

# Indian Financial Markets Functioning and the Impact of Geopolitics in Present Scenario

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## ABSTRACT

In recent decades, India's financial markets have undergone remarkable change, marked by growing foreign participation, rapid technological advancement, and increasing integration with the global economy. At the same time, shifting power equations, regional conflicts, and trade disputes have made the geopolitical environment more uncertain, creating new challenges for India's financial sector. This study explores how such geopolitical developments influence key segments of the Indian financial system—equity, bond, foreign exchange, and banking markets—over the period January 2012 to April 2024, a timeframe that includes major events such as the Russia-Ukraine war and U.S.-China trade tensions.

Adopting a quantitative approach, the analysis uses the Quantile Vector Autoregression (QVAR) framework to trace how shocks from global geopolitical risk spread across financial markets under low, medium, and high-risk conditions. The Geopolitical Risk Index (GPRI) proposed by Caldara and Iacoviello (2024) serves as the primary measure of geopolitical uncertainty, while relevant financial data are drawn from sources such as NSE, RBI, and Bloomberg. The findings indicate that the effect of geopolitical risk is uneven across markets and more pronounced during periods of heightened tension. The study also points to the underlying resilience of Indian markets, supported by sound regulation, economic diversification, and institutional strength, while stressing the importance of continued policy vigilance to manage risk and sustain financial stability.

**Keywords:** Indian financial markets, geopolitical risk, investor sentiment, capital flows, regulatory resilience, market volatility, India economy

## INTRODUCTION

"One among the world's largest and most distinct financial markets, India is one vital constituent in the nation's financial scene. Due to developments, technical advances, as well as globalization, India's financial market has extremely evolved in the past few years. Through good stock trades, expanding security market, as well as rapidly expanding unknown trade market, these advances have transformed India into an captivating platform for outsiders' speculation. Despite these encouraging trends in developments, however, the Indian financial market has increasingly proved incapable of responding to world events.

Exchange wars, pressures to conciliate, and provincial conflicts are only a few examples of world events that now unambiguously dictate market behavior. They impede all the way from capital flows to conversion standard security to financial backer certainty. Global business markets are all integrated as worldwide markets due to globalization. So, world events like strategic conflicts, finance authorizations, or changes in large powers' strategy can transcend national borders and cause turbulence in India's financial business markets. For instance, changes

in exchange strategy between key economies or higher oil prices as a consequence of world turbulence in the Middle East can have broad repercussions on India's expansion, the current record equilibrium, as well as the whole market sentiment.

It is important to understand how these external influences affect India's financial business sectors' performance as well as how protection is embraced in order to shield the economy from sheer unpredictability in the current environment, including increased global vulnerabilities as well as shifting power dynamics. To understand the external occurrences that affect India's financial environment as well as wider considerations for financial development as well as stability, this essay attempts to unravel the puzzling relation between global trends as well as the performance of the country's financial market. To understand the strengths as well as weaknesses in India's financial market sectors in responding to this volatile atmosphere, government policy roles as well as administrative arrangements will also come under scrutiny in reference to market adaptability."

## LITERATURE REVIEWS

### Geopolitical Risk and Financial Market Dynamics

Kumar & Rao (2024) in their study "*Assessing and Mitigating the Impact of Geopolitical Risk Uncertainty on the Indian Financial Sector*" published in the *Bulletin of Monetary Economics and Banking*, analyzed how geopolitical uncertainty affects India's financial system. Using a Quantile Vector Autoregression (QVAR) model, they explored the transmission of shocks across equity, currency, bond, and banking sectors. Their findings reveal that geopolitical shocks exert the strongest effects on the currency and banking markets, particularly under high-risk conditions. The study also highlights that India's financial markets, though increasingly integrated with global flows, remain relatively stable due to strong regulatory institutions and policy interventions. The authors conclude that the creation of effective monitoring systems and comprehensive risk management frameworks is essential to minimize the adverse effects of geopolitical disruptions.

### India's Stock Market under Global Geopolitical Shocks

SenGupta & Debnath (2025) in "*Geopolitical Risk and the Indian Stock Market*", examined how both global and country-specific geopolitical risks influence India's stock indices between July 1990 and February 2025. Using local projections and Caldara and Iacoviello's GPR measures, they analyzed 28 sectoral indices from the National Stock Exchange. The study found that global GPR shocks tend to reduce returns across most indices, with the strongest negative effects observed in broad-market and resource-oriented sectors. Interestingly, a few industries—such as automobile, tourism, capital markets, and defence—benefited from long-run gains under elevated geopolitical tension. Their findings also differentiate between *threat-based* (GPRT) and *act-based* (GPRA) shocks, showing distinct market reactions. Notably, India-specific risks were found to be statistically insignificant, implying that domestic investors largely anticipate regional uncertainties.

### Transmission of Geopolitical Risk to Global Financial and Commodity Markets

Chowdhury et al. (2025) in their paper "*Geopolitical Risk Transmission Dynamics to Commodity, Stock, and Energy Markets*" published in *Quantitative Finance and Economics*, analyzed how geopolitical shocks move across multiple markets using transfer entropy and quantile connectedness. Based on daily data from 1994 to 2022, they observed that wheat and corn returns are highly sensitive to short-term geopolitical risk, while silver displays persistent responsiveness to GPR. Their findings demonstrate that geopolitical risk is both a transmitter and a receiver of information, thereby creating a feedback loop between financial markets and real assets. The research further reveals that during global crises, correlations among asset classes strengthen, resulting in higher volatility and synchronized responses across markets. This work contributes to understanding how information spillovers connect stock, energy, and commodity markets during geopolitical shocks.

## Global Perspective: Market Reactions to Geopolitical Events

Petrov et al. (2018) in their *State Street Global Advisors* report “How Does Geopolitics Affect Financial Markets?”, assessed 71 major geopolitical events between 1986 and 2018 across four key emerging markets—India, Israel, South Korea, and Turkey. The study concluded that currency markets react more immediately and severely to negative geopolitical events, typically losing in two days what they would lose over a month in normal conditions. In contrast, equity markets show a more balanced reaction, with post-event returns stabilizing within one to two months. Their findings also note that markets interpret geopolitical events as “beta drivers,” suggesting that shocks are priced in quickly but can generate prolonged volatility. The report validated the Caldara and Iacoviello Geopolitical Risk Index (GPR) as a consistent proxy for measuring investor sentiment and uncertainty across time.

## The Russia–Ukraine War and BRICS Financial Markets

Gopal et al. (2025) in “*Geopolitical Shockwaves: The Russia–Ukraine War’s Impact on BRICS Financial Markets*” (*Cogent Economics & Finance*), investigated how the war transmitted financial contagion across BRICS nations. Using a multivariate DCC-GARCH model, they revealed that Russia’s stock market exhibited the highest volatility, while India’s market remained comparatively stable. The study found that India’s financial linkage with Russia increased due to strong bilateral trade relations, even as Brazil and China experienced heightened volatility. In contrast, China and South Africa displayed structural market decoupling during the post-war period. The authors emphasized that distinguishing between *spillover* (normal interdependence) and *contagion* (crisis-driven transmission) is vital for assessing systemic vulnerabilities in emerging markets. Their analysis underscores India’s relative resilience within the BRICS bloc.

## Geopolitical Risk and Renewable Energy in Emerging Markets

Alsagr & Van Hemmen (2021) in their paper “*The Impact of Financial Development and Geopolitical Risk on Renewable Energy Consumption: Evidence from Emerging Markets*” (*Environmental Science and Pollution Research*), studied 1996–2015 panel data across major emerging economies. Using the two-step System GMM model, they discovered that financial development positively contributes to renewable energy consumption and that, counterintuitively, geopolitical risk also stimulates the shift toward cleaner energy sources. This finding implies that uncertainty pushes nations to reduce external energy dependency by expanding renewable capacity. Their research bridges financial and environmental economics, illustrating how geopolitical insecurity becomes a long-term driver of sustainable energy policy in emerging markets.

## Institutional Evolution and Market Structure

A comprehensive survey of India’s monetary sector is offered in Sharma and Khanna (2024), who also examine the regulatory functions and institutional development of the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), and main stock markets (NSE and BSE). Their works highlight institutional solidity in insulating Indian markets from external shocks. Likewise, Khanna (2024) identifies the maturing policy environment in analyzing the key evolution in India’s financial architecture from independence to liberalization.

## Geopolitical Risks and Financial Stability

To manage geopolitical volatility, Srinivasan (2023) refers to the use by Indian investors and financial institutions of hedging instruments like currency futures, portfolio diversification, and management of sovereign risk. This is supported by Chaudhuri (2021), who examines the impact on investors’ confidence and transitory capital flight as well as depreciation in the value of currencies due to regional tensions (e.g., border disputes between China and Pakistan).

## Trade Wars, Financial Flows, and Currency Volatility

The impact on foreign investment in India due to trade tensions in the United States-China and China-India situations is provided in Bose, D., & Srinivasan, K. S. (2023). There is indication that trade uncertainty and depreciation in the INR are directly related, whereas FDI as well as bond rates are influenced indirectly. Within trade disputes, these trends are consistent with capital reallocation world patterns.

## Technology and Fintech's Contribution

Sharma, C., & Khanna, R. (2024) discuss how fintech innovations increase the resilience in Indian financial markets. They posit that their tools for real-time risk management, algorithmic trades, and higher digital penetration reduce volatility in markets from geopolitical shocks.

## Commodity Dependency and Global Events

Exposure to world oil market shocks in India is discussed in detail by Rezazadeh et al. (2024). From their research, they indicate that Middle Eastern conflicts greatly impact the prices of crude oil, influencing India's current account deficits as well as inflationary rates, and transmitting shocks to the forex as well as equity markets.

## Market Structure and Segmental Analysis

Structural definition of the capital markets in India is provided by Rao et al. (2022), who separate forex, bonds, derivatives, and stocks. Under conditions of geopolitical stress, segmentation here provides the foundation for the spillover study across asset classes."

## OBJECTIVES OF THE STUDY

1. To comprehend the nature, structure, and functions of the Indian financial markets.
2. To analyze the connection between market trends in India and geopolitical events.
3. To analyze how geopolitical risk affects investor sentiment in India.
4. To examine the role of India's political and economic relations with major global players.

## Structure of Indian financial market

"Comprising its market segments, institutions, as well as tools, India's money market is a compound structure. Through facilitating capital flow between depositors and monetary financiers, aiding entities, as well as contributing to monetary development, it is extremely significant to India's economic development. Its structure can broadly be divided into the following main components:

## Market Segments of the Indian Financial Market

Based on the type of participants as well as the products being traded, the Indian financial market is segmented into separate segments. The significant segments are as follows:

## Capital Market

Long-term finance and investment are provided to a large extent through the capital market in India. Its two segments are the equity market as well as the debt market. The equity market, in other instances, is also referred to as the stock market, trades in shares as well as corporate stocks. The National Stock Exchange (NSE) as well as the Bombay Stock Exchange (BSE) are the main platforms in India where equity is traded. Conversely, the bond or debt market provides for the issuance as well as trade in fixed-income securities like government, municipal, as well as corporate bonds.

Primary market and secondary market are two other parts of the capital market. The primary market provides new securities initially in private placements and in initial public offerings (IPOs), so issuers can raise additional funds from investors. But investors exchange already issued securities in the secondary market, which delivers liquidity and price discovery to already issued financial instruments.

## Money Market

India's money market is that part of the country's financial system that is involved in borrowing and lending, for short periods, usually not more than one year. Treasury Bills (T-Bills), short-term government securities sold with conventional maturities of 91, 182, and 364 days, issued against discount rates redeemable at face value, are important instruments in the money market in India. The Repurchase Agreement (Repo), one type of short-term borrowing involving the sale of securities with the commitment to buy them back at a pre-determined value and date, is another important instrument that is widely used by banks to cater to daily liquidity.

To finance working capital needs, creditworthy companies provide Commercial Papers (CPs), which are unsecured short-term debt instruments bearing higher returns compared to T-Bills. Commercial banks provide Certificates of Deposit (CDs), which are time-bounded deposit tools bearing fixed maturities as well as fixed rates of interest. Commercial banks normally provide CDs to raise short-term funds from institutional investors.

## INSTITUTIONAL STRUCTURE

### A. Financial Market Institution

#### i. Stock Exchange

A number of important institutions oversee and organize the Indian financial market, managing its functioning, making it transparent, and enhancing investors' confidence. The most important among these is the Reserve Bank of India (RBI), the national central bank. To keep the country financially healthy, the RBI is the driving force behind shaping monetary policy, checking price inflation, managing the banking sector, and controlling the money market. The RBI is helped in this task by the Securities and Exchange Board of India (SEBI), the chief regulator of the securities market. Other than protecting investors' rights and overseeing the smooth operation of capital markets, SEBI regulates stock exchanges through supervision and market intermediaries through regulation.

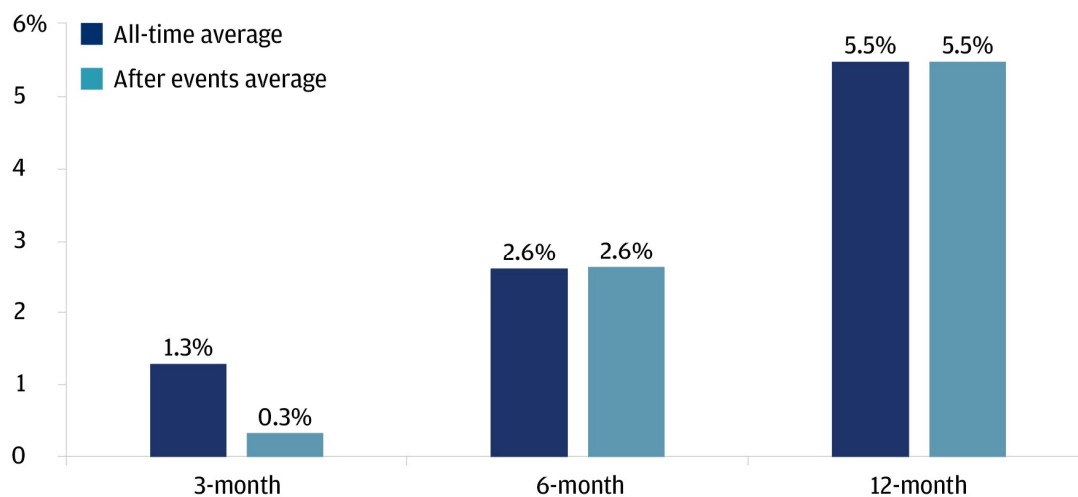
Major stock exchanges like the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) constitute the financial market infrastructure, as do the regulatory bodies. Comprising stock, derivatives, currency, and debt instrument trade platforms, the NSE is one of the largest as well as one of the most technically sophisticated exchanges in India. The BSE, in operation since 1875, is, on the other hand, Asia's oldest stock exchange with trades in stocks, bonds, as well as derivatives. The entities complement each other to promote the stability as well as the international integration of India's financial sector.

## Financial Instruments in the Indian Market

There are innumerable instruments provided in the Indian finance market that cater to diversified investment objectives, risk profiles, as well as hedging needs. Equity instruments, like stocks or shares, which denote any proportion of ownership in any given firm, are most famously known. Investors purchase these instruments to align their performance with that of the firm and stay in readiness to gain from the receipt of dividends as well as capital gain.

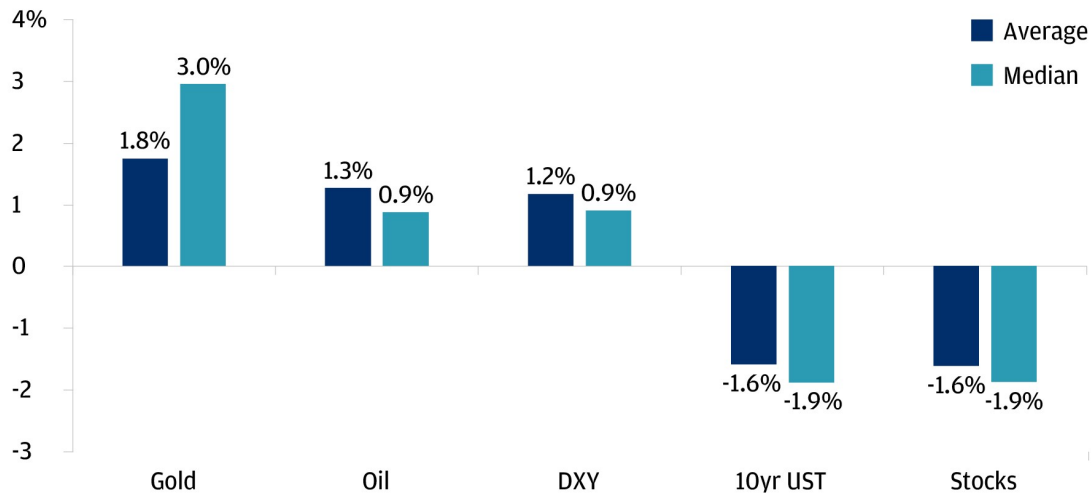
Initial Public Offerings (IPOs), which enable companies to provide new shares to the general public for the first time, are widely used by companies that are looking to raise capital to finance operations or expansion. Another significant category is that of derivative instruments, such as futures and option contracts, whose value is dependent on underlying instruments such as stocks, commodities, or indices. These are widely used to forecast future price movements or to protect themselves against risk.

Secondly, swaps are sophisticated money agreements where two parties agree to exchange obligations or dollar streams, usually involving interest rates or currencies. Useful tools like spot agreements that encompass same-time money interchange, as well as forward agreements that enable parties to lock in a conversion rate that will be used on the date when the deal will occur, are also available in the market's foreign exchange section. When combined, these tools offer significant tools for planning finance, risk management, investment, as well as speculation in India's ever-changing capital market."



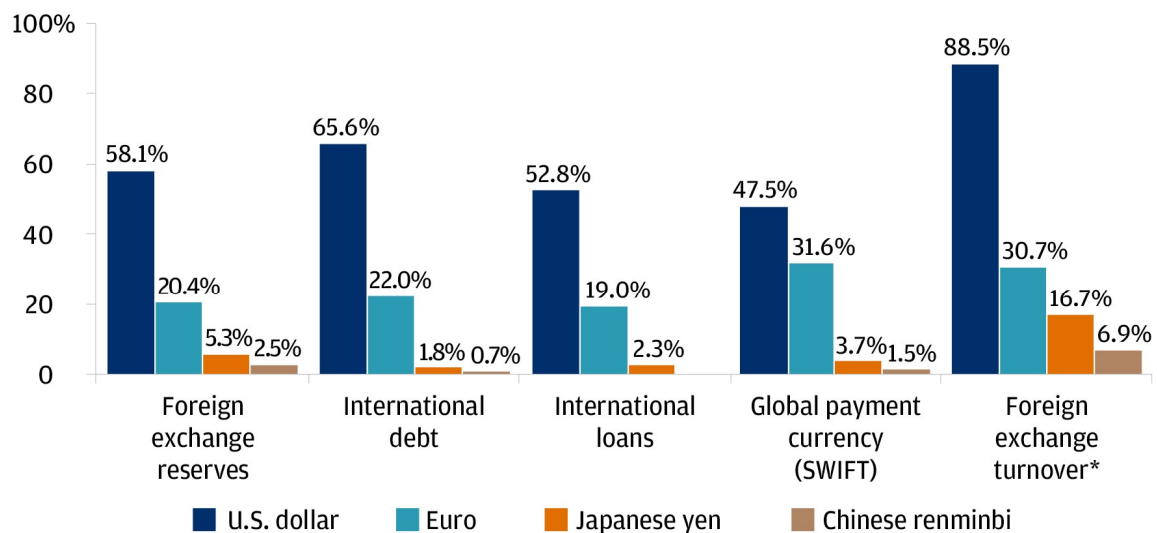
**Figure 1.** Historical data shows the typically fleeting impact of geopolitical events on equity returns

Sources: Robert Shiller, Haver Analytics. Data as of December 31, 2023. Note: Return refers to price return. Geopolitical events in the above chart refer to 36 events selected from 10 years of geopolitical events beginning with 2012 and continued with the war in Palestine in 2024. We measured the 3-month, 6-month and 12-month returns following these events.



**Figure 2.** Gold has often proven to be a performer as a tactical hedge against geopolitical risk

Sources: Dario Caldara and Matteo Iacoviello, J.P. Morgan Private Bank, Bloomberg Money L.P., Haver Investigation. Information as of April 16, 2024. Note: The time span of the investigation goes from January 1985 to April 2024. We utilized the International Gamble (GPR) File to separate international shocks where its standard deviation is more prominent than 2. For continuous series of information focuses surpassing 2 standard deviations, we just consider the main data of interest. This investigation depends on normal week by week information. DXY represents the U.S. Dollar List, though we involved S&P 500 All out Return for stocks. 10yr UST represents 10-year U.S. Depository Bond absolute return. We utilized costs/cost returns for gold, oil and DXY. Past execution is no assurance of future outcomes. Putting straightforwardly in an index is absurd.



\*Since transactions in foreign exchange markets always involve two currencies, shares add up to 200%.

**Figure 3.** The U.S. dollar is still the world's dominant reserve currency, and it's unlikely to be replaced anytime soon

Sources: BIS, IMF, Society for Worldwide Interbank Financial Telecommunication (SWIFT) and ECB calculations. Data as of December 31, 2022. Notes: the latest data for foreign exchange reserves, international debt and international loans are for the fourth quarter of 2022. SWIFT data are for December 2022. Foreign exchange turnover data are as of April 2022.

## METHODOLOGY

This study uses a quantitative approach to examine how geopolitical risk affects Indian financial markets. Data were collected from January 2012 to April 2024, covering key geopolitical events like the Russia–Ukraine war and U.S.–China trade tensions. Financial indicators such as equity returns, bond yields, forex rates, and banking indices were sourced from NSE, RBI, and Bloomberg. Geopolitical risk was measured using the Caldara and Iacoviello (2024) Geopolitical Risk Index (GPRI). Macroeconomic controls—including inflation, oil prices, and capital flows—were obtained from the IMF and Haver Analytics.

The dependent variables of the study include Equity Market Index (EQUITY), Foreign Exchange Rate (FOREX), Bond Yield (BOND), Banking Sector Index (BANKING), and Equity Market Volatility (EQUITY\_VOLT), while the Geopolitical Risk Index (GPRI) serves as the main independent variable. To ensure the validity of the data, the study conducted descriptive statistical analysis and applied stationarity tests using the Augmented Dickey–Fuller (ADF) and Kwiatkowski–Phillips–Schmidt–Shin (KPSS) methods. The analysis employed a Quantile Vector Autoregression (QVAR) model to evaluate risk spillovers across the financial markets under low, median, and high-risk regimes. The optimal lag length was selected based on the Bayesian Information Criterion (BIC), and the entire analysis was executed using the R statistical software with ten-step-ahead forecasts. Furthermore, connectedness tables were constructed to illustrate the extent and direction of the impact of geopolitical risk on various market segments across different quantiles.

## RESULTS AND INTERPRETATION

This section interprets the key empirical findings based on descriptive statistics, stationarity tests, and quantile VAR-based spillover analysis.

### Descriptive Statistics and Stationary Tests for Financial Market Stress Measures and Geopolitical Risk Index

This table contains selected descriptive statistics with the specific indicators listed in column 1. N = number of observations; ADF = Augmented Dickey–Fuller, KPSS= Kwiatkowski–Phillips–Schmidt–Shin; \*\*\* indicates a p-value less than 1%, denoting statistical significance at the 1% level.

**Table 1.** Descriptive Statistics and Stationary Tests for Financial Market Stress Measures and Geopolitical Risk Index

| Statistical Measure  | BANKING   | BOND      | FOREX     | GPRI        | EQUITY     | EQUITY_VOLT |
|----------------------|-----------|-----------|-----------|-------------|------------|-------------|
| Mean                 | 1.284     | 4.947     | 0.034     | 0.204       | -0.130     | 0.004       |
| Median               | 1.263     | 4.492     | -0.095    | 0.182       | -0.131     | 0.003       |
| Maximum              | 4.169     | 11.155    | 7.507     | 0.887       | 0.756      | 0.029       |
| Minimum              | -2.716    | 0.702     | -4.581    | 0.064       | -0.671     | 0.001       |
| Std. Dev.            | 0.850     | 2.461     | 1.675     | 0.096       | 0.225      | 0.004       |
| Skewness             | -0.369    | 0.276     | 0.578     | 2.193       | 0.926      | 3.521       |
| Kurtosis             | 5.935     | 1.910     | 4.964     | 13.622      | 6.006      | 17.923      |
| Jarque-Bera          | 86.645*** | 14.134*** | 49.147*** | 1248.965*** | 117.884*** | 2575.370*** |
| Probability          | 0.000     | 0.001     | 0.000     | 0.000       | 0.000      | 0.000       |
| ADF test             | -4.563    | -1.836    | -4.912    | -3.247      | -4.589     | -2.871      |
| ADF <i>p</i> -value  | 0.010     | 0.645     | 0.010     | 0.081       | 0.010      | 0.210       |
| KPSS test            | 0.163     | 1.090     | 0.118     | 0.550       | 0.202      | 0.837       |
| KPSS <i>p</i> -value | 0.100     | 0.010     | 0.100     | 0.030       | 0.100      | 0.010       |
| N                    | 227       | 227       | 227       | 227         | 227        | 227         |

The descriptive statistics reveal that EQUITY\_VOLT shows extreme volatility (kurtosis = 17.92), while GPRI displays high skewness (2.19) and kurtosis (13.62), indicating clustering of geopolitical shocks. FOREX shows a wide range, reflecting the rupee’s sensitivity to capital flows, whereas BOND volatility is more moderate.

Stationarity tests (ADF and KPSS) confirm that the series are suitable for VAR modeling. Significant Jarque-Bera test results ( $p < 0.01$ ) confirm non-normal distributions, justifying the use of Quantile VAR to better capture nonlinear dynamics across market conditions.

#### Quantile (Time-based) VAR Analysis of Geopolitical Risk Index Spillovers Across Financial Markets for Lower, Median and Upper Quintile

The connectedness table is based on a quantile VAR model with lag length of order 1 (BIC) and a 10-step-ahead forecast with window size of 20. The column furthest to the right, labeled "FROM," shows the total directional connectedness, represented by the sum of the rows ("from all others to i"). Conversely, the bottom row, labeled "TO," displays the total directional connectedness, indicated by the sum of the columns ("to all others from j"). The difference in total directional connectivity is presented at the very bottom row under "NET" (TO–FROM). The overall connectedness, which is the average "from" connectedness or similarly, the average "to" connectedness, is highlighted in the bottom-right element.

**Table 2.** Quantile (Time-based) VAR Analysis of Geopolitical Risk Index Spillovers Across Financial Markets for Lower, Median and Upper Quintil

|                          | GPRI   | BANKING | FOREX  | EQUITY_VOLT | EQUITY | BOND   | FROM   |
|--------------------------|--------|---------|--------|-------------|--------|--------|--------|
| GPRI                     | 26.01  | 14.6    | 14.59  | 13.03       | 15.13  | 16.65  | 73.99  |
| BANKING                  | 12.68  | 24.5    | 15.47  | 13.06       | 16.54  | 17.75  | 75.5   |
| FOREX                    | 12.87  | 14.22   | 24.18  | 13.16       | 18.41  | 17.16  | 75.82  |
| VOLATILITY               | 11.02  | 11.6    | 12.93  | 34.47       | 15     | 14.99  | 65.53  |
| EQUITY                   | 12.31  | 14.33   | 17.5   | 14.09       | 23.36  | 18.4   | 76.64  |
| BOND                     | 11.99  | 14.67   | 15     | 14.06       | 18.12  | 26.15  | 73.85  |
| TO                       | 60.88  | 69.42   | 75.49  | 67.4        | 83.2   | 84.95  | 441.33 |
| Inc.Own                  | 86.88  | 93.92   | 99.66  | 101.87      | 106.56 | 111.1  | TCI    |
| NET                      | -13.12 | -6.08   | -0.34  | 1.87        | 6.56   | 11.1   | 73.55  |
| NPT                      | 0      | 1       | 2      | 3           | 4      | 5      |        |
| Median quantile (q=0.50) |        |         |        |             |        |        |        |
| GPRI                     | 37.33  | 13.33   | 10.27  | 11.39       | 12.47  | 15.22  | 62.67  |
| BANKING                  | 7.53   | 46.44   | 9.3    | 9.68        | 10.41  | 16.63  | 53.56  |
| FOREX                    | 7.98   | 11.9    | 38.5   | 10.18       | 15.51  | 15.92  | 61.5   |
| VOLATILITY               | 7.58   | 10.68   | 9.09   | 41.98       | 13.23  | 17.45  | 58.02  |
| EQUITY                   | 7.37   | 9.44    | 11.83  | 11.56       | 37.29  | 22.51  | 62.71  |
| BOND                     | 7.5    | 12.61   | 9.32   | 12.45       | 17.59  | 40.54  | 59.46  |
| TO                       | 37.96  | 57.96   | 49.81  | 55.26       | 69.21  | 87.72  | 357.92 |
| Inc.Own                  | 75.29  | 104.4   | 88.31  | 97.24       | 106.5  | 128.26 | TCI    |
| NET                      | -24.71 | 4.4     | -11.69 | -2.76       | 6.5    | 28.26  | 59.65  |
| NPT                      | 0      | 3       | 1      | 2           | 4      | 5      |        |
| Upper quantile (q=0.50)  |        |         |        |             |        |        |        |
| GPRI                     | 20.08  | 14.24   | 18.08  | 16.68       | 15.18  | 15.75  | 79.92  |
| BANKING                  | 15.02  | 19.38   | 17.74  | 15.92       | 15.71  | 16.23  | 80.62  |
| FOREX                    | 15.39  | 14.22   | 22.33  | 15.73       | 16.75  | 15.58  | 77.67  |
| VOLATILITY               | 15.32  | 14.51   | 17.79  | 19.37       | 16.52  | 16.49  | 80.63  |
| EQUITY                   | 14.47  | 13.92   | 18.02  | 15.21       | 20.7   | 17.67  | 79.3   |
| BOND                     | 14.96  | 13.35   | 17.63  | 15.71       | 17.11  | 21.25  | 78.75  |
| TO                       | 75.16  | 70.23   | 89.27  | 79.24       | 81.27  | 81.73  | 476.9  |
| Inc.Own                  | 95.24  | 89.61   | 111.6  | 98.61       | 101.97 | 102.97 | TCI    |
| NET                      | -4.76  | -10.39  | 11.6   | -1.39       | 1.97   | 2.97   | 79.48  |
| NPT                      | 1      | 0       | 5      | 2           | 3      | 4      |        |

The Quantile VAR analysis reveals distinct spillover dynamics across different levels of geopolitical risk. In the lower quantile (low-risk environment), the spillover from geopolitical risk (GPRI) to other financial sectors is relatively limited at 73.99%, and equity volatility largely acts as a receiver rather than a transmitter. During this phase, the bond market emerges as a net transmitter (+11.1%), suggesting that it plays a stabilizing role.

In the median quantile (neutral risk), the influence of GPRI drops to 62.67%, indicating a moderate transmission of geopolitical shocks. The bond market continues to exert a strong influence (+28.26%), while equity markets act

as net receivers (−6.5%), reflecting heightened investor sensitivity to both geopolitical and macroeconomic conditions.

Under the upper quantile (high-risk environment), spillovers intensify sharply. GPRI becomes the most dominant driver (79.92%), and key financial sectors—including equity, forex, and volatility indices—become net receivers, underscoring the fragility of markets during geopolitical crises. Bonds remain a mild transmitter (+2.97%), reflecting a shift toward safer assets.

The Total Connectedness Index (TCI) further confirms this nonlinearity, rising from 59.65 in neutral conditions to 79.48 in high-risk periods, and validating the use of quantile models to capture regime-dependent financial contagion.

## CONCLUSION

The findings of this study underscore the increasingly complex relationship between geopolitical developments and the behavior of Indian financial markets. While India has built a robust and diversified financial ecosystem supported by regulatory reforms and institutional strength, the results show that global geopolitical shocks continue to influence key market segments — especially equity, forex, and bond markets — in nonlinear and quantile-dependent ways. Quantile VAR analysis reveals that the intensity and direction of market spillovers vary significantly across different levels of geopolitical risk. In high-risk environments, contagion effects across financial segments intensify, with equity and currency markets acting as net receivers of shocks. Conversely, in low-risk conditions, bond markets and banking indicators exhibit stronger outbound spillovers, reflecting capital reallocation by long-term investors. These dynamics highlight the vulnerability of emerging markets like India to external political uncertainties. However, they also reveal the adaptive capabilities of India's financial system, driven by institutional evolution, digital transformation, and policy responsiveness. Continued monitoring of geopolitical indicators and dynamic stress-testing of financial market conditions will be critical for building long-term resilience.

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