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Effect Of Shocks on Indian Stock Market

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Abstract

The impact of major macro and micro economic factors (also known as shocks) on the Nifty 50 Index are studied. Various factors from interest rates, economic fallout and most recent events such as the covid pandemic and the Russian Ukraine war are considered. Results of this study reveal only the immediate impact on the benchmark index rather than the long-term effect.

Key words Shocks, COVID,Inflation,Brexit

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Introduction

On the basis of either extreme adverse or euphoric factors, stock markets display turbulent changes. There is a curiosity to know if these changes are persistent or have long term effects on the broad Market performance. Some of the identifiable events in Indian Stock Markets are the recovery after the dotcom bubble, subsequent housing bubble crash in 2008 , multiple interest rate increases and decreases, Lok Sabha election of 2014, effects of demonetization, recession like effect after Covid-19 and Russia Ukraine war. To quantify shock, a fall greater than 3% in broad index is treated as shock for the purpose of this study

Daily data from Nifty 50 Index from 2005 till 2022 March was collected. And any daily dips beyond 3% was identified and broad cause for the same from published data was recorded.. And an understanding of the relation between the news, panic, economy, FDI inflows and the Indian stock is attempted to be understood.

Literature Review

The effect of the housing bubble crash and its build up towards the eventual fall of indices have been studied by Saha, S., & Chakrabarti using GARCH model and found the changing nature of volatility between financial markets. (1). Stock market attitude during general elections was examined by various researchers. However, Nordhaus (1975) created the primary political trade cycle and opined tradeoff between inflation and Unemployment. (2) During a study by Sathyanarayana and Garagesha (2016) with an objective of impact of Brexit referendum on the Indian stock markets found a big impact of Brexit referendum on NIFTY fifty and SENSEX indices on the event day(3). Pushpa B. V. (2016) studied the impact of Brexit referendum on global stock markets and found a big impact only on European stock markets and not on Asian and American stock markets.(4).

Swati Chauhan and Nikhil Kaushik , used event study methodology and concluded only short period downfall due to other factors..(5)

Ma, Rogers, and Zhou (2020) examined the impact of previous five infectious diseases including SARS. Based on the monthly returns of 81,000 listed companies worldwide, the authors found out that the stock market is more likely to over-react in the short-run.(6) This finding is consistent with the preliminary exposition presented by Phan and Narayan (2020) who argue that the initial overreaction is led by the fears of investors for the uncertainty of the development of the COVID-19 virus. (7). Overtime, the market corrects itself as more information is in place. Considering the spread of COVID-19 as the source of systematic risk in the US stock market and based on time-frequency domain analysis, Sharif, Aloui, and Yarovaya (2020) had determined from their wavelet approach, there is a strong negative impact on the US stock market in short-run and that the possibility of optimistic sentiment spreading over the investors in long-run could not be dismissed regarding the confidence built by the government by its effective intervention. (8). Haroon and Rizvi (2020) also highlight the importance of investors' attitude toward the effectiveness of government containment measures in analyzing the impact of the COVID-19 virus on the stock market.(9) Liu, M., Choo, W. C., & Lee, C. C. (2020) showed that depending on income status, countries responded with different negativity to carona virus pandemic. (10) Since we do not have many research on how a war like the Russia-Ukraine have on India we have relied our information on reporting made by the Financial Times on how the market behaved during the beginning of the war and how shortages in oil, wheat have affected the market.

Data And Findings

Table -1 shows The Given table shows Certain dates from 2008 to 2022 and the shocks we have analyzed and the causes. We have further taken look at the most effected segments during these periods of shock. Most of the shocks are caused by raising interest rates and release of inflation numbers and this is evident when we look at the banking sectors, most of the shocks have a negative effect on the banking segment. Sectors like Metal and Oil gas are the most affected after banking and hence we have selected them. Power sector although a very required commodity. If we look at 2020 we can see that following the lockdowns power sector has gained the most as it was one the most profitable business in Q2 2020.

Table -1

Date	Open	Close	Change in %	Reason
21/Jan/08	5705	5208.8	-8.70%	Signs of Raising Inflation and raising bad debt
31/Mar/08	4942.15	4734.5	-4.20%	Large Invest firms faces Margin Calls
07/Jan/09	3112.8	2920.4	-6.18%	Poor Q3 Results lead to falling markets
27/Jan/10	5008.5	4853.1	-3.10%	Raising Intrest rates
21/Aug/13	5494.45	5302.55	-3.49%	Start of revolution in Syria
03/Sep/13	5574.7	5341.45	-4.18%	The US enters the Syrian Conflict
24/Aug/15	8055.95	7809	-3.07%	Raising Intrest rates
11/Feb/16	7203.6	6976.35	-3.15%	Fears of war in Eastern Asia
09/Nov/16	8076.5	8432	4.40%	Republicans win the US election
12/Mar/20	10039.95	9590.15	-4.48%	China reveal the the covid Virus
17/Mar/20	9285.4	8967.05	-3.43%	WHO declares the Covid Pandemic
18/Mar/20	9088.45	8468.8	-6.82%	Governments around declare lockdowns
23/Mar/20	7945.7	7610.25	-4.22%	Effects of the lockdown
31/Aug/20	11777.55	11387.5	-3.31%	Dismal Q2 results
21/Dec/20	13741.9	13328.4	-3.01%	High chances of a US civil War

Table -2

	Power	Banking	FMCG	Metal	Oil and Gas
21-Jan-08	-9.86%	-6.9%	-5.62%	-12.70%	-15.29%
31-Mar-08	-2.66%	-4.7%	-1.23%	-3.48%	-3.72%
01-Feb-08	0.32%	0.2%	2.66%	2.86%	1.63%
29-Dec-08	2.26%	3.9%	0.22%	3.22%	-1.47%
07-Jan-09	-5.99%	0.7%	-2.08%	-8.09%	-9.76%
27-Jan-10	-2.36%	4.2%	-0.71%	-4.62%	-0.89%
21-Aug-13	-2.71%	-3.4%	-3.17%	-5.05%	-4.84%
03-Sep-13	-3.34%	-5.9%	-3.89%	-3.61%	-4.27%
24-Aug-15	-6.49%	-3.4%	-3.88%	-3.61%	-7.53%
11-Feb-16	-4.81%	-3.4%	-3.03%	-3.71%	0.00%
09-Nov-16	3.14%	5.8%	2.00%	4.63%	6.11%
12-Mar-20	-6.94%	-5.1%	-5.04%	-4.23%	-5.79%
17-Mar-20	-0.22%	-5.0%	0.80%	-1.80%	-1.63%
18-Mar-20	-8.31%	-8.0%	-4.83%	-5.67%	-4.52%
23-Mar-20	-0.51%	-9.2%	-6.82%	-5.75%	-4.39%
31-Aug-20	29.38%	-4.9%	-2.57%	-3.81%	-3.23%
31-Dec-20	-0.05%	-0.1%	-0.39%	0.52%	-0.06%

From the above table, its clear that fear like COVID and the housing bubble crash of 2008 have the most effect and certain anomalies over the years between 2008 and 2022. Demonetization of 2016 had very little effect on the Indian market. Further we understand that one of the things people do when the outlook is bad people tend to cut of their spending on transportation and spending on expensive dinning.. Further what comes after a shock is a domino effect, which is evident from FMCG segment. FMCG. like other sectors are affected during the shocks. This shows that most shocks induce a fear and people tend to sell their whole or part portfolio during a period of uncertainty. The housing bubble that has been growing since the early 2000 had shown the slight affects on the markets during early 2007 when the markets started showing signs of slowing down. But the inability of big institution to meet their margin calls lead to the fallout of the markets across the globe with big institutions like Lehman Brothers and Bear Stern facing bankruptcy, the ripple effect of this had affected other markets too September month of that year had been one of the worst months for many markets across the globe. Central banks around the globe announced huge bailout packages. This did help the markets recover during the months of November and December with December seeing the highest market gain following the crash, but Q3 results caused further market fall during January 2009. The 2010 January crash can be attributed to sustained gains over the previous year, following the 2008 market crash, governments around the world reduced interest rates and this led to huge inflows of capital into stock market. The last quarter of 2009 saw the biggest market uptrend prior to 2008. But by end of December the Q3 number of major companies were dismal and central banks around the world increased interest rates and many sovereign bonds were downgraded causing the markets to fall. Over the following months the market remained flat. The August- September 2013 crash can be attributed to the war in Syria, Following the war between the rebels and the government market had a slowdown but since no global powers joined any sides the market remained flat but this changed after the Russian government openly supported the Syrian government and in August the US condemned the Syrian government for using chemical weapons against its people causing a fear of war between two superpowers, this caused the market to fall. Following the announcement that US is not willing to intervene in the war the markets recovered by early 2014. We can also see the period between 2015-2016. The market rallied in early 2015 following the introduction of margin facilities to retail investors and raise of discount brokers lead to huge inflow of funds into the stock markets. People were investing by borrowing money that they didn’t have when the central banks decide to increase interest rates the there was a huge selloff. This was followed by the revelation of the growth in China was highly bloated by the government and the country devalued the Yuan, this further strained the global market. A fear of war between South and North Korea further caused markets to fall. Although the Indian market did not react to the demonetization, global sell-off and outflow of FPI’s caused fall in our markets too. The market stabilized following the 2016 US election were the Republican Party won, the Republicans has always been business friendly and this positive sentiment meant the market would see a rebound by November 2016. Although trade wars between China and USA had caused further shocks throughout 2018, they had very little impact on countries like India and also FPI outflows from China had been invested in other Asian countries like India, Indonesia etc. The years following 2019 was relativity peaceful until the end of the year. December 2019 reports from China about a new outbreak. The year 2020 by March China declared the covid-19 outbreak. By march 2020 WHO declared the covid pandemic as a global epidemic. And by end of march many countries around the world declared lockdowns. Further by end of the year tensions between Ukraine and Russia and raising interest saw a fear of recession in 2022.

Conclusion

1) Contagious effects of shocks transmits across globe.
2) Wars, Interest rates, and US presidential elections affects Indian markets.
3) There had been only one instance of forsseable payment issue causing shock.
4) Shocks effects different sectors differently

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