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EMOTIONS IN MOTION: THE ROLE OF INVESTORS' SENTIMENT IN STOCK MARKET DYNAMIC

Jayashree D. Chaudhari*
Dr. Nishant Ghuge**

ABSTRACT

Many still believe that the market at certain times reflects rationality but equally, there are emotions, psychology and even the irrationality of the participants coming into play and this paper attempts to focus on the interaction of the investors' fear, optimism, greed and pessimism, which are sentiments that affect stock markets. From the perspective of behavioural finance, this study seeks to understand how psychological irregularities, such as herding or loss aversion or that of overconfidence cause strange phenomena in the stock market such as bubble formation or market crashes or volatility. Some investors use social media or tools like VIX which provide sentiment analysis and volunteers emotion and trends, to explain emotional involvement with the market. Other LA Rocco demonstrates that the economic climate more accurately reflects market trends than it corresponds with emotions, by using real life examples of all well-known bubbles including the dot-com bubble and the 2008 real estate market crash. The rest of the themes demonstrate trends to indicate the emotions people use such as COVID-19 times and how this contagion is a factor for real price determination. These results have implications for investors as they explain the potential strategies for investors to manage emotions as well as point to the AI tools that would provide such opportunities. All in all, this study calls for greater appreciation of the interpenetration of psychological factors and economic factors when analysing modern financial markets dynamics.

***KEYWORDS**: Psychology, Stock Market, Emotions, COVID-19, Economic Climate.*

Introduction

"*A Market is combined behaviour of thousands of people responding to information, misinformation, and whim"*

Kenneth Chang

The marketplace where investors can purchase and sell stocks is referred to as the stock market. Demand and supply for a given stock in the market determine the price at which each purchase and sale occurs. The stock markets history demonstrates that the majority of investors purchase stocks in mutual funds or companies for ostensibly sound reasons but they sell their holdings as soon as the market moves against them. When strangers tell them something negative about the stock they sell the securities. (Mistry, 2015)

Individual investors display traits & behaviours that influence their investment decisions which in turn affect the volatility in the stock exchange market. As the classical school of thought of finance believes, investors are rational beings and are not affected by other factors as claimed by expected utility, asset pricing, mean variance portfolio and efficient market hypothesises. But as more interest shifted towards the Behavioural finance theory, it turned out that individuals were not completely rationale. But the person's proposed of behavioural portfolio theory, the behavioural life cycle theory and the behavioural asset pricing model confirmed the existence of irrationality in individuals when making investment decisions.

* Assistant Professor, KCES's Institute of Management & Research, Jalgaon, Maharashtra, India.
** Assistant Professor, KCES's Institute of Management & Research, Jalgaon, Maharashtra, India.

The branch of study known as psychology is associated with the evaluation of regulatory possibilities as well as the evaluation of social interaction resultant from the controlled possibilities.

In learning the psychology of the decision making process, in this case the investors' decisions, it is natural to recognize the influence of attitudes, emotions, moods and sentiment, specific personality traits, and perception of what they are investing in. Similarly, investors who buy stocks are deemed to be making illogical purchases and the rationale is common practice to accept the emphasis of biases triads in sequential order.

Investors create and change their sentiment on investment arbitrarily and quite often. News and gossip also add a lot to the investors' behaviour and decision making. Investors have also the effect of herding among impressionable persons who deal in shares and have little reliable knowledge. Many retail investors are constrained by various types of mediocre information supplied to them by tippers and operators and lose their capital through such investment actions. The legendary investor, Warren Buffett, too has talked about how temperament and not intellect is the most important quality for an investor.

The stock market is affected by the optimism excitement, anxiety fear panic hope greed and other emotions that investors experience. There must always be another trader losing money for every rupee that a trader makes. This phenomenon also means that if one group of traders is continuously profitable another group is suffering large losses. However, it's possible that fewer people make money from the stock market than lose it. Furthermore, a successful trader's comprehension of risk and how to manage it sets them apart from unsuccessful ones.

In 2024, around 10.7 crore Indians invest directly in the stock market, with over 20 crore demat accounts registered. "Twenty percent of Indian households are now investing in the stock market directly. (Chauhan, 2024)

In his book **"The Disciplined Trader"** renowned trader Mark Douglas states that eighty percent of successful trading is money management and twenty percent is strategy. Risk assessment is a major component of money management. Consequently, it is now essential for traders to comprehend risks and how they affect their feelings and trading decisions. As per the ET Money India Investor Personality Report 2022 more than 85% of all investors are Seekers Adventurers Explorers and Strategizers. When it comes to suffering losses these four personalities are not very comfortable. Nevertheless, they are taking a lot of chances which will undoubtedly make them uneasy when the market declines.

However, they are taking a lot of risks which will surely cause them to feel uneasy if the market drops. The paper focuses on the emotions that affect the stock market and different terms that are associated with the feelings of individual stock market investors. Investors will learn about how psychology affects the stock market as a result enabling them to make wise decisions in the future

Literature Review

(Khan, Fifield, & Power, 2024)Research on the stock market during COVID-19 has been examined in this paper. From January 1 2016 to December 31 2021 they looked at daily closing price data. According to the descriptive statistics the COVID period saw the lowest daily returns for all of the sample markets with the US and Indian markets seeing declines of 12 and 14 points respectively. Market reactions to the pandemic could be helpful in developing strategies for reducing risk.

(Rathi & Geetha, 2023)This study looks into how investor personality behavioural biases and investment decision-making are related. The results of this study help individual investors recognize and comprehend their prejudices and illogical beliefs. Investors will become more conscious when deciding on their investment capacity after weighing all of their options. In order to create wealth, achieve financial objectives save for retirement and manage intentions investments are an active way to use money. Both individual and institutional investors can boost the economy's competitiveness and productivity through wise investment.

(Antony & E.Selvarathinam, 2022)The study looks for ways that personality traits affect investment choices. Personality traits have a significant impact on respondent's investment decisions according to the study. Additionally, according to the study respondents age does affect their choices regarding risky investments. According to the study respondent's ability to make decisions about stock market investments is influenced by their perception of risk. The study also demonstrates that respondent's investment decisions are not positively correlated with their personality traits.

(Yadav & Singh, 2022) The impact of overconfidence bias, loss aversion bias, optimistic bias, cognitive bias and bounded rationality on the Indian share debt and mutual fund markets is discussed in this study. The research papers from 2009 to 2021 a ten-year span are included in this study determined that there is proof of psychological biases in individual choices demonstrating the irrationality of individual investors actions. However, the geographical scope of these studies is limited to India. The perspective of investors in each region must be taken into account when conducting behavioural finance research in India.

(Boda & Sunitha, 2018) This paper synthesizes the financial behaviour of investors from a historical standpoint. The psychological effects of investing are being researched in order to characterize the psychology of individual investors when they make investment decisions. Many empirical studies have supported and concluded that investor sentiment and mood cannot be disregarded when forecasting market movements. Recognizing the investors investment behaviour allows retail investors to turn psychological biases into financial gains. A thorough understanding of how to make investments can help retail investors correct their mistakes in judgment.

(Bakar & Yi, 2016) Investor decision-making is significantly impacted by availability bias conservatism and overconfidence but herding behaviour has no discernible effect. Additionally, the psychological factors are found to be dependent on the gender of the individual. The majority of the evidence from earlier studies is supported by the findings of this investigation.

Research Methodology

Research is based on Secondary data which has been collected from Reports, News, Books & other sources. We have tried to focus the implication of sentiments of individual investors on stock market and terms that are associated with the fluctuations in stock market.

Objective of Study

- Explore the relationship between investor sentiment and market dynamics.
- Analyse how investor sentiment contributes to market inefficiencies.
- Examine the role of sentiment during different market conditions

Limitation of Study

- This study is based on already published data.
- Limited time may restrict the depth of the study.
- Access to the material was limited.

Market Anomalies

The semi-strong form of the EMH is challenged by market anomalies which are patterns in the market that appear to produce abnormal returns more frequently than not. These patterns also suggest that fundamental analysis can be useful for individual investors. (Sudarvel & Velmurugan, 2015).

Stock prices abruptly adjust to the new information due to investor actions and this will be reflected and displayed on all available information. However, there are numerous stock exchanges around the world that do not adhere to the EMHs regulations. We examine in our research paper the economic theory that has led to a rise in liquidity in recent years. In order to enhance capital market anomalies and determine whether they are present in the Indian stock market it should have encouraged more anomalies based on the arbitrage method.(Paulson & Matthew, 2019)

Calendar based Anomalies	Announcement based Anomalies	Other Anomalies
Day-of-the-Week effect End-of-the-Day-effect Holiday effect Intra-Day effect January effect Monday/Week-End effect Monthly/Turn-of-the Month effect Tax-Year effect Week-of-the-Month effect	Earning-Surprise effect Information Releasing Hypothesis IPO's, Seasonal Equity Offerings and Buy-Backs Pay-Out effect P/E Ratio effect	Book-to-Market effect Low-Beta-Firm effect Low Price Stock effect Momentum effect Reversion to the Mean effect SEO Underperformance effect Size effect Weather effect

Source : (Sudarvel & Velmurugan, 2015)

Bubble in Stock Market

When an assets market price deviates sharply and asymmetrically from its intrinsic value with the potential for a sharp and abrupt reversal we refer to this as an asset price bubble.(Komarek & Kubicová, 2011). Bubbles of this type are mostly caused by investors emotional and cognitive biases. Due to the overpriced tulip flowers in the Netherlands the first financial bubble in human history occurred during the Tulip Mania in 1636. When a bubble forms extra demand may be generated which raises prices further without affecting the underlying values until enough investors recognize the overpricing or an outside event alters public perception of the stocks future. The process reverses in this kind of scenario and everyone wants to leave before the losses get too big which drives down the price even more. (Kayal, 2021)

The term bubble in economics describes a situation where the price of a single stock financial asset or possibly an entire market sector or asset class greatly surpasses its intrinsic value. The bubble gradually but unavoidably bursts because speculative demand not fundamental value drives inflated prices. After massive sell-offs prices fall sharply often quite dramatically. In fact, a speculative bubble is typically followed by a disastrous securities market crash.

Dot Com Bubble

The Dotcom bubble sometimes referred to as the internet bubble is the time frame from 1980 to the stock markets subsequent collapse which mostly occurred in the late 1990s and early 2000s. It had a detrimental effect on society resulting in a recession a rise in unemployment and widespread bankruptcy. On the other hand, this time period had the long-term benefits of strengthening the internet infrastructures base confirming technology concepts and validating business models for long-term growth. This sequence of events taught society a valuable lesson while laying the groundwork for the internet's growth a disruptive technological revolution that has now become an essential part of our everyday lives. Irrational stock values in the US tech sector in the late 1990s were the cause of the internet bubble. During this time the stock values of dotcom companies increased exponentially on the Nasdaq a stock exchange that lists technological and internet-based businesses.(Zhao & Hall, 2023)

A scenario where price increase news piques investor interest which then spreads from person to person through psychological contagion amplifying stories that could support the price increases and drawing in an ever-larger class of investors who are drawn to an investment despite doubts about its true value in part because they are excited by gamblers and in part because they are envious of others success. (Shiller, 2000)

Impact of Dotcom Bubble Burst

In 2000 the stock market crashed as a result of the Dotcom bubble popping. The Nasdaq index which had grown fivefold between 1995 and 2000 fell 76 points to 81 percent from its peak of 5048 points to 62 on March 10 2000 to 1139 points to 90 on October 4 2002. Many Dotcom stocks including well-known tech behemoths like Cisco Intel and Oracle faced insolvency by the end of 2001 with their share values having dropped by more than 80%. Additionally, it took the Nasdaq nearly 15 years to reach its peak again on April 24 2015.

A mild recession was also brought on by the crash according to a number of analysts. The collapse of the housing bubble and the mortgage-backed securities market however made the 2008 recession even more catastrophic.

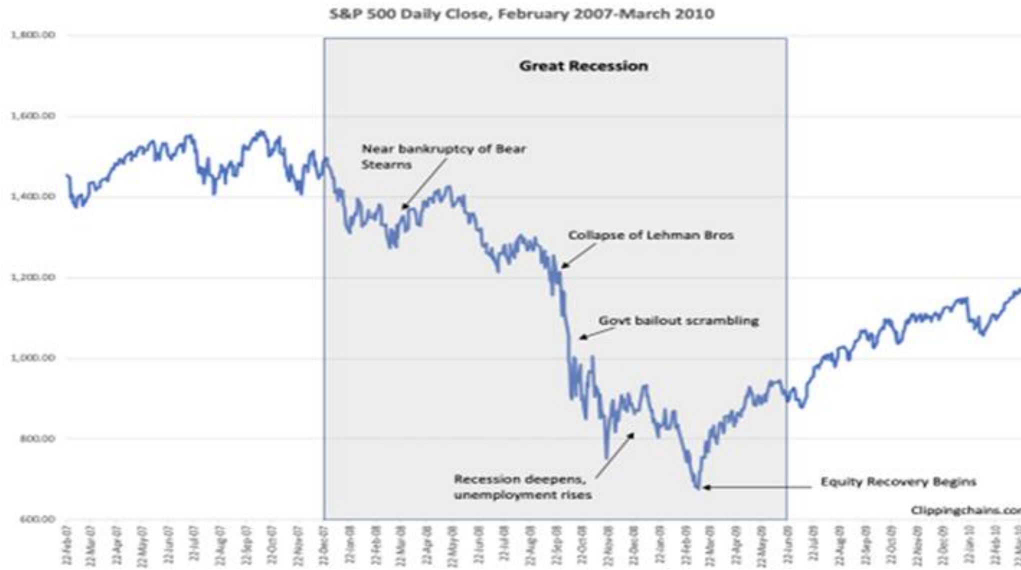
According to the New York Times despite some short-term damage roughly 48% of the Dotcom bubble companies survived the crash. Amazon Oracle IBM Adobe Systems and others are among the businesses that have weathered the storm. Currently they are tech giants. Companies like Boo Dot Com Pets Dot Com Northpoint Communications and others did not survive the bubble crash. (Angleone, n.d.)

Financial Crisis

The financial crisis which affected financial institutions in many OECD nations began in the United States in 2007. Only when the crisis escalated into a worldwide economic downturn did emerging and developing market economies experience any impact primarily through trade channels and occasionally through declining worker remittances. The economic repercussions of these indirect effects were just as bad in many developing nations as they were in developed ones. In 2009 the global recession the first since World War II caused the global gross domestic product (GDP) to drop by 0. 6 percent. Had there been no countercyclical reactions the decline might have been considerably more

severe. (Warwick McKibbin & Andrew Stoeckel).Banks started making rash loans to individuals and families who lacked the actual resources to repay the mortgages they had been given. After that these high-risk (subprime) loans were unavoidably combined and transferred down the chain. (Reserve, 2007)

"U.S. Loses 533,000 Jobs in Biggest Drop Since 1974," New York Times, December 5, 2008
"Housing Prices in 20 U.S. Cities Fall a Record 18.5%," Bloomberg News, February 24, 2009
"Stocks Fall to Lowest Level Since 1997 as Dow Drops Below 6,800," USA Today, March 2, 2009
"Job Losses Hint at Vast Remaking of Economy," New York Times, March 6, 2009
"Global Economic Shock Worse Than Great Depression," Huffington Post, May 8, 2009
"Financial Crisis is the Worst the World Has Ever Faced," Daily Telegraph, October 7, 2011(Chains, 2020)



Source: (Reserve, 2007)

Perceptions of investors fluctuate a lot but risk attitudes and perceptions are less erratic than return expectations. There are notable spikes in the percentage of trading investors their turnover and buy-sell ratios during periods of market turbulence. Most importantly the degree and changes in investor perceptions aid in the explanation of their trading and risk-taking habits as well as the comprehension of performance variations among investors. In fact, we show that investor perceptions have much more explanatory power for their actions than historical returns.(Hoffmann, Post, & Pennings, 2011)

Brexit Referendum

Voters in the UK decided to exit the European Union (EU) on June 23 2016. This choice is probably going to be the biggest shift in UK economic policy in a generation. According to the majority of research done before the referendum a UK exit from the EU or Brexit would lower living standards in the country over time. It is anticipated that stock markets that are more vulnerable to the shock and its effects will react more strongly to the Brexit referendum shock. The shock comes in multiple dimensions. First the sterling depreciated instantly as a result of the referendum outcome. On June 24 2016 the value of the pound fell by 5 points to the euro and 8 points to the US dollar. Second future trade and immigration policies may undergo significant changes as a result of exiting the EU. Third investors may have lowered their expectations for future UK growth over both the short and long term as a result of the Leave vote which also raised uncertainty about UK economic policy. Real economic effects will take time to manifest and market participants may be mistaken according to analysis that offers fresh insight into investors' expectations regarding the ramifications of Brexit. Since 2016 the UKs economic growth has slowed in comparison to other major economies dispelling fears that the Leave vote would cause an immediate recession.(Holger Breinlich, Leromain, Novy, Sampson, & Usman, 2018)

Covid 19

The Sensex saw a 5 percent decline in October its worst monthly decline since the Covid-19 crash. The drop is caused by IPOs QIPs FII outflows and weak Q2 earnings. Analysts predict that because of the robust domestic liquidity corrections are likely but a significant crash is unlikely. The

festive month of October is turning out to be the worst for Dalal Street since the Covid-led market crash in 2020 with foreign institutional investors (FIIs) withdrawing almost Rs 82000 crore from India this month IPOs and QIPs suckling liquidity and no support from a tepid earnings season. Although COVID-19 has a negligible effect on stock market returns it has a negative effect on investor sentiment. The NSE stock markets ascent during the pandemic was validated by this inquiry. The psychological impact of health crises on investors is significant. The strange correlation between sentiment and the market during a health emergency suggested that investors were resilient to the pandemic because of lingering negative feelings pessimistic thoughts and pressure and they were hopeful about financial investments. Additionally, the COVID-19 pandemic increased returns on the Indian market.(Mallick & Jain, 2023)

Short Squeeze

If borrowed shares are recalled and the short seller cannot locate another source of shares a short squeeze takes place. As a result, the short seller is forced to close out a position early. The likelihood of a short squeeze is extremely low for the majority of stocks. The most difficult-to-borrow stocks however frequently experience short squeezes. The returns from short selling are significantly impacted by the high trading costs resulting from squeezes for these stocks. Because squeezes compel them to liquidate their positions short sellers of hard-to-borrow stocks also lose out on large abnormal returns.(Schultz, 2021)

The stock market has seen a battle between buyers and sellers since January 2021. People who were long Gamestop were purchasing shares at a premium in the hopes that shortsellers would give in and cover their positions which would raise prices. The resulting short squeeze caused stock prices to soar at least temporarily as the hope did indeed come true. The model depicts this type of asset mispricing as a rational bubble which is made possible by short selling. Short sellers will have to cover their positions eventually. This facilitates a trajectory of steadily rising prices which feeds price increases. (Guimaraes & Pannella, 2021)

Every IPO meant a payout and an exit. The lifecycle of a bubble consists of five stages: euphoria, boom, displacement profit-taking/crisis and panic/revulsion. These five phases and the timing of the entry of various investor types are depicted in the graph below which clearly shows how latecomers were hardest hit by the collapse.

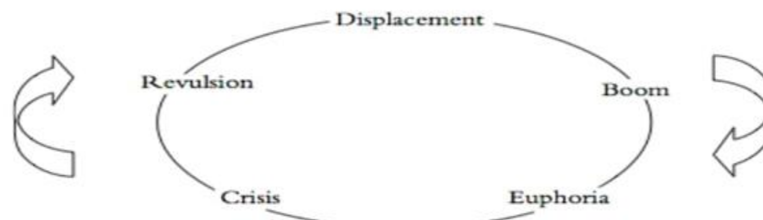


Figure 9.7 Anatomy of a Bubble: The Kindleberger–Minsky model
SOURCES: Kindleberger, SG Cross Asset Research.

Source : (Paluteder, 2022)

Hyman P. The evolution of financial instability and its connection to the economy were first understood by economist Minsky. In his ground breaking book Stabilising an Unstable Economy he outlined the five phases of a normal credit cycle one of the several periodic economic cycles. (1986).

- **Displacement**

A shift takes place when investors become enthralled with a novel concept like a cutting-edge new technology or historically low interest rates. Displacement is exemplified by the decline in the federal funds rate from 6 percent in July 2000 to 1 percent in June 2003. During these three years the interest rate on 30-year fixed-rate mortgages dropped 2-3 percentage points to a historic low of 5-23% setting the stage for the most recent housing boom.

- **Boom!**

After a displacement prices first rise gradually before picking up speed as more players join the market setting the stage for the boom phase. A significant amount of media attention is given to the subject asset during this phase. An increasing number of traders and investors are drawn to the market by the fear of missing out on a once-in-a-generation opportunity which feeds further speculation.

- **Euphoria**

Because asset prices are rising during this phase caution is completely ignored. During this phase valuation reach unprecedented heights as new metrics and measurements are proposed to support the unrelenting ascent and the greater fool theory which holds that there will always be a market of buyers willing to pay more is widely accepted. Prime office space in Tokyo for example sold for up to $139000 per square foot in 1989 at the height of Japans real estate bubble. Likewise, at the height of the Internet boom in March 2000 the total worth of all Nasdaq technology stocks exceeded the GDP of the majority of nations.

- **Profit booking**

The smart money starts to sell positions and take profits during this time paying attention to signals that the bubble is about to burst. However, because markets can remain irrational longer than you can be solvent as economist John Maynard Keynes once said it can be challenging to forecast when a bubble will burst. Because of their incapacity to assess their holdings the French bank BNP Paribas for instance suspended withdrawals from three investment funds that had a large exposure to US subprime mortgages in August 2007. Financial markets were initially shaken by this revelation but it was soon forgotten as global share markets hit all-time highs in the following months. Paribas was right in hindsight and this seemingly inconsequential incident foreshadowed the tumultuous times ahead.

- **Panic**

A bubble may be punctured by a relatively small event but once punctured the bubble cannot re-inflate. Asset prices reverse course and fall at the same rate that they rose during the panic stage. Speculators and investors are increasingly looking to liquidate at any price in response to margin calls and plummeting asset values. When supply outpaces demand asset values plummet.

Conclusion

According to the study investor sentiment drives market trends even though fundamental factors are still crucial. This emphasizes the necessity for investors policymakers and market analysts to take psychological factors into account when interpreting stock market movements. Market volatility bubbles and crashes can be fuelled by price movements that diverge from fundamental values due to investor sentiment. Trading decisions are influenced by emotions such as fear greed and overconfidence which frequently magnify market trends. A thorough examination of stock market dynamics requires an understanding of investor sentiment the study concludes. A more practical framework for comprehending market behaviour is offered by incorporating behavioural finance into conventional financial theories.

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