ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

Anxiety, Depression, Behavioural Biases and Investment Decision-Making Process During Covid-19: A Descriptive Study of Delhi-NCR

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Received: 14th Sept 2022 ***Revised: 16th Oct 2022*** ***Accepted: 26th November 2022***

Volume 11, Issue (11), 2022

Abstract

In the times of COVID-19, everyone was suffering from depression and anxiety due to the COVID-19 pandemic and the nationwide lockdown. Everyone was afraid of what would happen in the future. What will be our livelihood? No one has any idea what will happen. When will the lockdown open? Due to all these reasons, an atmosphere of fear was created among the people and due to this they were suffering from depression and anxiety. Covid-19 not only affected the individual livelihood but also the investment behavior of the investors. The purpose of this paper is to study and describe several biases in investment decision-making during covid-19, through the review of research articles in the area of behavioral finance. It also includes some of the analytical and foundational work and how this has progressed over the years to make behavioral finance an established and specific area of study. The study includes behavioral patterns of individual investors. In the present-day behavioral finance is becoming an important part of the decision-making process because it heavily influences the investor's decision-making. Behavioral finance will help investors to select better investment options and avoid mistakes in the near future. Investors can improve performance by identifying biases and errors of judgment. The main objective of behavioral finance is how can

ISSN PRINT 2319-1775 Online 2320-7876

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we minimize or avoid biases and how can make the right investment decisions. Investors display many behavioral biases that affect investment decision-making while making an investment decision. There are some common biases identified in these studies and also develop strategies to overcome these biases. People need to identify the biases and develop strategies to overcome these biases and people require proper allocation strategies and identify the risk and return in investment decisions.

Keywords: Behavioural biases, Cognitive delusions, Investment decision, Covid-19, Stock market.

***JEL Classification**: G11, G41*

Introduction

During the Covid-19 pandemic, investors should be very cautious when investing their money in the stock market. The stock market remained quite unstable during the Covid-19 pandemic. Institutional investors and foreign investors were withdrawing their money from the Indian stock market. Due to this, there was a decline in the market. The market was very volatile due to the COVID-19 pandemic, on the one hand, and various behavioral biases, on the other. Decision-making is a complex activity. Decisions can never be made in a vacuum by relying on personal resources and complex models, which do not take into consideration the situation. Also, Investment decisions should not be taken in a situation of depression and anxiety. Depression is a common and serious medical illness that negatively affects the way you feel, the way you think, and the way you act. Depression causes feelings of sadness or loss of interest in activities you previously enjoyed. This can lead to many emotional problems and making investment decisions under these circumstances is very risky. Decision-making can be defined as the process of choosing a particular alternative from several alternative courses of action that are available in particular circumstances. It is an activity that follows after a proper evaluation of all the alternatives. However, under the situation of depression and anxiety, an Individual investor is not able to do the proper evaluation of all alternatives and select the bestone. Investing is a passion and fascinating activity that is linked to needs and ambitions, and when uncertainty occurs (e.g., the COVID-19 pandemic), it puts people's financial planning patterns in jeopardy. Because of the market's extreme volatility and instability, investing in the

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

epidemic has become a much more overwhelming journey for individual investors. Thus, individual investors must update themselves in multidimensional fields so that they can accomplish the desired results/ goals in this uncertain and volatile market situation.

Every investor differs from others in all aspects due to various factors like demographic factors which include socio-economic background, educational attainment level, age, race, and gender. An optimum investment decision plays an active role and is of significant consideration. During the period of covid-19, behavioral finance is becoming an integral part of the decision-making process, because it heavily influences investors' performance. The first COVID-19 case in India was recorded in Kerala on 30 January 2020. On 2 March 2020, the BSE SENSEX observed a flash crash due to the Union Health Ministry's declaration of two new confirmed cases. On 12 March 2020, after WHO announced the outbreak as a pandemic, Indian stock markets encountered their worst crash since June 2017. The announcement of the lockdown by the government of India adversely affected the stock market. The stock market has shown a drastic recovery till the end of December 2020 from the dip in March 2020. BSE Sensex crossed the historical 60,000 mark on 24th September 2021, with Nifty less than 50 points away from 18,000. The Sensex and Nifty reached their highest mark of 63,583 and 18,887 respectively on 1st Dec 2022 but still, there is huge volatility in the stock market thus, hesitation has come into the minds of retail investors. The covid-19 pandemic has not only influenced the investment portfolio or investment pattern but also the overall investment decision-making process. Market volatility due to covid-19 on the one hand and behavioral biases on the other hand adversely affected the investment decision-making process of individual investors. We cannot control or minimize the impact of systematic risk (e.g., covid-19 pandemic) but we as investors can minimize committing errors in making investment decisions by recognizing the biases and errors of judgment to which all of us are prone. Understanding the behavioral biases will help investors to select a better investment instrument and thereby avoid repeating expensive errors in the future. The most crucial challenge faced by investors in the area of investment decisions is to understand the behavioral biases that theyare subject to while making investment decisions.

Various investment avenues are available in today's financial market i.e., PPF, stock market, Insurance, Bank Deposits, Gold, Mutual fund schemes, Post office deposits, etc. Today it is not just sufficient for investors to consider the risk and return aspects while making

ISSN PRINT 2319-1775 Online 2320-7876

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investment decisions but also essential for them to look at the psychological factors that play a crucial role in making investment decisions. It is not just the demographic elements that influence investors' decisions but also the psychological factors. Every investor has to understand the biases, take note of them, and take essential steps to avoid them, which will lead to rational investment decisions. Therefore, the objective of the present study is to describe the implication of various behavioral biases in the investment decision-making process during COVID-19.

Review of Literature

Imran Umer et al. (2018) results show that overconfidence, overthinking, herding, cognitive bias, and hindsight effect significantly positively impact investment decisions. Overall results conclude that much change in the investment decision is due to behavioral biases.

Coval and Markowitz (1999) study reveals that preference for local stocks extends to mutual fund managers in the sense that such managers tend to show a proclivity for stocks headquartered in the region in which the managers are based. Grinblatt and Keloharju (2001) found that Finish investors are more prone to hold stock in firms that are located close to the investor. Benartzi and Thaler (1995) show evidence of clearly irrational investor behavior where investors follow the "1/n" allocation rule across investment choices regardless of the stock-bond mix of the available choices.

Johnsson, Lindblom, and Platan (2002) studied factors that influence the speculative bubble during the period from 1998 to March 2000. A survey of 160 private investors drawn from Aktiespararna Association in Southern Sweden in December 2001 and 47 institutional investors comprising banks, mutual funds, and investment banks was conducted through a questionnaire. The study concluded that herd instincts, cognitive dissonance, anchoring, and loss aversion contributed significantly to the speculative bubbles as well as overconfidence. Goetzman and Kumar (2003) study reveals that individual investors who are young and less wealthy hold more under-diversified portfolios, suggesting that they may exhibit stronger behavioral biases.

Werah (2006) did a study to survey the influence of behavioral biases on investor activities at the Nairobi Stock Exchange. The behavioral biases considered in the study include

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

herd behavior, mental accounting, loss aversion, anchoring, overreaction and underreaction, overconfidence, confirmation bias, and regret aversion. The results obtained from the research suggested that the behavior of investors was to some extent irrational when considering the rationality of the investors in their disregard of fundamental estimations as a result of herd behavior, regret aversion, overconfidence, and anchoring.

Mbaluka (2008) examine the effect of behavioral factors on individual investment decision-making process. His results showed that investors had their rationality affected by psychological aspects. The study found that investors did not invest as expected as they showed unwillingness to change their portfolio despite the unattractive macroeconomic outlook. The endowment effect was identified with investors in the experiment with 23% of them changing their portfolio mix while 77% failed to change even when the economic outlook demanded that change.

Hsu and Shiu (2010) examined the investment returns of investors in discriminatory auctions taking place in the Taiwan stock market and found that frequent bidders underperform infrequent bidders. Overconfidence led to aggressive bidding and higher payment for securing the auctioned shares. Frequent bidders also prove to be inferior in terms of stock selection performance. This implies their overestimation of the future cash flow of the initial public offer (IPO) firms, underestimation of the risk of investment in these firms, or both.

Lin (2011) examined how rational decision-making and behavioral biases vary in different demographic characteristics. He examined how personal characteristics influenced behavioral biases. He used a sample of 450 individual investors from the Taiwan Stock Market. Primary data was collected through questionnaires. Cross-section analysis was used via structural equation modeling. He found out that gender explains the difference in behavioral biases. Females display a greater disposition effect than males. Males are more overconfident than females. Females are most affected by herding as they tend to follow blindly other investors doing the same investment decisions. The results further revealed that younger investors are more prone to herding than older investors. There is no significant evidence between the level of income and behavioral biases.

Aduda et al. (2012) investigate the behavior and financial performance of individual investors in the trading shares of companies listed at the Nairobi Stock Exchange with the first objective of their study being to find out how individual investors make their investment

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

decisions. Their result reveals that influence from friends; where most investors relied on advice from friends and colleagues (3.65 on a Likert scale of 1-5) before deciding to go for stocks and; popular opinion about the market (3.58) and from the recent trend in share price movements (3.53), was a clear indication of herding behavior existing in Nairobi Stock Exchange.

Abdulahi (2013) investigates the effect of behavioral biases on the investment decisions of individuals in Kenya. He found that outcomes of individual investor decisions were significantly correlated to representativeness, dissonance bias, Herd instinct bias, and Hindsight bias. These statistically significant correlations suggest that these dimensions of behavioral factors influence individual investor decisions. However, individual investor outcomes were not significantly related to loss aversion, self-attribution bias, regret aversion bias, and over-optimism bias.

Mwaka (2013) showed that the demographic characteristics of investors determine the investors‟ decision-making behavior in Keny. Investors of different demographic characteristics made decisions differently. Some investors made decisions rationally but most of them were affected by behavioral biases. The biases tested include herding, overconfidence, anchoring, and loss aversion. All these biases affected investors as they traded in shares though others were more prominent than others.

Relevance of the study

Although for a very long time, it was considered that investors are very rational in making their investment decisions, it is far from the truth, now a new theory of finance is developed called the behavioral finance theory, which clearly states that investors are not very rational and there are several behavioral biases which are influencing investor's decision-making process. These behavioral biases are leading to faulty investment decisions. Unless the investors recognize the presence of these behavioral biases and make efforts to overcome them, they would make faulty investment decisions. Investment decision-making is a complex process. Apart from just looking at the risk and returns that are associated with each investment avenue, there is a need for the investors to also look at the behavioral aspects of the investment decision-making process. The study is relevant since there is an urging need for investors to

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

understand the biases affecting their investment decisions and to take steps to overcome these biases, thereby leading to rational investment decisions,

The objective of the study

1. To describe and understand prevalent behavioral biases that can affect investors while investment decision-making during covid-19 pandemic.
2. To explore the impact of these behavioral biases in the investment decision-making process.
3. To identify the causes of these behavioral biases and their consequences on an individual's investment choice.
4. To identify solutions to deal with the adverse effect of the biases on investment decisions and suggestions given by various authors to mitigate the effect of these biases.

Research Methodology

Research Methodology is the approach in which research problems are solved methodically. It is a discipline of reviewing how research is conducted scientifically. The research methodology provides a systematic approach as well as an operational framework for conducting the research. Creswell et al. (2009) state that the research design is a blueprint or a detailed plan of the whole research process. According to Zikmund et al. (2009), the research design is a master plan that specifies the methods and procedures for collecting and analyzing the needed information. Likewise, Kothari (2004) argues that research methodology is more than just research methods since it extends beyond this, aiming to achieve a valid and capable research outcome.

A descriptive research methodology has been adopted in the present study. To describe the various behavioral biases and their implications the secondary data has been collected from various journals, research articles, and websites.

Types of Behavioural Biases

Traditional financial theory maintains that decisions made by investors are generally rational. Whereas modern theories suggest that no such consideration binds decision-makers. Most of the time, investors' decisions are inconsistent, or in other words we can say that

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

cognitive illusions play an important role in deviating human decisions, which are classified into two parts as shown in the figure 1 below:

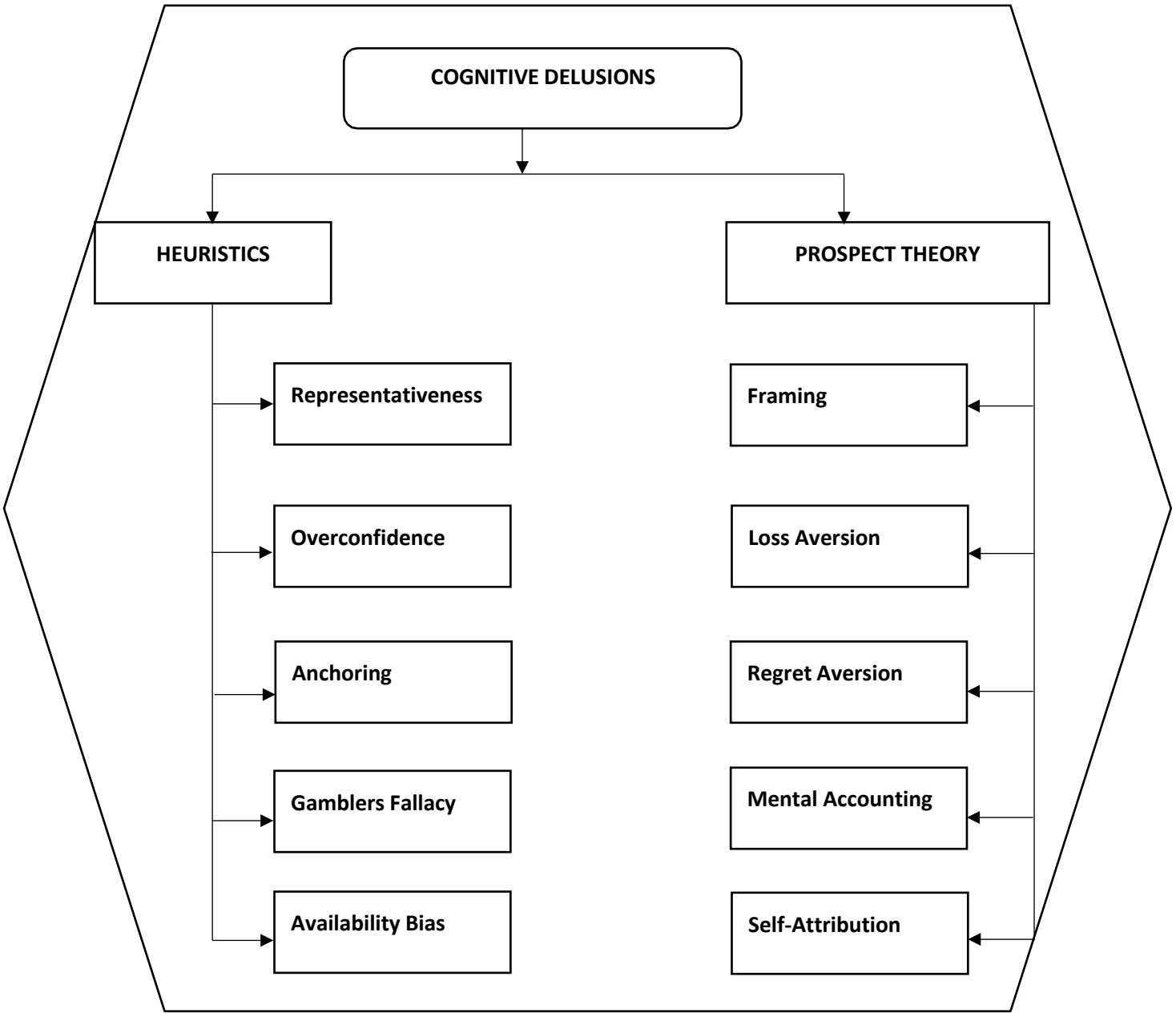

Fig. 1 Cognitive Delusions

Source: Constructed by authors

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

Overconfidence Bias

It is the situation when people are highly optimistic about the trading outcomes and they suppose that the information they have is adequate for them to take sound investment decisions. Investors also relate the high performance of the market to their performance and ignore the fact that paying too much attention to their capabilities and ignoring other factors can make them incur huge losses in the future.

Disposition effect.

It was initially given by Shefrin and Statman (1985). Investors tend to sell superior selling stocks early to realize the gains and they tend to hold the losing stocks for long to delay the losses. The tendency to avoid losses is much more than the willingness to realize gains. The final decisions of the investors are based not on the perceived losses but on the perceived gains.

Bandwagon effect.

It was identified by Shiller (2000) and Kahneman and Tversky (1979). It is also known as the Herding effect. Herding in the stock market is the tendency of the investors to follow the decisions of the other investors. In other words, it means mimicking the decision taken by other investors. This aspect of the investors is a subject of extensive research because the investors rely on the collective information that they possess more than the private information. This can result in price deviations from the fundamental values and the risk of reduced returns.

Mental accounting.

It was initially proposed by Thaler (1985). This theory implies that investors divide their investments in various portfolios based on several mental categories they have. Then they separate investment policies for each mental account in a way that each of them has a specific purpose to be attained and the aim is the maximization of returns with the minimization of risk. This could result in the selection of those portfolios that are not profitable yet they satisfy the emotions of the investors

Confirmation bias.

It was described by Dickens (1978). People generally have a preconceived impression of something and they rely on this information. This makes them adjust future information to suit

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

their opinion. This results in irrational decisions on the part of the investors as they get skewed toward the information that they already have and avoid the other information.

Hindsight bias.

This bias (Fischhoff and Beyth, 1975) occurs when an investor believes that the happening of some event can be predicted reasonably. But this belief can be dangerous as the investor can form cause an effective relationship between the two events even when the relationship is not associated at all and thus results in irrational decisions.

House money effect.

It was given by Thaler and Johnson (1990). It means that when gamblers are making profits then they become less loss-averse and more willing to take the risk. So the investors who are making huge profits are willing to take more risk and vice-versa.

Endowment effect.

It originated from the paper of Kahneman et al. (1990). People pay too much emphasis on what they currently hold and do not want to change their position. This makes them forego even the most profitable investment opportunities. This attitude makes the prices of some of the very profitable securities remain at a very low level; thus, the money lies in the market but suffers from the ignorance of the people.

Loss aversion.

This bias was given by Benartzi and Thaler (1995); it occurs because people react differently to assured losses and assured profits. When they are faced with sure profits then they do not want to take any risk, while if there are any chances of losses, then they are ready to take more risks. This means they value the certainty of losses more than the uncertainty of losses.

Framing.

This bias was given by Tversky and Kahneman (1981). When the information is provided in the positive frame, investors avoid risk to make sure of profits, and when the same information is provided in the negative frame, they are ready to take the risk to avoid losses.

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

Thus, the same information can be presented to the investors in either way to change their opinions.

Home bias

This was first introduced by French and Poterba (1991) and Tesar and Werner (1995). The feeling of belongingness of the investors toward their domestic companies makes them invest in the domestic companies even if their returns are lower than those of the international companies. Thus, the investors become inclined toward home bias.

Self-attribution bias.

This was developed by Bem (1967, 1972). People attribute their success to their hard work and intelligence, while they blame their failure on the action of others or some outside factors.

Conservatism bias.

It was originated by Edwards (1982). In this case, people stick to their own beliefs and forecasts and are not willing to accept the information which might be useful for their decision-making.

Regret Aversion bias.

It was invented in three different papers, Loomes and Sugden (1982), Bell (1982), and Fishburn (2013). When people regret some decision, then it has a greater impact on their future decisions. They either become motivated to take more risks or resist taking any risk at all. This is done to avoid any feeling of regret in the future.

Recency effect.

The recency effect is a term first coined by psychologist Hermann Ebbinghaus, who became famous for his work on the experimental study of memory. It occurs when the decisionsof the investors are based on some recent events that are in news and they neglect the information that might be useful but have taken place quite a while ago. It is a cognitive bias that favors recent events over historic ones; a memory bias. Recency bias gives "greater importance to the most recent event", such as the final lawyer's closing argument a jury hears before being dismissed to deliberate.

Anchoring bias

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

The investors make their judgments based on the initial information they receive and then base their subsequent decisions based on past information. The successive decisions are anchored around some previous information. This bias was introduced by Tversky and Kahneman (1981).

Representativeness bias.

It means assessing the characteristics of an event/object and considering them similar to other events/objects. This makes them consider the event/object more likely to happen which may or may not happen. It was given by Kahneman and Tversky in the early 70s.

Conclusion and findings

In present-day behavioral finance is becoming an important part of the decision-making process because it heavily influences the investor's decision-making. Behavioral finance will help investors to select better investment options and avoid mistakes in the near future. Investors can improve performance by identifying biases and errors of judgment. The main objective of behavioral finance is how can we minimize or avoid biases and how can make the right investment decisions.

Investors display many behavioral biases that affect investment decision-making while making an investment decision. There are some common biases identified in these studies and also develop strategies to overcome these biases. People need to identify the biases and develop strategies to overcome these biases and people require proper allocation strategies and identify the risk and return in investment decisions during covid-19.

Suggestion

During the Covid-19 pandemic, investors should be very cautious when investing their money in the stock market. The stock market remained quite unstable during the Covid-19 pandemic. Institutional investors and foreign investors were withdrawing their money from the Indian stock market. Due to this there was a decline in the market. The market was very volatile due to the COVID-19 pandemic, on the one hand, and various behavioral biases, on the other. Therefore, it is advised that they should avoid various behavioral biases while making investment decisions. Investors should not buy and sell in the stock market under pressure and panic during Covid-19.

ISSN PRINT 2319-1775 Online 2320-7876

Research paper UGC CARE Listed (Group -I) Journal Volume 11, Issue 11, Nov 2022

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