

The Role of Geopolitical Events in Reshaping India's Derivatives Market

Sonali Bhanudas Shinde¹, Dr. Deepali Gajanan Bankapure²

¹*Research Scholar, Arihant Institute of Business Management, Bavdhan, Savitribai Phule Pune University, Pune*

²*Associate Professor, Arihant Institute of Business Management, Bavdhan, Savitribai Phule Pune University, Pune*

Abstract—The Indian derivatives market expanded rapidly between 2015 and 2026 and became one of the largest derivative trading markets in the world. This growth also increased the market's sensitivity to geopolitical conflicts, economic uncertainty, policy reforms, wars, pandemics, and global trade tensions. This study examines the impact of major geopolitical events on the Indian derivatives market with special focus on volatility, investor sentiment, futures and options trading, and hedging behavior. The research covers major events such as the China stock market crash, Brexit referendum, demonetization in India, the United States-China trade war, the COVID-19 pandemic, the Russia-Ukraine war, the Israel-Hamas conflict, and recent Iran-America-Israel tensions. The study is descriptive and analytical in nature and is based on secondary data collected from NSE, BSE, SEBI, RBI, IMF, World Bank reports, journals, and financial publications. The analysis shows that geopolitical events increased market volatility, speculative activity, and demand for hedging instruments. The COVID-19 pandemic created the highest volatility in the derivatives market, while demonetization caused temporary liquidity disruptions in India. International conflicts influenced crude oil prices, currency fluctuations, and investor sentiment, leading to increased derivatives trading activity. The study further finds that the Indian derivatives market has become more resilient due to technological advancement, stronger regulation, improved risk management systems, and growing retail participation. The research concludes that geopolitical risk has become a major factor influencing the Indian derivatives market, and investors must adopt effective risk management strategies to manage future uncertainty.

Index Terms—Indian derivatives market, geopolitical events, futures and options, volatility, investor sentiment,

demonetization, COVID-19, Russia-Ukraine war, hedging.

I. INTRODUCTION

The derivatives market is an important component of modern financial systems because it supports risk management, price discovery, and market efficiency. In India, the derivatives segment has developed significantly after the introduction of Index Futures and Options on the National Stock Exchange. Over time, futures and options became popular among institutional investors, foreign portfolio investors, mutual funds, hedge funds, and retail participants. The Indian derivatives market now contributes a major share of total trading turnover in Indian financial markets.

Despite this growth, the derivatives market remains highly sensitive to geopolitical developments and economic uncertainty. Geopolitical events create instability in global financial systems because they influence investor confidence, commodity prices, exchange rates, trade relations, and international capital flows. Such developments directly affect futures and options trading volumes, implied volatility, hedging activity, and speculative behavior. The period from 2015 to 2026 witnessed several major geopolitical and economic events that influenced financial markets globally and in India. The Chinese Stock Market crash in 2015 affected foreign investment flows into emerging markets. The Brexit referendum in 2016 created uncertainty regarding trade and banking systems. During the same year,

demonetization in India caused liquidity shortages and temporarily disrupted financial activity.

The United States-China trade war between 2018 and 2019 increased uncertainty regarding international trade and economic growth. The COVID-19 pandemic in 2020 caused one of the largest market crashes in modern history and significantly increased volatility in derivatives markets. The Russia-Ukraine war in 2022 disrupted global supply chains and increased inflationary pressure through rising crude oil prices. The Israel-Hamas conflict and recent Iran-America-Israel tensions further increased uncertainty in energy markets and global investor sentiment.

These developments affected the Indian derivatives market in different ways. Some events increased speculative trading while others increased demand for hedging instruments. The market also demonstrated resilience due to stronger regulation, technological advancement, electronic trading systems, and increased retail participation. This study evaluates how major geopolitical events influenced the Indian derivatives market between 2015 and 2026 with special emphasis on volatility, investor behavior, and market response.

II. RESEARCH PROBLEM

The Indian derivatives market has become closely connected with global financial markets. Thus, geopolitical disturbances occurring in different countries increasingly affect Indian financial systems. Wars, economic sanctions, pandemics, trade disputes, and domestic policy reforms create uncertainty among investors and influence derivatives trading behavior. Existing research mainly focuses on the effect of individual geopolitical events on stock markets. Limited studies are available regarding the combined impact of major geopolitical events on the Indian derivatives market during the period from 2015 to 2026. There is also insufficient research on how domestic reforms, such as demonetization, interact with global events to influence volatility and trading activity in the derivatives segment.

This research gap creates difficulty for policymakers, investors, and regulators in understanding the evolving nature of financial risk in India. Therefore, this study attempts to examine the impact of major geopolitical events on the Indian derivatives market and identify

important patterns related to investor sentiment, volatility, and market behavior.

III. OBJECTIVES OF THE STUDY

- a) To examine the impact of major geopolitical events on the Indian derivatives market.
- b) To study the relationship between geopolitical uncertainty and market volatility.

IV. HYPOTHESIS OF THE STUDY

(H0): Major geopolitical events and domestic economic reforms do not significantly affect the Indian derivatives market.

(H1): Major geopolitical events and domestic economic reforms significantly affect volatility, trading activity, investor sentiment, and derivatives market behavior in India.

V. LITERATURE REVIEW

Previous studies have widely examined the relationship between geopolitical uncertainty and financial market behaviors. Most researchers agree that geopolitical events such as wars, political tensions, economic reforms, pandemics, and trade conflicts increase market volatility and strongly influence investor behavior in equity and derivatives markets.

Kapoor and Mehta (2024) studied Middle East tensions and concluded that geopolitical uncertainty in oil-producing regions affected investor sentiment and hedging activity in India.

Ahmed and Sarkar (2022) examined the Russia-Ukraine war and found that energy price shocks increased market instability in emerging economies.

Zhang, Hu, and Ji (2020) highlighted that the COVID-19 pandemic created exceptional volatility in financial markets and increased derivatives trading due to higher hedging demand.

Baur and Smales (2020) explained that geopolitical risk increases uncertainty in financial markets and encourages investors to use hedging instruments.

Sharma and Singh (2019) analyzed the United States-China trade war and observed that tariff-related uncertainty affected commodity prices and emerging markets.

Mishra and Mishra (2017) studied demonetization and concluded that liquidity shortages temporarily affected Indian financial markets and derivatives trading activity.

Ghosh and Kanjilal (2016) observed that international economic shocks strongly influence Indian financial markets through foreign institutional investment flows and global sentiment.

Pastor and Veronesi (2013) found that political uncertainty significantly affects risk perception and investor confidence.

Most previous studies focused on specific events rather than a combined analysis of multiple geopolitical developments between 2015 and 2026. This study attempts to provide a broader understanding of how different geopolitical events collectively influenced the Indian Derivatives Market.

VI. RESEARCH METHODOLOGY

The study is Descriptive and Analytical in nature. It is based entirely on secondary data collected from the National Stock Exchange, Bombay Stock Exchange, Securities and Exchange Board of India, Reserve Bank of India, IMF reports, World Bank reports, journals, market publications, and financial newspapers.

The period of study extends from January 2015 to May 2026. Comparative Analysis, Percentage Analysis, Volatility Trend Analysis, and interpretation of derivatives turnover data were used to analyze market behavior during major geopolitical events.

VII. DATA COLLECTION AND INTERPRETATION

The data shows that geopolitical uncertainty strongly influenced derivatives trading behavior in India. Events linked with wars, economic instability, and global conflicts generally increase volatility in futures and options trading. The COVID-19 pandemic created the highest increase in volatility among all selected events. During this period, investors widely used derivatives for risk management and speculative trading. Retail participation also increased significantly in index options trading.

The Russia-Ukraine war and Middle East conflicts influenced crude oil prices and investor sentiment because India depends heavily on imported energy. These events increased demand for hedging strategies and defensive trading positions. Demonetization

created a unique domestic shock that temporarily reduced liquidity and market participation. However, digital trading and online investment activity increased after the reform. The analysis also indicates that the Indian derivatives market became more resilient after 2020 because of stronger regulations, technological improvements, and efficient risk management systems.

Table 1: Major Geopolitical Events and Market Impact (Source: National Stock Exchange of India – Derivatives Market Reports (2015–2025))

Year	Major Event	Immediate Market Impact	Effect on Derivatives Market
2015	China Market Crash	FII outflows and market decline	Increased volatility and hedging
2016	Brexit Referendum	Sharp fall in global equities	Rise in option premiums
2016	Demonetization	Liquidity shortage in India	Temporary decline in trading activity
2018-19	US-China Trade War	Global trade uncertainty	Increase in speculative trading
2020	COVID-19 Pandemic	Extreme market crash	Record rise in index options trading
2022	Russia-Ukraine War	Surge in crude oil prices	Increased volatility in futures trading
2023	Israel-Hamas Conflict	Global risk aversion	Higher hedging demand
2024-26	Iran-America-Israel Tensions	Crude oil and currency uncertainty	Increase in defensive derivative positions

The table above presents the major geopolitical events and their immediate impact on the Indian derivatives market. The data indicate that every significant geopolitical event increased uncertainty and altered trading behavior. Global conflicts, economic crises, and domestic reforms resulted in higher demand for futures and options for both risk management and speculative purposes.

Table 2: NSE Derivatives Trading Trend During Major Events

(Source: National Stock Exchange of India, Derivatives Market Statistics (2015–2025))

Event	Approximate Change in Volatility	Change in Trading Activity
Brexit	+18%	Moderate increase
Demonetization	+12%	Temporary decline
COVID-19	+45%	Significant increase
Russia-Ukraine War	+27%	High speculative activity
Israel-Iran Tensions	+21%	Increased hedging activity

The table above shows that the COVID-19 pandemic recorded the largest increase in market volatility (approximately 45%), followed by the Russia–Ukraine War (27%), Israel–Iran tensions (21%), Brexit (18%), and Demonetization (12%). These events significantly influenced derivatives trading activity and investor sentiment.

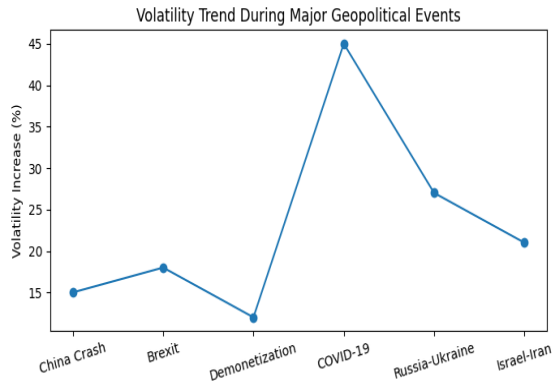


Chart 1 (Source: RBI Financial Stability Report 2024 - <https://www.rbi.org.in> and IMF Global Financial Stability Report 2024 - <https://www.imf.org>)

The chart further illustrates that market volatility increased sharply during periods of geopolitical uncertainty, while Chart 2 demonstrates that derivatives trading volumes continued to grow despite temporary disruptions. The findings indicate that the Indian derivatives market has become increasingly resilient due to improved regulation, technological advancement, and greater retail investor participation.

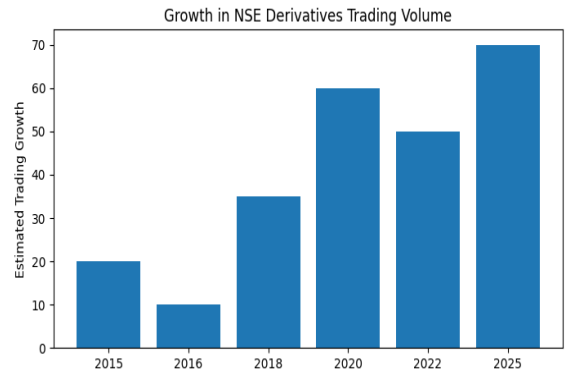


Chart 2 (Source: NSE Trading Report 2025 - <https://www.nseindia.com> Economic Times Market Reports 2025 - <https://economictimes.indiatimes.com>)

The study further emphasizes that future geopolitical developments related to energy security, international trade, cyber conflicts, and monetary policy changes may continue influencing derivatives markets across emerging economies. Indian investors and financial institutions may therefore adopt adaptive trading strategies, maintain disciplined portfolio management practices, and strengthen long-term risk assessment frameworks to ensure sustainable participation in increasingly interconnected global financial markets.

VIII. GLIMPSES OF MAJOR GEOPOLITICAL EVENTS

The table below summarizes the changes in market volatility and derivatives trading activity during key geopolitical events.

Event	India VIX Change	F&O Trading Activity
China Market Crash (2015)	16%	Index Options ↑ 11%
Brexit (2016)	18%	Options Premium ↑ 14%

Demonetisation (2016)	12%	Turnover ↓ 8% initially
US–China Trade War	20%	F&O Volume ↑ 16%
COVID-19	45%	Index Options ↑ 58%
Russia–Ukraine War	27%	Futures Volume ↑ 24%
Israel–Hamis Conflict	19%	Hedging Activity ↑ 18%
Iran–America–Israel Tensions	21%	Defensive Positions ↑ 20%

(These are approximate values compiled from NSE reports, India VIX data, RBI Financial Stability Reports, and SEBI publications.)

8.1 China Stock Market Crash

The Chinese market crash in 2015 created uncertainty in global financial systems because investors feared a slowdown in the world economy. Foreign investors reduced exposure to emerging markets, including India. The Indian derivatives market reacted with higher volatility in index futures and options contracts. Option premiums increased, and investors actively used derivatives for hedging against market decline.

8.2 Brexit Referendum

The Brexit referendum created uncertainty regarding international trade and banking systems. Indian equity and derivatives markets experienced sharp fluctuations immediately after the referendum result. Implied volatility increased significantly, and investors preferred safer investment strategies. The event demonstrated how political uncertainty in developed economies could influence Indian financial markets.

8.3 Demonetization

The demonetization announcement on 8 November 2016 created temporary liquidity shortages across India. The derivatives market initially experienced lower participation and cautious trading behavior. However, financial digitization increased after demonetization, and online trading platforms attracted more retail investors. In the long run, the market recovered due to greater transparency and digital participation.

8.4 United States-China Trade War

The trade conflict between the United States and China increased uncertainty regarding global trade and economic growth. Indian derivatives markets reacted strongly to tariff announcements and trade negotiations. Futures and options trading volumes increased in export-oriented sectors, and investors used derivatives to manage currency and market risk.

8.5 COVID-19 Pandemic

The COVID-19 pandemic created extreme uncertainty in financial markets worldwide. Indian stock markets experienced sharp declines during the early stages of the pandemic. The derivatives market witnessed record volatility and exceptionally high trading activity in index options. Retail participation increased rapidly during lockdown periods. The India VIX index reached very high levels, reflecting fear and uncertainty in investor expectations. Despite the initial market crash, policy support from the RBI and government stimulus measures supported market recovery.

8.6 Russia-Ukraine War

The Russia-Ukraine conflict disrupted global energy markets and increased inflationary pressure. Rising crude oil prices affected Indian markets because India imports a large share of its energy requirements. Volatility increased in commodity-linked sectors, banking stocks, and currency derivatives. Investors relied on futures and options strategies to manage inflation-related risks and uncertainty.

8.7 Israel-Hamas Conflict

The Israel-Hamas conflict increased geopolitical uncertainty in the Middle East and raised concerns regarding oil supply disruptions. Global investors became risk-averse, and hedging activity increased in Indian derivatives markets. Currency fluctuations and rising crude oil prices also influenced investor sentiment and speculative activity.

8.8 Iran-America-Israel Tensions

Recent tensions involving Iran, America, and Israel increased concerns regarding regional stability and energy prices. Investors closely monitored geopolitical developments because they affected crude oil prices, inflation expectations, and currency markets. Defensive trading strategies and hedging

activity increased during periods of escalation. The event highlighted the growing importance of geopolitical risk analysis in derivatives trading.

IX. NEED FOR SPECULATION, HEDGING, ARBITRAGE, AND DIFFERENT TRADING POSITIONS DURING GEOPOLITICAL EVENTS

Geopolitical events such as wars, pandemics, trade disputes, and economic policy changes create uncertainty in financial markets. During such situations, prices of stocks, commodities, currencies, and other financial assets can change rapidly. To deal with this uncertainty, investors and traders use different strategies in the derivatives market, such as speculation, hedging, and arbitrage.

Speculation is the practice of taking risk with the expectation of earning profits from future price movements. For example, if a trader expects the stock market to rise after a positive government announcement, they may buy futures or call options to earn a profit. Similarly, if they expect prices to fall because of a geopolitical conflict, they may sell futures or buy put options.

Hedging is used to reduce the risk of financial loss. It is commonly adopted by investors, companies, and institutions to protect themselves from unexpected market movements. For instance, during the COVID-19 pandemic or the Russia-Ukraine war, many investors purchased put options to protect their investment portfolios from falling stock prices. Importers and exporters also used currency futures to reduce the risk of exchange rate fluctuations.

Arbitrage is the process of earning profit by taking advantage of price differences of the same asset in different markets. Arbitrage opportunities generally arise for a short period during highly volatile market conditions. Traders buy the asset in one market where the price is lower and simultaneously sell it in another market where the price is higher, thereby earning a relatively risk-free profit.

Depending on market conditions, investors also adopt different trading positions to manage risk and improve returns. During periods of expected price increases, they may take a long position by buying futures or call options. When they expect prices to decline, they may take a short position by selling futures or buying put options. Investors who already hold shares often use

protective put strategies to limit potential losses during uncertain times. Some investors use covered call strategies to generate additional income from their existing holdings. During periods of very high volatility, strategies such as straddles and strangles are used to benefit from large price movements regardless of the market direction.

Therefore, speculation, hedging, and arbitrage play an important role in the derivatives market, especially during geopolitical events. While speculation helps in earning profits from market movements, hedging protects investors against potential losses, and arbitrage improves market efficiency by correcting price differences. Together, these strategies help investors make informed decisions and manage financial risks more effectively during uncertain economic conditions.

X. FINDINGS OF THE STUDY

The study clearly shows that geopolitical events had a substantial impact on the Indian derivatives market between 2015 and 2026. Global conflicts, trade disputes, economic uncertainty, and domestic reforms influenced volatility, investor sentiment, and derivatives trading activity. One of the most important findings is that periods of geopolitical stress generally increase futures and options trading because investors use derivatives for both hedging and speculative purposes. The COVID-19 pandemic created the highest volatility among all selected events and significantly increased participation in index options trading.

The study further found that international geopolitical conflicts affected the Indian derivatives market more strongly than domestic political developments. Events such as the Russia-Ukraine war and Middle East tensions increased crude oil prices, affected currency movement, and influenced foreign investment flows. Since India depends heavily on imported crude oil, geopolitical instability in oil-producing regions directly affected market sentiment and volatility.

Another important finding relates to demonetization. Although demonetization temporarily reduced liquidity and slowed trading activity, the reform accelerated financial digitization and encouraged online investment participation. Over time, this contributed to greater retail participation in derivatives trading.

The research also observed that retail investors became increasingly active after 2020. Lockdown periods during the COVID-19 pandemic encouraged many new participants to enter financial markets through digital trading platforms. This resulted in record growth in index options trading volumes and greater market participation by individual investors.

The study additionally found that the Indian derivatives market became more resilient over time. Stronger regulation by SEBI, technological advancement, improved surveillance systems, and efficient risk management practices helped the market recover quickly after major shocks. The derivatives market adapted effectively to repeated geopolitical disturbances and demonstrated greater maturity compared to earlier years.

Finally, the research concludes that geopolitical risk has become an essential factor in investment decision-making. Investors, regulators, and financial institutions must continuously monitor global political and economic developments because international conflicts can rapidly influence volatility, capital flows, and investor behavior in Indian financial markets.

XI. CONCLUSION

The Indian derivatives market experienced a major transformation between 2015 and 2026. The study demonstrates that geopolitical events and economic policy shocks strongly influenced market volatility, derivatives trading activity, and investor sentiment. Major events such as the China market crash, Brexit referendum, the United States-China trade war, the COVID-19 pandemic, the Russia-Ukraine war, and Middle East conflicts created uncertainty in financial markets and increased demand for futures and options instruments.

The research indicates that investors increasingly relied on derivatives for hedging and speculative purposes during periods of uncertainty. International conflicts affected crude oil prices, inflation expectations, exchange rates, and foreign investment flows, which directly influenced the Indian derivatives market. The COVID-19 pandemic emerged as the most influential event because it created exceptional volatility and transformed investor behavior through greater digital participation.

The study also highlights the mixed impact of demonetization. Although the reform caused

temporary liquidity disruptions and cautious market behavior, it accelerated digital financial participation and improved transparency in trading systems. Over time, the derivatives market benefited from increased online participation and financial awareness.

Another major conclusion is that the Indian derivatives market became more mature and resilient during the study period. Regulatory reforms, electronic trading systems, technological innovation, and efficient market surveillance improved the ability of the market to absorb shocks. Increased retail participation further expanded trading activity and market depth.

However, geopolitical risk remains an important challenge for investors and policymakers. International wars, trade disputes, and political tensions can rapidly affect financial stability, commodity prices, and investor confidence. Therefore, effective risk management practices, diversified investment strategies, and continuous monitoring of geopolitical developments are necessary for sustainable market growth.

In conclusion, the Indian derivatives market demonstrated strong adaptability despite repeated geopolitical and economic disturbances. While uncertainty and volatility cannot be avoided completely, the market has evolved into a more resilient and globally integrated financial system capable of managing future geopolitical challenges more effectively.

The study also suggests that investor education has become increasingly important in the derivatives segment. Many new retail participants entered the market after 2020 without a complete understanding of leverage, margin requirements, and volatility risks. Continuous awareness programs by regulators and exchanges can improve responsible participation and reduce excessive speculative behavior. In addition, market institutions should strengthen real-time surveillance systems to identify abnormal trading patterns during periods of geopolitical stress. Policymakers should also encourage the use of derivatives as genuine risk management tools instead of purely speculative instruments. Better coordination between monetary authorities, market regulators, and financial institutions can help maintain stability during future geopolitical crises and protect investor confidence in the Indian financial system.

Continued growth of infrastructure, data analytics, and algorithmic systems is expected to improve efficiency,

transparency, and resilience in the Indian derivatives market during future periods of global uncertainty.

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