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PSYCHOLOGICAL BIAS AND FINANCIAL RISK TOLERANCE OF MUTUAL FUND INVESTORS - A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT
Background and Introduction
The theme of financial investment is of grave concern as the probability of psychological bias and the existence of huge financial risk. In financial investment,decision making is very important for individual investors to be conscious withtheir personality traits and financial risk tolerances due to the chance of occurrenceof psychological biases.
Objectives
We intended to conduct a systematic review of the concepts related to psychological biases and financial risk tolerance of mutual fund investors residing in India and abroad by reviewing previous researches. Further, to identify the most commonly occurring biasesand also to find research gaps on this topic.
Methodology /Design
The literature review wasperformed by retrievingthepreviously published data from the year 1973-2018 period of time.Theliterature selection criteria were based on keywords like Psychological bias, Cognitive bias, Emotional biases, Availability bias, Cognitive-Dissonance bias, Confirmation Bias, Conservatism bias, Framing bias, Representativeness bias and financial risk tolerance of the mutual fund investors. The review also emphasized the details of the list of journals, countries of research conductance, conceptual and empirical researches over the period of time on behavioral bias and financial risk tolerance.
Results
The literature survey resulted in 9 studies (>100 respondents), 45 journals, and 12 countries with empirical researches, 48 studies comprising conceptual (38) and empirical (10) researches that covered the topic over the stipulated period.
Study Findings
Most of the literature review on behavioral bias shows the limited research in developingeconomies, the ascendency of secondary source data of empirical research, and lack of empirical research on individuals displaying group behavior. The reviews of studies indicate a significant correlation between the psychological biases and personality traits of the investors and affected their financial risk tolerances.
Conclusions
Our systematic analysis of psychological bias and risk tolerance significantly covered the research published during the period of time from 1973-2018. The data will be of great value to the researchers, academics, and professionals working in the field of finance in understanding the impact of psychological biases on financial risk tolerance. Further, more detailed studies are required to determine the prevalence of different cognitive biases and personality traits and their potential impact on mutual fund investors.

Keywords: Psychological bias, financialrisk tolerance, personality traits,financial investment, mutual fund investors.

I. INTRODUCTION

Mutual funds have unlockeddifferentvistas to lots of smallscale investors with the advantage of advanced technology.The success of mutual funds is basically the outcome of the mutual efforts of skilled fund executives and attentive investors. A financial manager wouldexaminethe behavior of the investor and understand expectations and their needs to uplift the performance in order to meet the investor necessities. “Expectations” of investors play a significant role in the financial markets. They affect the securities and the volume traded among various other financial operations in reality.
The financial market tendencies and the behavior of individuals towards their investment options are governed by several conventional theories like Efficient Market Hypothesis, Fama (1970), Modern

Portfolio Theory, Markowitz (1952), Capital Asset Pricing, Model Jenson, Scholes and Black (1972). These theories mainly consider the individual investors as rational beings who subject various data to numerical analysis aiming at maximizing the anticipated benefit, Kubilay and Bayrakdaroğlu (2016) and several studies support this approach.On the contrary, recent studies spanning financial investments indicate despite aiming for broader folio with maximal return and minimum risk, individuals often deviate from a rational approach on the basis of conventional financial theories. It is now well established that several factors restrain from rational financial investment (Camerer, 1995; Loewenstein, 1999).

Two psychologists, namely, Kahneman and Tversky (1970) have done commendable work in the zone of 'behavioral finance'. They emphasized on the significance of 'psychological biases' of investors pertaining to financial investments. In recent times, behavioral biases broadly including cognitive and emotional; have been instrumental in shaping financial investments of the individuals,Baker and Nofsinger(2002); Bruni and Sugden (2007). While cognitive bias is instances of evolved mental behavior. These could arise from an anticipated rapid decision, or effective action but lack rational strategy. Major forms of cognitive biases include heuristics such as representativeness bias, cognitive-dissonance bias, and framing bias. An emotional biasis a state of the mental ability thatascendsnaturally compared to conscious effort. These could arise from emotions which yield in irrationalities including misinterpretation of the situation and inaccuracy in the judgment. Major types of emotional biases include endowment bias, self-control bias, and loss-aversion bias,Pompian(2006). This concept has geared up the researchers and financial experts on discovering theindividual investor's behavior and their key determinants for the choice of investment.The precise definitions framed by the researchers for various concepts of psychological bias were given in table.1.

II. REVIEW OF LITERATURE

The theory of cognitive bias includes availability bias, cognitive dissonance bias,confirmation bias, Conservatism bias, framing bias, and representativeness bias. While emotional bias includes Self-attribution, loss aversion bias, endowment bias, self-control bias.

2.1 Cognitive bias

It basically denotes the deviation from rational thinking when concerning financial investments. It could arise from a confusion of the situation, incorrect interpretation or hasty decision. It can be readily rectified when accurate information is perceived and decisions are bound by them.

Important cognitive biases include

2.1.1 Availability bias

It refers to people's propensity to make an opinion about the probability of events based on either their recent experience or on the milieu of similarity of the events to the current situation. In other words, it's the bias which utilizes the power of association between instances to assess their probabilities, Tversky and Kahneman, (1974).For example, Kliger and Kudryavtsev (2010) analyzed the financial markets and concluded that positive stock valueresponses to analyst approvalpromote stronger when supplemented by positive market index returns and availability of more positive investment outcomes. Conversely, negative stock price responses to analyst approvaldemote when accompanied by negative market index returns and the existence of negative investment outcomes. The responses from both studies are enormous. Another study by Kudryavtsev (2017) explored the result of the investigativedata on a huge daily stock expense changes and on succeeding stock returns. He predicted that both negative and positivehuge price moves are supplemented by the same-sign concurrent daily market returns. They are followed by substantialsetbacks on the next 2 trading days and over 5-and 20-day intervals nextto the event. The outcomes hold true, subsequently accounting for an additional company (size, beta, and historical volatility) and event-specific (stock's return and trading volume on the event day) factors, and are stronger for small and volatile stocks.

2.1.2 Cognitive-Dissonance bias

The cognitive-dissonance biasincludes the response that ascendssince the people struggle to synchronize the thoughts and thusrelease their psychological discomfort. Cognition could represent attitude, emotion, belief or value, which enable the investor to rationalize their decision irrespective of the fate of that financial investment. Cognitive dissonance is regarded as a universal psychological thought process in which people feel uncomfortable upon exposure to facts that are contrary to their: a)Existing knowledge, b) Existing beliefs, c) prejudices and predetermined ideas, d)Preferences and needs, and e)Habits and commitments,Greenfinch (2009).

Cognitive dissonance is thus the inner conflict of above mentioned parameters with that of the realistic situation. Its theory relies on the point that people have an inspirationalinitiative to

decreasedisagreement by modulating or justifying their outlooks, views, and activities, in sync with their decision.

2.1.3 Confirmation Bias

Confirmation biases refer to those biased behavioral approaches whereby the investor seeks information in agreement with his pre-conceived notion such that selective knowledge 'confirms' their approach. They often ignore information which contradicts their thought process, which yields in the unrealistic depiction of the actual scenario. For example, if an investor is open to equities, he will conduct analysis that would echo his viewpoint and not take a rational, informed decision for financial investment

2.1.4 Conservatism bias

Conservatism bias is amongst the oldest biases recognized, whereby the investment patterns are in sync with traditional – 'conservative' beliefs and not updated/modified as per the current need of the hour. Several researches have been carried out to lay emphasis on its importance. Luo et al exhibited the influence of conservatism bias on the benefit price in a security market with plannedcollaborationbetween the traders. The study highlights that conservatism bias is due to asset price overreaction to new evidence. This result is in strident contrast to several studies attributing conservatism bias as the cause of asset price, Luo GY(2013). In other study by London Stock Exchange assessed the combinational consequence of two cognitive biases, representativeness, and conservatism. The findings attained by the compound factor model endorse the presence of 2 cognitive biases and tendencies that investors perceive in financial performance in long-term horizon, Kariofyllas et al.(2017).

2.1.5 Framing bias

It refers to the propensity of the investors to react to severalconditions differently based on the setting in which an option is 'framed'. This notion of framing bias emphasizes the presentation of facts, which influence the choice and decision of the people. Even though investors strive to create rational financial decisions, their choices may vary depending on the presentation of practically, the same data. For example, if an investor is asked to make a choice in between two portfolios A and B, where A has 70% of chance attaining the financial goal and B has 30% of chance of not attaining the financial goal; most people are likely to select A for its pronounced positive outcome. Therefore, despite the similar situation, different decisions are taken owing to the different frames established for the given condition. This framing effect is a normalpropensity of human awareness and isn't inherently bad. When making rational investments, it is best to evadeconcentrating on unrealized gains or losses. Instead, the focus should be on the forthcomingpredictions of the investment and any alteration in the key determining factors. The investments should be assessed at fixed intervals to check their pattern of growth or otherwise, and in order to retain the framing effect at bay.

2.1.6 Representativeness bias

The representativeness exploratory is the most imperative among psychological bias which indicates that, under ambiguity, investors are predisposed to assume that incrediblepresentationof a given firm in the past is 'representative' of a positive outcome of the firm in future also, Boussaidi (2013). Therefore, investors tend to construct flawed perceptual patterns based on prior performance combined with their pre-existing ideas. This results in arbitrary situations. For example, an investor might consider stock 'A' as a value stock because it resembles stock 'B'which has proven to be an efficacious investment in the past. However, the new stock just represents a value stock and mere representation doesn't establish its worth, Pompian(2006). Likewise, good companies 'represent' good investments irrespective of their market value. Any particular share could be over-, under-, or fairly-priced, which should be the key determinant for its investment worthy profile. Shares of a reasonably good company may be overpriced, and hence would not represent a good investment. On the other hand, that of a comparatively weaker company may be underpriced, and therefore, fruitful from the financial investment point of view. This was observed for the landmark case of 'nifty-fifty' stocks in the United States in the early1970s. The company's profile and performance were considered excellent leading to the popular belief that its shares were good to buy at any price. This resulted in huge demand thereby shooting the stock prices up. However, once the mispricing was gradually corrected, the nifty-fifty stockprices exhibited a trend of declining values. Moreover, most of them under-performed in the market in subsequent years, Fesenmaier and Smith (2002). Another important aspect of representativeness is the trend of the market. It is largely presumed that if prices have been rising in the past then they will continue to do so. Such patterns become the 'representation' of long term successful investments. The reverse trend with falling prices is also assumed to be true, where price fall is equated with failure of the share. Therefore, these biased behavioral patterns lead to improper investment profile.

2.2. Emotional biases

2.2.1 Self-attribution

Self-attribution bias is associated with the general propensity of an individualto 'attribute'achievements to individualability and failures away from theircontrol,Feather and Simon(1971); Miller and Ross (1975). In the financial sector, this is largely correlated as individual investor's overconfidence, Dorn and Huberman, (2005). In an assessment of data of hugeconcessionbrokerage firm, Hoffman and Post observed that greater the returns in anearlier period are, the more investors approvewith a statement appealing that their recent performance flawlesslyreproduces their investment skills andit conversely also holds true. They also notified that thoughsingle individual returns linked to the higher agreement, market returns have no sucheffect, in reality, Hoffman and Post(2016).

2.2.2Loss aversion/endowment effect

The crux of this bias is the individual'spropensity to favorpreventing losses than gainingprofits strongly. Meticulouslyconnected to loss aversion is the consequence of the endowment effect that occurs when individuals place a greater value on a good of their property rather than they do not own. The loss aversion/endowment outcome can result in very poor and illogical investment decisions whereby investors decline to vend unprofitable investments in the faith of getting their money back. The loss-aversion propensity disrupts one of the basic rules of finances; the measurement of opportunity cost. To be an effective investor, one must be capable of quantity opportunity cost appropriately and not be affixed to previous investment choices due to the inherent human inclination to escape losses. Investors who develop secured due to loss aversion explore thetempting investment prospects to recall prevailing unsuccessful investment with the hope of making money returned.

2.3 Some concepts of bias

With the growing attention in the financial sector and behavioral patterns for investments, newer biases are being increasingly recognized, Magellan Asset Management Limited (1999). Some of these includeInformation bias, which is the affinity to assessinfo even when the evidence is not reliable inconsidering a difficult or issue. Incentive-caused bias is the supremacy that recompenses and inducements can have on human behavior, frequentlyresulting inrecklessness. Oversimplification tendency, whereby investors seek flawless and simple explanations, though financial matters are of great complexity and grave apprehension. Oversimplification often causes folly. Another bias gaining widespread concern is the hindsight bias which refers to the propensityof considering beneficial past events as predictable and bad events as not predictable. The bandwagon or groupthink bias definesachieving comfort to some degreesincemost of people do believe the same.Anchoring bias is the inclination to depend on too profoundly on, or anchor to, a past orientation or one part of information during decision making.

2.4 Financial Risk Tolerance

Risk refers to the unexpected variability (negative) of returns than those expected from investments, Kannadhasan (2006); Kannadhasan and Nandagopal(2010).Financial risk tolerance can be extrapolated to the compliance of a person to feel the discomfort of making risky financial decisions in lieu of current wealth for a prosperous future. It enables the investors to accept the adverse changes instead of the expected changes in the decision making of financial investments. However, the market trends and associated risk component keeps fluctuating. Several market analysts have emphasized that the risk is directly associated with the returns, that implies greater the risk, higher the returns and lower the risk lower the returns. Several studies have been conducted to analyze this strategy. Yao et al. reported that investors with the propensity for higher risk tolerance invest in the risky assets to obtain greater returns in the futureYao et al. (2004). While Hanna et al. stated that the propensity for lesser risk tolerance needs added compensation when faced with uncertainty in a financial investment decision,Hanna et al.(2008). Generally, people restrict their choices to risk aversion than meeting the risk, Roszkowski, and Snelbecker(1990). In an efficient financial set-up, risk tolerance is inversely proportional to risk aversion, Walls and Dyer(1996);Barsky et al.(1997); Gron and Winton(2001); Gilliam et al.(2010). Simon et al. found that certain types of cognitive biases influence the risk tolerance. It is because of them that the investors perceive less risk and make risky investment decisions which in turn enhance the overall financial risk tolerance, Simonet al. (1999).

To knowthe human conduct in this viewpoint, reviewing investment behavior and how performance is affected by behavioral biases and financial risk tolerance convertsvital. There are many biases recognized by many literatures and the influence of these biases is wide in nature. However, more studies especially comparative ones in the different context could unravel different facts on the overall investment trend and deepen our understanding on the same. It is necessary to understand the underlying factors that affectthe trading behavior of individual investors.

III. MATERIALS AND METHODS

Data sources

We performed a systematic literaturereviewto assess the consequence of behavioral biases of the investors in financial risk tolerance. In order to retrieve the literature, we have compiled the following search tools, GOOGLE SCHOLAR, EBSCO, PUBMED, and SCIENCE DIRECT by using the following keywords: Cognitive bias,Psychological bias, Cognitive bias, Emotional biases, Availability bias, Cognitive-Dissonance bias, Confirmation Bias, Conservatism bias, Framing bias, Representativeness bias, investment, and financial risk tolerance of the mutual fund investors. The studies published over 45years;from the year 1973- 2018 were included in the study.

Sampling Method followed

Hair et.al suggest that evaluation of at least 100 respondentsin order to fit the statistical methods of data analysis. Accordingly, such papers were collected wherein the data analyzed were collected from questionnaires from a sample size of a minimum of 100 respondents.

Study selection

The criteria for selection of studies were (1) studies published in peer-reviewed journals (2) articles published in English with full-text access (3) Research data types including research paper, case study, and review paper were considered (4) We excluded the studies reporting the less than 100 respondents and the data collected from secondary sources.The studies were assessed to deduce the investment preference profile of Indian and abroad investors. We analyzed the articles that satisfied our inclusion criteria on each cognitive bias andrisk tolerance and also explored the original data as described by the authors.

Data Retrieval

We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method of analysis. Research data wasretrieved by following the standardized forms. Information was collected on the list of journals covered the topic over the period of time, country of empirical researches conducted over the period of time, year of publication, type of article, type and nature of biases. The information regarding conceptual and empirical researches over the period of time was also collected.

Research Framework

It was observed that different researchers had selected different types of psychological biases to study their impact on investor's decision making.Independent Variables: in the form of (i) representativeness bias (ii) self-attribution bias (iii) availability bias (iv) confirmation bias(iv) conservatism bias and the Dependent variable in the form of (i) financial risk tolerance.

IV. RESULTS AND DISCUSSION

The systematic literature search and classification of research data resulted in 9 studies, 45 peer-reviewed journals covering the behavioral bias over the period of time, 12 countries that carried out the empirical researches and 48 researches covering the empirical and conceptual topic with different areas of bias over the period of time. The studies selected for systematic analysis (Ph.D. thesis, Dissertation thesis, and research articles) were tabulated and classified in table 2 which is based on the researches being conducted with Indian investors.

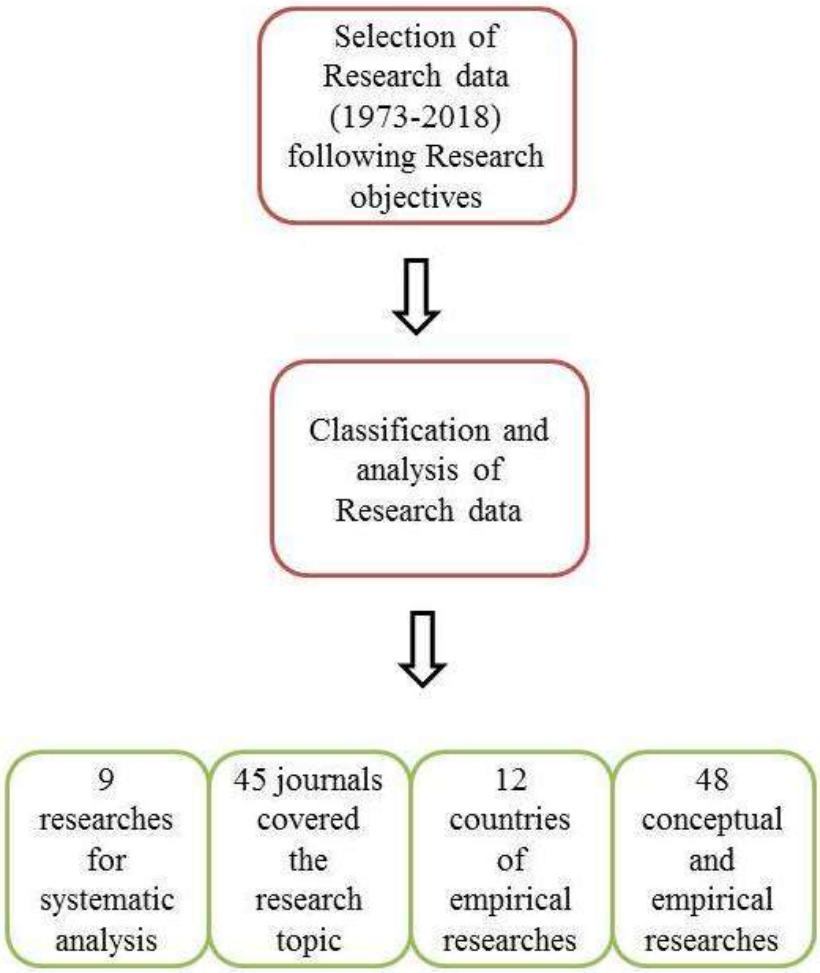

Figure 1. Schematic representation of systematic review of literature

It was observed that various sampling methods were utilized by different researchers including convenience sampling method, Boda and Sunitha (2018), random sampling method, Bobde et al. (2017). Convenience sampling is a non-probability sampling method where individuals are sampled because of their suitableconvenience and nearness to the researcher, Bryman, and Bell (2007). Random sampling is a probability-based sampling technique, where each individual of the sample has an equivalent chance to get selected.

All the data and information for this study have been assembled from research articles and thesis having collected them from primary sources via questionnaires. The questionnaires in the selected articles were designed according to the key biases being studied by the individual researchers. Some of the studies also incorporated data related to the demographic variables of the respondents. Such questionnaires are widely acceptable for analyzing individual's profile as they are economic, doesn't require tremendous efforts from the questioner in assessment to verbal or telephone surveys, and frequently have consistent answers that create it easy and convenient for respondents to answer and surveyor to mark and compile the data. Majority of the studies further utilized Likert scales for rating the response of the respondents. It enables the response to be categorized as to how strongly an individual agrees or disagrees with a sequence of statements and mark it accordingly, Saunders et al. (2009). This scale is then interrelated with the impression of behavioral factors on the financial investment choices of the populace being analyzed. The reliability index was assessed to establish the dependability of the data. Their results indicate that all of these psychological factors contribute towards investment profile. Table 3, Table 4 and Table 5 is based on the researches being carried outside India. Table 3 shows the list of all the journals which covered the topic of our research. Table 4 covered the countries thatconducted empirical researches on the topic.

The assessment indicates the presence of cognitive bias among financial investors across India.

4.1 Prevalence of cognitive bias

A number of studies conducted across different Indian cities indicate that heuristics and cognitive bias influence investment behavior. The statistical analysis had shown that all the investors were affected by the various biases during investment decision making. The study conducted on a big sample size of 1182 respondents from major cities of Gujarat showed evidence of frame dependence,disposition effect, loss aversion, and mental accounting bias in investment behaviorof respondents. The study also indicates the presence of the following phenomenon while investing: representativeness, familiarity, overconfidence, self-attribution, extrapolation of past and herding effects.

4.2 Outcome/Sub-category

According to the traditional financial theory, financial decision makers were regarded as rational, simultaneously stock markets were considered as perfect markets with fully transparent information. However, the modern financial theory emphasizes that investors' decision-making is not always propelled by rational thoughts or market scenario. In fact, various psychological factors influence the investment profile pertaining to avenue, parent company, timing, and duration, Akerlof and Shiller(2009); Gupta and Ahmed(2016).

In a study conducted across different major cities of Gujarat(Ahmadabad, Ankleshwar, Bharuch,Bhavnagar, Kutchchh, Vapi & Valsad, Rajkot, Surat, Vadodara), the frequency of various biases were observed. 56% of respondents exhibited the framing effect of investors' decision making while 66 % of investors depicted overconfidence bias in the choice of interval for financial performance evaluation. Notably, self-attribution bias was recognized as the predominant bias (87 percent). Whereby, a profitable investment was attributed to selfwhile in case of loss, other factors were taken into consideration/blamed. Further, cognitive dissonance bias was observed. Around 60.3 % ofrespondents didn't prevent from their financial perspective while only 25 % considered the market fluctuations and accordingly, their investment, Chapadia (2014).

Yet in another study conducted by Gupta and Ahmed, analyzed the investment behavior of a minor sample of investor's trading in Indian share market (380 retail investors), which were further isolated in two groups based on their investment experience (experienced versus less experienced investors). The outcomes of the discriminant analysis indicate that of the fours behavioral biases studied, three specifically Loss Aversion Bias, Regret Aversion Bias and Anchoring bias affect the experienced investors more than the less experienced ones. However, both investor groups tend to exhibit herding bias in an equally likely manner. Therefore, this study also emphasized on impact of behavioral biases in making dreadful investment decisions, Gupta and Ahmed (2016).

In another study involving 522 mutual fund investors based in Hyderabad, the researchers observed a relationship between age of the respondents and the safety of investments. However, unlike other studies carried out in India, no correlation was found between other personal attributes and investor perceptions,Sindhu et al. (2017).In another study involving 100mutual fund investors in Ludhiana city, a structured questionnaire was utilized to extract information on the personal profile of respondents and their frame of mind while investing. The biases assessed included cognitive biases namely representativeness bias, cognitive dissonance bias and framing bias and emotional biases namely endowment bias, loss aversion bias and self- control bias,Katyal (2013).

Bobde et al analyzed a large sample size of 470 mutual fund investors of Nagpur city to study behavioral finance applicability. They also observed the tendency of endowment bias and self-control bias in mutual fund investments. For any rational investment, coherent disciplined approach is imperative for achieving financial goals,Bobde et al. (2017).Likewise, Deshmukh and Joseph conducted a survey on investor'sbehavioral factors with regard to their mutual fund investment of an industry from 300 investors across diverse demographic profiles in Raipur city. Theirfindings revealed that demographic factors like gender, income, and occupation cannot be associated with the degree of awareness that an investor has about the mutual fund market and its mechanics. Their survey suggested that heuristics and frame of mind play a pivotal role in deciding for mutual funds,Deshmukh and Joseph(2016).

A study carried out in Bengaluruemphasizes that mutual fund investors across different professions operating through Computer Age Management Service Ltd. (CAMS) were studied. These professionals exhibited several biases namely overconfidence bias, self-attributive bias, an illusion of control, loss aversion and herding behavior, Metilda(2015).Yet another dramatic study was conducted in cities of low capital market activity including those from Odisha, West-Bengal, Jharkhand, and Bihar. Multiple regression analysis was carried out, which established that overconfidence bias predominantly affects investment performance. Here, the impact of herd behavior bias was minimal. Therefore, people regarded as passive investors might not exhibit this bias while investing, Kumari and Sar (2017). Boda and Sunitha

explored the aspects related to investor's psychology in investment decision making. They indicated inherent irrational psychologically skewed nature towards the same. The prime biases observed by them were cognitive bias, over-confidence, self-attribution bias, and herd effect. They concluded that such psychology biases can't be rectified by learning and accumulating experiences, Boda and Sunitha (2018).

It was observed that males possess a high extent of knowledge as compared to females. Investors belonging to service class possessed a high extent of knowledge. It was observed that investors were significantly biased with respect to Cognitive and Emotional biases. Investors were found significant bias in case of Cognitive Dissonance bias, Endowment bias and Self-control bias with reverence to the percentage of savings invested in mutual funds in a year.

4.3 Risk tolerance

In theperspective of financial investment terminology, risk refers to the possibility of losing money (both principaland any earnings) and alsofailure to earn out of an investment.Risk is also equated with the volatility of earnings, as a fund with stable,positive earnings is generally considered less risky than a fund with unstable total returns. As the interest in behavioral finance is building up, the concept of "tolerating" the associated "risk" is also being increasingly recognized. It was observed that investors were significantly biased compared to Cognitive and Emotional biases. Investors were found significant bias in case of Cognitive Dissonance bias, Endowment bias, and Self-control bias when compared to the percentage of savings invested in mutual funds in a year.

In the study carried out in different cities of Gujarat, it was observed that risk correlated with a different phenomenon for different investors, reflecting loss, the uncertainty of return, opportunity, and thrill as 26.23percent, 40.19percent, 26.57percent, and 7percent respectively. Deshmukh and Joseph analyzed 300 mutual fund investors, a resident of Raipur city. They indicated that respondents were conscious of the fact that greater the risk higher the return and mutual fund are saferthan to equity investment due to its capacity to expand the risk of the investors while decision making, Deshmukh and Joseph(2016). Therefore, the underlying principle of lower risk and higher return is widespread among investors while choosing mutual fund asset.Kumari and Sar (2017), observed that for people of Eastern Indian states, the impulsive risk doesn't constitute an important dimension contributing towards investment performance. However, calculative risk and speculative risk have a larger impact on investment performance. Demographics, specifically, the individual nature of the individual might be causing this risk tolerance bias, Grable and Rabbani (2014).

4.4 Study findings and Research Gaps

We have made efforts to include all the relevant studies and identified the following issues that are relevant to our research area are (1) Limited research in developing countries (2) Predominance of secondary data-based empirical research.

V. FUTURE DIRECTIONS/CONCLUSION

There exist huge spaces in the concept of behavioral finance that can be studied.The current article has compiled studies conducted in different cities of India with regard to investor's financial behavior. The various psychological biases effecting investing were analyzed to understand the investors' psychology in investment decision making of individual investors. Notably, investors' psychology plays a great role in the investment profile. This comparative study established that self-serving bias, loss aversion bias, self-attribution bias, confirmatory bias significantly affected investment profile in Indian stock market. These biases often account for irrational judgments leading to investors incurring huge losses. Further studies spanning larger areas, bigger sample sizes including not just urban but also rural population and profile of not just retail investors but also institutional investors, financial advisors, personal agents could shed more light on overall Indian scenario of investment prototype.

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