MARKET-WIDE CIRCUIT BREAKERS: A CRITICAL ANALYSIS OF THEIR IMPACT ON STOCK MARKET STABILITY IN INDIA

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Original Article

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Abstract

The market-wide circuit breaker mechanism was introduced in India on 02 July 2001 with the intent of restraining intense movements in the market. It is a financial instrument that works to prevent both overabundant losses as well as speculative gains within a short span of time. The market-wide circuit breaker is calculated on the basis of the index movements. The circuit breaker system has not undergone amendments to the different levels at which it gets triggered. This is the reasoning for the study, which aims to investigate whether there is a need for a revision of the mechanism. An exploratory study of the equity markets utilizing an Event Study methodology reveals that circuit breakers are definitely useful towards restraining volatility. The study also shows that investors tend to panic more when the markets show intense movements in the downward direction than in the upward direction.

Keywords: Intense Movements; Losses; Market Wide Circuit Breaker; Speculative Gains; Triggered

Introduction

The circuit breaker is an innovative concept applicable to reducing quick movements in stock prices on any trading day in the stock market. The uncertainty regarding unexpected rises or falls affects the markets and investors as well as the whole nation. Stock markets play a vital role in the growth and development of the economy by facilitating fundraising for projects and capital formation. Efficient functioning of stock markets with adequate transparency, liquidity, price efficiency and resilience to stocks is a prerequisite [1]. Circuit breakers were first introduced in the American exchanges in the year 1988 based on the Brady Commission Report to suppress the market sways and prevent panic.

Circuit breakers are applied in different forms across different exchanges globally. Those are

- price limits i.e. stock wise trading halts
- firm-specific trading halts
- market wide circuit breakers

Duration of stock market halt

The duration of the stock market halt differs as per the mention in the SEBI guidelines. The detailed Figures 1 & 2 are presented below for a clear understanding of the halt duration due to the circuit breaker rule.

Figure 1: SEBI Stock Market Halt Circuit Breaker Rule

Trigger limit	Trigger time	Market halt duration	Pre-open call auction session post market halt
10%	Before 1:00 pm	45 minutes	15 minutes
	At or after 1:00 pm upto 2.30 pm	15 minutes	15 minutes
	At or after 2.30 pm	No halt	Not applicable
15%	Before 1:00 pm	1 hour 45 minutes	15 minutes
	At or after 1:00 pm before 2:00 pm	45 minutes	15 minutes
	On or after 2:00pm	Remainder of the day	Not applicable
20%	Any time during market hours	Remainder of the day	Not applicable

Source: Collected by Author

Figure 2: Circuit Breaker Price Drop Levels
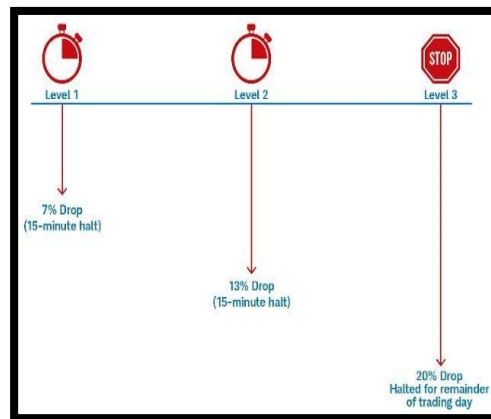
Source: Collected by Author

Objectives of the research

The objectives of the study on stock market circuit breaker in the Indian share market are:

- To study the concept of circuit breakers in Indian share market.

- To measure the trends of circuit breakers during recent times.

- To evaluate the trends of circuit breakers.

- To measure and evaluate the trends and returns of BSE stocks.

- To identify the circuit breaker stocks which are part of Sensex and not part of Sensex.

Literature Review

This section examines prior empirical research and other pertinent literature on various manifestations of ethical practices within the share market and the impact of circuit breakers in Indian share markets.

Prior research has been conducted on the topic of Stock Market Circuit Breaker

Substantial amount of work has been done on the topic of circuit breakers. The body of Literature comprises papers that address a variety of questions ranging from the impact of Circuit breakers on measures of stock performance to

comparative analyses of the existing system across countries in the globe. While some argue in favour of this mechanism, others try to put forward arguments that disprove the validity of the system. The scope of the work done in this area ranges from theoretical assertions to quantitative results based on empirical findings via econometric modelling.

Market-wide trading halts, also called circuit breakers, have been widely adopted as part of the stock market architecture, in the hope of stabilising the market during dramatic price declines. This study develops an intertemporal equilibrium model to examine how circuit breakers impact market behaviour and welfare. It can be shown that a circuit breaker tends to lower the overall level of the stock price and significantly alter its dynamics. In particular, as the price approaches the circuit breaker, its volatility rises drastically, accelerating the chance of triggering the circuit breaker – the so-called "magnet effect**';** in addition, returns exhibit increasing negative skewness and positive drift, while trading activity spikes up. Our empirical analysis finds supportive evidence for the model's predictions. Moreover, in this study it can show that a circuit breaker can affect the overall welfare either negatively or positively, depending on the relative significance of investors' trading motives for risk sharing vs. irrational speculation [1].

Since the Black Monday of 1987, Stock Markets worldwide have adopted several financial regulatory measures to cease the free flow of market crashes during times of extreme volatility. Circuit Breakers, a.k.a. trading curbs, are regulatory instruments that halt trading and stabilise the extreme volatility. This research paper analyses Circuit Breakers in the Stock market, their impacts, and their effects on market behaviours. The study reviews the history of the circuit breaker implementation and the impact it causes on market behaviours such as volatility and the difference in return pre- and post-circuit breaker events. This study considers Nifty 50 index data for a total period of 60 days, 30 days prior, and 30 days post-implementation of circuit breakers. The thesis explores the importance of the market-wide circuit breaker in India and the history of the circuit breaker. This research uses Bloomberg data on the closing price and volume of the Nifty 50 index on 12 separate windows, such as pre-and post-circuit breakers of respective six times as an industry-wide circuit breaker in the Indian stock market. The sample determines the disparity in return and volatility between the pre- and post-circuit breaker periods based on the mean and standard deviation. The impact of a circuit breaker lasts for up to 10 days in most cases and up to 20 days in some cases; however, the impact of a circuit breaker lasts for up to 30 days in some cases.

Using the rare triggers of market-wide circuit breakers in the Chinese stock markets, the authors study the magnet effect of the trading halts on stock returns and its interaction with the magnet effect of price limits. Theory suggests that the existence of a circuit breaker could actually make the price accelerate toward the boundaries when it gets closer to the limits (the magnet effect), but empirical evidence is scanty. This paper provides evidence on the magnet effect of circuit breakers using high-frequency market index returns and individual stock returns. Furthermore, our empirical tests for the individual stock returns suggest that the magnet effect of the circuit breaker does not only coexist but also interacts with the magnet effect of the price ceiling limit. Based on a small group of stocks that hit their price ceilings during the market collapse, the magnet effect of price ceiling is found to accelerate when a trigger of market-wide circuit breaker is more likely. In one of the circuit breaker proximity measures, the magnet effect of the price ceiling increased sixfold when the market index approached 3% from the circuit breaker threshold.

Circuit breaker, an automated regulatory instrument employed to deter panic, temper volatility, and prevent crashes, is controversial in financial markets. Proponents claim it provides a propitious time out when price levels are stressed and persuades traders to make rational trading decisions. Opponents demur to its potency, dubbing it a barrier to the laissez-faire price discovery process. Since conceptualisation in the 1970s and practice from the 1980s, researchers focused mostly on its ability to allay panic, interfere in trading, transmit volatility, prospect of self-fulfilling prophecy through gravitational pull towards itself, and delay dissemination of information. Though financial economists are forked on circuit breakers' usefulness, they are a clear favourite among regulators, who downplay the reliability of anti-circuit breaker findings, citing, inter alia, suspect methodology and lack of statistical power. In the backdrop of the 2007–2008 Crisis and the 2010 Flash Crash, the drumbeats for more regulatory intervention in markets grew louder. Hence, it is unlikely that intervening mechanisms such as circuit breakers will ebb. But are circuit breakers worth it? This paper synthesises three decades of theoretical and empirical works, underlines the limitations, issues, and methodological shortcomings undermining findings, attempts to explain regulatory rationale, and provides direction for future research in an increasingly complex market climate.

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Proponents of circuit breakers justify the practice, citing its utility in placating stressed markets, persuading agents to reflect on available information, and trading rationally. Opponents counter by calling it an infringement on the laissez-faire price discovery process, citing the lack of conclusive evidence of their effectiveness in market crises. After nearly three decades of theoretical and empirical scrutiny, this discord persists. Most of the empirical focus in this domain revolves around the ex-post performance of circuit breakers in cooling off the market, interference in trading, volatility splattering, and delayed assimilation of information. A less explored hypothesis is a potential for traders to hasten trading plans, fearing illiquidity or trading blockade [2]. Thus, the existence of the circuit breaker alone can induce its tripping. Known formally as the magnet effect, this hypothesis remains less explored due–inter alia–to paucity of data and methodological limitations. Greater availability of high-frequency datasets in recent times, however, has spurred a growth in empirical works focusing purely on the magnet effect. As this nascent sub-discipline in market microstructure grows, this paper undertakes one of the first formal surveys looking to consolidate theoretical and empirical works on the magnet effect. Moreover, the author discusses methodological challenges and analytic limitations which strain the credibility of academic research findings in this domain, particularly among regulators.

This brings to light both sides of the coin by highlighting the reasons for the same. He speaks about how the lack of consensus regarding the effectiveness of this tool during crises stems from arguments that are equally strong and valid in their backing and Assumptions. On one hand, circuit breakers provide investors with a period to "cool off", Thereby calming the sensations of fear and panic that could coerce them to take haphazard Trading decisions during periods of steep market movement. On the other hand, circuit Breakers can be viewed as counter effective due to the drain on liquidity as well as the reduction of market depth that it brings about. Putting forth a similar argument as Singh towards the Positives of circuit breakers. In this realm, it explores the same Question in the Indian scenario. It assesses the impact of circuit breakers specifically on trading activity and volatility in an effort to understand how the system impacts these Measures and whether it serves the purpose it is intended for. The study analyses specific Events when the circuit breaker was triggered in India and finds that the effects of the circuit Breaker last for up to three days post these events.

Others also study the circuit Breakers from the perspective of the impact it has on the markets in the context of China. They conduct a study comparing intraday and inter day halts and find out that from the Perspective of price trends, positive events are more effective for intraday halts and negative Events are more effective in the case of inter day halts.

In various stock markets, an institution called a "circuit breaker" exists to interrupt the trading of stocks for a certain period when stock prices change significantly. The purpose of this institution is to directly control rapid changes in stock prices and avoid confusion in the market. However, the benefits and drawbacks of the effectiveness of circuit breakers have been discussed back and forth. In this study, this study considers the influence of circuit breakers on a futures market by using an artificial market simulator, "U-Mart", by operating the period of interruption. From experimental results, authors found the following: circuit breakers play an important role in controlling price fluctuations and in stabilising the settlement system, while they also reduce the trading volume. Circuit breakers greatly reduce the volatility when market liquidity is low. In high liquidity situations, circuit breakers prevent the misdistribution of profits, which is caused by an increase in bankruptcies. Authors also suggest that the period of interruption is an important parameter in the institutional design of a circuit breaker, since the volatility and the number of bankruptcies are sensitive to the period.

The paper evaluates the efficacy of Single-stock circuit breakers on the stock markets by using proprietary data during July and August 2011. It finds that trading suspensions help to reduce the noise of market Microstructures as well as price inefficiencies during a period of falling markets but do the exact opposite when markets are rising [2]. The conclusion the paper draws is that while trading Halts may not be the solution with regard to improvement of the trading process within Individual securities, they do play a paramount role in the prevention of the spread of poor Market quality and can thus be viewed as efficacious tools for the promotion of stability at the Market level.

This surveys security-specific mechanisms implemented in financial markets to protect investors from unusually high volatility levels. These so-called circuit breakers alter the normal trading conditions of the disturbed asset by either interrupting its continuous session (trading halts) or limiting the absolute cumulative price change during each session (price limits) [3]. Circuit breakers are controversial and have been the subject of heated debate among academics, practitioners, and regulators since the recent financial crisis. This chapter highlights the main arguments of proponents

and opponents of circuit breakers and summarises the empirical evidence on this topic. It also points out some common limits researchers face when analysing circuit breakers and identifies a few of the most promising areas for future research.

The paper attempts to investigate the validity of the Efficient Market Hypothesis on the Indian Securities Market. Initially, the paper discusses the definitions and types of the EMH, as well as the literature available on the same [4]. Taking a sample of eleven securities listed on the Bombay Stock Exchange (BSE), the oldest stock exchange in Asia, it applies the runs tests and the autocorrelation tests in order to judge the efficiency of the Stock Markets. The Autocorrelation test when directly applied to share prices, gives conflicting results with Run's test and thus makes it difficult to reach a definite conclusion. Then, the autocorrelation test is applied to the first differenced series, which gives satisfactory results. In a nutshell, it is observed that the effect of stock prices for the sample companies on future prices is very meagre, and an investor cannot reap profits by using the share price data, as the current share prices already reflect the effect of past share prices.

Further goes on to discover that such halts also Aid efficient price discovery and help to protect value, as opposed to a sudden inflation or Deflation in the prices driven by speculation and overreaction. Moving further into the realm of such policies and viewing the same through the lens of price limits [5]. Price limits can act as substitutes for margin requirements and can thus ensure contract performance without the need for costly litigation. This resolves the Issue in those situations where margin requirements can be considered costly for some market Participants. He believes the risk of a trading interruption through the imposition of price Limits might be worth the potential to reduce margin requirements. Empirically studies the same effect and comes to a conclusion in support of Brennan's study that there is a negative relationship between price limits and margin requirements and that margins are smaller when price limits are put in place [6].

Many reports and papers on the topic are comparative studies of the system across Different countries in the world. One such study presents a report of the difference in Implementation of the circuit filter system spanning Hong Kong, Japan, Korea and the United States and makes a comparison of the same with the Indian system in terms of percentage Levels at which the filter is triggered and what that implies [7]. The study conducts an in-depth analysis of how many stages the filter is executed in. Another study that documents the same is that [8]. Both the above papers Consider circuit breakers as one aspect in their comparative study of the entire stock market System between India and other countries. Other reports, however, exclusively conduct a detailed study of the circuit breaker mechanism across countries. One such report is that prepared by the International Organisation of Securities Commissions (IOSCO), which talks about how trading venues use such mechanisms to manage extreme volatility and preserve Orderly trading. It covers the regulatory aspect of the system and analyses how dissemination of information to market participants and the public occurs when such systems are in place and subsequently executed. Yet another survey on circuit breakers among international Trading venues was conducted by the World Federation of Exchanges (WFE). It considered the differences between those venues that had such a system in place and those that did not and how it impacted the markets during periods of high volatility. It presents a detailed report on the topic of circuit breakers spanning subtopics such as the different types of circuit Breaker implementations, the triggering process of circuit breakers, initiation and revision of these mechanisms and how the system has evolved since its initiation in different venues. The analysis of the literature presents scope to consider another dimension of the issue, which is regarding the levels at which the circuit breaker mechanism gets triggered. A research gap can be identified in this regard. While countries like India and the United States of America have undergone amendments to the originally proposed mechanism, the same has not been deeply investigated in the literature [8]. There have been mentions of the same, but not an Analysis of the reasons for the amendments or whether the system post the changes has significantly improved upon the previous system. This paper aims to analyse the current Mechanism in India and whether the existing levels at which the trading halt gets triggered at the market level are fine or whether there is any empirical evidence to support that it may Need to be changed [9]. The inspiration for the same arises from the fact that the levels for Implementation of the halt have not changed since the mechanism was initially introduced in 2001 in spite of the system having undergone other changes, such as the introduction of a pre-open auction session post the halt. The index level for the Nifty 50, which is the National Stock Exchange of India's benchmark index, has risen from 1000 points in 2001 to 11,500 Points in 2019, which brings to light the question of whether it is necessary to adjust the circuit Breaker mechanism according to the change in the index

level. This paper aims to explore the above question through an exploratory study of the events that warrant volatility in the Markets and hence trigger the circuit breakers at the index level [10].

Result

Table 1: Computation of Annual Return and Standard Deviation for the Year 2021

Months	CMP	PMP	Returns	D	D2
January	50184.01				
February	52516.76	50184.01	52515.76	1377.670833	1897976.925
March	51821.84	52516.76	51820.84	682.7508333	466148.7004
April	50375.77	51821.84	50374.77	763.3191667	582656.1502
May	52013.22	50375.77	52012.22	874.1308333	764104.7138
June	53126.73	52013.22	53125.73	1987.640833	3950716.082
July	53290.81	53126.73	53289.81	2151.720833	4629902.545
August	57625.26	53290.81	57624.26	6486.170833	42070412.08
September	60412.32	57625.26	60411.32	9273.230833	85992810.09
October	62245.43	60412.32	62244.43	11106.34083	102991662.3
November	61036.56	62245.43	61035.56	9897.470833	97959928.9
December	59203.37	61036.56	59202.37	8064.280833	65032625.36
			Total return = 613657.07 **Avg. Returns = 51138.08917**		$\sum$**D2=406338943.8**

Source: Collected by Author

From the above information in the table, the values are calculated by using the following formulas

$$\text{Returns} = \frac{(current\ month\ price - previous\ month\ price)}{previous\ month\ price}$$

$$\text{Average Return} = \frac{sum\ of\ all\ returns}{NO.of\ returns}$$

$$\text{Difference (D)} = \text{Returns} - \text{Average Returns}$$

$$\text{Variance} = \frac{\sum D^2}{n-1}$$

$$= \frac{406338943.8}{12-11}$$

$$= 36939903.9818$$

$$\text{Standard Deviation} = \sqrt{variance}$$

$$= 6077.820660$$

$$\text{Coefficient of variance} = \frac{Standard\ deviation}{Total\ Annual\ Return}$$

$$= 0.00990426242$$

Interpretation

The above Table 1 represents the calculation of closing prices of BSE Stocks in the form of returns, average returns, differences between returns and average returns, deviations, and standard deviations. The table indicates closing prices and the returns from January 2021 to December 2021 and it's also indicated in Figure 3.

The return value for the starting period is taken as zero or nil for the calculations and compared with the end period values of December 2021.

This table has been designed for the purpose of computing annual return, variance and standard deviation. The annual return of the year 2021 was 613657.07, the variance of 36939903.9818 and the standard deviation was 6077.820660

Figure 3: Annual Returns in 2021
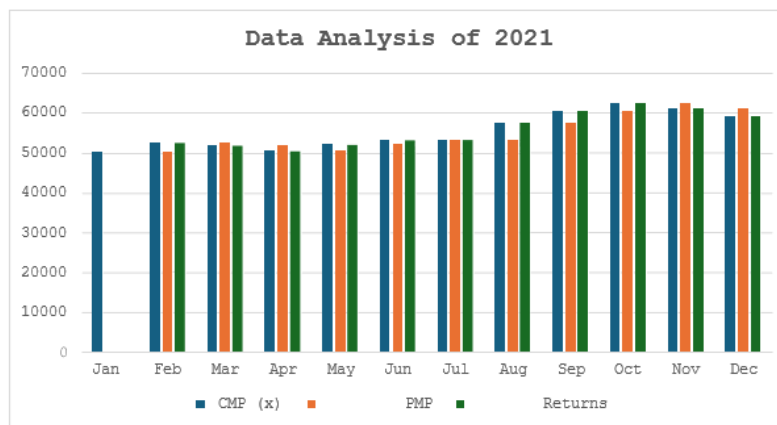
Source: Collected by Author

Table 2: Calculation of Mean

Months	CMP(x)	$\bar{X}$ (x-avg)	$\bar{X}$ 2
January	50184.01	-5136.996667	26388734.75
February	52516.76	-2804.246667	7863799.368
March	51821.84	-3499.166667	12244167.36
April	50375.77	-4945.236667	24455365.69
May	52013.22	-3307.786667	10941452.63
June	53126.73	-2194.276667	4814850.09
July	53290.81	-2030.196667	4121698.505
August	57625.26	2304.253333	5309583.424
September	60412.32	5091.313333	25921471.46
October	62245.43	6924.423333	47947638.5
November	61036.56	5715.553333	32667549.91
December	59203.37	3882.363333	15072745.05
	Avg.= 55321.00667		**Mean = 217749056.7**

Source: Collected by Author

Interpretation

The above Table 2 represents the calculation of Mean of BSE Stocks from January 2021 to December 2021.

This table is designed to calculate the mean of the year 2021 by taking the current month price as (X) and taking its average to get the sum of $\bar{x}$ 2, which is the mean of the presented data.

Table 3: Computation of Annual Return and Standard Deviation for the Year 2022

Months	CMP	PMP	Returns	D	D2
January	61475.15				
February	59618.51	61475.15	59617.51	4672.53	21832536.6
March	58890.92	59618.51	58889.92	3944.94	15562551.6
April	60845.1	58890.92	60844.1	5899.12	34799616.77
May	57184.21	60845.1	57183.21	2238.23	5009673.533
June	56432.65	57184.21	56431.65	1486.67	2210187.689
July	57619.27	56432.65	57618.27	2673.29	7146479.424
August	60411.2	57619.27	60410.2	5465.22	29868629.65
September	60676.12	60411.2	60675.12	5730.14	32834504.42
October	60786.7	60676.12	60785.7	5840.72	33468143.3
November	63303.01	60786.7	63302.01	8357.03	69839950.42
December	63583.07	63303.01	63582.07	8637.09	74599323.67
			Total return =659339.76 Avg. Returns = 54944.98		$\sum$D2=327171597.1

Source: Collected by Author

From the above information in the table, the values are calculated by using the following formulas

$$Returns = \frac{(current\ month\ price - previous\ month\ price)}{previous\ month\ price}$$

$$Average\ Return = \frac{sum\ of\ all\ returns}{NO.of\ returns}$$

$$Deviation\ (D) = Returns - Average\ Returns$$

$$Variance = \frac{\sum D^2}{n-1}$$

$$= \frac{327171597.1}{12-1}$$

$$= 29742872.46$$

$$Standard\ Deviation = \sqrt{variance}$$

$$= 5453.70263765$$

$$Coefficient\ of\ variance = \frac{Standard\ deviation}{Total\ Annual\ Return}$$

$$= 0.00827146$$

Interpretation

The above Table 3 represents the calculation of closing prices of BSE Stocks in the form of returns, average returns, differences between returns and average returns, deviations, and standard deviations. The table indicates closing prices and the returns from January 2022 to December 2022 also mentioned in Figure 4.

The return value for the starting period is taken as zero or nil for the calculations and compared with the end period values of December 2022.

This table has been designed for the purpose of computing annual return, variance and standard deviation. The annual return of the year 2022 was 659339.76, the variance was 29742872.46 and the standard deviation was 5453.70263765.

Figure 4: Annual Returns in 2022
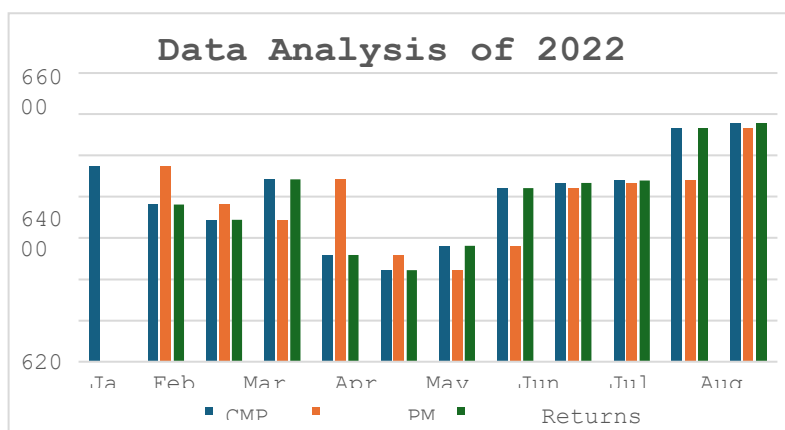
Source: Collected by Author

Table 4: Calculation of Mean

Months	CMP(X)	$\bar{X}$ (x-avg)	$\bar{X}$ 2
January	61475.15	1406.324167	1977747.662
February	59618.51	-450.3158333	202784.3498
March	58890.92	-1177.905833	1387462.152
April	60845.1	776.2741667	602601.5818
May	57184.21	-2884.615833	8321008.506
June	56432.65	-3636.175833	13221774.69
July	57619.27	-2449.555833	6000323.781
August	60411.2	342.3741667	117220.07
September	60676.12	607.2941667	368806.2049
October	60786.7	717.8741667	515343.3192
November	63303.01	3234.184167	10459947.22
December	63583.07	3514.244167	12349912.06
	Avg. = 60068.82583		**Mean = 55524931.6**

Source: Collected by Author

Interpretation

The above Table 4 represents the calculation of Mean of BSE Stocks from January 2022 to December 2022.

This table is designed to calculate the mean of the year 2022 by taking the current month price as (X) and taking its average to get the sum of $\overline{x}$ 2, which is the mean of the presented data.

Table 5: Computation of Annual Return and Standard Deviation for the Year 2023

Months	CMP	PMP	Returns	D	D2
January	61475.15				
February	59618.51	61475.15	59617.51	4675.481667	21860128.82
March	58890.92	59618.51	58889.92	3947.891667	15585848.61
April	60845.1	58890.92	60844.1	5902.071667	34834449.96
May	57148.21	60845.1	57147.21	2205.181667	4862826.183
June	56432.65	57148.21	56431.65	1489.621667	2218972.71
July	57619.27	56432.65	57618.27	2676.241667	7162269.458
August	60411.2	57619.27	60410.2	5468.171667	29900901.38
September	60676.7	60411.2	60675.7	5733.671667	32874990.78
October	60786.7	60676.7	60785.7	5843.671667	33505694.66
November	63303.01	60786.7	63302.01	8359.981667	69889293.47
December	63583.07	63303.01	63582.07	8640.041667	74650320
			Total return = 659304.34 **Avg. Returns =54942.02833**		**∑D2=327345696**

Source: Collected by Author

From the above information in the table, the values are calculated by using the following formulas:

$$\text{Returns} = \frac{(current\ month\ price - previous\ month\ price)}{previous\ month\ price}$$

$$\text{Average Return} = \frac{sum\ of\ all\ returns}{NO.of\ returns}$$

Difference (D) = Returns – Average Returns

$$\text{Variance} = \frac{\sum D^2}{n-1}$$

$$= \frac{327345696}{12-1}$$

$$= 29758699.64$$

$$\text{Standard Deviation} = \sqrt{variance}$$

$$= 5455.15349371$$

$$\text{Coefficient of variance} = \frac{Standard\ deviation}{Total\ Annual\ Return}$$

$$= 0.008274105$$

Interpretation

The above Table 5 represents the calculation of closing prices of BSE Stocks in the form of returns, average returns, differences between returns and average returns, deviations, and standard deviations. The table indicates closing prices and the returns from January 2023 to December 2023 also mentioned in Figure 5.

The return value for the starting period is taken as zero or nil for the calculations and compared with the end period values of December 2023.

This table has been designed for the purpose of computing annual return, variance and standard deviation. The annual return of the year 2023 was 659304.34, the variance was 29758699.64 and the standard deviation was 5455.15349371.

Figure 5: Annual Returns in 2021
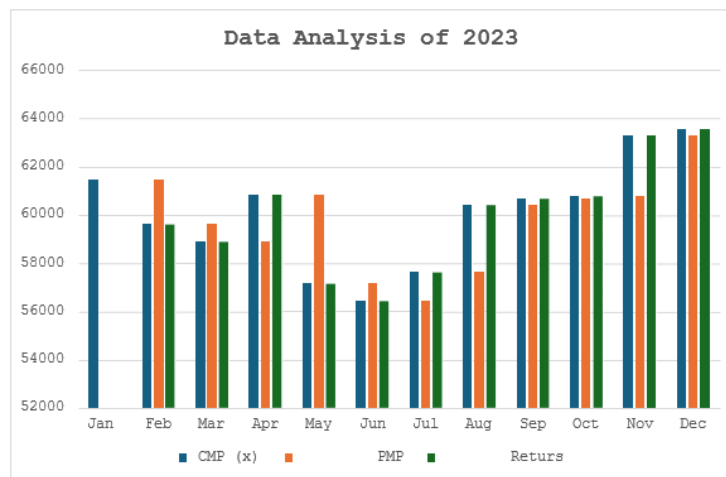
Source: Collected by Author

Table 6: Calculation of Mean

Months	CMP(x)	$\bar{X}$ (x-avg)	$\bar{X}$ 2
Jan	61475.15	1409.275833	1986058.374
Feb	59618.51	-447.3641667	200134.6976
Mar	58890.92	-1174.954167	1380517.294
Apr	60845.1	779.2258333	607192.8993
May	57148.21	-2917.664167	8512764.189
Jun	56432.65	-3633.224167	13200317.85
Jul	57619.27	-2446.604167	5985871.948
Aug	60411.2	345.3258333	119249.9312
Sep	60676.7	610.8258333	373108.1987
Oct	60786.7	720.8258333	519589.882
Nov	63303.01	3237.135833	10479048.4
Dec	63583.07	3517.195833	12370666.53
	Avg. = 60065.87417		**Mean = 55734520.19**

Source: Collected by Author

Interpretation

The above Table 6 represents the calculation of Mean of BSE Stocks from January 2023 to December 2023.

This table is designed to calculate the mean of the year 2023 by taking the current month price as (X) and taking its average to get the sum of $\overline{x}$ 2, which is the mean of the presented data

Trend Analysis

The present study deals with the impact of changes in Stock market prices over a period of threeyears 2021-2023. Only BSE Sensex prices have been considered for the purpose of Analysis.

The table below presents the average stock market prices for the period 2020-2023.

Current Period Value - Base Period Value / Base Period Value * 100

Table 7: Returns for 3 years

Years	Sensex Prices
31st March 2020	
31st March 2021	61365707
31st March 2022	659239.76
31st March 2023	659204.34

Source: Collected by Author

Interpretation

The above Table 7 shows the movement of stock price of BSE from the year 2021-2023. This tablehas been designed for the purpose of computing the Annual Return of BSE Sensex. The Annual Return of the years 2021- 2023 is displayed through the graph below in Figure 6.

Figure 6: Annual returns for 3 years
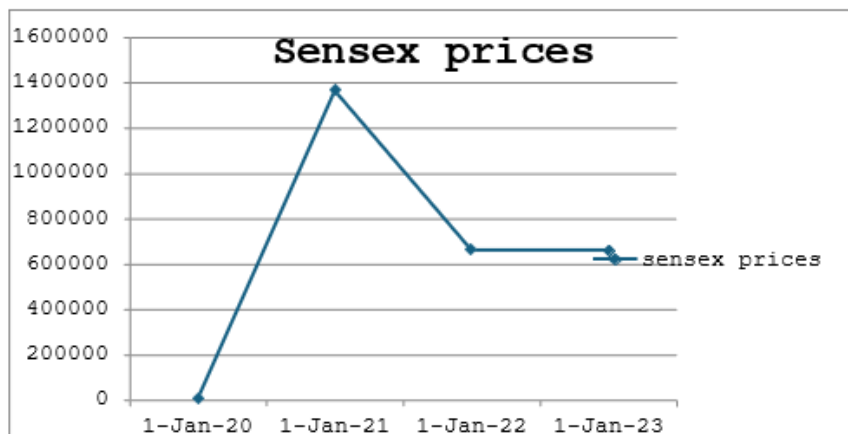
Source: Collected by Author

Discussion

The discussion portion of this review article provides a thorough examination and integration of the main discoveries and understandings offered in the preceding sections. This text explores the consequences of Stock market halts in Indian Share Markets. It discusses the triggered points where stocks are halted for particular time periods.

An important finding from this analysis is the Data Analysis and Interpretation of the stocks of BSE during the past 3

years [11].

The implementation of circuit breakers in Indian share markets has been a subject of extensive debate among regulators, market participants, and researchers. The discussion revolves around their impact on market stability, investor behaviours, and efficiency.

Market Stability
Circuit breakers have demonstrated their utility in preventing excessive volatility during crises, such as the global financial meltdown of 2008 and the COVID-19-induced market crash in 2020. By halting trading temporarily, these mechanisms provide a "time-out" for investors to reassess market conditions, preventing panic-driven decisions. However, critics argue that circuit breakers may only postpone volatility, as trading often resumes with increased intensity once the halt is lifted [12].

Investor Confidence
Proponents believe circuit breakers play a crucial role in maintaining investor confidence by signaling regulatory oversight and protecting markets from extreme price movements. They create a structured environment for market corrections. On the other hand, frequent triggers during turbulent [13].

Conclusion

Stock market circuit breakers in Indian share markets serve as an essential regulatory mechanism to address extreme volatility and maintain market integrity. Introduced with the objective of preventing panic and systemic risks, they have proven effective during critical market downturns, such as the 2008 financial crisis and the COVID-19 pandemic in 2020. By providing a cooling-off period, circuit breakers help stabilise markets and boost investor confidence.

However, their effectiveness is not without limitations. While they mitigate short-term volatility, concerns remain about delayed price discovery, amplified post-resumption volatility, and potential liquidity disruptions. Balancing these trade-offs is essential to ensure that circuit breakers continue to serve their purpose without hindering market efficiency.

In conclusion, circuit breakers play a vital role in protecting Indian financial markets, but ongoing evaluation and refinement of their thresholds and mechanisms are necessary to adapt to evolving market dynamics.

Conflict of Interests
The author declares that she has no conflict of interests.

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