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The Role of Recognition-Based Heuristics in Investment Management Activities: Are Expert Investors Immune? – A Systematic Literature Review

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The Role of Recognition-Based Heuristics in Investment Management Activities: Are Expert Investors Immune? – A Systematic Literature Review

Abstract

Purpose – The aim of this article is to systematically review the literature published in recognized journals focused on recognition-based heuristics and their effect on investment management activities and to ascertain some substantial gaps related to them.

Design/methodology/approach – For doing research synthesis systematic literature review approach was applied considering research studies published within the time period, i.e., 1980-2020. This study attempted to accomplish a critical review of 59 studies out of 118 studies identified, which were published in reputable journals to synthesize the existing literature in the behavioural finance domain-related explicitly to recognition-based heuristics and their effect on management activities.

Findings – The survey and analysis suggest investors consistently rely on the recognition-based heuristic-driven biases when trading stocks, resulting in irrational decisions, and an investment strategy constructed by implementing the recognition-based heuristics, would not result in better returns to investors on a consistent basis. Institutional investors are less likely to be affected by these name-based behavioural biases in comparison to individual investors. However, under the context of ecological rationality, recognition-based heuristics work better and sometimes dominate the classical methods. The research scholars from the behavioural finance community have highlighted that recognition-based heuristics and their impact on investment management activities are high profile areas, needed to be explored further in the field of behavioural finance. The study of recognition-based heuristic-driven biases has been found to be insufficient in the context of emerging economies like Pakistan.

Practical implications – The skillful understanding and knowledge of the recognition-based heuristic-driven biases will help the investors, financial institutions and policy-makers to overcome the adverse effect of these behavioural biases in the stock market. This article provides a detailed explanation of recognition-based heuristic-driven biases and their influence on investment management activities which could be very useful for finance practitioners' such as investor who plays at the stock exchange, a portfolio manager, a financial strategist/advisor in an investment firm, a financial planner, an investment banker, a trader/ broker at the stock exchange, or a financial analyst. But most importantly, the term also includes all those persons who manage corporate entities and are responsible for making its financial management strategies.

Originality/value – Currently, no recent study exists, which reviews and evaluates the empirical research on recognition-based heuristic-driven biases displayed by investors. The current study is original in discussing the role of recognition-based heuristic-driven biases in investment management activities by means of research synthesis. This paper is useful to researchers, academicians, and those working in the area of behavioural finance in understanding the role that recognition-based heuristics plays in investment management activities.

Keywords – Recognition-based heuristics, Alphabetical ordering, Name memorability, Name fluency, Investment management activities, Research synthesis

Paper type – Literature review

Qualitative Research in Financial Markets

1. Introduction:

In the financial management literature, there are important traditional finance theories such as Modern Portfolio Theory (Markowitz, 1952), CAPM Model and APT Model, which hold that investors are to be rational and independent and consequently, it is extremely hard to get alpha return from the market, for example, efficient market hypothesis (Fama, 1970). According to Fama (1970) and other believers in the fundamental theories of standard finance hold that markets are almost always efficient. Market efficiency means the price of securities holds with fair value, even if some investors make errors due to biases. In the efficient markets, investors are regarded as rational, unbiased, and consistent actors who make optimal investment decisions without being affected by their psyches or emotions. The implication of the "efficient market hypothesis" is that no one can constantly beat the market and get a superior return over a long period. However, there is a larger number of investment funds who are generating a large extent of alphas (Yuen, 2012). If the CAPM Model, APT Model, and modern portfolio theory are valid, then why investors display irrational behaviors in the marketplace? If the financial market is efficient enough to eradicate all alphas within the stock market, then what is the reason there are so many investors in the market who are generating a superior return.

The investment was based on forecasting, previous performance, market timing and so on. Arora and Kumari (2015) said that investors entrusted with various models and theories of standard finance from a very long horizon to estimate risk and expected return while taking investment decisions or other financial decisions. However, today's departure from rational decision-making has been noticed in almost every aspect of financial activity. The market becomes inefficient, which motivates the authors to explore the reasons for such type of behavior. Just as conventional finance's reliance on the assumption of rationality fails to explain the fluctuations in share prices, it also fails to identify the real causes of a large number of other financial decisions. For example, if a company were to decide on its capital structure purely on rationality grounds, the answer would be to have a capital mix that produces the lowest WACC (weighted average cost of capital). In reality, this may not happen at all. Standard finance has no explanation for this state of affairs.

During the 1980s, behavioural finance emerged as a separate field of study, coalescing behavioural and psychological aspects in economic and financial decision making. Behavioural finance challenges the perspective of an efficient market and helps to understand why investors behave in a particular manner while investing in financial assets. It is a field of study that helps us understand how persons, or groups of persons, make choices relating to managing their monetary resources to achieve their preferred objectives. Behavioural finance suggests that the process of making investment decisions is influenced by various behavioural bias, which encourages investors to deviate from rationality and make irrational investment decisions; as result markets become inefficient.

This is a comprehensive review of the recognition-based heuristic-driven biases in investment management with a focus on individual and institutional investors. To our knowledge, there is currently no systematic review of the literature on recognition-based heuristic-driven biases, in which different heuristic-driven biases have been examined in a single study. Thus, in this current study, the authors focus exclusively on the systematical literature survey-based evidence to understand and plans to seek answers for the following questions:

Qualitative Research in Financial Markets

- What is a heuristic?
- What is meant by the recognition-based heuristic?
- How many types of recognition-based heuristic-driven biases?
- What are the factors causing an increased use of recognition-based heuristic by investors?
- What is the effectiveness of the recognition-based heuristic when used as an investment management strategy?
- How can a recognition heuristic be positively utilized in investment management activities?
- Could the recognition-based heuristic lead to investors behaving irrationally?
- How to overcome the negative effects of recognition-based heuristics?
- Whether the uses of heuristic variables are good or bad for both individual and institutional investors?
- As compared to individual investors, institutional investors relatively immune to the recognition-based heuristic?

Investment management firms and academic studies have acknowledged the existence of investment heuristics, causing a number of behavioural biases that lead practitioners of financial management and business actors to make less than optimal choices. These heuristic-driven biases in investing encompass many types and are as yet not well understood. Investors' irrational behavior is real, and its effects on economic and financial systems are pervasive if no efforts are taken to acknowledge and mitigate them (Ahmad, Ibrahim, and Tuyon 2017). This review provides awareness and understanding of recognition-based investment heuristics and their effect on investment management, which could be very useful for finance practitioners' such as an investor who plays at the stock exchange, a portfolio manager, a financial strategist/advisor in an investment firm, a financial planner, an investment banker, a trader/ broker at the stock exchange, or a financial analyst. But most importantly, the term also includes all those persons who manage corporate entities and are responsible for making its financial decisions. This review also provides information to regulators, scholars, and business actors on the recognition-based investment heuristics and their consequences and suggests possible future actions. With the help of this review, they can improve the quality of their decision making by diagnosing their behavioural biases, which occur as a result of recognition-based heuristics and also learn that how heuristics factors can be positively utilized in investment management activities. There are only very few studies on the application of fast and frugal reasoning in financial management. The present study thus focuses on achieving the following main objectives:

- To synthesize the existing literature on behavioural biases which occurs as a result of recognition-based investment heuristics in a systematic manner
- To identify the causes of these recognition-based heuristic-driven biases and their consequences on institutional and individual's investment choice,
- To identify which types of investors relatively immune to the recognition-based heuristics
- To explore the impact of these recognition-based heuristic-driven biases in the investment decision-making process
- To identify how to overcome the negative effect of recognition-based heuristics so that finance practitioners can avoid repeating the expensive errors which occur due to heuristic factors

Qualitative Research in Financial Markets

- To explore how recognition-based heuristics can be positively utilized in investment management activities; and
- To identify the research gaps and directions for future research in this area.

The remainder of the article proceeds as follows: In the next section is related to the research methodology adopted for this present study. The third section shows the basic concepts, and discoveries related to recognition-based heuristics and biases shall be explained through a systematic review of the literature. The recognition-based heuristic-driven biases, its influence on investment strategies, investment decision-making, the factors causing an increased use of heuristics by investors, how to overcome the negative effects of heuristic-driven biases, and how it can be positively utilized in investment strategies shall be highlighted. The existing gaps in the literature are presented in section four. Section fifth gives the conclusions.

2. Research Methodology

According to Fink (2010), a Systematic literature review can be defined as a "systematic, explicit and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners". Similarly, Marshal (2010) defined a review of research literature as "a systematic method for identifying, evaluating and interpreting work produced by researchers, scholars, and practitioners". Cooper, Hedges, and Valentine, (2009) documented that before conducting research synthesis or systematic review, it is indispensable that there is primary research on the topic, and it is always useful in formulating a problem that can be addressed in a proposed research study. According to Manten, (1973) a common conception concerning literature reviews is that they are "not based primarily on new facts and findings, but on publications containing such primary information, whereby the latter is digested, sifted, classified, simplified and synthesized". Divergent terms, namely systematic review, research synthesis, and research review, are frequently used by researchers interchangeably, and there is still no consensus about whether these differences are really meaningful (Cooper, Hedges, & Valentine, 2009). The guidelines provided by prior research studies (for example, Levy, and Ellis, 2006; Kitchenham, 2007 and Kitchenham, et al., 2010) were followed for conducting an effective systematic review.

The research synthesis methodology adopted for this study is shown in Figure 1. This review of the literature is based on five steps. Step one is concentrated on developing the research objectives. Step two elucidates the mechanism by which the authors discovered the related work by highlighting different search strings and databases. Step three is related to the selection and exclusion criteria of publications for a systematic review. The process of extracting useful insight from the selected studies has been carried out in four steps. Step five is related to the dissemination of findings and agenda for future research. A detailed discussion of the research synthesis methodology adopted for this study is presented below.

Qualitative Research in Financial Markets

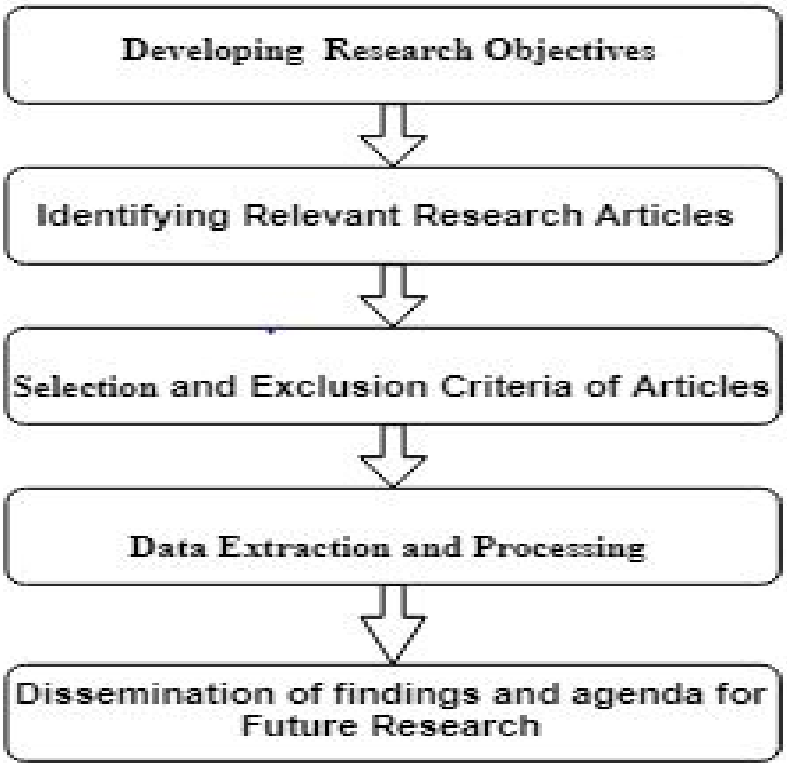

Figure 1: Methodology for the Research Synthesis

2.1 Research Objectives

The present study thus intends to achieve the following objectives

RO1: To synthesize the existing literature on behavioural biases which occurs as a result of recognition-based investment heuristics in a systematic manner

RO2: To identify the causes of these recognition-based heuristic-driven biases and their consequences on institutional and individual's investment choice,

RO3: To identify which types of investors relatively immune to the recognition-based heuristics

RO4: To explore the impact of these recognition-based heuristic-driven biases in the investment decision-making process

RO5: To identify how to overcome the negative effect of recognition-based heuristics so that finance practitioners can avoid repeating the expensive errors which occur due to heuristic factors

RO6: To explore how recognition-based heuristics can be positively utilized in investment management activities; and

RO7: To identify the research gaps and directions for future research in this area.

2.2 Digital Resources (Databases/Libraries)

According to Poojary, and Bagadia, (2014), to proceed with the systematic review, the authors' decision concerning databases to be considered for obtaining relevant articles is a challenging task. Where to look for and how to find relevant information for research objectives or research questions is very important at the start of the review. Mahmood, Khan, and Khan, (2019) assert that obtaining relevant information through different resources increased the quality of the review, and the authors can anticipate different perspectives on similar issues. Thus, the authors used the following seven databases for the literature search. From which access of the first five databases was available in a digital library subscribed by the university, and Z library is one of the best websites to download free articles and eBooks. Google Scholar is an academic search engine. The databases used for the literature search were listed below.

- Emerald.
- Science Direct.
- Springer Link.
- JSTOR.
- Institute of Electrical and Electronics Engineers (IEEE).
- Z library
- Google Scholar.

2.3 Literature Search Strings

To conduct a rigorous review of the literature, the selection of search traces or keywords play a significant role in the research activity (Mahmood, Khan, & Bokhari, 2019). According to Collis and Hussey, (2009), a literature search is referred to as a systematic process through which researchers identify the existing knowledge concerning a specific topic. Bryman and Bell, (2007) assert that literature plays a significant role in providing the conceptual and theoretical content of the research from which researchers or authors can justify their research questions. Cooper et al., (2009) documented that to achieve the required objectives search the literature until you reach the required goal. A similar approach deduced by Corbin and Strauss (2008) also pressed the idea of theoretical saturation in building the literature until categories and subcategories are well developed, continued data collection and analysis provide no significant new insights and previously identified gaps in the theory are filled. The guidelines provided by prior research studies (for example Levy, and Ellis, 2006; Kitchenham, 2007; Collis & Hussey, 2009; and Kitchenham, et al., 2010) were followed for searching and writing an effective literature review.

2.3.1 Keywords Searching

For this present study, relevant literature was searched by using all possible keywords. Both single keywords and combined keywords were used to obtain the desired literature. Some of the important keywords used for searching relevant literature cited in this current study are described here. For example: “heuristic decision-making”, “recognition-based heuristics”, “recognition-based heuristic-driven biases”, “recognition-based heuristics and investment strategy”, “recognition-based heuristics and investment decision making” “name-based behavioural biases”, “name-based behavioural biases and investment decision making” alphabetical ordering and

Qualitative Research in Financial Markets

investment decision- making, name memorability and investment decision- making, name fluency and investment decision- making etc.

Furthermore, the forward and backward search approach recommended by Levy and Ellis, (2006) were also utilized to make the search process more rigorous.

2.3.2 Forward Searching

According to Webster and Watson, (2002), forward-searching is a process of identifying and reviewing relevant articles that cite an original article. Levy and Ellis, (2006) assert that this type of search pays attention to the relevant literature created after an article was published. The forward-searching technique was also adopted to find out more articles related to the topic.

2.3.3 Backward Searching

Backward-searching is also known as chain searching. According to Levy and Ellis, (2006), chain searching or backward-searching means identification of the relevant articles or literature by looking at the references or work cited in an article. The backward-searching was also used for the identification of further research articles related to the topic.

2.3 Research papers/articles extraction criteria

According to Cooper and Hedges, (2009), after collecting sufficient relevant literature for research synthesis, one ought to extract those pieces of information from each document that may help answer the questions raised to be addressed. It helps further to filter research papers assembled, thus, articles that did not address the research objectives under study were discarded. The following selection criteria were adopted to find out the most relevant articles/papers for the current research synthesis.

- Research papers published in peer-reviewed journals and appeared in the English language with full-text access were included only
- The peer-reviewed conference papers were also included
- "Time frame" constraints decided at the outset of our study for selection of publications (i.e., 1980-2020) were followed strictly; and
- Articles/papers, which addressed the research questions and objectives were included only in this study

Initially, 118 articles were found regarding recognition-based heuristics and their effect on investment management activities. Later on, by applying specified selection criteria, 59 papers (including journal articles and conference papers) were finalized to be included to proceed with this research.

3. Literature Review

3.1 Heuristics

According to Gestalt psychologists Max Wertheimer, Wolfgang Koehler, Karl Duncker, and a handful of later philosophers, especially Herbert Simon (1955), heuristics are strategies that guide information search and modify the depiction of a problem to facilitate solutions. From its origin,

Qualitative Research in Financial Markets

the term heuristics have been used to describe useful and important ways to identify solutions to problems that cannot be handled by logic and theory of probability (Groner, Groner, & Bischof, 1983). In the late 1960s and early 1970s, the heuristics definition has modified approximately to the point of inversion. In an investigation on reasoning, judgment, and decision-making, heuristics refer to strategies that inhibit one from discovering correct solutions to problems that posit by the probability theory (Goldstein, & Gigerenzer 2002). In this stream of thought, studies primarily deal with general rules of thumb and the deviations from a rational computation that they tend to yield referred to as behavioural biases. Thus, heuristics have even become allied with irrationality and unavoidable cognitive illusions (Piattelli-Palmerini, 1994). A brief debate on both streams of thought is presented below.

According to Hertwig and Pachur (2015), heuristics referred to as mental shortcuts or rules of thumb. One of their core functions is to diminish the complexity of the problem by neglecting some of the accessible information or searching only a subset of all possible solutions. Gigerenzer and Gaissmaier (2011) propose a definition of heuristic as "a strategy that ignores part of the information with the goals of making decisions more quickly frugally, and/ or accurately than more complex methods". Hence, heuristics are frugal in that they ignore part of the information. Unlike statistical optimization techniques, heuristics do not try to optimize, i.e., find the best solution, but instead satisfice, i.e., find a good-enough solution (Gigerenzer 2008). According to Shah and Oppenheimer (2008), all heuristics are a form of effort reduction, using one or more of the following: analyzing only a few clues, reducing the effort of recovering cue values, integrating less information or analyzing only a few alternatives. Thus, Heuristics are referred to as "rules of thumb" or mental shortcuts, which finance practitioners (both individual and group level) used in complex and uncertain situations to make decision simple and efficient. Business actors and finance practitioners often use heuristics in order to simplify the decision-making process, typically these heuristics are useful and beneficial when decision-makers have limited time and information (Waweru, Munyoki, & Uliana, 2008), but sometimes they lead to systematic errors in judgment (Ritter, 2003, Tversky & Kahneman, 1974). Conventionally, heuristics have been considered as necessary and effective tools; however, ones that produce only the second-best solutions.

Moreover, as Gigerenzer and Gaissmaier, (2011) argue convincingly that individuals and organizations often rely on fast and frugal heuristics in an adaptive way and ignoring part of the information can result in more accurate judgments as opposed to adding and weighing all information, such as small samples and low predictability. Similarly, Gigerenzer and Goldstein (1996) assert that relying on one of the best reasons (and neglecting the rest) can lead to greater prediction accuracy than is accomplished by multiple linear regression. This means that the less-is-more effect. Less-is-more effects require a new conception of why people rely on heuristics. This new conception is evolved in the form of ecological rationality. According to Gigerenzer and Gaissmaier (2011), ecological rationality basically investigates in which environments a given strategy is better than other strategies (better—not best—because in large worlds, the optimal strategy is unknown). Gigerenzer (2008) also asserts that the study of ecological rationality is prescriptive and describes the framework of environments where particular heuristics either succeed or fail.

"A heuristic is ecologically rational to the degree that it is adapted to the structure of the environment" (Gigerenzer et al. 1999). Additionally, as Gigerenzer and Marewski (2015) state,

Qualitative Research in Financial Markets

fast and frugal heuristics can be more effective and are the only potential opportunity for making appropriate decisions in given situations. Thus, in an investment strategy that relies more on fast and frugal heuristics principles, it is possible to yield better returns when compared with the same depending on complex strategy. The research scholars from the psychological research community have highlighted that due to limited knowledge and time in taking decisions and uncertainty, people often used heuristics. Besides, heuristics become useful when costs of effort are higher than the gain in accuracy, and there are capacity limitations that prevent from making rational decisions and are considered as a source of judgmental errors. In this situation, fast and frugal heuristics may be useful for making an adaptive decision with fewer resources and can, in fact, outperform more complex strategies (Hertwig & Pachur 2015).

Some scholars disagree with this school of thought that the less-is-more effect. They demonstrate that investment strategy, which relies on fast and frugal rules, would not produce better returns on a consistent basis. The cost of relying on these shortcuts is the jeopardize of committing systematic errors and serious illusions of reasoning. The paper by Shah, Ahmad, and Mahmood, (2018), seeks to highlight that investors rely on heuristics ostensibly to reduce the risk of losses in unpredictable situations. When investors use heuristics, their technical knowledge and reasoning faculties are impaired, leading to errors in judgement. As a result, investors make irrational decisions, which in turn adversely affect their investment performance (Ahmad and Shah, 2020). The literature revealed that when finance practitioners and business actors use heuristics, they reduce the mental effort in the decision-making process, causing a number of behavioural biases. The list of heuristic-driven biases that finance practitioners committed is too long and impossible to be summarized here. Here we are discussing only those behavioural biases resulting from recognition-based heuristics and are reflected in the reviewed empirical papers.

3.2 Recognition-Based Heuristics

One of the most fast and frugal heuristics introduced by Gigerenzer and colleagues is the recognition heuristic (Goldstein & Gigerenzer, 1999; Gigerenzer and Goldstein (1996); Goldstein & Gigerenzer, 2002). It is defined as "If one of two objects is recognized and the other is not, then infer that the recognized object has the higher value" (Goldstein & Gigerenzer, 1999). It is a simple mental strategy that considers only the recognition cue and leads to efficient decision making (Pachur, et al., 2011). When one alternative is recognized, and the other is not, it selects the recognized one; such a phenomenon is known as recognition heuristic (Goldstein and Gigerenzer, 2002). Additionally, Gigerenzer, & Gaissmaier (2011) state that heuristics that bases judgments only on recognition information and neglecting other signals is called recognition heuristics. Thus, the recognition heuristic is a judgment and decision-making strategy in which judgement is made by relying on one single cue (recognition), ignoring other information.

The recognition heuristic was considered as a one-cue, non-compensatory inference strategy (Dhami & Ayton, 2001), which means that no additional information aside from recognition is taken into consideration in the judgment. In reality, the "inconsequentiality of further knowledge" (Goldstein & Gigerenzer, 1999) is a crucial element of the heuristic. This peculiarity is referred to as the less is more effective. Psychologically this means that individuals and organization with little knowledge can make better decision than individuals and organization with comprehensive knowledge about the matter.

Qualitative Research in Financial Markets

Some scholars contradict Goldstein and Gigerenzer's school of thought that the recognition heuristic relies only on one single cue. As Hilbig (2010) clarifies, the recognition heuristic considers multiple cues, not only rely on one single cue as proposed by Goldstein and Gigerenzer (1999; 2002). Newell and Shanks (2004) assert that individuals consider both recognition and expert opinions in a stock market simulation. Thus, according to this school of thought, when individuals are making a judgement by using recognition heuristics, they take into account additional evidence aside from recognition. The recognition heuristic is domain-specific, cannot be useful to every situation or cannot make correct inferences in every situation by using it. According to Goldstein and Gigerenzer (1999) "ignorance is beneficial if it is correlated with what one wishes to infer", so we need the best cognitive frame for any given context.

In the recognition-based heuristics debate, we have two streams of thought: Gigerenzer and his research group (1999) claim that recognition-based heuristics can be successful in complex and uncertain environments as they guide the decision-maker in searching information "by effectively and efficiently exploiting information structures in the environment" (Bertel and Kirlik, 2010). Contrary to this position, some researchers postulated that the human mind relies on recognition-based heuristics strategies affected by systematic and predictable errors (biases), that allows only a second-best decision. Based on the systematically literature survey-based evidence, we explored some Recognition-based heuristic-driven biases that affect the decision-making process of finance practitioners, which are listed and discussed blew.

3.2.1 Recognition based heuristic-driven biases

3.2.1.1 Names fluency

Name fluency is a recognition-based heuristic-driven bias in which decision-makers rely on recognition and retrieval fluency when making judgments. It is also known as name-based behavioural bias (Itzkowitz, & Itzkowitz (2017). Investors often utilized name fluency when trading is based on the ease with which decision-makers process information. When information is easy to process, for instance, a fluent title of the stock, people tend to perceive the feelings of ease, as a result mistakenly regarded as a positive assessment of the information itself. Because investors overstate the ease of processing a fluent name with positive feelings toward the stock, stocks with more fluent names should trade more than stocks with less fluent names (Itzkowitz, & Itzkowitz (2017). According to Hertwig et al. (2008) names fluency is a heuristic that bases judgments only on the fluency cue: "when both alternatives are recognized, but one is recognized faster, it selects the one that is recognized faster".

Song and Schwarz (2009) assert that people perceive disfluently processed stimuli as riskier than fluently processed stimuli, so they prefer fluent and familiar stimuli over disfluent and unfamiliar stimuli. Thus, if investors considered stocks to be risky or harmful when their names were difficult to pronounce than when their names were easy to pronounce, such type of behavior is the reflection of name fluency bias.

3.2.1.2 Alphabetical order

Another recognition-based heuristic-driven bias, in which decision makers choose early alphabet options more frequently than others. It is also known as name based behavioral bias (Itzkowitz, &

Qualitative Research in Financial Markets

Itzkowitz (2017). Itzkowitz, Itzkowitz, and Rothbort (2015) argue convincingly; investors prefer trading in company stocks commencement with the letters that appear early in the alphabet more than stocks commencement with later letters of the alphabet; such a phenomenon is known as alphabeticity bias. Two psychological factors contribute to alphabeticity bias one is known as status quo bias, and the other is satisficing.

Investment alternatives are normally listed in alphabetical order (Doellman, et al., 2019). Even though a list of investment choices can easily be re-ordered based on individual stock characteristics, people more often rely on the default (status quo) list given to them (Kahneman, Knetsch, & Thaler, 1991). Thus, because information related to stocks are normally presented in alphabetical order, and individuals depend on the default ordering (status quo), early alphabet stocks are bought and sold more frequently than stocks appearing later in the alphabet; as a result, stocks beginning with the early letters of the alphabet have higher turnover and value than stocks beginning with later letters of the alphabet (Itzkowitz, & Itzkowitz (2017).

Doellman, et al., (2019) assert that conviction on the status quo correlates with decision-makers tendency to satisfy, resulting in an alphabetical bias. When making a choice between large numbers of options, decision-makers often satisfice, as a result, stops the search after an acceptable option is found, even if prolonged searching could yield a better result (Caplin et al., 2011). Furthermore, when decision-makers (investors) glance through lists of stocks, they will prefer to buy and sell more stocks appearing toward the beginning of the list. Thus, initial ordering has a significant influence on which stocks are chosen for purchase or sale.

3.2.1.3 Names memorability

Finally, names memorability is a recognition-based heuristic-driven bias, in which decision-makers rely on recall and recognition when making judgments. When investors are making an investment, decisions based on a stock of firms can remember such a phenomenon as names memorability bias. According to Itzkowitz, and Itzkowitz (2017), the memorability of a firm's name is a name-based behavioural bias: when investors may simply limit stock choices to firms, they remember such type of behavior is the reflection of names memorability bias.

3.3 The rationale for heuristics

There are many factors causing an increased use of heuristic by decision-makers; some of them are described in this section. According to Baker, and Nofsinger, (2010), decision-makers may still use heuristics, even when an ideal solution of a problem exists because they are not aware of the best way to solve the problem. Furthermore, they might not have the resources (or access to credit) to seek help from others, or the costs of consideration involved may be too high. They also state that policies makers formulate strategies, rely on heuristics when they are unable to get all the information needed for an optimizing solution, or they may not be capable of doing so at the time a decision must be made. Even if all the information is available, the decision-maker may not be able to complete the optimization calculation in a timely manner.

Both individual and institutional often fell prey to recognition-based heuristic-driven biases when trading in the stock market. Individual investors have a lack of knowledge regarding market fundamentals and start trading without proper research work regarding the stock performance,

Qualitative Research in Financial Markets

which stock is overpriced, and which stock is under-priced. They have no awareness concerning how to evaluate the stock performance and might not have the resources to seek help from others and intended to maximize their profit with a short period. Due to all these reasons, they invest in the stock market by using heuristic factors. Institutional investors rely on heuristics when they cannot get all the information needed for decision-making, or they may not be capable of doing so when a decision must be made. Even if all the information is available, they may not be able to complete the optimization calculation on time. High volatility exists in the stock market. They have limited time to conduct a proper analysis regarding investment opportunities; all these factors lead investors to make trading decisions by relying on mental shortcuts.

3.4 The use of recognition heuristics in investment strategy

Perhaps the first attempt to implement the recognition heuristic in constructing portfolio strategies was made by Borges, Goldstein, Ortmann, and Gigerenzer in 1999. The authors aimed to explore and clarify whether investors take advantage of a fast and frugal decision-making process to see if it was possible to build a better portfolio with less information than an investor who had access to abundant information and resources. This was the first article to empirically prove that constructing portfolios rely on the recognition heuristic, often yielded better returns than the market index. According to them, investors can earn an abnormal return by using the recognition heuristic: constructing an investment portfolio based only on one piece of information, such as the company name recognition. No other information, such as financial indicators and firms' fundamentals etc., would be indispensable in building investment portfolio strategies. As Ortmann, Gigerenzer, Borges, and Goldstein (2008) assert, stock portfolios that are constructed by implementing the recognition heuristic outperformed in the vast majority of cases and often clearly, mutual funds, market index, portfolios of unrecognized stocks and individual investment decisions. Furthermore, the recognition heuristic can be implemented with a minimum of effort and make accurate inferences at little cost.

Some researchers disagree with the view that investment strategy, which relies on fast and frugal rules (recognition heuristic), would produce better returns on a consistent basis. Boyd (2001) replicates the same study as Borges et al. (1999) to make it clear whether the recognition heuristics strategies also outperformed in different market conditions. The results show that investment portfolio strategies based on the recognition heuristic yield abnormal return only during bull markets, while during other market conditions, the strategy produced poor results. According to Boyd (2001,) "a high degree of company name recognition can lead to disappointing investment results in a down market, and it can also be beaten by pure ignorance". A similar study was conducted by Andersson and Rakow (2007) empirically prove that a simple strategy relies on fast and frugal rules (name recognition) that cannot be utilized as a general strategy for selecting stocks that generate better than average revenue. The results of their study show that "intermediate levels of recognition might yield better (or worse) returns than both low and high levels of recognition also failed to show a consistent or predictable pattern".

Another study on the topic conducted by Lobão, Pacheco, and Pereira (2017) investigates whether a portfolio constructed based on most recognized stocks yields abnormal returns consistently using a methodology based on a survey and google trends. The results from the survey-based methods exhibited that market portfolio outperformed than investment portfolio constructed by implementing the recognition heuristic, which in turn beat the unrecognized portfolio by a small

Qualitative Research in Financial Markets

margin. The results from the google trends methods indicated that the investment strategy relies on the recognition heuristic yielded weak but statistically insignificant abnormal returns on a consistent basis. According to Lobão, Pacheco, and Pereira, (2017), investment strategy relies upon fast and frugal rules (name recognition) would not result in better returns to investors than investing in a market portfolio. Ahmad, Shah, and Abbass (2020) assert that heuristic-driven biases have a markedly negative influence on entrepreneurs' strategic decisions in emerging markets.

Many studies have concluded that individuals tend to use heuristics in an adaptive way (Katsikopoulos & Martignon, 2006; Payne et al., 1993), that is, to best exploit the features of the environment in which the decision takes place. Also, ecological rationality affirms the usefulness of recognition-based heuristics, which sometimes dominates the classical methods. On the contrary, recognition-based heuristics are deemed bias-bias, which is an inferior mode of decision-making. There is still no consensus on the usefulness of the recognition heuristic in the field of portfolio management. Thus, a lack of consensus about this topic suggests that further studies may bring relevant contributions to the literature.

3.5 Recognition based heuristic-driven biases and investment decision making

Investor psychology has a direct effect on the decision-making process. The effects of recognition-based heuristic-driven biases on stock valuation have also been revealed in real-life investment situations. The paper by Itzkowitz and Itzkowitz (2017) seeks to highlight the influence of the recognition-based heuristic-driven biases, i.e., alphabetical ordering, name memorability, and name fluency, on the investment decision-making of individual and institutional investors. The results of the study reveal that investors use these name-based short-cuts when trading stocks, resulting in irrational decisions. Chan, Park, and Patel, (2018) studied the impact of company name fluency on venture investment decisions in pre-venture and post-success stages. The results show that pre-ventures investors prefer low linguistically fluently named ventures because they prefer to invest in unique enterprises with high phonetically fluent names. The high phonetic fluency automatically elicits a favorable impression. On the other hand, post-success investors may still prefer to invest in ventures with high phonetically fluent names but are less affected by linguistic fluency because they are less concerned about an enterprise's uniqueness.

Green, and Jame, (2013) have elucidated the impact of name fluency and its effect on investment decisions and firm value. The results are in the context of the USA, and it has proved that name fluency has a significant influence on investment decisions, i.e., with fluently named mutual funds attracting greater fund flows and fluent closed-end funds trading at smaller discounts. Moreover, it also showed that companies with short and easily pronounced names have higher turnover and value than companies with difficult names to pronounce. Anderson and Larkin (2019) also documented that companies with English word tickers and fluent names have a higher turnover, valuation ratios, and breadth of ownership (Xing et al., 2016). According to Song and Schwarz (2009) investors tend to perceive such companies as “less risky investment opportunities” because the company fluency name could diminish risk perception and develop a sense of skill with a greater familiarity with the company (Weber et al. 2005). Investors are more likely to optimistically value companies with fluent names as those firms tend to prompt a more favorable impression of associated objects (Alter and Oppenheimer 2006); as a result, they intend to engage more investment in such firms.

Qualitative Research in Financial Markets

Itzkowitz, Itzkowitz, and Rothbort, (2016) explore the effect of alphabetical ordering on stock turnover and value. The results revealed that stocks with early alphabet names are traded more often than stocks with later alphabet names and that alphabetical ordering also has a significant effect on the value of a firm. Jacobs and Hillert (2016) investigate the impact of alphabetic bias on investors' trading behavior actively trading on the US stock market. The results show stocks with early alphabet names have about 5–15% higher trading activity than stocks with later alphabet names. Similarly, Doellman, et al., (2019) studied the role of alphabetic bias in investment allocation decisions. The results indicate that alphabetically bias has a significant influence on investment allocation decisions even in small choice sets, such as the case with 401(k) investing. Thus, investors are more likely to purchase and sell stocks with early alphabet names. Grullon, Kanatas, and Weston, (2004) explain the mechanism by which advertising influences the breadth of ownership and liquidity of a firm. The results show that companies that are engaged in more frequent advertising have a greater number of both individual and institutional stockholders, as well as better liquidity of their common stock. The study's overall results suggest that the degree of investor familiarity with a company may affect the cost of capital and, consequently, its value.

After reviewing the relevant literature, the researcher concluded that investors are relying on recognition-based heuristic-driven biases when trading stocks, resulting in irrational decisions. Due to these name-based behavioural biases, among others, investors choose inappropriate or risky investments, as well as trading excessively, which can have a negative effect on their returns. Investors are more likely to optimistically value companies with fluent names alphabetical ordering, and name memorability as those companies tend to prompt a more favorable impression of associated objects; as a result, they underestimate their downside risk and intend to engage more investment in such companies which in turn adversely affect their investment performance.

3.6 Are expert investors immune to recognition-based heuristics?

Generally, it is seen that novices and expert investors display divergences in both sizes and also characteristics and that they get opposite positions in the financial markets (Schmeling, 2007). Besides, institutional and individual investors differ in their risk perceptions, time horizon and profit goals (George et al., 2005). Fisher and Statman (2002) propounded that institutional investors, just like individual investors, were subject to behavioural biases and these biases had equal influences on both investor groups. Some researchers disagree with this view, and this school of thought is the motivating idea for this research. Itzkowitz and Itzkowitz (2017) argue convincingly; all investors are not the same; thus, heuristic-driven biases may not influence all the investors equally.

One of the factors that can lead to heuristic differential use is the level of investor knowledge. Because institutional investors have practiced skills of analysis and amplification, thus they can better manage their efforts and understand which data are relevant to the decision-making abilities that may protect them against the biases that influence an individual's investor behavior (Alba and Hutchinson 1987). Compared to individual investors, institutional investors are experts considering some empirical exceptions. Institutional investors have a wide variety of trading experience and have more training as compared to individual investors. Thus, we can say that institutional investors to be less affected by heuristic biases than are individual investors.

Qualitative Research in Financial Markets

The paper by Khan, Naz, Qureshi, and Ghafoor (2017) seeks to highlight the effect of the heuristic's biases, i.e., representativeness, anchoring and adjustment, and availability on the investors' stock buying decisions. The results are in the context of Pakistan and the Malaysian Stock Market. It has proved that these heuristic biases have a significant impact on the investors' stock buying decisions. This paper shows that the heuristics effect similarly across the sample countries. This paper also explains that better educated and more experienced investors are less likely to suffer from these heuristics. Itzkowitz and Itzkowitz (2017) studied individuals and institutional investors' investment behavior to discover the distinction in their behavior and the impact of behavioural biases in their financial decision-making. The results of their study indicate investors use heuristics when trading stocks, resulting in irrational decisions. The research also reveals that institutional investors are relatively immune to heuristic biases as compared to individual investors because both types of investor's process information differently as a result, heuristics may not affect all investors equally.

Similarly, another study on the topic by Chou and Wang (2011) asserts that institutional investors were less subject to behavioural bias as compared to individual investors. A qualitative approach has been employed by Jaiyeoba, Adewale, Haron, and Ismail, (2018) to understand behavioural biases and their influence on individuals' investment decisions and institutional investors who are trading at the Malaysian stock exchange. The results of the study revealed that Malaysian individual and institutional investors, although they suffer from psychological biases, but the latter use more comprehensive approaches to overcome such influences during investment decisions. Moreover, the findings exhibited that individual investors are likely to be more influenced by emotions and psychological biases as compared with institutional investors. Similarly, a study conducted by Chaudary, (2019) also highlighted that individual investors suffering from salience heuristic more than institutional investors, specifically for short-run investment choices.

Furthermore, Jaiyeoba, Abdullah, & Ibrahim, (2020) stated that institutional and individual investors of Malaysia were subject to psychological biases i.e., representativeness heuristic, overconfidence bias, anchoring bias, herding bias, religious bias, and these biases had equal influences on both investor groups except herding bias and religious bias. These groups of investors are differently influenced by herding bias and religious bias. They also argue convincingly; institutional investors do not completely behave rationally[1] during the investment decision-making process. As Li, Rhee, and Wang, (2017) assert that both individual and institutional investors are suffering from herding behaviour. Additionally, they also highlight three important findings regarding the difference between institutional and individual investors. First, institutional investors who have better information trade more selectively in comparison to less-informed individual investors who allocate their investment across stocks evenly; second, while institutional investors rely on rational analysis for their trades, individual investors make investment decisions by using public information as attention-grabbing events and market sentiment influence them; and third investors are less concerned regarding up- and down-market

[1] Rationality is defined as systematic selection among possible choices that is based on reason, facts, logic, or statistical models. In rational decision-making models, decision makers evaluate a number of possible substitutions from different possible situations before selecting a choice (Oliveira 2007). In this context, investors use different models and theories of standard finance to estimate risk and expected returns when making investment decisions rationally (Arora and Kumari, 2015).

Qualitative Research in Financial Markets

movements whereas institutional investors react asymmetrically to up-and down-market movements (Li et. al, 2017).

After reviewing the relevant literature, the authors have identified that it seems inconceivable to contend that institutional investors completely behave rationally during stock trading. They deviate from rational decision-making during investment management because of heuristic-driven biases but less likely to be affected by these heuristics in comparison to the individual investors.

3.7 How to mitigate the negative effect of recognition-based heuristics?

Finance practitioners should follow guiding principles provided by different researchers to mitigates the negative effect of heuristic-driven biases and how it can be positively employed in investment strategies. For example, Otuteye and Siddiquee (2015) assert that to mitigate the chances of falling prey to heuristic biases is to stipulate the algorithm for the investment management activities in advance and employ it dispassionately. They also documented that disciplined enforcement of heuristics in investment strategies will evade the common pitfalls of cognitive heuristic biases. Ahmad and Shah, (2020) argue convincingly; financial literacy plays an important role in overcoming the negative effect of heuristics factors. If investors used heuristics with the inclusion of financial knowledge, the negative impact of heuristic factors would reduce; as a result, an investor can positively utilize heuristics in their investment management activities. Gigerenzer, & Gaissmaier, (2011) asserts that heuristics can be more accurate than gradually complex techniques despite the fact that they process less information. They also argue a heuristic convincingly is not bad or good, irrational or rational; its precision relies upon the structure of the environment. With adequate experience, individuals figure out how to choose legitimate heuristics from their adaptive toolbox.

According to Jaiyeoba, Adewale, Haron, and Ismail, (2018), institutional investors can mitigate the impact of psychological biases and emotions by maintaining self-discipline, talking about the investment intention in the board of trustees meeting, following guiding principles of investment, before investing or putting resources in a company seek information relevant to the company to know their business activities and receive investment advice from the investment team and occasionally from other portfolio managers. Moreover, individual investors can minimize the influence of emotions and psychological biases, if desired, by reading newspapers and magazines, seeking investment advice from financial strategist/advisor' reports, family members, friends, traders in the stock market, and online forums and online search. As Anandarajan, Kleinman, and Palmon (2008) concluded, experience diminishes the inadvertent consequences of heuristic-driven biases.

4. Research gaps in the existing literature

The authors have evaluated the published individual and institutional investors research focused on the behavioural finance paradigm in recognized journals in order to discover some significant gaps with regard to them. A limited review of prior studies regarding the behavioural finance paradigm and substantial gaps with regard to them is provided below.

Jaiyeoba & Haron (2016) studied the investment behavior of retail investors in Malaysia by using qualitative research method. According to them investment decisions of retail investors depend on

Qualitative Research in Financial Markets

the feeling of comfort or convention as opposed to quantitative analysis. They recommended further studies can be done by using a mixed-methods approach to investigate the behavior of investors during investment decision making. Itzkowitz and Itzkowitz (2017) studied individuals and institutional investors' investment behavior to discover the distinction in their behavior and the impact of recognition-based heuristics in their financial decision-making. The results of their study indicate investors use name-based heuristics, i.e., name memorability, alphabetical ordering and name fluency, when trading stocks, resulting in irrational decisions. The research also reveals that institutional investors are relatively immune to name-based /recognition-based heuristic as compared to individual investors because both type of investor's process information differently as a result, name-based heuristics may not affect all investors equally. They suggested further studies explore heuristics use by institutional investors and test whether investors are equally immune to behavioural biases resulting from loss aversions such as status quo bias, sunk costs, and endowment effects.

A qualitative approach has been employed by Jaiyeoba, Adewale, Haron, and Ismail, (2018) to understand behavioural biases and their influence on individuals' investment decisions and institutional investors who are trading at the Malaysian stock exchange. And also identify how to mitigate the effect of emotion, behavioural biases, sentiments and challenges faced by the investors during investment decisions. The results of the study revealed that Malaysian individual and institutional investors suffering from psychological biases. Furthermore, the findings exhibited that individual investors are likely to be more influenced by emotions and psychological biases as compared with institutional investors. They recommended further studies used a mixed-methods approach to clearly understand this phenomenon. Ahmad, (2020) also recommended that the study can be further used a mixed-methods approach to clearly understand heuristic-driven biases and their effect on investment management activities. As well as to identify the factors causing an increased use of heuristics by investors, how to overcome the negative effects of heuristic-driven biases and how it can be positively utilized in investment strategies. Chaudary (2019) explores the salience heuristic impact on short-term and long-term investment decisions. And also determine whether the salience heuristic equally influenced both individual and institutional investors. The results demonstrated that the salience heuristic has a significant positive influence on investment decisions both in the short and long run. Furthermore, individual investors suffer from the salience heuristic more than institutional investors, specifically for short-run investment choices. She suggested further extension can be made by including other heuristic-driven biases that may have an impact on the investment decision-making of individual and institutional investors.

The effect of the overconfidence heuristic on individual investors' decisions and performance, with the mediating role of risk perception and the moderating role of financial literacy, is studied by Ahmad and Shah (2020). The results conclude that risk perception fully mediates the relationships between the overconfidence heuristic on the one hand and investment decisions and performance on the other. At the same time, financial literacy appears to moderate these relationships. The results suggest that overconfidence can impair the quality of investment decisions and performance, while financial literacy and risk perception can improve their quality. According to them, further extension can be made by including additional biases like alphabetical ordering, name memorability and name fluency because limited research has been carried out on these name-based heuristics among investors. Furthermore, they suggest applying behavioural finance theories to explore other behavioural factors, which influence the decisions of individual investors and have a significant effect on their performance, as mediated by risk perception and moderated by

Qualitative Research in Financial Markets

financial literacy. Fundamental and technical anomalies might also be used as mediating variables. It may also be helpful if a study were carried out that covers data from three different markets, like one from a developed country, the second from a developing country and the third from not so developed economy. Such a comparative study can prove to be a meaningful addition to the body of knowledge on behavioural finance.

Jaiyeoba, Abdullah, and Ibrahim, (2020) studied the investment behavior of Malaysian individuals and institutional investors in an attempt to determine whether behavioural biases equally influenced these groups of investors. The results of the study indicate that institutional and individual investors are equally influenced by psychological biases, i.e., anchoring bias, overconfidence bias, and representativeness heuristic and differently influenced by herding bias and religious bias. They suggested that the study can be performed to find the additional psychological biases and their impact on the investment decision-making of individual and institutional investors and illustrate the differential effect of these behavioural biases in their financial behavior.

Thus, research scholars from the behavioural finance community have highlighted that recognition-based heuristics and their effect on investment management activities are highly demanded areas, needed to be explored further in the field of behavioural finance. Therefore the future research studies will fill this gap in the current body of literature on behavioural finance for this part of the globe, which will contribute to theory and practice by providing a framework that clarifies the mechanism by which recognition-based heuristic-driven biases influences investment management activities and to discuss a practical approach to overcoming the negative effects of recognition-based heuristics so that finance practitioners can avoid repeating the expensive errors which occur due to heuristic biases. It also discussed how recognition-based heuristics could be positively utilized in investment management activities using a mixed-methods approach. The gaps analysis and discussions in the earlier sections have carried forward several issues for future research. These are addressed below.

Literature highlights the lack of research regarding recognition-based heuristic-driven biases (namely alphabetical ordering, name memorability, and name fluency) and their effect on investment management activities in the context of emerging economies like Pakistan. Hence future research studies can focus on emerging stock markets because emerging markets contain more conditions of uncertainty when compared with the developed markets. The uncertainty prevails in the form of more sparse informational environments, fewer analysts following, reduced accounting disclosure, and the like. In such a context, fast and frugal reasoning works better, which needs to be studied further. It has also been seen that after globalization, emerging markets have tremendous growth potential, and investors (institutional and individuals) are more likely to invest in the stock market, which leaves a broad scope for future research. Second, attention should be given to consider why the recognition-based heuristic-driven biases were formed and possible mediator and moderator variables to clearly understand how these heuristic-driven biases affect investment related choices. For example, an anxious feeling for quick benefits could be a factor to form the recognition-based heuristic-driven biases, and these name-based behavioural biases could affect the investment management activities via a mediator of risk perception. Furthermore, financial literacy as moderating, fundamental, and technical anomalies might also be used as a mediating variable between these name-based behavioural biases and investment management activities.

Qualitative Research in Financial Markets

Third, research can be conducted by combining diverse types of investors such as individuals, institutional (investment advisors, mutual funds, pension funds, hedge funds, etc.) to find out the variation in their behavior and the influence of recognition-based heuristic-driven biases in their financial decision making. Fourth, It may also be helpful if a study can be performed that used a mixed-methods approach to clearly recognition-based heuristic-driven biases and their effect on investment management activities as well as to identify the factors causing an increased use of heuristics by investors, how to overcome the negative effects of heuristic-driven biases, and how it can be positively utilized in investment strategies. Such a study can prove to be a meaningful addition to the body of knowledge on behavioural finance.

5. Conclusion

This article aimed to determine the impact of recognition-based heuristic-driven biases on investment management activities and to address the question as to why investors' behavior diverges from rationality. A systematic literature review approach was used to understand the role that recognition-based heuristics plays in investment management activities. This study has provided a detailed analysis of themes from 58 articles, which have been published from 1980 to 2020. There is substantial literature on investors who are thought to make irrational decisions with the effect of various financial behavioural tendencies. The studies indicate that an investment strategy constructed by implementing the recognition-based heuristics would not result in better returns to investors on a consistent basis. Most investors consistently rely on recognition-based heuristic-driven biases, i.e., alphabetical ordering, name memorability, and name fluency, when trading stocks, resulting in irrational decisions. Due to these name-based behavioural biases, investors choose inappropriate or risky investments and trading excessively, which can have a negative effect on their returns. Investors are more likely to optimistically value companies with fluent names alphabetical ordering, and name memorability as those companies tend to prompt a more favorable impression of associated objects; as a result, they underestimate their downside risk and intend to engage more investment in such companies which in turn adversely affect their investment performance. The authors have also identified that during stock trading, it seems improbable to contend that institutional investors completely behave rationally. They deviate from rational decision-making during investment management activities because of recognition-based heuristics biases but less likely to be affected by these heuristics in comparison to the individual investors. This article has important practical implications for finance practitioners' such as an investor who plays at a stock exchange, a portfolio manager, a financial strategist/advisor in an investment firm, a financial planner, an investment banker, a trader/ broker at a stock exchange, or a financial analyst. But most importantly, the term also includes all those persons who manage corporate entities and are responsible for making its financial decisions and academia. This article also helps a researcher understand the gaps in the existing behavioural finance literature and provides future work scope.

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Qualitative Research in Financial Markets

References.

Ahmad, M. (2020), "Does under-confidence matter in short-term and long-term investment decisions? Evidence from an emerging market.", Management Decision, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/MD-07-2019-0972

Ahmad, M., Shah, S. Z. A., & Abbass, Y. (2020). The role of heuristic-driven biases in entrepreneurial strategic decision-making: evidence from an emerging economy. Management Decision, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/MD-09-2019-1231.

Ahmad, M., and Shah, S.Z.A. (2020), "Overconfidence Heuristic-Driven Bias in Investment Decision-Making and Performance: Mediating effects of risk perception and moderating effects of financial literacy.", Journal of Economic and Administrative Sciences, just accepted

Ahmad, Z., Ibrahim, H., & Tuyon, J. (2017). Institutional investor behavioral biases: syntheses of theory and evidence. Management Research Review, Vol. 40 No. 5, pp. 578-603. https://doi.org/10.1108/MRR-04-2016-0091

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of consumer research*, *13*(4), 411-454.

Alter, A. L., and Oppenheimer, D. M. 2006. Predicting short-term stock fluctuations by using processing fluency. Proceedings of the National Academy of Sciences, 103(24), 9369-9372.

Anandarajan, A., Kleinman, G., & Palmon, D. (2008). Novice and expert judgment in the presence of going concern uncertainty. *Managerial Auditing Journal*. Vol. 23 No. 4, pp. 345-366. https://doi.org/10.1108/02686900810864309

Anderson, A. G., & Larkin, Y. (2019). Does Noninformative Text Affect Investor Behavior?. *Financial Management*, *48*(1), 257-289.

Andersson, P. and Rakow, T. (2007), "Now you see it now you don't: the effectiveness of the recognition heuristic for selecting stocks", Judgment and Decision Making, Vol. 2, pp. 29-39.

Arora, M. and Kumari, S. (2015), "Risk taking in financial decisions as a function of age, gender: mediating role of loss aversion and regret", International Journal of Applied Psychology, Vol. 5 No. 4, pp. 83-89.

Baker, H. K., & Nofsinger, J. R. (Eds.). (2010). *Behavioral finance: investors, corporations, and markets* (Vol. 6). John Wiley & Sons.

Bertel, S., & Kirlik, A. (2010). Fast and frugal heuristics. *Wiley Encyclopedia of Operations Research and Management Science*. https://doi.org/10.1002/9780470400531.eorms0319

Borges, B., Goldstein, D.G., Ortmann, A. and Gigerenzer, G. (1999), "Can ignorance beat the stock market?", in Gigerenzer, G., Todd, P. and The ABC Research Group (Eds), Simple

Qualitative Research in Financial Markets

Heuristics That Make Us Smart, Oxford University Press, New York, NY, Oxford, pp. 59-72.

Boyd, M. (2001), "On ignorance, intuition, and investing: a bear market test of the recognition heuristic", Journal of Psychology and Financial Markets, Vol. 2 No. 3, pp. 150-156.

Bryman, A. and Bell, E. (2007), Business Research Methods, 2nd ed., Oxford University Press, Oxford.

Caplin, A., Dean, M., & Martin, D. (2011). Search and satisficing. *American Economic Review*, *101*(7), 2899-2922.

Chan, C. S. R., Park, H. D., & Patel, P. (2018). The effect of company name fluency on venture investment decisions and IPO underpricing. *Venture Capital*, *20*(1), 1-26.

Chaudary, S. (2019), "Does salience matter in investment decision? Differences between individual and professional investors", *Kybernetes*, Vol. 48 No. 8, pp. 1894-1912. https://doi.org/10.1108/K-09-2018-0490

Chou, R. K., & Wang, Y. Y. (2011). A test of the different implications of the overconfidence and disposition hypotheses. *Journal of Banking & finance*, *35*(8), 2037-2046..

Cooper, H., Hedges, L. V., & Valentine, J. C. (2009). The handbook of research synthesis and meta-analysis 2nd edition. In *The Hand. of Res. Synthesis and Meta-Analysis, 2nd Ed.* (pp. 1-615). Russell Sage Foundation.

Dhami, M. K., & Ayton, P. (2001). Bailing and jailing the fast and frugal way. *Journal of behavioral decision making*, *14*(2), 141-168.

Doellman, T., Itzkowitz, J., Itzkowitz, J. and Sardarli, S., 2019. Alphabeticity bias in 401 (k) investing. The Financial Review, 54(4), pp. 643-677

Fama, E. (1970), "Efficient Capital markets: a review of theory and empirical work", Journal of Finance, Vol. 25 No. 2, pp. 383-417.

Fink, A. (2010), Conducting Research Literature Reviews: From the Internet to Paper, 3rd ed., Sage Publications, CA.

Fisher, K.L. and Statman, M. (2002), "Blowing bubbles", Journal of Psychology and Financial Markets, Vol. 3 No. 1, pp. 53-65.

George, G., Wiklund, J. and Zahra, S.A. (2005), "Ownership and the internationalization of small firms", Journal of Management, Vol. 31 No. 2, pp. 210-233.

Gigerenzer, G. (2008). Why heuristics work. Perspectives on psychological science, 3(1), 20-29.

Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic decision making. *Annual review of psychology*, *62*, 451-482.

Gigerenzer, G., & Goldstein, D. G. (1996). Reasoning the fast and frugal way: models of bounded rationality. *Psychological review*, *103*(4), 650-669.

Gigerenzer, G., & Goldstein, D. G. (2011). The recognition heuristic: A decade of research. *Judgment and Decision Making*, *6*(1), 100-121.

Gigerenzer, G., & Marewski, J. N. (2015). Surrogate science: The idol of a universal method for scientific inference. *Journal of Management*, *41*(2), 421-440.

Goldstein, D. G., & Gigerenzer, G. (1999). The recognition heuristic: how ignorance makes us smart. In G. Gigerenzer, & P. Todd (Eds.), Simple heuristics that make us smart. New York: Oxford University Press.

Goldstein, D. G., & Gigerenzer, G. (2002). Models of ecological rationality: the recognition heuristic. *Psychological review*, *109*(1), 75–90.

Green, T. C., & Jame, R. (2013). Company name fluency, investor recognition, and firm value. *Journal of Financial Economics*, *109*(3), 813-834.

Groner, R., Groner, M., & Bischof, W. F. (1983). The role of heuristics in models of decision. In *Advances in Psychology*, Vol. 16, pp. 87-108

Grullon, G., Kanatas, G., & Weston, J. P. (2004). Advertising, breadth of ownership, and liquidity. *The Review of Financial Studies*, *17*(2), 439-461.

Hertwig, R., & Pachur, T. (2015). Heuristics, history of. *International encyclopedia of the social & behavioral sciences*, *10*(2), pp. 829-835,

Hertwig, R., Herzog, S. M., Schooler, L. J., & Reimer, T. (2008). Fluency heuristic: A model of how the mind exploits a by-product of information retrieval. *Journal of Experimental Psychology: Learning, memory, and cognition*, *34*(5), 1191.

Hilbig, B. E. (2010). Reconsidering "evidence" for fast-and-frugal heuristics. *Psychonomic Bulletin & Review*, *17*(6), 923-930.

Itzkowitz, J., & Itzkowitz, J. (2017). Name-based behavioral biases: are expert investors immune?. *Journal of Behavioral Finance*, *18*(2), 180-188.

Itzkowitz, J., Itzkowitz, J., & Rothbort, S. (2016). ABCs of trading: Behavioral biases affect stock turnover and value. *Review of Finance*, *20*(2), 663-692.

Itzkowitz, Jennifer, Jesse Itzkowitz, and Scott Rothbort. "ABCs of trading: Behavioral biases affect stock turnover and value." *Review of Finance* 20, no. 2 (2016): 663-692.

Jacobs, H., & Hillert, A. (2016). Alphabetic bias, investor recognition, and trading behavior. *Review of Finance*, *20*(2), 693-723.

Jaiyeoba, H. B., Abdullah, M. A., & Ibrahim, K. (2020). Institutional investors vs retail investors. International Journal of Bank Marketing, , Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJBM-07-2019-0242.

Jaiyeoba, H. B., Adewale, A. A., Haron, R., & Ismail, C. M. H. C. (2018). Investment decision behaviour of the Malaysian retail investors and fund managers. *Qualitative Research in Financial Markets*. Vol. 10 Issue: 2, pp.134-151, https:// doi.org/10.1108/QRFM-07-2017-0062

Kahneman, D. and Tversky, A. (1974), "Judgment under uncertainty: heuristics and biases", Journal of Science, Vol. 85 No. 4157, pp. 1124-1131.

Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic perspectives*, *5*(1), 193-206.

Katsikopoulos, K.V. and Martignon, L. (2006), "Naïve heuristics for paired comparisons: some results on their relative accuracy", Journal of Mathematical Psychology, Vol. 50 No. 5, pp. 488-494.

Khan, H. H., Naz, I., Qureshi, F., & Ghafoor, A. (2017). Heuristics and stock buying decision: Evidence from Malaysian and Pakistani stock markets. *Borsa Istanbul Review*, *17*(2), 97-110.

Kitchenham, B.A. (2007), "Guidelines for performing systematic literature reviews in software engineering", in Technical report, Ver. 2.3 EBSE Technical Report, EBSE. sn.

Kitchenham, B.A., Brereton, P., Turner, M., Niazi, M.K., Linkman, S., Pretorius, R. and Budgen, D. (2010), "Refining the systematic literature review process—two participant-observer case studies", Empirical Software Engineering, Vol. 15 No. 6, pp. 618-653.

Levy, Y. and Ellis, T.J. (2006), "A systems approach to conduct an effective literature review in support of information systems research", Informing Science, Vol. 9

Li, W., Rhee, G., & Wang, S. S. (2017). Differences in herding: Individual vs. institutional investors. Pacific-Basin Finance Journal, 45, 174-185.

Lobão, J., Pacheco, L. and Pereira, C. (2017), "The use of the recognition heuristic as an investment strategy in European stock markets", Journal of Economics, Finance and Administrative Science*, Vol. 22 No. 43, pp. 207-223. https://doi.org/10.1108/JEFAS-01-2017-0013*

Mahmood, F., Khan, A. Z., & Bokhari, R. H. (2019). ERP issues and challenges: a research synthesis. Kybernetes. Vol. 49 No. 3, pp. 629-659. https://doi.org/10.1108/K-12-2018-0699

Mahmood, F., Khan, A. Z., & Khan, M. B. (2019). Digital organizational transformation issues, challenges and impact: A systematic literature review of a decade. Abasyn University Journal of Social Sciences, 12(2),232-249.

Manten, A.A. (1973), Scientifi c Literature Review, Vol. 5, Scholarly Publishing, 75-89.

Marshal, G. (2010), "Writing . . . literature review", Synergy, Imaging and Therapy Practice, pp. 20-23.

Newell, B. R., & Shanks, D. R. (2004). On the role of recognition in decision making. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *30*(4), 923.

Ortmann A, Gigerenzer G, Borges B, Goldstein DG. 2008. The recognition heuristic: a fast and frugal way to investment choice? In Handbook of Experimental Economics Results: Vol. 1 (Handbooks in Economics No. 28), ed. CR Plott, VL Smith, pp. 993–1003. Amsterdam: North Holland

Otuteye, E., & Siddiquee, M. (2015). Overcoming cognitive biases: A heuristic for making value investing decisions. *Journal of Behavioral Finance*, *16*(2), 140-149.

Pachur, T., Todd, P. M., Gigerenzer, G., Schooler, L., & Goldstein, D. G. (2011). The recognition heuristic: A review of theory and tests. *Frontiers in psychology*, *2*, 147.

Payne, J.W., Bettman, J.R. and Johnson, E.J. (1993), The Adaptive Decision Maker, Cambridge University Press, Cambridge, MA.

Piattelli-Palmerini, M. (1994). *Inevitable illusions: How mistakes of reason rule our minds*. New York: Wiley.

Poojary, S.A. and Bagadia, J.D. (2014), "Reviewing literature for research: doing it the right way", Indian Journal of Sexually Transmitted Diseases and Aids, Vol. 35 No. 2, pp. 85-91.

Ritter, J.R. (2003), "Behavioral finance", Journal of Pacific-Basin Finance, Vol. 11 No. 4, pp. 429-437.

Schmeling, M. (2007). Institutional and individual sentiment: Smart money and noise trader risk?. *International Journal of Forecasting*, *23*(1), 127-145.

Shah, A. K., & Oppenheimer, D. M. (2008). Heuristics made easy: An effort-reduction framework. *Psychological bulletin*, *134*(2), 207-222.

Shah, S.Z.A., Ahmad, M. and Mahmood, F. (2018), "Heuristic biases in investment decision-making and perceived market efficiency: A survey at the Pakistan stock exchange", Qualitative Research in Financial Markets, Vol. 10 No. 1, pp. 85-110. https://doi.org/10.1108/QRFM-04-2017-0033

Song, H., & Schwarz, N. (2009). If it's difficult to pronounce, it must be risky: Fluency, familiarity, and risk perception. Psychological Science, 20(2), 135-138.

Song, H., and Schwarz, N. 2009. If it's difficult to pronounce, it must be risky, Fluency, familiarity, and risk perception. *Psychological Science,* 20(2), 135-138.

Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, *1*(1), 24-41.

Weber, E. U., Siebenmorgen, N., and Weber, M. 2005. Communicating asset risk, How name recognition and the format of historic volatility information affect risk perception and investment decisions. *Risk Analysis,* 25(3), 597–609.

Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. MIS Quarterly, 26(2), xiii-xxiii.

Xing, X., Anderson, R. I., & Hu, Y. 2016. What' s a name worth? The impact of a likable stock ticker symbol on firm value. *Journal of Financial Markets*, *31*, 63-80.

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