

Navigating Market Turbulence: Exploring Banking Sector Volatility Amidst COVID-19

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Abstract

The objective of the study was to study the volatility in the banking industry during COVID-19 by employing the technical barometer Relative Strength Index. The secondary data was extracted from the official websites of the National Stock Exchange for the period 1st January, 2020 to 30th September, 2022. The top 5 banks of Bank Nifty Index were undertaken for the analysis purpose and it was found that the maximum average return was witnessed by SBI Bank during the period of study. The returns of HDFC Bank, AXIS Bank, SBI Bank and Kotak Bank were fairly symmetrical as their values lies between -0.5 and 0.5. The returns of ICICI bank were moderately skewed as the value is -0.78. The high values of the excess kurtosis indicates that returns are heavily peaked and possesses thick tails as the values among all banks is greater than 1. The median return is highest in case of ICICI Bank and lowest in case of HDFC Bank. It was further witnessed that in the year 2020, due to COVID-19, the stock prices declined measurably and entered the oversold zone with RSI value of 18.98 on 24th March, 2020. Thereafter, there were continuous ups and downs in stock prices due to panic and unrest during the pandemic phase. The chart of Bank Nifty index was normal and there were many occasions when it appeared bullish and bearish to investors. Due to the change in behaviour of the individual investors there was panic buying and selling in the market.

Keywords: COVID 19, Market, Trends, Investors, Banks, Volatility

Introduction

The banking industry has seen considerable upheaval and unpredictability due to the COVID-19 epidemic, as has every other industry. Financial markets saw sharp swings as the world economy encountered unheard-of difficulties, and changing market patterns had a significant impact on investor mood. Given this, it is important to examine the major market dynamics that have influenced and will continue to influence investor sentiment in the banking sector throughout the pandemic. Around the world, the COVID-19 epidemic has caused several economic disruptions, particularly in the banking industry. Due to erratic market circumstances and unanticipated investor activity, the Indian stock market experienced substantial volatility during the epidemic. Investors must demonstrate their objectivity in situations where behavioural biases shouldn't affect their financial decisions. Heuristic, prospect, market, and herding biases that influence investment decisions among individual investors in India during the COVID-19 epidemic are some of the behavioural bias variables that are of concern in this study.

The banking sector supports economic systems by giving people, companies, and governments access to vital financial services. But the pandemic set off a chain of events that had an impact on the banking industry's supply and demand. Consequently, investors were forced to make their way across a quickly evolving environment while taking these market trends into account when making investment selections.

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The study aims to elucidate the significant market elements that have influenced investor sentiments in the banking industry, considering the COVID-19 outbreak. Investors who want to make wise selections and adjust to the changing banking industry realities must comprehend these developments. The COVID-19 epidemic has resulted in a significant increase in market volatility and a state of uncertainty. There were notable fluctuations in the stock markets, with banking equities being especially vulnerable. Accurately estimating the pandemic's effects on banks' overall profitability, asset quality, and financial health proved to be difficult for investors. Investors were apprehensive due to the unpredictability of government policies, interest rates, and loan defaults. Monetary policy measures were adopted by central banks globally to alleviate the economic consequences of the epidemic. Frequently, these actions involved notable decreases in interest rates. Lower interest rates have an impact on banks' profits, even if they were intended to encourage borrowing and economic activity. Investors kept a careful eye on changes in interest rates and evaluated how they might affect the net interest margins and revenue streams of banks.

The epidemic has hastened the banking sector's digital transition. Digital payment technologies, remote customer service, and internet banking became crucial when physical branches were shuttered or operated under tight constraints. As fintech businesses gained popularity, they put established banking methods to the test. Investors assessed how banks responded to these developments, taking into account their technological expenditures, alliances with fintech companies, and capacities to deliver smooth online experiences.

Globally, COVID-19 has changed the social and commercial scene. In the modern world, a corporation's capacity to adapt its business strategies is crucial to its survival and development. The largest technological change in the country has been caused by the COVID-19 illness. Due to the COVID-19 epidemic, companies saw a dramatic transition that can be seen in the manner in which they adopted an e-commerce business strategy. Some businesses have had a beneficial effect from COVID-19 as a result of the expansion of their client base, such as e-commerce businesses where some businesses had to be wound up owing to a sharp fall in consumer

demands. For small size enterprises, the pandemic has been difficult since their existence was on the line. The nation's economy has seen significant adversity due to the disruption in the worldwide supply chain, volatile market circumstances, and swift fluctuations in the demand and supply of products and services.

All organisational departments—including those dealing with information technology, human resources, marketing, research and development, finances, production, and sales—went through upheaval as a result of the epidemic. Both internal and external company operations have been impacted by the storm COVID-19 has produced. The rules, processes, and strategies have been updated to reflect contemporary and critical methods of operation. Businesses that were able to comprehend the current situation and make accurate future predictions were victorious in the COVID-19 epidemic. In the COVID-19 scenario, digitisation is one of the business solutions chosen by every prosperous entrepreneur and large-scale industry. Every sector of the economy has made an effort to speed up the business processes that might be digitalised. The COVID-19 phase presented difficulties for the company's board of directors since they had to adhere to stringent operating guidelines and governance standards provided by the Indian government. The largest challenge was focusing on what matters most to business entities and how information technology can empower and simplify it. In the early stages of COVID-19, the route to recovery seemed unclear, but ongoing government efforts and the assistance of technocrats have brought comfort through trying times. The COVID-19 epidemic proved to be fruitful for digital pioneers, who made contributions to the fields of automation, distributed cloud computing, artificial intelligence, and machine learning, among others. The majority of people now spend the majority of their time online, thus, businesses must analyse client preferences during the COVID-19 phase to learn more about the demand for their goods and services. The whole globe was undergoing changes that had an influence on daily life. The current need for businesses is to consistently analyse market stimuli, stay committed to quick innovation, and attempt to satisfy consumer aspirations for a seamless digital user experience in post-COVID-19 periods. The country's economy was in freefall, and it was anticipated that India may go into a recessionary period. The GDP of India is predicted to decrease 7.7%

in the fiscal year 2020–21. If it occurs, the 7.7% decline would be India's worst economic performance since 1961–1962. Due to more government investment and an

expedited phase of recovery, the country has experienced a considerable rebound in the second half of the year.

Behavioural Factors Influencing Investment Decisions

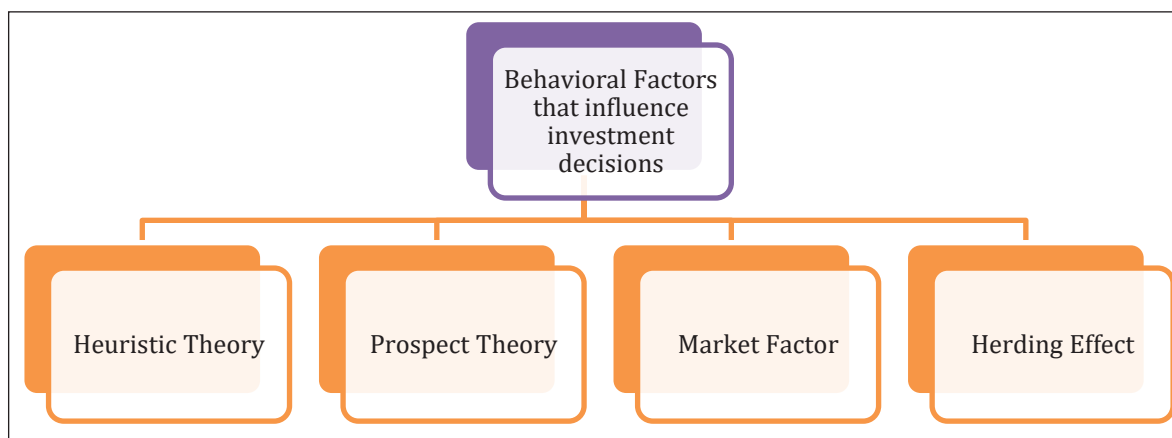


Fig. 1: Showing Behavioural Factors that Influence Investment Decisions

Heuristic Theory: Heuristics are quick approaches to problem resolution that yield sufficient outcomes in a little amount of time. Investors and financial gurus employ heuristic approaches to speed up analysis and investment decisions. On the basis of little facts, heuristics can lead to poor decision-making; nevertheless, sometimes the benefits of speed outweigh the disadvantages. In the field of behavioural economics, heuristics have garnered significant attention for their potential to impede rational action. The hot hand fallacy, availability, anchoring, confirmation bias, and anchoring are examples of heuristics that are employed in daily life (Fig. 1).

Prospect Theory: It is a psychological framework, explains how humans make choices in situations that entail risk, probability, and uncertainty. The argument posits that individuals make decisions based on the anticipated benefits or detriments they are likely to encounter. When faced with two equally likely options, the majority of individuals would opt to maintain their existing financial status rather than take a chance to enhance it. Individuals often exhibit risk aversion, meaning they prefer to avoid potential losses rather than take a gamble to potentially get a similar benefit. The loss-aversion hypothesis is an alternative title for the concept of the prospect idea.

Market Factors: The prevailing market conditions affect the investment decisions of investors. The continuous price changes and inflow of new market information influence their investment patterns. Investors also get affected due to past trends of the market. The fundamental analysis of the company stocks also plays a major role in selection of stocks of the company. Sometimes overreactions to price changes also impact the investment decisions.

Herding Effect: Every investor receives information (signals) indicating what to do. They are also aware of the choices made by their forebears, while they are unaware of the signals they were given. Each investor decides for themselves based on this information. However, this lack of awareness of earlier signals might occasionally lead investors to miss current signs and make the same choices as their forebears. The “Herd Effect” is the name for this impact on the economy. Many believe that this phenomenon is the primary initiating factor in the historical occurrence of mass panic or hysteria (as seen in bubbles and collapses).

Incorporating these theories into the review of the literature provides a comprehensive understanding of the behavioural factors driving investment decisions.

By examining the interplay between heuristic strategies, prospect theory principles, and market dynamics, researchers can gain valuable insights into the complexities of investor behaviour and its implications for financial markets.

Objective of the Study

The main objectives of the study are:

- To study the volatility in the banking industry by employing the technical barometer Relative Strength Index.

Literature Review

Barro et al. (2020) stated that the 1918–1920 Great Influenza Pandemic's mortality rate and economic downturn offered tenable upper boundaries for what may happen with the coronavirus (COVID-19). Data for 48 nations suggested that 40 million people died from the flu in 1918–1920, accounting for 2.1 percent of the global population and, when extrapolated to the present population, 150 million fatalities. Regressions using yearly data on influenza mortality in 1918–1920 and war deaths in World War I suggested that the epidemic caused economic reductions of 6 and 8 percent, respectively, for GDP and consumption in the average nation. Additionally, there is evidence that lower realised real returns on equities and, particularly, short-term government bills, were impacted by increased flu fatality rates.

Biswas et al. (2020) stated that no illness has ever caused as much havoc over the world as the Novel Corona Virus (COVID-19). The global economy and financial markets are experiencing trade uncertainty as the nations of the globe unite to combat this sickness and look for a vaccine that can combat this life-threatening disease. Sentiment analysis is a technique used by researchers to identify people's predominant attitudes from posts and comments made on social networking websites. The study discussed a technique for predicting how investors will respond to information and developments about the Corona virus. A proposed technique that compiles tweets about the coronavirus outbreak can predict market changes. The researchers also went through the body of research on sentiment analysis and natural language processing tools that academics have employed to create forecasting

models based on data taken from Twitter and other social media. We take news and numerical data from Twitter and Yahoo! Finance for our research trials in order to build a prediction model. The results of the study showed that the suggested model could predict stock market trends, and the predictions matched the actual movements of the Bombay Stock Exchange index, SENSEX.

Bouri et al. (2021) stated present coronavirus epidemic has affected investor herding in global stock markets. The author studied the correlation between herd mentality and pandemic-induced market volatility in 49 different stock markets throughout the world using a daily newspaper-based measure of infectious disease-related financial uncertainty. With a focus on the pattern of cross-sectional market behaviour, we want to answer the question of whether the uncertainty caused by the outbreak causes directional similarities in the behaviour of stock markets throughout the world that conventional asset pricing models fail to explain. According to the research, the correlation between herd mentality and the COVID-19-induced market uncertainty is rather high. The herding impact of COVID-19-induced market anxiety is especially acute for European PIIGS stock markets, which include some of the most severely affected European countries by the epidemic, and developing stock markets. The results demonstrated a clear connection between the current epidemic and the establishment of herd mentality among traders in international financial markets.

Cevik et al. (2022) investigated the connection between bullish and bearish investor sentiment, stock market returns, and volatility in a group of twenty countries. The author employed a number of methods, including panel quantile regressions, a panel vector autoregression (PVAR) model, and country-specific regressions. The study measured investor sentiment positively for terms related to the coronavirus disease (COVID-19) and negatively for terms related to COVID-19 immunisation using the Google Search Volume Index for these terms, respectively. The study used weekly data from March 2020 to May 2021 and discovered considerable connections between investor sentiment, stock market volatility, and returns. In particular, at lower quantiles, stock returns are lower when investor optimism falls and vice versa when market optimism rises. Since the data demonstrate that measures of both optimistic and pessimistic investor sentiment seem to be valid predictors of market returns

and volatility during the pandemic, they may have an effect on portfolios.

Chakraborty and Thomas (2020) stated that it was difficult to quantify the macroeconomic uncertainty brought forth by COVID-19. The circumstances necessitate concurrent governmental intervention in the areas of livelihood and public health infrastructure. India has also declared its first round of fiscal and monetary policy adjustments, in line with the rest of the world. However, in order to intensify the policy response to the developing crisis, greater coordination between fiscal and monetary policy is needed. It is necessary to investigate creative ways of funding the deficit, such as through the money financing of fiscal initiatives, a kind of “helicopter money.”

Chen et al. (2020) investigated how the fear around the coronavirus epidemic influences changes in the price of bitcoin. Researchers developed a unique proxy for the emotion of coronavirus fear by using hourly Google searches for terms related to coronaviruses. The results showed that a spike in coronavirus search interest has exacerbated market volatility due to fear. Furthermore, we find that negative Bitcoin returns and increased trading volume might be explained by investor aversion to the coronavirus. The research results also indicated that Bitcoin is not a pandemic sanctuary.

Chohan (2020) stated that the COVID-19 epidemic has caused significant harm to the global economy in a number of ways, but it stands out for its effects on the “real world” economy rather than just the financial markets. As both wealthy and developing nations attempt to combat the epidemic, they all encounter resource constraints, with the poorer world experiencing a greater shortage. This paper demonstrated the potential long-term economic effects of the COVID-19 pandemic by presenting some limited forecasting through scenario analysis utilising an aggregate demand method for Pakistan. According to the research, there will be significant decreases in FY20, but quicker rates of local and global recovery might lead to a pick-up in economic activity in FY21.

Costola et al. (2021) stated that concerns about the severity of the pandemic have been a major factor in investment choices throughout the COVID-19 epidemic. In this study, we use Google Trends search engine data to examine the connection between public interest and the financial markets. Our research demonstrates the

relationship between stock markets and search query volumes in Italy, Germany, France, Great Britain, Spain, and the United States. All markets taken into consideration are determined to be mostly driven by the Italian Google Trends index. Additionally, the Italian lockdown procedure is closely followed by the market effects of COVID-19-related worries on a country-by-country basis.

Haushofer and Metcalf (2020) stated that recent years have seen advancements in behavioural economics’ ability to recognise and evaluate interventions that might enhance prophylactic health practices like handwashing. We examine this data and offer potential strategies for utilising it to lessen the present new coronavirus outbreak. We next go into how knowledge from infectious disease epidemiology may be used to optimise the impact of these interventions. Initially, the nonlinear dynamics of disease transmission suggest that saturation—that is, the proportion of members of a community that practice preventive measures—is a significant influence factor. Therefore, saturation needs to be considered methodically while designing and assessing interventions. Furthermore, the dissemination of preventive knowledge and actions may be optimised through the utilisation of contagion mechanisms themselves. Lastly, the temporal complexity of infectious illness transmission makes treatments difficult.

Huynh et al. (2021) presented a novel approach to evaluating investor attitudes and analysing their impact on global financial markets. The study utilised data from January 2020 to February 2021 to examine the COVID-19 pandemic in 17 major economies. It focused on six behavioural indicators, including media coverage, false news, panic, mood, media hype, and infodemic, to provide a comprehensive understanding of the situation. The primary findings indicated that the overall and net connectivity for the newly introduced “feverish sentiment” index were calculated using a time-varying parameter-vector auto-regression (TVP-VAR) model. This index provided information on the countries that either emit or receive emotional shocks.

Khanna et al. (2020) stated that emerging pandemics serve as a reminder that people are flawed and that communities must be ready. Following early reports of the coronavirus epidemic around the end of 2019, the World Health Organisation has officially classified it as

a pandemic. Different nations throughout the world are handling the viral epidemic in different ways. China and other big nations have reported a delay in identification and reaction, which has resulted in an overburdening of the local health systems. However, since the start of the pandemics, relatively few cases have been reported in a few other countries that have successfully contained the illness.

Maital and Barzani (2020) purport to provide an overview and synthesis of the existing body of material on the COVID-19 “new coronavirus” and its impact on the worldwide economy. The argument posits that the epidemic, sometimes referred to as a pandemic, primarily affects the supply side of the global economy. Conversely, the demand side is predominantly influenced by the ongoing investigation and implementation of cures. The global arsenal for mitigating supply-side shocks and disruptions is severely constrained. Given the appropriate circumstances, it is quite probable that a worldwide economic downturn will occur.

Naseem et al. (2021) observe that both patients and medical professionals are experiencing significant psychological strain due to the epidemic, leading to the development of psychological resilience. This study aimed to examine the stock market’s behaviour and investor psychology during the COVID-19 pandemic. Investors’ psychological reactions to the stock market, whether positive or negative, can influence how the status of the economy is perceived. This research used principal component analysis to investigate the performance of the Shanghai, Nikkei 225, and Dow Jones stock markets over the period from January 20, 2020, to April 27, 2020. The results indicated that three particular stock markets had a negative correlation with investor psychology, despite the presence of pandemic strain and psychological resilience.

Salisu and Akanni (2020) stated that for the COVID-19 pandemic, the author first created a global fear index (GFI) to aid in economic, financial, and policy studies. Second, we use OECD data to illustrate how the index might be used to predict stock returns. The relevance of the index as a reliable predictor of stock returns during the pandemic is demonstrated by the panel data prediction results. We also discover that the GFI-based prediction model for stock returns performs better when “asymmetry” impact and macro (common) variables are taken into consideration. Numerous empirical assessments can be expanded to other

macroeconomic factors in future studies with continuous updates and enhancements to the index.

Sen and Gupta (2020) stated that the Indian economy has seen an unparalleled disruption because of the COVID-19 epidemic. The condition of the economy was extremely poor even prior to the onset of the COVID-19 pandemic. The extended nationwide lockout, the worldwide economic decline, and the consequent disruption of supply and demand networks are expected to lead to a lengthy economic recession. The length and intensity of the health crisis, the duration of the lockdown, and the subsequent sequence of events after lifting the lockdown will all determine the magnitude of the economic repercussions. The study examined the pre-Covid-19 condition of the Indian economy, evaluated the potential impact of the shock on several economic sectors, and analysed the current strategies being implemented.

Serbulova et al. (2020) discussed COVID-19’s methods for adjusting innovation processes in organisations and illustrated technology and solutions that may be used to address contemporary issues. Innovation may help a corporation endure a crisis and provide opportunities for the exploration, assessment, and experimentation of new products and processes. Future competitive advantages may depend significantly on utilising new technology and being receptive to advances. The study was based on an investigation of how the coronavirus affected different businesses, utilising authoritative industry data sources, analytical reports, and global indices and indicators.

Sherif (2020) investigated the fast spread of the coronavirus (COVID-19) and its direct influence on the UK Dow Jones market index, which follows Shariah principles. The results indicate a robust and statistically significant relationship between the COVID-19 epidemic and the performance of the traditional stock market index. This result is derived from the examination of daily data gathered from January 20 to May 20, including 10 industrial sector groupings in the United Kingdom. The results suggested that, in contrast to the British equivalent, the sickness had a little and inconsequential effect on the Dow Jones faith-based ethical (Islamic) index. In addition, the data demonstrated that the information technology sector outperformed the market by a substantial margin in terms of stock returns, whereas other sectors did not exhibit the same level of performance. During the

COVID-19 epidemic, the stock returns of consumer services significantly underperformed the entire market. In contrast, the consumer discretionary sector, which includes businesses like transportation, drinks, tourism, and leisure, has different returns. Other sector classifications offer parameter values that are highly unrealistic.

Research Gaps

Although there has been research on how market developments affect investor mood, there is still a lack of knowledge about these dynamics, particularly in the context of the banking sector during the COVID-19 epidemic. Few research has thoroughly examined the complex effects of market movements on investor attitudes during a worldwide crisis.

Rationale for the Study

The COVID-19 epidemic presented hitherto unheard-of difficulties; hence, it was imperative to look at how market movements impacted investor attitudes in the banking industry. By offering a thorough investigation of the complex links between market movements and investor feelings throughout the pandemic, this study seeks to close the gaps that have been found.

Research Methodology

The objective of the study is to identify market trends and study the volatility in the banking industry. The data for the study has been extracted from the official website of the National Stock Exchange (NSE) for the period starting from 1st January 2020 till 31st October, 2022. The

design employed in the study is conceptual, descriptive and analytical. The data has been analysed using the Microsoft Excel NUMXL add-in. The technical analysis tool ‘Relative Strength Index’ has been employed to study the volatility in the stock prices of BANK NIFTY.

The banking industry is selected for a number of reasons, including:

- *Systemic Importance:* Banking is crucial to the global economy, and the stability of the economy as a whole depends on our capacity to comprehend investor moods in this area.
- *Vulnerability to External Shocks:* Banks are susceptible to shifts in the external economy, and the COVID-19 epidemic offered a special external shock that called for further investigation.
- *Regulatory Dynamics:* The banking industry is subject to various regulations that may influence how market trends impact investor sentiments, adding complexity to the analysis.

The top ten leading companies in the banking industry shown in Table 1 have been selected for the study based on their weightage as of September 30, 2022.

Table 1: Showing the Top 5 Constituents by Weightage

Company's Name	Weight(%)
HDFC Bank Ltd.	25.61
ICICI Bank Ltd.	24.62
Axis Bank Ltd.	12.63
State Bank of India	10.99
Kotak Mahindra Bank Ltd.	10.87

Source: Collated by the researchers on October 31, 2022, from the website (moneycontrol.com).

Data Analysis and Interpretation

Table 2: Showing Descriptive Statistics of the Top 5 Banks in the NIFTY Bank Index

Summary Statistics	HDFC Bank	ICICI Bank	AXIS Bank	SBI Bank	KOTAK Bank
Average Returns	0.000210	0.000761	0.000563	0.000796	0.000170
Standard Deviation	0.020107	0.024794	0.018776	0.024009	0.022044
Skewness	-0.35	-0.78	0.00	-0.45	-0.33
Excess Kurtosis	7.21	9.41	2.86	5.47	6.04
Median	0.000174	0.001829	0.000550	0.001518384	0.000278
Minimum	-0.134754	-0.196597	-0.068668	-0.144586481	-0.139257

Summary Statistics	HDFC Bank	ICICI Bank	AXIS Bank	SBI Bank	KOTAK Bank
Maximum	0.109747	0.128942	0.086426	0.129525269	0.113784
1st Quartile	-0.009642	-0.010844	-0.009551	-0.011235566	-0.011490
3rd Quartile	0.010177	0.012900	0.011100	0.013994574	0.012302

Under the period of the study the highest average return i.e., 0.07906% among top 5 constituents is of SBI Bank, followed by ICICI Bank with 0.0761% and AXIS bank with 0.0563%. The variability in returns is highest in case of ICICI Bank with standard deviation of 2.47% followed by SBI Bank with 2.4%, thereafter Kotak Bank with a standard deviation of 2.22%. The returns of HDFC Bank, AXIS Bank, SBI Bank, and Kotak Bank were fairly symmetrical as their values lies between -0.5 and 0.5. The returns of ICICI Bank were moderately skewed as

the value is -0.78. The high values of the excess kurtosis indicates that returns are heavily peaked and possesses thick tails as the values among all banks is greater than 1. The median return is highest in case of ICICI Bank and lowest in case of HDFC Bank. The minimum return is witnessed in case of ICICI Bank and highest return among all five banks is noticed in case of SBI Bank. The lower and upper quartile values show the below 25% values and lowest 75% values (Table 2).

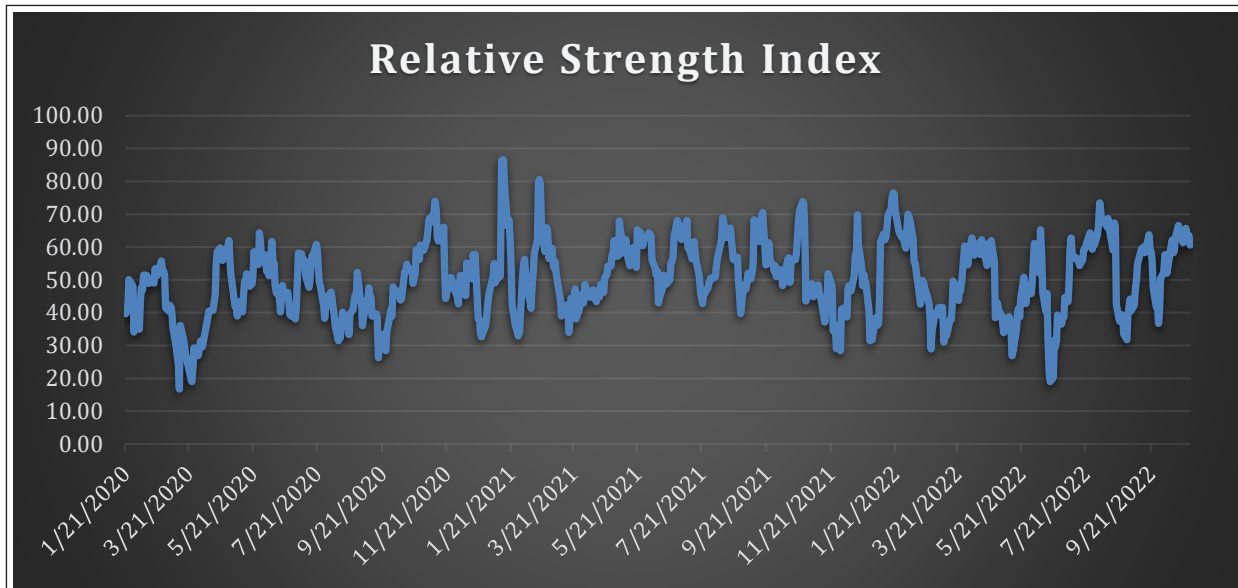


Fig. 2: Shows the Relative Strength Index of NIFTY BANK Index

Fig. 2 reflects the continuous bullish and bearish movements in the stock prices of NIFTY Bank. In the year 2020, due to COVID-19 the stock prices declined measurably and entered the oversold zone with RSI value of 18.98 on 24th March, 2020. Thereafter there were continuous ups and downs in the stock prices due to panic and unrest during pandemic phase. In the month of September, 2020, the stock prices of NIFTY Bank Index again entered the oversold zone. In month of November stock prices entered the overbought zone and stayed there till January, 2021. From March 2021 till October 2021 the stock prices did not enter the oversold zone. In the month

of November, 2020, the stock prices entered the oversold zone and there were continuous instances during which it remained in the oversold zone. In the month of June, 2022, the stock prices declined with RSI value of 18.98. The chart of the BANK NIFTY index was normal and there were many occasions when it appeared bullish and bearish to the investors.

Conclusions

The coronavirus COVID-19 pandemic wreaked havoc on nations’ economies and other parts of the globe. In India

during the COVID-19 epidemic, this study discovered the presence of behavioural bias represented by heuristic, prospect, market, and herding factors that affected individual investors' investment decisions. Investor sentiments in the banking industry during the COVID-19 pandemic were shaped by various market trends. The heightened volatility, interest rate fluctuations, digital transformation, government interventions, and changing consumer behaviour influenced investment decisions. To thrive in this dynamic environment, investors needed to stay informed about these trends, assess their implications, and identify banks that effectively responded to the challenges posed by the pandemic.

The top 5 banks of Bank Nifty Index were undertaken for the analysis purpose and it was found that the maximum average return was witnessed by SBI Bank during the period of study. The returns of HDFC Bank, AXIS Bank, SBI Bank and Kotak Bank were fairly symmetrical as their values lies between -0.5 and 0.5. The returns of ICICI Bank were moderately skewed as the value is -0.78. The high values of the excess kurtosis indicates that returns are heavily peaked and possesses thick tails as the values among all banks is greater than 1. The median return is highest in case of ICICI Bank and lowest in case of HDFC Bank. It was further witnessed that in the year 2020, due to COVID-19 the stock prices declined measurably and entered the oversold zone with RSI value of 18.98 on 24th March, 2020. Thereafter there were continuous ups and downs in the stock prices due to panic and unrest during pandemic phase. The chart of Bank Nifty index was normal and there were many occasions when it appeared bullish and bearish to the investors. Due to change in behaviour in the individual investors there was panic buying and selling in the market. Investor turn to follow herding behaviour which has negative impact on the stock movements. The market factors such as surge in interest rates and change in fiscal policies also changed the behaviour of investors in the market. Investors were mostly risk averse in the pandemic phase and often tried to behave in the manner other investors are investing which resulted in phases of oversold and overbought zone.

Beneficiaries of the Studies

- *Investors*: The knowledge gained from this research will enable investors in the banking industry to

make well-informed decisions that minimise risks and maximise possibilities.

- *Regulators*: By utilising the data, regulatory organisations may improve policy and more accurately predict how market developments will affect investor behaviour in the banking sector.
- *Academic Community*: By building on this work, researchers and academics can get a deeper comprehension of how market movements and investor feelings intersect during times of crisis.

Limitations of the Study

- Real-time data availability and the dynamic nature of financial markets during the pandemic may pose limitations to the study.
- The emphasis on a particular time period and the banking sector may limit the generalizability of the findings.

Future Research Prospects

- Research in the future may examine how market movements may affect investor mood in the long run after COVID-19.
- Studies that compare data from several industries or geographical areas may offer a more comprehensive viewpoint.
- More detailed insights might be obtained by conducting in-depth evaluations of particular banking products or market niches.

References

- Barro, R. J., Ursúa, J. F., & Weng, J. (2020). *The coronavirus and the great influenza pandemic: Lessons from the "spanish flu" for the coronavirus's potential effects on mortality and economic activity* (No. w26866). National Bureau of Economic Research.
- Biswas, S., Sarkar, I., Das, P., Bose, R., & Roy, S. (2020). Examining the effects of pandemics on stock market trends through sentiment analysis. *J Xidian Univ*, 14(6), 1163-76.
- Bouri, E., Demirer, R., Gupta, R., & Nel, J. (2021). COVID-19 pandemic and investor herding in international stock markets. *Risks*, 9(9), 168.

- Cevik, E., Kirci Altinkeski, B., Cevik, E. I., & Dibooglu, S. (2022). Investor sentiments and stock markets during the COVID-19 pandemic. *Financial Innovation*, 8(1), 1-34.
- Chakraborty, L., & Thomas, E. (2020). COVID-19 and Macroeconomic Uncertainty. *Economic & Political Weekly*, 55(15), 15.
- Chen, C., Liu, L., & Zhao, N. (2020). Fear sentiment, uncertainty, and bitcoin price dynamics: The case of COVID-19. *Emerging Markets Finance and Trade*, 56(10), 2298-2309.
- Chohan, U. W. (2020). Forecasting the economic impact of coronavirus on developing countries: Case of Pakistan. CASS Working Papers on Economics & National Affairs, Working Paper ID: EC016UC (2020). doi:<https://doi.org/10.2139/ssrn.3563616>
- Costola, M., Iacopini, M., & Santagiustina, C. R. (2021). Google search volumes and the financial markets during the COVID-19 outbreak. *Finance Research Letters*, 42, 101884.
- Dev, S. M., & Sengupta, R. (2020). *COVID-19: Impact on the Indian economy* (No. 2020-013). Indira Gandhi Institute of Development Research, Mumbai, India.
- Haushofer, J., & Metcalf, J. C. E. (2020). Combining behavioral economics and infectious disease epidemiology to mitigate the COVID-19 outbreak. *Princeton University, March*, 6, 1-10.
- Huynh, T. L. D., Foglia, M., Nasir, M. A., & Angelini, E. (2021). Feverish sentiment and global equity markets during the COVID-19 pandemic. *Journal of Economic Behavior & Organization*, 188, 1088-1108.
- Huynh, T. L. D., Foglia, M., Nasir, M. A., & Angelini, E. (2021). Feverish sentiment and global equity markets during the COVID-19 pandemic. *Journal of Economic Behavior & Organization*, 188, 1088-1108.
- Khanna, R. C., Cicinelli, M. V., Gilbert, S. S., Honavar, S. G., & Murthy, G. S. (2020). COVID-19 pandemic: Lessons learned and future directions. *Indian Journal of Ophthalmology*, 68(5), 703. doi:https://doi.org/10.4103/ijo.IJO_843_20
- Maital, S., & Barzani, E. (2020). The global economic impact of COVID-19: A Summary of research. *Samuel Neaman Institute for National Policy Research*.
- Naseem, S., Mohsin, M., Hui, W., Liyan, G., & Penglai, K. (2021). The investor psychology and stock market behavior during the initial era of COVID-19: A study of China, Japan, and the United States. *Frontiers in Psychology*, 12, 626934.
- Salisu, A. A., & Akanni, L. O. (2020). Constructing a global fear index for the COVID-19 pandemic. *Emerging Markets Finance and Trade*, 56(10), 2310-2331.
- Sherif, M. (2020). The impact of coronavirus (COVID-19) outbreak on faith-based investments: An original analysis. *Journal of Behavioral and Experimental Finance*, 28, 100403.