outcomes, the study demonstrates how dissonance distorts rational judgement and sustains suboptimal financial choices. These distortions are not merely isolated errors but are linked to identity protection, emotional regulation, and social positioning, which collectively shape the way individuals interpret, process, and respond to financial information.

The thematic synthesis underscores the multifaceted nature of CDB, highlighting how it operates differently across cultural, technological, and demographic contexts. Investors embedded in digital echo chambers, for instance, may experience heightened confirmation bias, while those operating within strong cultural norms may be more constrained in their capacity to acknowledge mistakes. The review also illustrates that dissonance-reduction strategies are often deeply personal and context-dependent, thereby challenging universalistic assumptions in BF theory.

Addressing these issues requires a comprehensive, interdisciplinary approach. Financial systems must recognise that effective intervention lies not only in correcting informational asymmetries but also in fostering psychological resilience and adaptive decision frameworks. The study, while exploratory in scope, lays the groundwork for future efforts to better integrate psychological realism into financial theory and practice.

Emerging Trends and Future Research

Looking forward, several avenues merit further inquiry. The use of neuroscientific methods such as fMRI and EEG offers promising potential to examine the neural correlates of dissonance during investment decision-making. Such approaches could provide empirical validation for theoretical claims regarding emotional discomfort and cognitive conflict in real-time trading environments.

Artificial intelligence and machine learning also present valuable opportunities. Real-time sentiment analysis, embedded within trading platforms, could enable the early detection of dissonance-prone behaviours and allow for the delivery of targeted nudges or interventions. These tools, when ethically and thoughtfully deployed, could serve as decision aids that align investor actions more closely with long-term goals.

Another promising area involves the development of agent-based models that simulate the diffusion of cognitive dissonance across investor networks. These models could offer insight into how collective dissonance shapes asset pricing, particularly during periods of crisis or rapid sentiment shifts. Similarly, the growing interest in

Environmental, Social, and Governance (ESG) and ethical investing presents a new frontier for dissonance research, as investors navigate tensions between moral values and financial returns. Quantifying and modelling these value-return conflicts may eventually lead to the formulation of 'dissonance-adjusted' asset pricing frameworks.

In conclusion, future work should aim to operationalise the concept of CDB in ways that inform empirical testing, cross-cultural validation, and the design of intervention tools. Doing so will not only advance theoretical understanding but also enhance investor well-being and the integrity of financial markets.

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