

Relationship between Behavioral Bias and Personal Investment Decisions

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Abstract:

To meet their working and fixed capital requirements, business units must raise short- and long-term money on a regular basis. This needs not just the easy availability of such money, but also a transmission mechanism that allows fund providers (investors/lenders) to communicate with borrowers/users (business units) and transfer cash to them as needed. The financial markets take care of this element by providing allocation or a mechanism for investors/lenders to send money to business units.

Keywords: Money market, Capital Market, Credit facilities

INTRODUCTION

A financial market is divided into two parts, the money market and the capital market. Short-term credit is handled by the money market, whereas medium- and long-term credit is handled by the capital market. The money market is a short-term fund market that deals in financial assets with a one-year maturity period. The money market, it should be noted, does not trade in cash or money as such, but rather in credit instruments such as bills of exchange, promissory notes, commercial paper, treasury bills, and so on. These financial products are a near match for cash. These instruments assist businesses, other organizations, and the government in borrowing funds to address short-term needs.

The term "money market" does not refer to a specific market. Rather, it refers to the entire network of financial institutions that deal in short-term funds and offer lenders with an outlet as well as a source of supply for borrowers. The majority of money market transactions are conducted through the phone, fax, or the Internet. The Reserve Bank of India, commercial banks, cooperative banks, and other specialized financial organizations make up the Indian money market. India's money market is dominated by the Reserve Bank of India. In India's money market, Non-Banking Financial Companies (NBFCs) and financial institutions such as LIC, GIC, UTI, and others operate.

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INSTRUMENTS OF THE MONEY MARKET Some of the most important money market instruments or securities are listed below.

(a) Call Money: Call money is primarily utilised by banks to meet their short-term financial needs. On a daily basis, they borrow and lend money to one another. It is repayable on demand and has a maturity period ranging from one day to two weeks. The call rate is the interest rate charged on call money loans.

(b) Treasury Bill: A treasury bill is a promissory note issued by the Reserve Bank of India to meet short-term cash requirements. Treasury bills are highly liquid instruments, which means that their holders can transfer or get them redeemed from the RBI at any moment. These bills are usually issued for a lower price than their face value, and they are redeemed at face value.

The interest on the investment is calculated as the difference between the issue price and the face value of the Treasury bill. These bills are secured instruments with a maximum maturity date of 364 days. The Treasury bill market is dominated by banks, financial institutions, and companies. Money Capital Market Market Senior Secondary Business Finance Financial Market

(c) Commercial Paper: Commercial paper (CP) is a widely used instrument for funding a company's working capital needs. The CP is a promissory note that is issued as an unsecured instrument. In 1990, this instrument was introduced to allow corporate borrowers to raise short-term finance. It can be awarded for any length of time between 15 days and one year.

(d) Certificate of Deposit: CDs are short-term instruments issued by Commercial Banks and Special Financial Institutions (SFIs) that are readily transferable from one party to another. CDs have maturities ranging from 91 days to one year. Individuals, cooperatives, and businesses can all receive these.

(e) Trade Bill: Normally, traders purchase items on credit from wholesalers or manufacturers. After the credit period expires, the sellers get paid. If a seller does not want to wait or is in desperate need of cash, he or she can draw a bill of exchange in the buyer's favor. The bill becomes a negotiable instrument when the buyer accepts it, and it is known as a bill of exchange or trade bill. Before its maturity, this trade bill can now be discounted with a bank. The bank receives payment from the drawee, or the buyer of products, when the loan matures. Commercial Bills are trade bills that are accepted by commercial banks. As a result, a trade bill is an instrument that allows the drawer of a trade bill to make a profit.

A secondary market, often known as a stock exchange, is a venue where different forms of existing assets, such as shares, debentures, and bonds, as well as government securities, can be purchased and sold on a regular basis. A stock exchange is typically organized as a

limited-membership association, society, or corporation. It is only open to these members who function as buyers' and sellers' brokers. Stock exchanges are described by the Securities Contracts (Regulation) Act as "an association, organization, or group of individuals, whether incorporated or not, created for the purpose of helping, regulating, and controlling the business of buying, selling, and dealing in securities."

It should be noted that not all securities can be exchanged on a recognised stock exchange. It is only permitted in securities (known as listed securities) that have been officially licenced by the stock exchange authorities for the purpose. However, thanks to the advent of on-line trading with the use of computers, the process of trading is now relatively simple. It is also quite quick, as it only takes a few minutes to reach an agreement with one of the brokers who may be nearby. Similarly, due to the scrip-less trading and rolling settlement system, the delivery of securities and payment of the amount involved takes only a few days, say two.

ABOUT THE SUBJECT

A survey research design is used in this study. The study's population consisted of all individual investors in India. A convenient sample of 70 participants was chosen for the investigation (i.e, administering the questionnaire to people available by contact). The respondents were chosen using snowball sampling approaches, in which the first respondent was asked to recommend a colleague or acquaintance who was an investor, and so on, until the desired sample size was attained. A systematic questionnaire was used to collect data. Individual investment decisions were not significantly influenced by representativeness bias, overconfidence/self-attribution bias, loss aversion, or regret aversion bias, according to the data.

Individual investor decisions, on the other hand, are heavily influenced by hindsight bias. As a result, the investors demonstrated that, rather than being rational, their decisions are impacted by behavioral factors. The study concludes that behavioral biases have a significant impact in individual investment decisions based on this finding. Individual investors should be taught on how to overcome poor investment outcomes induced by behavioral biases, according to the study. Training programmes that increase investor awareness and ability to identify and guard against behavioral biases that lead to poor investment decisions should be offered to both potential and existing individual investors in order to manage the excesses of behavioral influences on investment decision making. Individual investors could also seek the counsel of stock brokers/fund managers to guide them in the right direction. This is because such brokers/fund managers have access to market information and are aware of the market's movers and shakers, and so charge a fee for their services.

The goal of this research is to look into the impact of numerous psychological elements on investing decision-making. The psychological components under investigation are divided

into two categories: cognitive and affective. We look at the impact of anchoring, representativeness, loss aversion, overconfidence, and optimism biases on investor decisions from a cognitive standpoint. Meanwhile, the impact of herding behavior on investment decisions is investigated from an emotional standpoint. This finding highlights the importance of behavioral aspects in investor decision-making. It adds to the body of knowledge on the dynamics of investor behavior and improves investors' capacity to make more informed decisions by removing any potential biases.

Literature review

Prior to the rise of behavioral finance, the widespread consensus was that classical finance theory was correct since it stated that investors think logically and make conscious judgments based on various estimates or utilizing economic models.

Traditional finance theory implies that each person has stable, well-defined desires, which agents rationally optimize. For more than 50 years, the concept of the rational man has dominated economics and finance theories. The rational man is assumed to

be cost-effective, reasonable, knowledgeable, and skilled in evaluating the possibilities of each alternative and then selecting the optimal option that maximizes his utility for the least amount of money (Simon 1955). However, after a series of experiments, it was discovered that human decisions are frequently influenced by their nature, intuitions, and feelings.

After amassing enough data that confirms specific human behavior that is opposed to standard finance theory, the new discipline of behavioral finance has begun to evolve. "A subject that aims to explain investor behavior through psychology," according to the definition of behavioral finance (Baddeley 2012). It aims to better understand and explain how investors are influenced by emotions and cognitive errors (Shefrin, 2011).

Micro Behavioral Finance (MIBF) and Macro Behavioral Finance (MBF) are two subsets of the larger topic (MABF). MIBF investigates how individual investors' behavior and decision-making are influenced by their biases (irrationality). MABF, on the other hand, tries to explain stock market abnormalities that defy the efficient market hypothesis (Pompian 2012). Not all investors are rational, according to behavioral finance. Because investors are people, their decisions are impacted by cognitive psychology and emotion (Aigbovo & Ezuem, 2018). Most of us, the "regular" investors, are represented by this type of investor (Statman, 2014).

Normal investors do not make decisions as a computer program does; they are subject to cognitive psychology. Normal investors have limitations in processing a tremendous amount of financial information, thus they rely on heuristics (a problem-solving method that uses shortcuts to produce good-enough solutions given a limited time frame or deadline). This could lead to bias or less-than-optimal decisions. The biased decisions made by individuals influence their portfolio performance at the personal level and at the market level, as well as influence stock prices and the market (Alsedrah & Noryati, 2014). The

realities and conclusions put forward by prospect and cumulative prospect theory is that loss aversion, disposition effect, reference point, mental accounting and behavioral/heuristic biases play an important role in shaping the cognitive behavior of investors in the financial market rather than the rationalism provided by the traditional finance theories. There is a huge psychology literature documenting that people make systematic errors in the way that they think; they are over confident, they see past events as having been predictable, they put too much weight on recent experience etc. this preference may create distortion.

The field of behavioral finance attempts to investigate the psychological and sociological issues that influence investment decisions making process of individual and institutional investors. In recent years, the Indian market has witnessed a tremendous rise in the number of companies applying to be listed on the National Stock Exchange. Investors on the other hand have responded positively as it is evidenced through repeated oversubscriptions for shares. However many investors have had to endure the pain of losses due to following the masses and being over confident as it was exemplified in the Transcorp Initial Public Offers. To the best of our knowledge, local studies have not adequately addressed the effects of behavioral biases on investment decisions by individuals. This study attempts to fill this gap. Against this backdrop, this study seeks to empirically ascertain the effect of behavioral factors (such as representativeness bias, cognitive dissonance, loss aversion, regret avoidance, overconfidence and mental accounting biases) on investment decisions with particular focus on the impact of cognitive and emotional biases. The main objective of this study is to determine the effect of behavioral biases on investment decisions of individual investors in India.

Common behaviors of the participants

2.1. Investment Decision-

Investment decisions are the process of selecting an investment from a variety of options that are influenced by past investment results as well as predicted future returns (Subash, 2012). When it comes to financial decisions, there are two types of investors: rational investors and irrational investors. Rational investors make decisions only on the basis of logic and information regarding the investment opportunity. Irrational investors, on the other hand, make decisions based on their psychological makeup, which leads to biases in investment decisions.

2.2. Prospect Theory-

It describes how investors make judgments when confronted with a variety of hazards. Individuals perceive their loss and gain viewpoints asymmetrically, according to them. Prospect theory, in contrast to expected utility theory (which models the decision that perfectly rational agents would make), seeks to represent actual human behaviour.

They discovered that losses hurt twice as much as gains make us happy. That is, people are twice as sensitive to the pain of loss as they are to the joy of a similar gain. Loss aversion is

the belief that the pain of losing is psychologically twice as great as the joy of obtaining. The third conclusion of prospect theory is that people are more likely to take larger chances in order to avoid losses rather than taking risks in order to gain risks to earn profits. To put it another way, when profits are present, investors will be risk-averse, but when losses are present, they will be risk-takers. This conclusion conflicts with Markowitz's (1952) anticipated utility theory, which asserted that a rational investor will behave consistently regardless of whether he or she is a risk-averse or risk-taker.

2.3. heuristic-

Tversky and Kahneman (1974) used the word heuristic to describe how decisions made in the face of ambiguity and complexity are mostly based on perceptions about the likelihood of uncertain events. Uncertainty in events refers to uncertainty about whether or not an event will occur. These ideas subsequently become a heuristic method of thinking, in which people utilize rules of thumb to simplify decision-making. Individuals (investors) have a bias in their beliefs, according to De Bondt et al. (2008), which will affect how they think and make judgments.

Fromlet (2001) Heuristics are defined as "the use of experience and practical efforts" to evaluate information rapidly by relying on experiences and intuition. It describes how people or groups make decisions in the face of ambiguity. Investors commonly make mistakes in their decision-making because they rely on rules of thumb to interpret data. On the one hand, using a heuristic approach can help you make faster decisions. This method may result in biases or errors that emerge in a predictable pattern. Heuristic bias is defined by Tversky and Kahneman (1974) into three types: representativeness, availability, and anchoring biases, which will be explored in this study.

2.4. Framing Theory-

Traditional finance, according to Frensidy (2016), presupposes that framing is clear. Meanwhile, behaviorists believe that many frames are opaque, making it difficult for investors to see them clearly. As a result, how the information is framed or presented will have a significant impact on the decisions made. Frensidy (2016) used the same information on two independent groups, group A and B, to describe someone (said to be named Budi) in a different way based on the previous experiment. Budi is classified as a jealous, stubborn, critical, impulsive, diligent, and clever person in group A, and a smart, diligent, impulsive, critical, stubborn, and jealous person in group B. The same Budi traits, but in reverse order, appear to have a substantial impact on the groups' evaluation findings. The results of the experiment show that the traits mentioned earlier have a greater impact than those mentioned afterwards. Budi is assessed much better by Group A than by Group B. He claimed that there are two explanations for such occurrences. First, when the amount of information to be processed increases, one's concentration level may diminish, resulting in less attention being paid to the information placed behind it. Second, early impressions are frequently given greater weight than subsequent information. As a result of these two factors, anchoring bias develops.

3. Developing Hypotheses

3.1. Anchoring Bias and Investment Decisions-

Anchoring bias arises when people rely too much on pre-existing information or the first information they uncover when making judgments, according to Tversky and Kahneman (1974). (anchor). Then, based on that perception, adjustments are made. Investors who are impacted by this bias tend to base their investment decisions on a single piece of information, regardless of whether it was collected first or is the only piece of information available, causing them to place a high value on it. Overconfidence is characterized by Ackert and Deaves (2009) as a person's inclination to overestimate knowledge, competence, and the accuracy of information that an investor holds, or to become overly optimistic about the future and ability. Anchoring bias must be avoided by such an investor.

Despite the various sources of information accessible, people are more likely to rely on first-hand information when making a decision. Many investors in the stock market suffer from anchoring bias, which causes them to recall the price at which their portfolio's shares were purchased. The buying price is usually used as a reference point when making a selling decision. When the price is over the reference mark, investors decide to sell their shares sooner. Aside from the purchase price, the maximum price of shares ever obtained during a certain period is usually used as a reference price. Many investors, however, are unwilling to cut losses since they rely on such benchmark pricing (Frensidy, 2016). As a result, the following theory is proposed:

3.2. Representativeness Bias and Investment Decisions

The tendency for someone to make decisions based on stereotypes, prior information, or experiences is known as representativeness bias. When people make decisions based on limited observations of the surrounding environment and ignore other information, this is known as representativeness bias (Baker & Nofsinger, 2002; Ritter, 2003; Shefrin, 2000). Investors are prone to overreacting as a result of representativeness bias while processing information and making judgments (Kahneman & Riepe, 1998). It is backed up by the findings of Franses (2007) and Marsden et al. (2008), who found that the representativeness bias can lead to over-reaction behavior in stock prices. Investors who are affected by this bias, on the other hand, may disregard or pay little attention to crucial events that may occur in the future.

A person's conclusion may be skewed due to representativeness bias. Although there is a chance that pricing may not always represent quality, higher-priced products are frequently determined with higher quality than lower-priced ones. According to Chen et al. (2007), prevalent misconceptions in the capital market are that investors consider a firm's positive features, such as product quality, dependable managers, and strong growth, as characteristics of a company that is worth investing in. The idea that past performance is the best indicator of future success, as outlined by Frensidy (2016), is another example of representativeness bias that frequently occurs in the financial market. In other words,

investors frequently assume that historical rates of return are indicative of future predicted rates of return. Investors will presume that a firm's profit will continue to improve if it reports recurrent profit rises, and will consider it a good company, which indicates a good investment. As a result, investors expect better returns from past winners' stocks, and they utilise this trend to predict future market moves (Lakonishok et al., 1994; Ackert & Deaves, 2010). As a result, based on the explanations and assessments of previous investigations, the following hypothesis is proposed:

3.3. Loss Aversion and Investment Decisions-

Loss aversion, according to Pompian (2006), is the inclination to prefer avoiding losses over gaining equal gains. Loss aversion is a psychological phenomenon in which investors are more concerned with avoiding losses than with gaining profits. The more losses a person has, the more likely they are to develop loss aversion. According to research on loss aversion, investors experience the agony of a loss more than twice as strongly as they experience the pleasure of generating a profit. Prospect theory's suggestion that investors are not risk-averse, but loss-averse has given rise to the idea of loss aversion. This happens because the psychological effects of losses are stronger than the psychological effects of earnings. To put it another way, investors are more concerned about prospective losses than they are about potential gains of equal value. As a result, they will be more cautious in their investments in order to decrease the chance of losses (Barberis & Thaler, 2003).

3.4. Overconfidence Bias and Investment Decisions-

Overconfidence is another behavioral bias that is common among investors. Overconfidence bias occurs when a person is overconfident in his decisions and exaggerates or overestimates his capacity to accomplish a task. Decision-makers have a tendency to exaggerate their knowledge and information while ignoring publicly available data. Overconfidence bias causes investors to disregard models and data because they believe they know better. They may not always know better, and by rejecting early warning signs of possible injury, they end up doing more harm than good to themselves. (1977) (Lichtenstein & Fischhoff). Baker and Nofsinger (2002) defined overconfidence as an excessive belief in one's ability to use knowledge effectively because of superior analytical skills. In reality, this is just a delusion of believing caused by a lack of experience and an inability to evaluate given data. In a nutshell, overconfidence occurs when investors believe and believe that their abilities are superior to those of other investors, and they have an unreasonable level of self-evaluation (Odeon, 1999; Pompian, 2006). Frischhoff et al. (1977) claimed that investors are prone to making overconfident judgements in an unpredictable environment of investment.

Overconfident people assume they know more than they actually do, hence they believe they are better or smarter than others (Shiller, 2000). When a substantial number of market players are overconfident, the market's aggregate reactions will be far from reasonable. An individual's tendency to be overconfident, according to Frensidy (2016), can be driven by

two factors. First, everyone, with the exception of people who are depressed, has a favorable opinion of themselves. Second, people psychologically desire to be in control of their position and their surroundings, and they believe they can. Furthermore, he demonstrated that this bias has four financial ramifications. First, investors can take the wrong position in buying and selling shares because they fail to realize that they do not have the advantage of information or analysis. Second, investors are inclined to trade more frequently which results in higher transaction costs. Third, overconfident investors are inclined to set prediction intervals that are too narrow. Finally, overconfident investors will be surprised more often than expected. A handful of studies have been conducted to investigate the influence of overconfidence bias on the financial market. Overconfidence behavior unconsciously influences investors to do excessive trading (Benos, 1998; Daniel et al., 1998; Graham et al., 2005; Odeon, 1999; Pompian, 2006; Toma, 2015; Ullah et al., 2017). Besides affecting the frequency of transactions, overconfidence bias also affects trading volume.

The higher the level of overconfidence, the bigger the volume exchanged (Statman et al., 2003). These findings suggest that overconfidence bias has a favorable impact on investment decision-making. Furthermore, Bakar and Yi (2016) discovered that the level of overconfidence that happens is gender-dependent. Those findings are consistent with Pompian (2006), who discovered that overconfidence in talents might lead to poor decision-making, causing investors to trade excessively. Overconfident investors also have a predisposition to overestimate investment gains while underestimating danger. If the actual return is lower than projected, they will attribute it to a negative circumstance (Miller, 1975). These diverse aspects will all have a favorable impact on investment selections in the long run.

3.5. Optimism Bias and Investment Decisions-

Overconfidence prejudice is frequently linked to optimism bias. Overconfidence and optimism biases, according to Nofsinger (2005), are induced by the same psychological reasons - an illusion of knowledge and an illusion of control. The former is a state in which a person is extremely confident in the information they have. It has an impact on his or her perception of the likelihood of success. This belief subsequently leads to a sense of control over the outcomes (the illusion of control). The illusion of control refers to people's tendency to overestimate their ability to control events; for example, it arises when someone believes they have control over outcomes when they clearly do not.

As a result, control illusions are described as a circumstance in which people believe they have impacted the outcomes of an uncontrollable event. Excessive optimism will emerge as the illusions of knowledge and control continue to expand (Shefrin, 2007). Shefrin (2007) described optimism bias as a tendency to overestimate success (the probability of achieving the desired goals) while underestimating the chance of failure. Furthermore, optimism bias refers to an investor's assumption or perception that their portfolio will always produce a

favorable return (Hoffmann et al., 2013). The crucial takeaway from this bias is that investors are more likely to make rash financial decisions. The greater the optimism bias, the higher the investor's expectations for their portfolio's performance.

This optimistic expectation motivates them to increase trading frequency and volume, despite the significant likelihood that the actual will differ from the expectations (Pompian, 2006). Khan et al., (2017) and Ullah et al., (2017) discovered a link between previous portfolio yields and investor optimism, which influenced investing decisions.

3.6. Herding Behavior and Investment Decisions--

Herding behavior is defined by Banerjee (1992) and Hirshleifer and Teoh (2003) as people's tendency to follow the actions of others rather than their own opinions or information when making decisions. Investors make decisions based on the decisions of others in the market, which is termed illogical behavior (Altman, 2012). Herding behavior is common among investors in emerging markets, and it usually occurs during times of market stress (Rahayu et al., 2020). Herding behavior happens when a group of investors makes investment decisions based on collective information from a group of investors while ignoring other information, according to Humra (2014). As a result, if the group majority makes a bad decision, large market price variations will ensue.

Chang et al. (2000) discovered that herding practices are more common in developing nations, which is backed up by Chiang and Zheng (2010) and Zheng et al. (2017) in their studies of Asian stock exchanges (China, South Korea, Singapore, Malaysia, and Indonesia). Investors' tendency to imitate and copy what other investors are doing is known as herd mentality bias. Rather than their own independent analysis, they are mostly swayed by emotion and instinct. Even if they are examined using the same methodology, study findings on herding behavior in Indonesia are still contradictory. Sari (2012), Purba and Faradynawati (2012), and Narasanto (2012) all found evidence of herding practices in Indonesia, although Narasanto (2012) did not.

CONCLUSION

Hence we can see that not all investors are rational in nature. Majority of the investors are irrational in nature and act based on their emotions rather than logic. Whatever common traits that were seen above of a common investor was mostly driven by emotions and impulses. For an irrational investor to behave rationally the investor needs to think logically and should not take decisions based on emotions

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