

## Geopolitical Oil Shocks and Sectoral Stock Returns in India: The Exchange rate channel during Middle East Conflicts..

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### ABSTRACT

This study examines the impact of geopolitical oil shocks arising from Middle East conflicts on sectoral stock returns in India, with particular emphasis on the rupee dollar exchange rate as a transmission channel. Using a quantitative empirical design and secondary high-frequency data on crude oil prices, exchange rates, and sectoral equity indices, the paper investigates whether conflict-induced oil shocks generate heterogeneous effects across Indian industries and whether currency movements amplify or mitigate these effects. The analysis is motivated by India's high dependence on imported crude oil and its exposure to external volatility through inflation, current account pressure, and rupee depreciation. The study finds that geopolitical oil shocks do not affect all sectors uniformly; instead, energy-intensive, import-dependent, and rate-sensitive sectors tend to experience stronger adverse reactions, while commodity-linked and upstream sectors show relative resilience or gains. The exchange rate emerges as a key mediator, reinforcing the spillover from crude price shocks to sectoral equity performance. The findings contribute to the literature on oil shocks, geopolitical risk, and emerging-market financial stability by highlighting the importance of sectoral heterogeneity and currency transmission in India's equity market during conflict episodes. The study also offers practical implications for portfolio diversification, hedging, and policy design in oil-import-dependent economies...

**Keywords:** Geopolitical oil shocks; Middle East conflicts; exchange rate transmission; sectoral stock returns; India; crude oil prices; financial markets; currency depreciation; emerging markets; portfolio risk

### INTRODUCTION:

The relationship between geopolitical events and oil prices can significantly influence stock returns across various sectors in India, particularly through fluctuations in the exchange rate. India's persistent dependence on imported crude oil makes it acutely vulnerable to geopolitical disturbances in key supplier regions, particularly the Middle East (Vajiram & Ravi, 2026). As the world's third-largest consumer of crude, India now imports over 85% of its crude requirements, and although discounted Russian barrels gained importance after the Ukraine war, West Asian producers such as Iraq, Saudi Arabia and the UAE have again emerged as pivotal suppliers as Russian flows moderated in late 2024 (Ranjanikar, 2025; Vajiram & Ravi, 2026; Reuters, 2024). This structural exposure means that conflict-driven supply disruptions, shipping risks around the Strait of Hormuz and conflict-related risk premia in oil markets are quickly transmitted to India's macroeconomic environment via higher import costs, a wider current account deficit and pressure on inflation, with knock-on effects on the rupee and domestic asset prices (Ranjanikar, 2025; Vajiram & Ravi, 2026).

Recent Middle East flare-ups involving escalating tensions among the United States, Israel, Iran and regional non-state actors have translated into sharp, if episodic, spikes in global crude benchmarks together with pronounced volatility in Indian financial markets (Share India, 2026; Anand Rathi, 2026). During the March 2026 episode, for example, Brent crude prices jumped by roughly 8 12%, briefly trading well above 80 US dollars per barrel, while the BSE Sensex and NSE Nifty 50 retreated to multi-month lows as global investors shifted to safe-haven assets (Reuters, 2026; Anand Rathi, 2026). In the same window, the Indian rupee depreciated to record or near-record levels—crossing 91 92 per US dollar—highlighting how geopolitically driven oil shocks can rapidly spill over into currency markets in an oil-import-dependent emerging economy (Share India, 2026; Reuters, 2026). Market commentaries around these events repeatedly emphasised that the combination of crude spikes and rupee weakness weighed heavily on fuel-intensive and import-dependent sectors, even as a handful of upstream and defence-linked stocks displayed relative resilience (Share India, 2026; The Hindu Business Line, 2026).

A growing empirical literature documents that crude oil price movements and broader measures of geopolitical risk exert statistically and economically significant effects on stock returns, with notable heterogeneity across countries and sectors (Behera et al., 2024; Antonakakis et al., 2017; Balcilar et al., 2018). Behera et al. (2024) show that oil prices and a Caldara Iacoviello-type geopolitical risk index jointly influence sectoral stock returns in major economies including India, with oil prices generally supporting commodity and pharma stocks while geopolitical risk tends to undermine banking stocks in emerging markets. For India specifically, recent sector-level work finds that banking, auto, metal, energy, IT, financial services and real-estate indices display asymmetric and non-linear responses to oil price shocks, whereas FMCG, media and pharma are comparatively less cointegrated with oil prices (Gopal et al., 2025). Studies on India's sustainable and "green" stocks similarly report that oil price uncertainty and shocks can generate asymmetric volatility spillovers into ESG-oriented portfolios, underscoring the need to understand sector-wise oil sensitivity in greater detail (Sustainable Accounting, Management and Policy Journal, 2013).

From a macro-financial perspective, the exchange rate constitutes a key channel through which geopolitical oil shocks propagate to sectoral stock returns in India. Higher crude prices worsen the current account deficit, intensify imported inflation and may delay monetary policy easing, all of which put depreciation pressure on the rupee (Duan et al., 2021; Caldara et al., 2022). A weaker rupee then amplifies the domestic-currency cost of oil and other imported inputs, compressing profit margins in fuel-intensive, import-dependent industries such as airlines, logistics, paints, tyres and petrochemicals, and can also aggravate balance-sheet risks for firms with unhedged foreign-currency liabilities (Duan et al., 2021; Behera et al., 2024). At the same time, currency depreciation may support export-oriented sectors and firms with large dollar revenues for example in IT, pharmaceuticals and some upstream energy companies generating heterogeneous sectoral responses to a common external oil-and-geopolitics shock (Gopal et al., 2025; Behera et al., 2024). This asymmetry makes the exchange rate channel particularly salient for understanding cross-sectional stock-return dynamics during Middle East-related oil turmoil.tandfonline+1

The recent Middle East conflicts therefore offer a natural setting to study how geopolitical oil shocks, operating through the exchange rate, shape the distribution of sectoral stock returns in India. Contemporary analyses of the 2026 episode point out that crude-price spikes and rupee weakness were central drivers of under-performance in oil marketing companies, aviation, paints, tyres, chemicals and several consumer-facing sectors, even as upstream oil producers and defence-linked firms showed relative resilience (Share India, 2026; The Hindu Business Line, 2026; Anand Rathi, 2026). While the aggregate indices often recover once geopolitical tensions stabilise, the dispersion of gains and losses across sectors during such windows can be substantial, with important implications for portfolio allocation, hedging strategies and macro-prudential

oversight in energy-importing emerging markets (Behera et al., 2024; Gopal et al., 2025). Against this backdrop, the present study investigates how conflict-linked geopolitical oil shocks originating in the Middle East affect sectoral stock returns in India, explicitly modelling the rupee dollar exchange rate as a key transmission mechanism. By combining high-frequency information on international crude prices, conflict-related shocks, the exchange rate and sectoral equity indices, the study aims to quantify the extent to which currency movements mediate or amplify sector-specific responses to oil disturbances, thereby filling an important gap in the literature on oil shocks, geopolitical risk and emerging-market financial stability (Behera et al., 2024; Gopal et al., 2025).anandrathi+4

## Background of the Study

The exchange rate channel serves as a critical mechanism through which geopolitical oil shocks impact sectoral stock returns, necessitating a comprehensive analysis of its effects in the Indian context.

Understanding how exchange rate fluctuations mediate the effects of geopolitical oil shocks on India's sectoral stock returns is essential for investors and policymakers alike.

Investors must consider the implications of geopolitical risks and oil price volatility when making decisions, as these factors can lead to significant market fluctuations and affect various sectors.

The intricate interplay between geopolitical events and economic variables has garnered significant attention in recent years, particularly in the context of oil price fluctuations and their subsequent effects on stock market performance. In India, a nation heavily reliant on oil imports, the ramifications of geopolitical oil shocks, especially those emanating from the Middle East, are profound. These shocks not only influence oil prices but also have cascading effects on the exchange rate, which in turn affects sectoral stock returns across the Indian market (Baffes et al., 2015; Kumar & Singh, 2019). The exchange rate channel is a pivotal mechanism that mediates the impact of these shocks, highlighting the necessity for a thorough examination of its implications within the Indian economic framework. Understanding the dynamics of how exchange rate fluctuations interact with geopolitical oil shocks to influence sectoral stock returns is crucial for both investors and policymakers. Investors must navigate the complexities introduced by geopolitical risks and oil price volatility, as these factors can lead to substantial market fluctuations, impacting sectors differently based on their oil dependency and operational structures (Choudhry, 2018; Sharma & Gupta, 2020). Policymakers, on the other hand, require insights into these interactions to formulate strategies that can mitigate adverse economic impacts during periods of geopolitical instability. This research aims to elucidate the relationship between geopolitical oil shocks, exchange rate fluctuations, and sectoral stock returns in India, with a specific focus on conflicts in the Middle East. The objectives of the study include analyzing the exchange rate channel's role in mediating these effects, assessing the differential impacts on various sectors, and providing actionable insights for

stakeholders. Key research questions will explore how exchange rate movements correlate with oil price changes during geopolitical events and their consequent effects on sectoral stock performance. The methodology will involve a quantitative analysis of historical data on oil prices, exchange rates, and sectoral stock returns, employing econometric models to establish causal relationships. A comprehensive review of existing literature will provide a theoretical framework for understanding these dynamics, while also identifying gaps in current research that this study aims to address. Previous studies have highlighted the significance of oil prices on stock markets (Hamilton, 2009; Lee & Ni, 2002), yet there remains a need for focused research on the Indian context, particularly regarding the role of exchange rates and sectoral analysis during periods of Middle Eastern conflict. By bridging these gaps, this research contributes to a deeper understanding of the economic implications of geopolitical oil shocks and offers valuable insights for navigating the complexities of the Indian stock market in an increasingly interconnected global economy.

### Objectives of the Study

The present study is designed with the following specific objectives:

**To quantify the impact of geopolitical oil shocks associated with Middle East conflicts on sectoral stock returns in India.** Building on evidence that oil supply, demand and risk shocks have heterogeneous effects on Indian sectoral indices, this objective focuses on conflict-linked disturbances rather than generic oil fluctuations (Mishra & Mishra, 2021; Behera et al., 2024).

**To examine the role of the rupee dollar exchange rate as a transmission channel between geopolitical oil shocks and sectoral stock returns.** Prior studies emphasise that oil price increases worsen India's external balance and inflation, thereby exerting depreciation pressure on the rupee, which can feed back into equity valuations (Mishra & Mishra, 2021; Vajiram & Ravi, 2026).

**To identify sectoral asymmetries in the response of Indian industries to conflict-induced oil shocks once the exchange rate channel is accounted for.** Recent work documents strong asymmetries across banking, auto, metal, energy, IT and other sectors in response to oil price changes, suggesting that energy-intensive and import-dependent industries may be particularly vulnerable (Gopal et al., 2025).

**To assess whether the exchange rate mitigates or amplifies the effect of geopolitical oil shocks on specific sectors over different horizons.** This objective draws on evidence of asymmetric and non-linear stock-oil relationships and seeks to clarify how currency movements shape short-run and long-run sectoral adjustments (Gopal et al., 2025; Chalissery et al., 2025).

**To derive implications for portfolio allocation, sectoral hedging strategies and policy responses in an oil-import-dependent emerging market.** By mapping sector-wise sensitivities to oil and currency shocks, the study aims to provide actionable insights for investors and

regulators managing risk during future Middle East conflict episodes (Mishra & Mishra, 2021; Behera et al., 2024).

### Research Questions

In line with the above objectives, the study addresses the following research questions:

**RQ1:** How do geopolitical oil shocks associated with Middle East conflicts affect sectoral stock returns in India? Existing evidence shows that different types of oil shocks (supply, demand, risk) have distinct effects on sectoral indices, but conflict-specific disturbances remain under-explored in the Indian context (Mishra & Mishra, 2021).

**RQ2:** To what extent does the rupee dollar exchange rate mediate the relationship between geopolitical oil shocks and sectoral stock returns? Given India's high crude import dependence and the documented link between oil prices, external balances and exchange-rate movements, the currency channel is expected to be a critical mechanism (Vajiram & Ravi, 2026; Ranjanikar, 2025).

**RQ3:** Are there significant asymmetries across sectors in their sensitivity to conflict-driven oil shocks once exchange-rate dynamics are incorporated? Prior research indicates that banking, auto, metal, energy, IT and real-estate sectors respond asymmetrically to positive and negative oil price changes, whereas FMCG, media and pharma show weaker cointegration with oil (Gopal et al., 2025).

**RQ4:** Do geopolitical oil shocks and associated exchange-rate movements exert predominantly short-run or persistent long-run effects on different sectoral indices? The literature reports mean-reverting, yet non-linear, sectoral adjustments to oil shocks, but the persistence of conflict-related effects through the exchange rate remains an open question (Gopal et al., 2025; Chalissery et al., 2025).

### Methodology Overview

The study adopts an empirical, quantitative design using secondary, high-frequency financial and commodity market data for India over a period that spans major Middle East conflict episodes. Sectoral stock indices for key industries—such as banking, auto, metal, energy, IT, FMCG, aviation-proxied transport, and real estate—are obtained from NSE/BSE databases, while international crude oil prices (e.g., Brent) are drawn from global commodity sources. The rupee dollar exchange rate is used as the primary currency variable, capturing the external adjustment channel in an oil-import-dependent economy (Mishra & Mishra, 2021; Vajiram & Ravi, 2026).

Geopolitical oil shocks are identified by combining conflict-date information from Middle East crises with international oil price movements and, where available, decomposed oil shocks distinguishing supply, demand and risk components (Ready, 2018; Kilian, 2008, cited in Mishra & Mishra, 2021). Following the literature on oil stock exchange-rate linkages, the econometric strategy may include: (i) a structural VAR or local-projection framework to estimate impulse responses of sectoral

returns and the exchange rate to conflict-linked oil shocks; (ii) linear and non-linear ARDL models to capture asymmetric short- and long-run relationships between oil prices, the exchange rate and sectoral indices; and (iii) regime-switching or rolling-window techniques to account for time-varying dynamics and high- and low-volatility regimes (Mishra & Mishra, 2021; Gopal et al., 2025). The baseline specifications incorporate control variables such as global risk indices or geopolitical risk measures, in line with Behera et al. (2024), to isolate the incremental effect of Middle East conflict shocks on Indian sectoral returns via the exchange rate.

## Review of Literature

The literature on oil prices and stock markets initially focused on aggregate indices, but subsequent work has highlighted the importance of sectoral and country-specific heterogeneity, especially for oil-importing emerging markets. Mishra and Mishra (2021) examine the impact of decomposed oil shocks—demand, supply and risk—on ten Indian sectoral indices over 2010–2019, employing rolling regressions, dynamic conditional correlation and Markov switching models; they find that demand shocks positively affect all sectors in both high- and low-volatility regimes, whereas risk shocks have a negative and statistically significant effect across sectors. Extending this strand, Gopal et al. (2025) analyse “Crude complexities” in the Indian stock market using linear and non-linear ARDL models with monthly data from 2008 to 2025, and report that banking, auto, metal, energy, IT, financial services and real estate exhibit asymmetric responses to oil price changes, while FMCG, media and pharma are not cointegrated with oil prices.

Parallel evidence on sustainable and ESG-oriented stocks indicates that oil price shocks can significantly influence India’s “sustainable” sector, with crisis-induced dynamics that differ from conventional sectors and display notable volatility spillovers (Chalissery, Nishad, & Milinth, 2025). At the same time, Behera et al. (2024) show that geopolitical risk and crude oil prices jointly shape sectoral stock returns in both advanced and emerging economies, with oil prices generally supporting commodity and pharma stocks but geopolitical risk exerting an adverse effect on banking sectors in emerging markets. These findings converge with broader equity-valuation theory, which posits that shocks to oil prices, exchange rates, inflation and interest rates feed into expected cash flows and discount rates, thereby influencing stock prices (Arouri & Nguyen, 2010; Basher & Sadorsky, 2006, cited in Mishra & Mishra, 2021). However, the specific interaction between conflict-driven oil shocks, the rupee dollar exchange rate and sectoral stock returns in India during Middle East crises remains only partially addressed, motivating the present investigation.

## Gaps in Existing Literature

Despite substantial work on oil prices, exchange rates and stock markets, several gaps remain that motivate the present study. First, much of the empirical literature treats oil price innovations as generic shocks, without isolating conflict-driven geopolitical oil shocks linked specifically to Middle East crises and mapping their sector-wise impact in India (Mishra & Mishra, 2021; Behera et al.,

2024). Second, while sectoral analyses for India document asymmetric oil sensitivities across industries, the exchange rate is typically included as a control rather than modelled explicitly as a mediating channel between oil shocks and sectoral returns (Gopal et al., 2025; Raju et al., 2021). Third, cross-country studies on GPR, crude oil and stock returns rarely focus on a single, highly oil-dependent emerging market with detailed sectoral disaggregation, limiting their direct applicability to India’s context during Middle East conflict episodes (Haroon et al., 2021; Salisu et al., 2021). Finally, there is limited evidence on how conflict-linked oil shocks and associated rupee movements jointly shape the distribution—rather than just the level—of sectoral stock returns over different horizons, leaving a clear scope for research that integrates geopolitical shocks, oil prices, exchange rates and sectoral equity performance in a unified framework.

## Theoretical Framework

The theoretical framework for this study rests on equity valuation theory and the macro-financial transmission of oil shocks through the exchange rate. In standard discounted-cash-flow models, stock prices reflect the present value of expected future cash flows discounted at a rate that incorporates risk-free interest rates, risk premia and macroeconomic uncertainty (Arouri & Nguyen, 2010; Basher & Sadorsky, 2006). Oil price shocks can affect both cash flows—via input costs, demand conditions and profitability—and discount rates—via their impact on inflation, interest rates and risk perceptions, thereby influencing equity prices at the sectoral level (Arouri et al., 2011, cited in Mishra & Mishra, 2021).

For an oil-import-dependent economy such as India, the exchange rate is a central transmission channel linking geopolitical oil shocks to sectoral returns. Conflict-induced oil price increases raise the oil import bill, worsen the current account deficit and intensify imported inflation, which can prompt expectations of tighter or delayed monetary easing and increase market volatility (Vajiram & Ravi, 2026; Ranjanikar, 2025). These macroeconomic adjustments typically put depreciation pressure on the rupee, which, in turn, amplifies the rupee-denominated cost of oil and other imported inputs for fuel-intensive, import-dependent sectors such as aviation, logistics, paints, tyres and petrochemicals, compressing profit margins and dampening stock prices (Mishra & Mishra, 2021). Conversely, rupee depreciation can improve the competitiveness and earnings of export-oriented sectors and firms with substantial dollar revenues—such as IT, pharmaceuticals and some upstream energy companies—potentially offsetting the adverse direct effect of higher oil prices on these segments (Gopal et al., 2025; Chalissery et al., 2025).

Accordingly, the conceptual framework posits a two-step linkage: (i) geopolitical oil shocks associated with Middle East conflicts affect international oil prices and global risk premia; (ii) these shocks influence India’s macroeconomic conditions and the rupee dollar exchange rate, which then transmit differentially to sectoral stock returns depending on each sector’s oil-intensity, trade

exposure, currency mismatch and pricing power. This structure allows the study to model the exchange rate as an explicit mediator between conflict-driven oil shocks and sectoral equity performance, consistent with recent empirical findings on time-varying and asymmetric oil stock interactions in India (Mishra & Mishra, 2021; Gopal et al., 2025; Behera et al., 2024).

### Previous Studies on Geopolitical Oil Shocks

Previous studies on geopolitical oil shocks emphasise that geopolitical risk (GPR) is now a priced factor in emerging-market equities, particularly in conflict-prone economies. Using the Caldara Iacoviello news-based GPR index, recent work shows that changes in geopolitical sentiment significantly predict the cross-section of country-level returns across emerging markets, with heightened conflict risk raising risk premia and depressing equity valuations (Diamonte et al., 1996; Dimic et al., 2015; Cheng & Chiu, 2018, cited in Haroon et al., 2021). At the same time, studies that jointly model GPR and crude oil prices document that oil prices often have a direct, negative impact on stock returns, while GPR mainly operates through volatility, risk aversion and safe-haven flows (Behera et al., 2024; Salisu et al., 2022). In the context of oil-importing economies, geopolitical events in major producing regions have been shown to trigger persistent shifts in oil prices and volatility, which then transmit to financial markets through changes in risk sentiment, funding conditions and macroeconomic expectations.

### Impact of Oil Prices on Stock Markets

A large body of work establishes that oil price dynamics exert statistically significant effects on stock markets, both at the aggregate and sectoral levels. For oil-importing countries, higher oil prices are typically associated with lower equity returns due to their adverse impact on input costs, inflation and real activity, whereas for oil exporters the relationship can be positive via improved terms of trade and corporate earnings (Hamilton, 2009; Kilian & Park, 2009). In the Indian context, VAR and VECM-based studies report strong linkages among crude oil prices, stock indices and macro variables, finding bidirectional causality between oil and stock prices and documenting that oil shocks significantly influence stock price volatility and inflation over the long run (Raju et al., 2021; Kumar & Tiwari, 2025). More recent time-frequency and quantile-based approaches for BRICS and other emerging markets show that the oil stock return relationship is highly state-dependent, with stronger co-movements during periods of heightened uncertainty and market stress (Prabheesh et al., 2020; Salisu et al., 2021).

### Sectoral Analysis of Stock Returns

Sector-level analyses reveal substantial heterogeneity in how different industries respond to oil price movements and shocks. For India, Mishra and Mishra (2021) find that decomposed oil shocks—demand, supply and risk—have distinct effects on ten sectoral indices, with demand shocks generally supporting returns and risk shocks exerting a uniformly negative influence across sectors. Gopal et al. (2025) show that banking, auto, metal, energy, IT, financial services and real estate indices display

pronounced asymmetric responses to oil price changes, whereas FMCG, media and pharma are not cointegrated with oil prices, implying weaker direct sensitivity to crude (Gopal et al., 2025). Related work on sustainable and ESG-oriented portfolios suggests that oil price shocks and uncertainty generate non-linear volatility spillovers into India's "sustainable sector", further underscoring that oil exposures and transmission channels differ markedly across sectors (Chalissery et al., 2025).

Sectoral evidence for India shows that the impact of oil shocks on equity returns is both economically and statistically heterogeneous across industries. Mishra and Mishra (2021) analyse ten disaggregated sectoral indices over 2010-2019 using Ready's (2018) decomposition of crude oil shocks into demand, supply and risk components, combined with rolling regression, dynamic conditional correlation (DCC-GARCH) and Markov-switching models. Their results indicate a clear structural, time-varying shift in the conditional correlations between oil shocks and sectoral returns, with demand shocks exerting a positive and significant effect on all ten sectors in both high- and low-volatility regimes, reflecting strong oil-intensive growth in Indian industries. In contrast, supply shocks are generally insignificant in both regimes, while risk shocks have a uniformly negative and statistically significant impact on every sectoral index, implying that heightened oil-market uncertainty systematically depresses sectoral equity performance.

Complementing this, Gopal et al. (2025) investigate "Crude complexities" in the Indian stock market using monthly data from April 2008 to July 2025 for major sectoral indices sourced from Bloomberg, and employ both linear and non-linear ARDL models with Generalised Impulse Response Functions to capture asymmetric responses. They document that sectors such as banking, auto, metal, energy, IT, financial services and real estate are cointegrated with oil prices and exhibit significant asymmetric adjustment, whereas FMCG, media and pharma show no cointegration with crude, suggesting weaker direct oil sensitivity. Negative oil price changes are found to trigger stronger and more immediate sectoral responses than positive changes, and the estimated error-correction terms are negative and statistically significant across cointegrated sectors, confirming mean-reverting behaviour and long-run equilibrium relationships with oil prices.

Additional evidence from the sustainable/ESG space indicates that "green" investments in India are not fully insulated from oil-market conditions. Chalissery, Nishad and Milinth (2025) show that India's sustainable sector displays crisis-induced dynamics in which oil price uncertainty and shocks materially influence the volatility and co-movement of ESG-oriented stocks, with responses that vary across different phases of global uncertainty. Taken together, these studies demonstrate that (i) oil-related demand and risk shocks carry distinct implications for sectoral returns; (ii) oil-intensive and financially leveraged sectors such as banking, energy, metals and autos are more strongly and asymmetrically exposed to oil shocks; and (iii) even sectors perceived as relatively insulated—such as pharma, FMCG or sustainable stocks—can be indirectly affected through

volatility spillovers and changes in macro-financial conditions. This sector-level heterogeneity provides a crucial empirical basis for modelling how geopolitical oil shocks, transmitted via the exchange rate, will differentially affect sectoral stock returns in India during Middle East conflict episodes.

### The Role of Exchange Rates

The exchange rate has emerged as a key conduit linking oil prices and stock markets, especially in oil-importing economies. The oil price exchange-rate nexus posits that a rise in oil prices deteriorates the trade balance of importers, leading to currency depreciation and a wealth transfer from oil-importing to oil-exporting countries (Prabheesh et al., 2020; Salisu et al., 2021). Empirical evidence for India based on cointegration, Granger causality and variance decomposition indicates that crude oil prices significantly affect the USD/INR exchange rate, which in turn influences stock market returns, highlighting the importance of the exchange-rate channel in transmitting oil shocks to equities (Raju et al., 2021). Multi-country studies using wavelet or quantile frameworks further find that oil prices and exchange rates jointly shape stock returns at different time horizons, with stronger oil FX stock linkages during crises and

high-uncertainty periods (Salisu et al., 2021; Haroon et al., 2021).

### Middle East Conflicts and Economic Implications

Conflicts in the Middle East have repeatedly been associated with sharp oil price spikes, shipping disruptions and heightened global risk aversion, with disproportionate effects on energy-importing economies such as India. Recent commentary on the Iran-centred conflict in 2026 describes a “triple energy shock” for India, combining elevated crude prices, LNG supply risks and higher freight and insurance costs, which collectively pressure inflation, growth and the rupee. Analyses by policy and market observers highlight that instability around strategic chokepoints like the Strait of Hormuz amplifies India’s structural vulnerabilities, raising the oil import bill, weakening the currency and prompting portfolio outflows from equity markets (Finance Ministry of India, 2026; Finnovate, 2026). Sectorally, aviation, paints, logistics, refiners and other oil-intensive industries face margin compression during such episodes, while defence and some upstream energy producers may benefit from higher spending and prices (The Finance Lens, 2026; Anand Rathi, 2026).

**Table 1: Sectoral indices, performance and oil exposure**

Sectoral index (NSE)	1-year return %	3-year return %	Oil/commodity exposure interpretation
Nifty Metal	44.02%	134.72%	Highly oil- and commodity-linked; benefits from global commodity up-cycle and infrastructure push.
Nifty Energy	13.32%	69.26%	Directly exposed to crude price and refining/marketing margins; gains from higher prices but hit by policy caps.
Nifty Commodities	17.12%	77.43%	Broad commodity basket; performance consistent with elevated global commodity and energy prices.
Nifty PSU Bank	19.64%	100.70%	Benefits from credit growth and government capex; indirectly exposed to oil via macro and credit-risk channels.
Nifty PSE	5.45%	119.01%	Many PSUs are energy- and infrastructure-linked; performance aligned with higher commodity and energy prices.
Nifty CPSE	11.46%	132.15%	Central PSUs; strong 3-year gains reflect state-owned energy/infra rally under high-commodity environment.
Nifty Auto	10.13%	86.92%	Fuel- and input-cost sensitive; faces margin pressure when oil and rupee rise, but supported by demand recovery.
Nifty Bank	-2.40%	21.82%	Sensitive to macro and credit cycle; oil-induced inflation/FX stress can weigh on profitability and asset quality.
Nifty Pharma	15.79%	104.90%	Less directly oil-intensive; partly benefits from defensive demand and export revenues when rupee depreciates.
Nifty MNC	14.46%	56.29%	Many firms are import- and export-oriented; exposed to FX pass-through and global commodity cost cycles.

Sectoral index (NSE)	1-year return %	3-year return %	Oil/commodity exposure interpretation
Nifty Realty	-16.88%	67.22%	Sensitive to interest rates and input costs; higher oil-driven inflation and yields can depress performance.
Nifty FMCG	-10.12%	3.37%	Input-cost pressures from oil (packaging, logistics) but relatively weak 3-year performance despite defensive status.
Nifty IT	-21.72%	3.11%	Export-oriented; rupee depreciation is positive for revenues, but global tech slowdown dominates in recent years.
Nifty Media	-15.09%	-15.99%	Low direct oil linkage; weak returns reflect structural and cyclical pressures despite limited commodity exposure.

The Above table reports the 1-year and 3-year total returns of key NSE sectoral indices alongside a qualitative assessment of their oil and commodity exposure. The evidence points to a clear sectoral asymmetry in performance over the period marked by elevated crude prices and repeated geopolitical disruptions. Highly commodity-linked indices such as Nifty Metal, Nifty Energy, Nifty Commodities and PSU-heavy indices (Nifty PSU Bank, Nifty PSE, Nifty CPSE) have delivered exceptionally strong 3-year returns, in the range of roughly 70-135%, with Nifty Metal (134.7%), Nifty CPSE (132.1%) and Nifty PSE (119.0%) standing out as the top performers. These sectors have benefited from the post-pandemic commodity boom, government-led infrastructure spending and favourable pricing power under an environment of sustained high crude and metal prices, in line with prior evidence that resource- and financial-cyclical sectors in India are strongly pro-cyclical to global commodity upturns.

By contrast, sectors with weaker direct oil linkage but higher sensitivity to global growth and domestic cost-push inflation, notably Nifty FMCG, Nifty IT and Nifty Media, have substantially underperformed. Over the last three years, Nifty FMCG and Nifty IT have generated only low single-digit cumulative returns (around 3-4%), while Nifty Media has produced negative returns (about -16%), despite the defensive reputation of consumer and media stocks. In the most recent 1-year window, which coincides with the escalation of the Iran-centred Middle East conflict and the associated oil price spike, these indices have posted sizeable corrections: Nifty IT and Nifty Media have declined by about 21.7% and 15.1%, respectively, while Nifty FMCG has fallen by roughly 10.1%, even as metal, commodity and PSU indices continued to show positive annual gains.

Taken together, the cross-sectional patterns in Table X are consistent with the proposed “geopolitical oil shock exchange rate sectoral returns” channel. Conflict-driven increases in crude prices have raised input and logistics costs and contributed to rupee depreciation, squeezing margins in fuel-intensive, import-dependent and rate-sensitive sectors such as FMCG, IT (via global risk-off and valuation compression) and Media, while simultaneously supporting the earnings and valuations of

commodity-linked and state-owned sectors that either directly benefit from higher global prices or from policy-driven spending. The table therefore provides descriptive evidence, in line with earlier econometric studies on Indian sectoral indices, that sectoral responses to oil and FX shocks are heterogeneous and asymmetric, justifying the need for a formal exchange-rate-augmented model of sectoral stock returns during Middle East conflict episodes.

#### Data Overview and Sources

The empirical context for this study is extracted by the joint evolution of global crude oil prices, Indian sectoral equity indices and the rupee dollar exchange rate over the past five to six years, a period marked by COVID-19, the Russia Ukraine war and renewed Middle East tensions. Crude oil benchmarks (Brent, WTI, OPEC basket) exhibit extreme swings from the 2020 demand collapse to the post-pandemic and war-related spikes, while NSE sectoral indices show sharply divergent performance across metals, energy, PSU, auto, IT, FMCG and media (ET Money, 2026; NSE Indices, 2026). The USD/INR exchange rate series over 2019-2026 captures episodes of significant rupee depreciation coinciding with oil price surges and foreign portfolio outflows, particularly during the Iran-centred Middle East conflict (Slideshare study, 2025; Wise, 2025; TradingEconomics, 2026).

#### Crude Oil Market: 2019-2026

Crude oil prices have experienced exceptional volatility since 2019. During the COVID-19 shock in 2020, benchmark prices briefly turned negative in US futures and Brent spot prices fell to multi-year lows as global demand collapsed (Statista, 2025). From these troughs, prices rebounded strongly; in the first half of 2022, following Russia’s invasion of Ukraine, Brent crude averaged around 100 US dollars per barrel, and early-March prices reached the highest inflation-adjusted levels since 2014 (U.S. EIA, 2023). In 2024, Brent traded in a relatively narrow band of roughly 68-93 US dollars per barrel, but upward spikes coincided with Red Sea disruptions and heightened geopolitical risk, underlining the sensitivity of oil markets to regional tensions (U.S. EIA, 2025). The most recent Iran-centred conflict has produced an even sharper shock: in March 2026, Brent

surged more than 15% in a single day to above 100 US dollars per barrel, with intraday moves of up to 29% and weekly gains of about 27%, the strongest since April 2020 (Trading Economics, 2026). Over the same month, Brent climbed from around 72.5 to 112.6 US dollars per barrel, a monthly increase of roughly 51%, and briefly traded near 119.5 US dollars per barrel as flows through the Strait of Hormuz were disrupted (The Guardian, 2026). These episodes define the sequence of geopolitical oil shocks relevant for an oil-import-dependent economy such as India, which imports more than 85% of its crude requirements (Vajiram & Ravi, 2026; Ranjanikar, 2025).

### **Sectoral Stock Returns: Metals, Energy, PSU and Defensives**

NSE sectoral return data reveal pronounced asymmetry across industries in the post-COVID and conflict period. As of early 2026, three-year total returns for commodity- and PSU-linked indices are exceptionally strong: Nifty Metal has gained about 134.72%, Nifty CPSE 132.15%, Nifty PSE 119.01%, Nifty PSU Bank 100.70% and Nifty Pharma 104.90%, reflecting both post-pandemic recovery and the global commodity up-cycle (ET Money, 2026). Over the same horizon, Nifty Commodities has returned around 77.43% and Nifty Energy 69.26%, confirming that energy- and resource-oriented sectors have benefited from elevated oil and metal prices and domestic infrastructure spending (ET Money, 2026). In contrast, more defensive or low-oil-beta indices have delivered much weaker performance: Nifty FMCG and Nifty IT have generated only about 3.37% and 3.11% respectively over three years, while Nifty Media has recorded a negative three-year return of approximately -15.99%, despite their limited direct exposure to crude oil (ET Money, 2026). The one-year performance window, which overlaps with the escalation of the Iran war and the associated oil-price surge, reinforces this pattern: Nifty Metal is up about 44.02%, Nifty Commodities 17.12%, Nifty PSU Bank 19.64%, Nifty Pharma 15.79% and Nifty Energy 13.32%, whereas Nifty IT has fallen roughly 21.72%, Nifty Media about 15.09% and Nifty FMCG around 10.12% (ET Money, 2026). These return differentials are consistent with prior econometric evidence that Indian metals, energy, banking and other cyclical sectors are significantly more oil-sensitive than FMCG, media or pharma, and that the sign and magnitude of their responses depend on the nature of the oil shock (Mishra & Mishra, 2021; Gopal et al., 2025; Chalissery et al., 2025).

### **Exchange-Rate Behaviour under Oil Shocks**

The USD/INR exchange rate has played a central role in transmitting external oil shocks to Indian financial markets. A 2019-2024 study of the relationship between international crude prices and the rupee finds a moderate positive association, with higher oil prices systematically linked to rupee depreciation (NSE, 2025). During the recent Middle East conflict phase, this pattern intensified. RBI and market assessments indicate that the rupee traded in the 87-92 per US dollar range in late 2025 but breached 95 per dollar intraday in March 2026, with a full-year FY26 depreciation close to 9.9%, the largest in 14 years (RBI, 2026). By early May 2026, with Brent near 110 US dollars per barrel, the rupee had fallen to fresh record lows

around 95-96 per US dollar, marking a decline of roughly 11-12% over the preceding twelve months and making it one of Asia's worst-performing currencies over that period (Whalesbook, 2026; Reuters, 2026; Fortune India, 2026). Analysts consistently attribute this weakness to the combination of elevated oil prices, wider trade and current-account deficits, higher US yields and foreign portfolio outflows, emphasising that oil-driven balance-of-payments pressures are a key determinant of INR dynamics during conflict episodes (Reuters, 2026; Fortune India, 2026).

### **Linking Crude Prices, the Rupee and Sectoral Returns**

The joint evolution of crude prices, the rupee and sectoral returns over 2019-2026 provides descriptive support for an exchange-rate channel of geopolitical oil shocks. In the post-COVID and Russia-Ukraine phase, elevated oil and metal prices coincided with strong three-year gains in Nifty Metal, Nifty Energy, Nifty PSU Bank, Nifty PSE and Nifty CPSE, illustrating how commodity-linked and state-owned sectors benefit from a favourable commodity cycle despite higher input costs (ET Money, 2026; U.S. EIA, 2023; Economic Times, 2026). At the same time, rupee depreciation raised the domestic-currency cost of imported crude and other inputs, compressing margins in fuel-intensive and consumption-oriented sectors such as FMCG, IT-dependent domestic demand and media, which posted flat or negative three-year returns (ET Money, 2026; Slideshare study, 2025). During the Iran-centred Middle East conflict, an abrupt Brent surge of more than 50% in a single month and record implied volatility were accompanied by a near-double-digit annual rupee depreciation and a widening import bill, intensifying cost pressures for airlines, paint and tyre manufacturers, logistics firms and oil-marketing companies (U.S. EIA, 2025; Trading Economics, 2026; The Guardian, 2026; RBI, 2026). By contrast, metals, energy, PSU, commodity and some defence-linked stocks outperformed or remained resilient, supported by higher output prices, state capital expenditure and currency gains on foreign revenues (ET Money, 2026; Anand Rathi, 2026; Economic Times, 2026). These descriptive patterns align with earlier econometric findings that sectoral indices in India exhibit asymmetric and non-linear responses to oil shocks, and that exchange-rate movements often amplify the impact of oil on sectoral stock returns in oil-importing emerging markets (Mishra & Mishra, 2021; Gopal et al., 2025; Nair & Thenmozhi, 2019; Reboredo et al., 2019).

### **Findings**

The study indicates that geopolitical oil shocks originating from Middle East conflicts have a clear and uneven effect on Indian sectoral stock returns. Sectors that are highly energy-intensive, import-dependent, or rate-sensitive tend to experience sharper negative reactions when crude prices rise and the rupee weakens, while commodity-linked and upstream sectors often show relative resilience or even gains.

The exchange rate emerges as a significant transmission channel in this relationship. When Brent crude spikes, India's import bill rises, the current account pressure intensifies, and the rupee depreciates, which in turn

amplifies cost burdens for sectors dependent on imported inputs and foreign currency exposure.

The descriptive patterns in the article also suggest strong sectoral asymmetry. Commodity-related and PSU-linked indices outperform over the medium term, while FMCG, IT, and media show weaker or negative performance during recent conflict-linked stress periods, consistent with differential exposure to oil and currency shocks.

### Suggestions and Recommendations

Investors should diversify across sectors rather than relying on broad market exposure alone, because conflict-driven oil shocks do not affect all industries equally. Hedging strategies that account for oil price volatility and rupee depreciation may help reduce portfolio risk during geopolitical stress episodes.

Portfolio managers should monitor crude oil benchmarks, USD/INR movements, and conflict escalation indicators together, since the combined effect is more informative than any single variable. Sector rotation toward energy, metals, and select export-oriented firms may be more suitable during periods of elevated oil and currency pressure.

For policymakers, the findings support the need for stronger energy diversification, better strategic petroleum reserve management, and measures to cushion the macroeconomic effects of oil shocks. The RBI and government should also maintain adequate foreign exchange buffers and watch imported inflation carefully when geopolitical tensions escalate.

### Conclusion

The study concludes that geopolitical oil shocks from Middle East conflicts materially affect Indian sectoral stock returns, and that the rupee-dollar exchange rate plays a central role in transmitting and amplifying these

effects. India's high crude import dependence makes its financial markets particularly vulnerable to conflict-related disruptions in oil supply and global risk sentiment.

The evidence supports the view that sectoral responses are heterogeneous, with commodity-linked sectors benefiting more than import-dependent or cost-sensitive sectors during oil shock episodes. This makes the exchange rate channel an important focus for both empirical research and practical risk management in India's equity market.

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