



An Analysis on Stock Market Volatility in an Emerging and Developing Economy During Global Pandemic

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Abstract

Unavoidably, COVID-19's global epidemic brought about a significant drop in every sphere of the economy. This study examines the impact of COVID-19 on Indian stock market performance by using a moving average and historical values of the Nifty 50 and S&P BSE SENSEX. The investigation's goal is to pinpoint the Indian Stock Exchange's BSE and NSE weaknesses and the volatility during that time span. The results demonstrate that the pandemic had a major influence on the industries included in this research. But the rise in COVID-19 cases starting in January 2020 and the deaths that followed in 2021 caused the biggest stock market decline ever seen. Despite that, the market saw a record-breaking high on both the NSE and the BSE by the end of 2021. Following the Covid's impact, the Indian financial market also experienced a sharp downturn. During this time, the Nifty dropped 7500 points and the BSE dropped about 920 points. This research focuses on the volatility of the stock market across this time frame. By the afternoon of April 5th, 2021, investors had lost more than Rs. 4.54 lakh crore. The investors lost a total of 7.36 lakh crore in just 7 months.

Keywords: COVID-19; Bombay Stock Exchange; National Stock Exchange; Stock market; Share price

Introduction:

The stock market has become more liberalized as part of the process of economic liberalization. The Indian corporate sector has been allocated a significant role in financing. The stock markets' main tasks include providing liquidity to investors, monitoring and disciplining business management, and mobilizing capital for investment directly from investors. The stock market's main draw is that it allows companies and governments to raise funds directly from investors while also providing liquidity to those who invest. Liquid markets are also seen to help with resource allocation and long-term economic growth prospects. Stock markets are also likely to play a significant role in reining in firm executives. Since the early 1980s, when India was still in the early stages of liberalization, equity market growth has been a priority. Following the deepening and widening of the liberalization process in 1991, the development of capital markets was declared an integral aspect of the restructuring agenda. In terms of structure and operational efficiency, Indian markets now comply with international standards.

As a result of the suspension of business due to the epidemic of COVID-19, markets throughout the world, including the Indian market, fell. During this time, volatility has increased, and the situation is becoming worse. Even small investors had it rough since they couldn't position themselves advantageously or profit from the market. COVID-19 directly heated SMEs and clarified minimal

Higher realizations on surging commodity prices, a steady improvement in consumption demand post the festive season and vaccination roll-out, and easing supply-side bottlenecks in amongst the limited lockdown restrictions during the quarter helped Nifty 50/Nifty 500 companies' net sales grow by a strong 9.3 percent /8.0 percent (<https://www.nseindia.com/resources/publications-market-reports>).

Above the graph represents high price fluctuations and volatility among stocks during this last month of the year. Because to COVID-19's devastating second wave and its impact on the economy in FY21, this was truly the case. With this, the top 200 companies' earnings are predicted to expand at a CAGR of 27.6 % between FY 21 and FY23(<https://www.nseindia.com/resources/publications-market-reports>).

On February 1st, 2020, the government announced the Union Budget, following a 2% drop in the SENSEX due to the coronavirus scare. On February 28, 2020, the nifty and the Sensex saw their biggest weekly decline since 2009 when the WHO proclaimed a pandemic of the coronavirus, according to the publication "The Week".

On the other hand, the BSE (Bombay Stock Exchange), the SENSEX finished the roller coaster trip of 2020 at a new closing high, supported by optimistic global market sentiment. Despite falling to a multiyear low in March due to the coronavirus outbreak, the index has risen 15.75 percent in 2020. The 30-stock index gained 6,497 points in 2020, closing at a new high of 47,751 on the last trading day of the year. The index also hit an all-time high of 47,896 during the session (Sharma, 2021).



Source: Statista

Figure 6 : Graphical representation

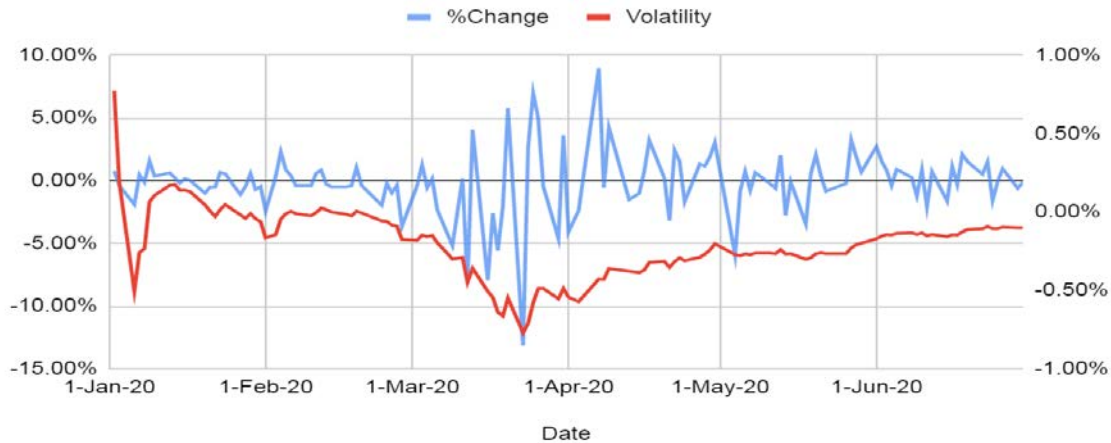
The S&P BSE SENSEX index, one of India's key stock indexes, lost nearly a quarter of its value between the end of February and the end of March 2020 as a result of the economic implications of the worldwide coronavirus (COVID-19) epidemic. On March 23rd BSE SENSEX fell 25981.24 points. It has since rebounded, and in November 2020.

The SENSEX plummeted by 1,941.67 points on March 9, 2020, and the markets closed in the red, with the SENSEX ending at 35,634.95. The SENSEX plummeted by 2919.26 points (-8.18 percent) on

March 12, 2020, the worst week in the index's history. The SENSEX ended at a 33-month low of 32778.14. The SENSEX fell by 2,713.41 points (approximately 8%) on March 16, 2020, the second-worst drop in its history. The SENSEX, on the other hand, continued to plummet for four consecutive days until March 19, 2020, shedding 5815 points in the process. On March 23, 2020, the SENSEX dropped 3,934.72 points, or 13.15%, the worst weekly loss since October 2008.

Volatility Analysis 2020

BSE



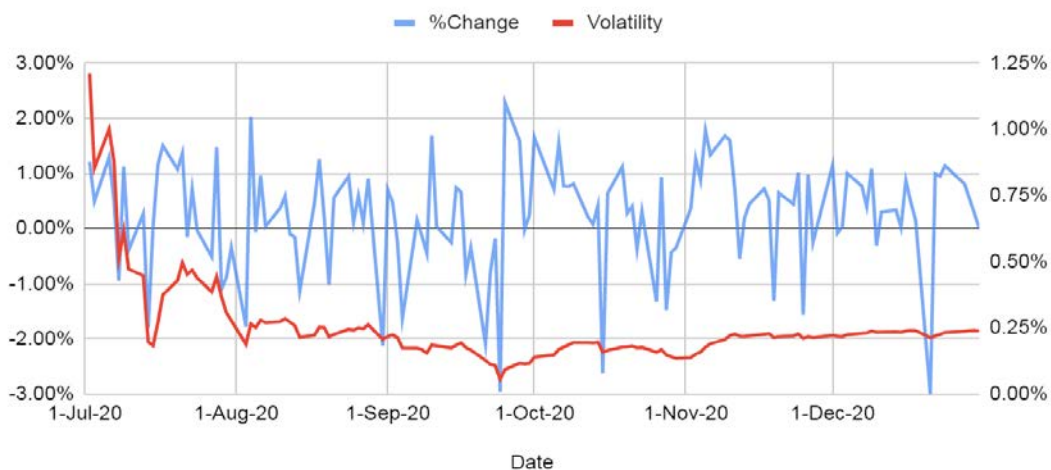
Source: -BSE SENSEX stock Index Data

Figure 7: Graphical representation of (BSE)

In the calendar year 2020, the SENSEX climbed 12% to an all-time high of 46,373.34. The benchmarks plunged to multi-year lows when the government imposed a statewide lockdown to stop the spread of coronavirus. The SENSEX fell to 25,638 points, a multi-year low.

Volatility Analysis 2020

BSE



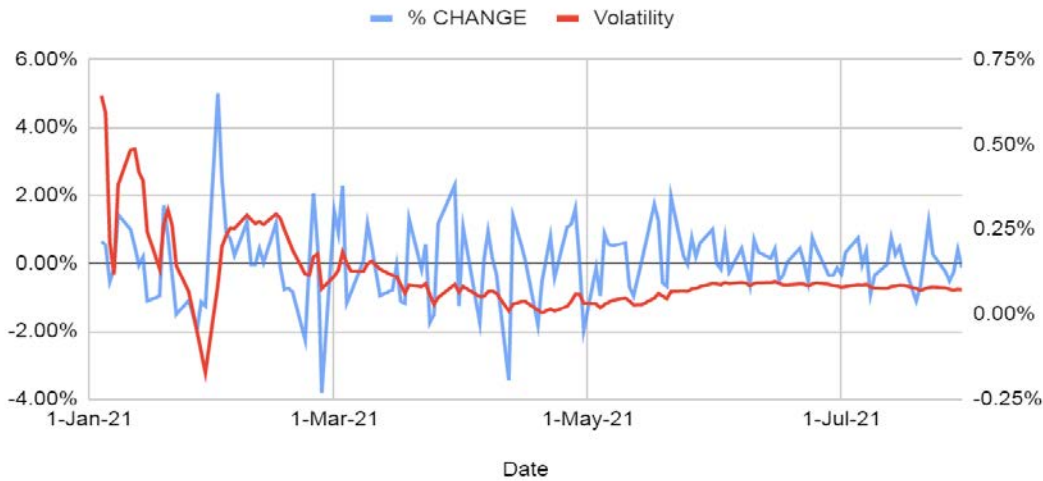
Source: BSE SENSEX stock Index Data

Figure 8: Graphical Representation of (BSE)

On January 29th 2021 SENSEX fell to 46,287.77 points. The stock market's decline is plainly seen in the graph below. As India continues to confront the second wave of Covid-19, the market maintained its downward trend on Tuesday. The SENSEX ended 243 points down after a tumultuous day.

Volatility Analysis 2021

BSE



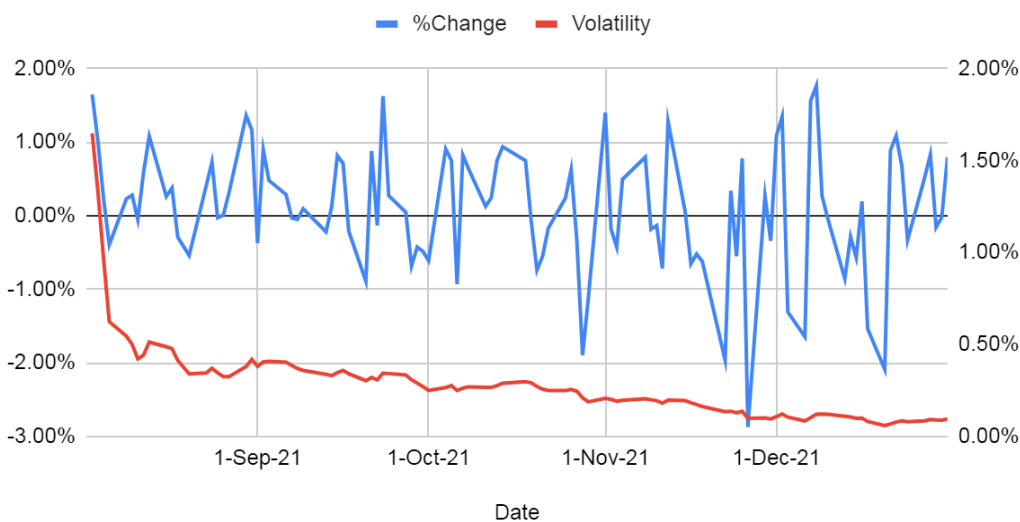
Source: BSE SENSEX stock Index Data

Figure 9: Graphical representation of (BSE)

SENSEX crashed 10 percent as of Tuesday's closing from its all-time high of 52,516.76 hit on February 16th.

Volatility Analysis 2021

BSE



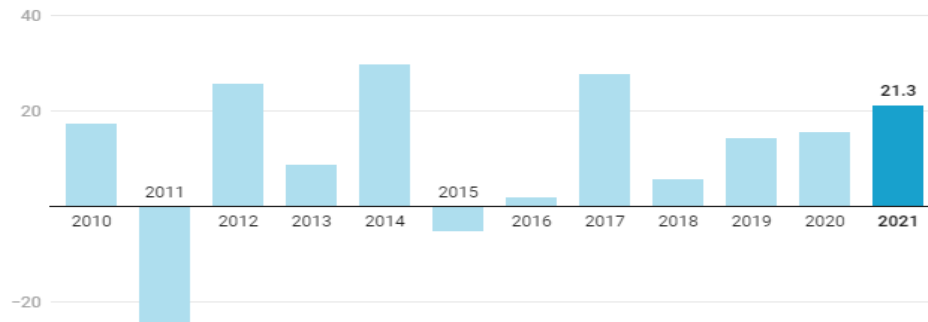
Source: BSE SENSEX stock Index Data

Figure 10: Graphical Representation of (BSE)

Despite the country reporting over 300,000 diagnosed diseases and over 4,000 fatalities per day, India's benchmark equity index has been increasing at a pace with regional competitors. In comparison to MSCI AC Asia Pacific, the S&P BSE SENSEX index is down 6.6% since mid-February. As a comparison, when the global coronavirus outbreak came out in March of last year, the SENSEX dropped by 23% (Mazumdar & Acharya, 2021).

The VIX rose 16.22% at the start of the week, indicating that Indian markets were experiencing higher volatility. While the market was still tumultuous and the prices of equities fluctuated, the SENSEX managed to rise by roughly 650 points, or 1.3 percent. The market has benefited from a number of corporations' solid fourth-quarter results, according to Indian express (Singh, 2021).

Yearly growth in Sensex



Source: BSE SENSEX stock Index Data

Figure 11: Graphical representation of (BSE)

Despite the Deadly Pandemic the SENSEX rose by over 10,000 points in a single year, making it the best year for BSE. Between January 1, 2021 and December 29, 2021, the BSE SENSEX increased by 10,054 points. In absolute terms, this is the largest year-over-year growth in history. The performance in 2021 is the best in the last four years, even in percentage terms.

Conclusion

As a rising economy, India's is expected to grow. The Indian stock market's reaction to COVID-19 was examined in this study. The Nifty fifty is expected to have a wild ride in 2020, soaring from a low of 7,511 in March to a high of 14,024 at year's end. The Nifty 50 fell from 11380 to 7500 points in March as investors were more concerned about the spread of coronaviruses. The 2 percent drop in SENSEX occurred as a result of the government's announcing the Union Budget on February 1, 2020, due to concerns about the coronavirus. 2021 saw the Bombay Stock Exchange (BSE) hit 60,000 points, while the Indian stock market (NSE) hit 17000 points. COVID restrictions, including lockdowns, curfews, and other measures taken by state governments, resulted in a total loss of Rupees 6.25 lakh crores for 8 crores of Indian dealers in April. It was revealed in a statement by the Confederation of All India Traders, which acts as the community's top authority on things relevant to merchants, by way of more than 40,000 clubs that together represent over 8 million traders. In April, the COVID pandemic cost the nation an estimated \$6.25 billion in business damage. CAIT estimates that the government has lost Rupees 75,000 crores in income. BC Bhartia and Praveen Khandelwal, national president and secretary general, respectively, of CAIT, estimate that retail businesses suffered a loss of around Rupees 4.25 lakh crores and wholesale trade suffered a loss of about Rupees 2 lakh crores out of the overall business loss of Rupees 6.25 lakh billion. According to the Federation of Retailer Associations of India (FRAI), which represents India's 4 crore micro, small, and medium-sized businesses, the lockout restrictions may eat up as much as 40% of small retailers' monthly profits. As a result of the

Covid restrictions, "8 million retail and wholesale trade rupees have incurred a business loss of Rupees 6.25 lakh crore." As reported by the confederation, Maharashtra was the worst-hit state (\$1.5 billion in damages), with Delhi coming in second (\$40,000), Gujarat coming in at \$77,500, upstate New York at \$85,000, Madhya Pradesh at \$45,000, Rajasthan at \$35,000, Chhattisgarh at \$27,000, and Tamil Nadu at \$80,000. Since localized lockdowns have worsened the losses, the informal commerce sector must bear the brunt of the official restrictions. Dealers are also contemplating reducing the number of employees they employ since they are unable to pay their bills without receiving a paycheck. Traders all throughout the country are considering laying off 30 to 40 percent of their workforces because they are unable to pay their workers' wages. According to the national president of CAIT, BC Bhartia, there are an estimated 8 million small businesses in India that are involved in trade, employing up to 40 million people. There has been a rise in volatility, and things seem to be getting worse. Investors of any size had a difficult time, since no one was able to position themselves favourably or make money due to the volatility in the market.

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Conflict of Interest:

The authors declare that the research review was conducted in the absence of any commercial or economic associations that could be construed as a potential conflict of interest.

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