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Global Interest Rates and Emerging Markets

Inflation, capital flows, asset prices, and India VIX

Interest rates are prices of time, risk and liquidity. A policy rate is directly selected by a central bank, but market yields reflect expected future policy, inflation compensation, fiscal supply, term premia and investor risk tolerance. Emerging markets are linked to these prices through trade, portfolio investment, foreign-currency borrowing, commodity pricing and the benchmark role of dollar assets. A change in the Federal Reserve's expected path can therefore affect local bond curves and exchange rates before the Fed changes its target. The same rate increase can have different effects across countries and across episodes because financing structures, external buffers, institutional credibility and the nature of the shock differ.

Concepts and global inflation context

A nominal policy rate is the administered overnight or short-term rate around which a central bank seeks to guide money-market conditions. A nominal government-bond yield is a market price for borrowing over a given maturity. A useful decomposition is that a long-term nominal yield reflects the expected path of future short rates, expected inflation, an inflation-risk premium, and a term premium. In practice, these components are not observed directly and can move together. When investors revise the expected policy path upward, the two-year yield may rise. If they also demand greater compensation for duration risk or worry about fiscal supply, the ten-year yield may rise by more than expected short rates. The second movement can tighten global conditions even without a change in the policy rate.

Inflation itself is not one shock. Demand-driven inflation can reflect excess spending relative to productive capacity and may respond to tighter financial conditions with a lag. Supply-driven inflation can originate in energy, food, freight, semiconductors, weather or geopolitical disruptions. A supply shock raises costs and may reduce output at the same time, creating a policy trade-off. Second-round persistence appears when firms and workers begin to incorporate high inflation into price and wage setting, or when exchange-rate depreciation becomes embedded in expectations. Central banks therefore care about the duration of a shock, pass-through, expectations and the risk of broadening beyond the initial sector, not just the first-round change in a headline index.

Transmission channels from global rates to emerging markets

The portfolio-rebalancing channel begins with relative risk-adjusted returns. When US Treasury yields rise, global investors may shift toward dollar assets, particularly if the increase is unexpected and accompanied by a stronger dollar. Portfolio outflows from local-currency bonds and equities can lower local asset prices and widen term premia. But flows are not determined by the policy-rate differential alone. Expected growth, corporate earnings, benchmark inclusion, valuation, hedging costs, domestic pension and insurance demand, and the investor base all matter. Residents' outward investment can also be as important as foreign investors' withdrawals, so gross flows tell a more complete story than net flows.

The exchange-rate channel changes the relative price of imported goods and foreign-currency obligations. Dollar appreciation can raise the local-currency price of oil, food inputs, capital goods and intermediate goods. The pass-through to consumer inflation depends on invoice currency, import shares, administered prices, competition, subsidies, taxes and firms' pricing power. A flexible currency can absorb a shock by changing relative prices, but excessive or disorderly movement may destabilize balance sheets or unanchor expectations. A central bank can use reserves or liquidity operations to smooth market dysfunction, yet a persistent attempt to defend a particular level can deplete buffers and invite one-way speculation.

The global benchmark yield channel affects local borrowing costs. If investors treat the US Treasury curve as a reference rate, an increase in US yields can be transmitted to local sovereign yields, especially at longer maturities. The pass-through depends on the maturity composition of local public debt, foreign ownership, domestic institutional demand, currency hedging and the term premium. In some countries, central-bank purchases or domestic savings can cushion the movement. In others, large fiscal financing needs make the sovereign curve more sensitive. A higher local government yield then affects corporate bond spreads, bank funding costs, mortgage rates and the discount rate applied to future cash flows.

Major central banks and policy divergence

At the evidence cut-off, the four central-bank observations provide a snapshot of meaningful divergence. The Federal Reserve held its federal funds target at 3.75–4.00 percent on 28 October 2026; the BoE's 17 September decision kept Bank Rate at 3.75 percent; the BoJ's 30 October guideline was around 1.25 percent; and the RBI page and October 2026 policy record available at retrieval reported a 5.50 percent repo rate. The RBI observation carries an earlier verified decision date than the other three and should be read as such, not as proof that no later decision occurred. These are not directly comparable instruments: the Fed reports a range, the BoJ a money-market guideline, and the others a single policy rate.

The Fed's mandate requires it to pursue maximum employment and stable prices. Its target range affects overnight funding, while longer-term Treasury yields incorporate expected policy, inflation and term premia. The Fed can thus influence global financing conditions even when it does not intend to target foreign outcomes. In October 2026 the FOMC cited strong activity, elevated inflation and uncertainty; the statement's details matter because market participants revise the expected path based on both the vote and the language. The Fed's domestic objectives remain primary, but the international effects of its policies are large because dollar securities and dollar funding occupy central positions in global markets.

The BoE's inflation target and the structure of UK credit create a different transmission profile. A large share of household mortgages reprice over time rather than immediately, so past rate increases can continue to affect cash flow after the policy rate has paused. In September 2026, the MPC maintained Bank Rate at 3.75 percent while noting energy-price volatility and upside inflation risks. This illustrates how policymakers can hold rates while emphasizing an asymmetric risk assessment. A pause is not necessarily an easing signal: if the expected future path is higher or rates are held longer, longer-term borrowing conditions may remain restrictive.

The BoJ's normalization reflects a structural transition from years of very low rates toward a positive-rate environment. On 30 October 2026 it maintained the uncollateralized overnight call-rate guideline around 1.25 percent. A normalization path can change yen funding strategies and valuation of Japanese assets, though the global spillover depends on the pace, market expectations and currency hedging. Japanese investors have sizable international portfolios, so higher domestic yields may alter their foreign asset allocation over time. Yet it is incorrect to assume that a BoJ increase automatically triggers repatriation: institutional mandates, liability matching, hedging costs and relative yields shape actual flows.

POLICY-RATE OBSERVATIONS

Central bank	Rate / guideline	Latest decision or verified observation	Interpretation
Reserve Bank of India	5.50% repo	7 Oct 2026 MPC decision	Raised 25 bps from 5.25%; latest verified decision by evidence cut-off
Federal Reserve	3.75–4.00% target range	28 Oct 2026	FOMC target range; midpoint used in Figure 1
Bank of England	3.75% Bank Rate	17 Sep 2026	MPC held Bank Rate; next meeting scheduled for 5 Nov 2026
Bank of Japan	Around 1.25% overnight call rate	30 Oct 2026	Guideline for money-market operations

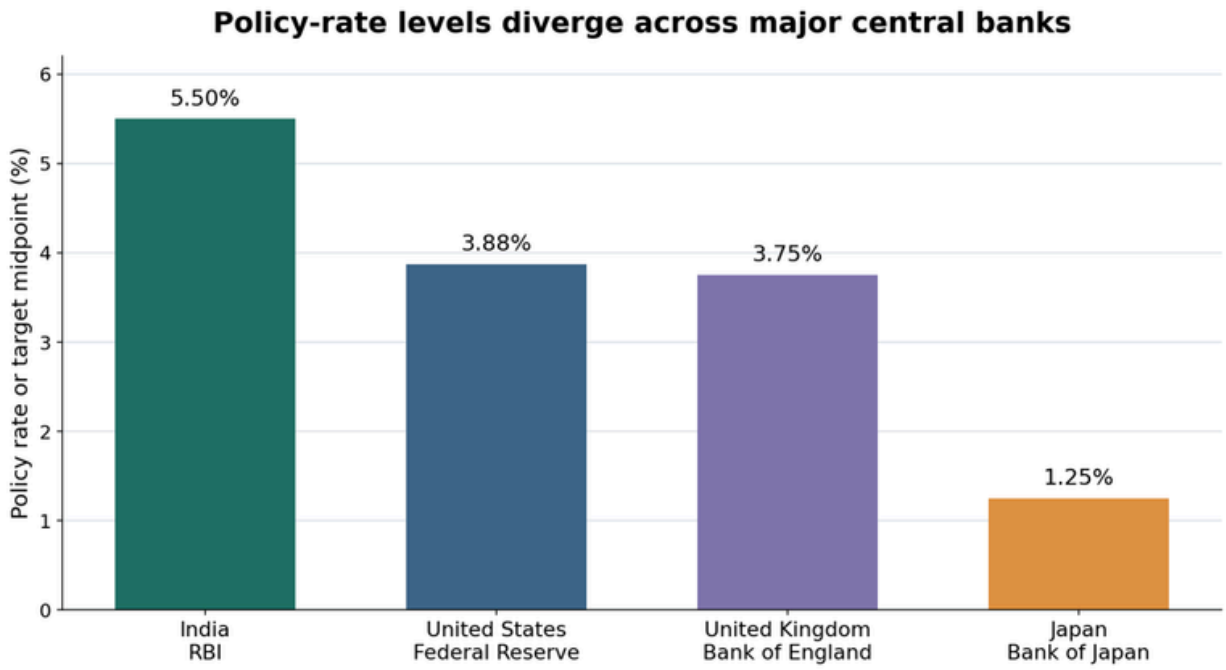


Figure 1. Policy-rate snapshot across four central banks. India reflects the RBI MPC decision of 7 October 2026. Nominal rates are not a ranking of monetary restrictiveness. Sources: RBI [1], Federal Reserve [2], Bank of England [3], Bank of Japan [4].

INFLATION, REAL YIELDS, AND THE GLOBAL FINANCIAL CYCLE

Inflation and interest rates interact through expectations. If inflation expectations remain anchored, a temporary rise in oil or food prices raises measured inflation but may not cause a large revision in longer-term nominal yields. If expectations become unanchored, lenders demand greater nominal compensation, workers negotiate to protect real wages and firms set prices more frequently. The result is persistence. A credible central bank may need to tighten even during a negative supply shock to prevent that second-round process. The appropriate pace depends on the output cost of tightening, the degree of initial credibility and the evidence that expectations or wage-setting have shifted.

Real yields are an important valuation link. In a standard discounted-cash-flow model, a higher risk-free rate lowers the present value of future cash flows, with the largest effect on assets whose expected cash flows lie far in the future. Growth equities can therefore be sensitive to long yields. A higher real rate also raises the hurdle rate for investment and can weigh on real estate and leveraged firms. However, equities may rise when rates rise if the cause is stronger expected growth and profits. The sign of a rate–equity relationship is therefore conditional on the source of the yield change and the earnings outlook.

EMERGING-MARKET EXPOSURE AND RESILIENCE

EMEs are heterogeneous. Some are commodity exporters with current-account surpluses and large reserve holdings; others rely on foreign portfolio flows and energy imports. Some issue deep local-currency bonds; others have short domestic maturities or foreign-currency borrowing. The average EME coefficient therefore conceals distinct response functions. BIS work on recent EME experiences emphasizes that residents' outflows, foreign currency and local-currency financing, and non-bank intermediaries have changed the composition of vulnerability. A country's net external position may appear modest while its gross positions and hedging arrangements create large liquidity needs during stress.

Reserve adequacy is a second buffer. Reserves can provide foreign-currency liquidity, smooth disorderly markets and support confidence, but their value depends on accessibility, short-term external liabilities, import cover and contingent claims. Reserve holdings are not a substitute for sustainable fiscal and external balances. A central bank that uses reserves to resist every price adjustment may create incentives for unhedged risk-taking and eventually face a more damaging correction. Transparent objectives, two-way intervention and adequate buffers improve the credibility of smoothing operations.

INDIA AS A CASE STUDY

India combines a large domestic demand base with significant exposure to imported energy and global portfolio flows. This structure creates a distinction between short-term market sensitivity and medium-term economic resilience. Domestic savings, a broad banking system and a large local market can moderate dependence on foreign portfolio investors. At the same time, a rapid rise in global yields or risk aversion can affect the rupee, bond yields and equity valuations, while imported energy can pressure the current account and headline inflation. The RBI's policy response is therefore shaped by domestic inflation and activity as well as external financial conditions.

The RBI's inflation framework provides a nominal anchor, while its liquidity operations affect overnight rates and transmission. Policy-rate changes feed into bank lending and deposit rates with lags and uneven pass-through. A shift in the policy corridor or liquidity conditions can move short yields before longer government yields adjust. Bank balance-sheet health, deposit competition and public borrowing schedules can alter transmission. This complexity means that the policy repo rate is necessary but insufficient to summarize local financial conditions. A country-level financial-conditions index can combine rates, spreads, exchange rates, equity prices and credit conditions, but its construction requires transparent weights and careful interpretation.

The rupee's adjustment has implications for both inflation and corporate balance sheets. Depreciation raises local costs of imported energy, machinery and intermediate goods, although the pass-through varies by sector and policy offsets. Exporters with foreign-currency revenues can benefit in local-currency terms, while import-intensive manufacturers may face margin pressure. Firms often hedge near-term exposures but may leave longer-dated exposures open. The central bank's intervention can reduce disorderly intraday moves and preserve market liquidity. Intervention should not be interpreted as a guarantee against depreciation, especially when global fundamentals are shifting.

Indian equities respond to both local cash flows and global discount rates. The NIFTY 50 is a concentrated large-cap benchmark with substantial exposure to financials, information technology, energy, consumer firms and industrials. A rate increase may weigh on discounted valuations and borrowing-sensitive sectors, but it can also signal stronger growth or improve bank net interest margins at certain points in the cycle. Foreign portfolio investors may sell during periods of global risk-off, but domestic mutual fund and insurance flows can partially offset sales. Aggregate index movement is thus the outcome of multiple investor groups and industry exposures.

India VIX is an implied-volatility index derived from NIFTY options and is designed to represent near-term expected volatility, conventionally over a 30-day horizon. It is not a directional forecast: a higher India VIX implies greater expected magnitude of movement, not a prediction that the market must fall. It is also not identical to realized volatility. The options market prices protection, skew and demand for insurance, and these premia vary across events. Volatility can fall even as the index declines if the market's expected range narrows; it can rise during a rally when uncertainty or demand for protection increases.

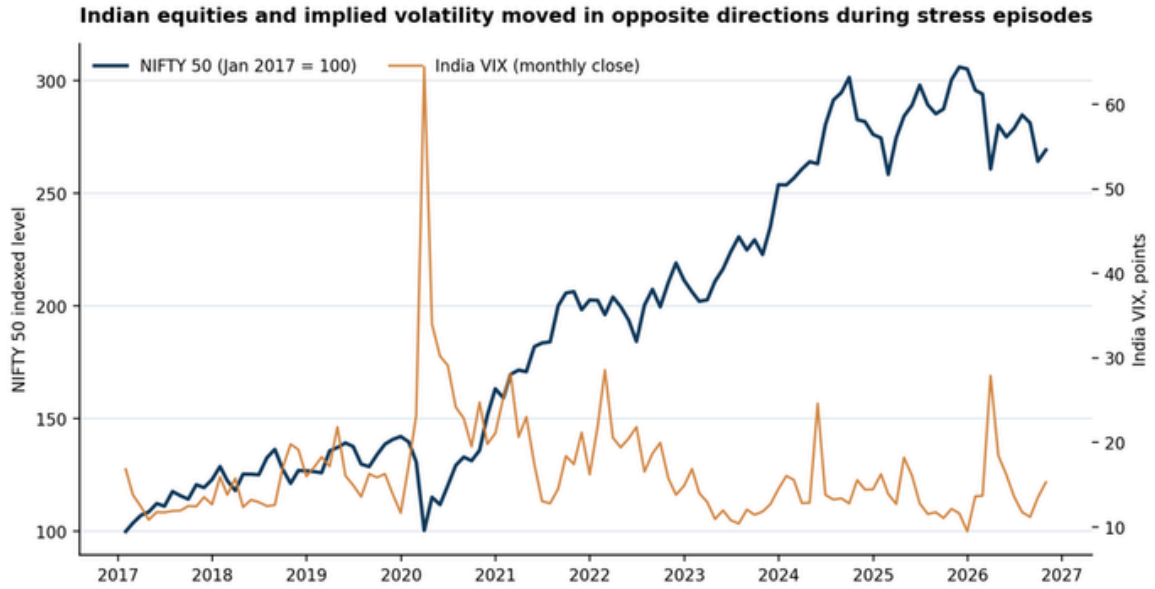


Figure 2. NIFTY 50 normalized to 100 in January 2017 (left axis) and month-end India VIX (right axis), January 2017–October 2026. The two-axis chart shows co-movement episodes and does not identify causation. Market data: Yahoo Finance chart feed (^NSEI, ^INDIAVIX); index methodology and historical route: NSE [5].

DATA AND ECONOMETRIC DESIGN

The market illustration uses 118 monthly observations from January 2017 through October 2026, formed from month-end NIFTY 50 and India VIX closes and monthly observations for US Treasury constant-maturity ten-year yields, CBOE VIX and the INR-per-US-dollar exchange rate from Federal Reserve Economic Data (FRED), plus the effective federal funds rate. Market prices are obtained from Yahoo Finance's chart feed using the symbols ^NSEI and ^INDIAVIX; NSE is cited for the official India VIX methodology and historical-data route. Because the market-feed close and official end-of-day close may differ slightly due to vendor handling, exact replication should download exchange files for the same dates and rerun the model. The sample ends in October 2026, avoiding a partial November observation.

The dependent variable is the NIFTY 50 monthly log return in percent: $r_t = 100 \times [\ln(P_t) - \ln(P_{t-1})]$. The primary explanatory variable is the month-to-month point change in India VIX, $\Delta IVIX_t$. Additional controls are the change in US VIX, $\Delta VIX_US,t$; change in US ten-year yield in percentage points, $\Delta y10_US,t$; monthly rupee depreciation, measured as $100 \times \Delta\ln$(INR per USD); and change in the effective federal funds rate, ΔFF_t. All series are aligned by calendar month. Monthly rates use the final available observation in each month. Missing values are dropped, and first differences reduce the sample by one observation.

The baseline equation is: $r_t = \alpha + \beta 1 \Delta IVIX_t + \beta 2 \Delta VIX_US,t + \beta 3 \Delta y10_US,t + \beta 4 INRdep_t + \beta 5 \Delta FF_t + \varepsilon_t$. The coefficients describe the conditional association between an indicator and the NIFTY return in the same month. The model does not include lagged responses, inflation surprises, domestic rates, earnings, oil prices, election events or flows. To account for serial dependence and heteroskedasticity in monthly residuals, uncertainty is summarized using Newey–West heteroskedasticity-and-autocorrelation-consistent standard errors with three monthly lags. The lag choice is illustrative and should be varied in sensitivity analysis.

This specification has clear limitations. The India VIX and NIFTY return are jointly determined: a market decline can raise demand for put options and implied volatility, while higher implied risk premia may be associated with lower equity valuations. Monthly aggregation can obscure announcement timing and within-month reversals. The US ten-year yield is endogenous to global growth and risk perceptions, and it is not a pure Fed policy shock. The federal funds rate changes infrequently; its monthly first difference contains step changes, and its coefficient is estimated from relatively few episodes. Multicollinearity between volatility measures can widen uncertainty. A high R-squared in this setting does not prove that the model captures causal mechanisms.

VARIABLE DEFINITIONS AND EXPECTED SIGNS

Variable	Construction	Expected sign / caution
NIFTY return	100 × monthly change in log close	Outcome; percent
India VIX change	Monthly close minus prior month close	Usually negative during equity stress; jointly determined
US VIX change	Monthly change in CBOE VIX close	Often negative through global risk repricing
US 10-year yield change	Month-end yield difference, percentage points	Ambiguous: growth, inflation and term-premium news
Rupee depreciation	100 × monthly log change in INR per USD	May proxy external risk-off or dollar-return effects
Fed funds change	Month-end effective rate difference, percentage points	Sparse step changes; target surprise not identified

EMPIRICAL ILLUSTRATION RESULTS

The sample yields a contemporaneous correlation of approximately −0.67 between NIFTY monthly returns and the change in India VIX. This negative correlation is economically intuitive: months of equity losses often coincide with a rise in expected volatility. But the statistic is not a causal estimate, and the relationship is not a constant law. The scatter plot includes outliers and substantial dispersion, reflecting that a given change in implied volatility can accompany different returns depending on the source of uncertainty, option positioning and market direction.

In the five-predictor OLS model with a constant and Newey–West standard errors using three lags, the coefficient on the monthly change in India VIX is about −0.375 percentage points of NIFTY return per one-point rise in India VIX, with a HAC standard error around 0.058 and a t-statistic near −6.48. Conditional on the other variables, an increase of five India VIX points corresponds to roughly 1.87 percentage points lower same-month NIFTY return in the fitted linear relationship. This calculation is an association, not a forecast or causal effect. The linear form also assumes a constant marginal response across low- and high-volatility regimes, which is unlikely to be exact.

Rupee depreciation has an estimated coefficient near −1.03, with a HAC standard error near 0.23 and a t-statistic around −4.42. The result is consistent with the possibility that currency weakness and equity outflows occur together or that depreciation lowers expected returns in US-dollar terms for foreign investors. It may also capture common global risk-off periods. The contemporaneous specification cannot establish whether depreciation precedes equity losses, follows them through portfolio rebalancing, or responds to a third factor such as a commodity shock.

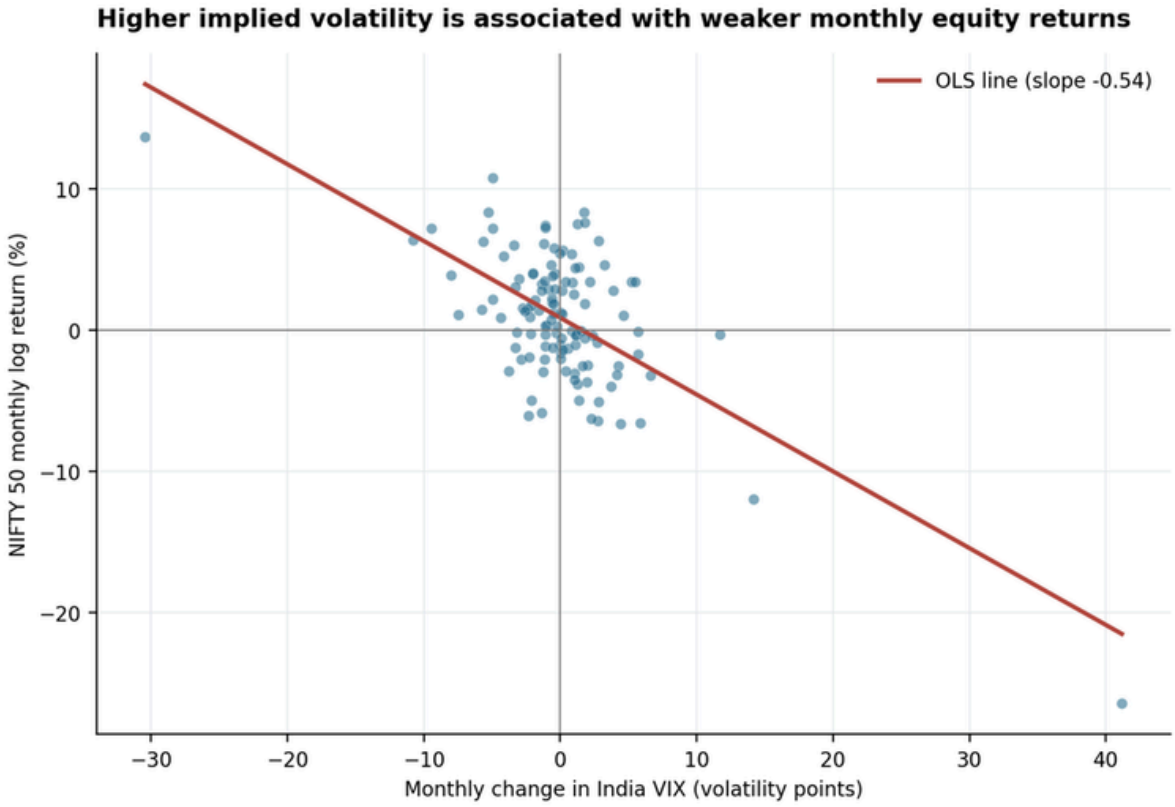


Figure 3. Monthly NIFTY 50 log returns and monthly change in India VIX, January 2017–October 2026. The line is an unconditional OLS fit; its slope is not the multivariate regression coefficient.

REGRESSION ESTIMATES

Predictor	Coefficient	HAC SE	t statistic
India VIX change	-0.375	0.058	-6.48
US VIX change	-0.166	0.049	-3.38
Rupee depreciation	-1.031	0.233	-4.42
US 10-year yield change	-0.689	1.338	-0.51
Federal funds rate change	2.002	1.707	1.17

Model summary: n = 118 months; R-squared = 0.568; Newey–West HAC standard errors with 3 lags. Dependent variable is NIFTY 50 monthly log return in percent. The intercept is 1.135 (HAC SE 0.313).

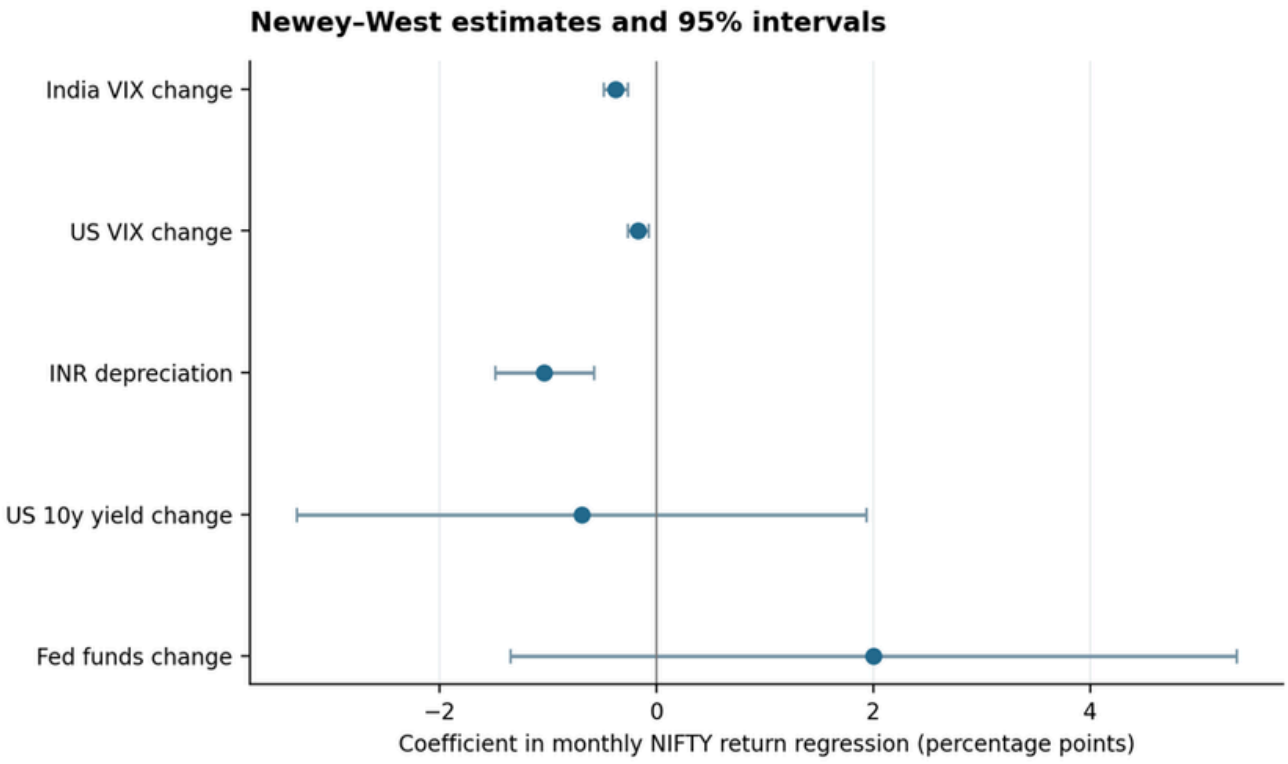


Figure 4. Multivariate OLS coefficients with approximate 95% Newey–West confidence intervals. A zero-excluding interval is not proof of causation or model stability.

INFLATION, STOCK MARKETS, AND INDIA VIX

The relationship between inflation and volatility depends on uncertainty and policy credibility. A stable, anticipated inflation rate can be incorporated into contracts and valuations. Unexpected inflation can raise uncertainty about central-bank reaction, real wages, input costs, and future rates. Volatility often rises when the range of plausible outcomes widens, not only when the mean inflation rate rises. India VIX can rise when traders are unsure whether a food or energy shock will remain temporary, whether policy will respond, or whether a currency move will generate second-round inflation. This makes options-implied volatility a useful, though imperfect, measure of market uncertainty.

The stock-market and India VIX relationship is inherently asymmetric. During a sudden market decline, investors may purchase puts, dealers may hedge, and implied volatility can rise sharply. In a calm rally, option sellers may supply volatility and the VIX can fall. This leverage effect is common in equity markets: lower prices often coincide with higher perceived risk. But there are exceptions. A market can advance while volatility rises before an event, or decline gradually with lower volatility if risk is well understood. Portfolio risk limits should use both direction and volatility, and examine skew and term structure when options data are available.

POLICY IMPLICATIONS

For EME central banks, exchange-rate flexibility should be accompanied by credible inflation policy and adequate market liquidity. Intervention can smooth disorderly trading, but should not create a one-way bet. Public reporting of intervention objectives and reserve data can support confidence. Central banks should stress-test the effects of a stronger dollar, higher US real yields, and simultaneous portfolio outflows. Reserve adequacy should be evaluated against short-term external liabilities and likely contingent demands, with attention to valuation changes and access to swap lines.

Monetary authorities should avoid mechanically matching Fed hikes. The optimal response depends on domestic inflation expectations, the output gap, exchange-rate pass-through, external funding needs and credibility. A policy move intended solely to protect a yield differential may impose unnecessary domestic costs if the currency adjustment is orderly and inflation expectations remain anchored. On the other hand, a failure to respond to persistent depreciation when pass-through is high can unanchor expectations. Scenario analysis and transparent explanation can help markets understand how the central bank weighs these conditions.

A practical monitoring dashboard should combine headline and core inflation, wage growth, inflation expectations, the current-account outlook, foreign-currency debt maturities, reserve adequacy and market liquidity. The same indicators help distinguish a temporary repricing from a persistent shift in global real rates. Authorities can then explain whether a policy decision responds to domestic inflation, disorderly currency trading or impaired funding markets. Clear objectives reduce the risk that interventions are read as a fixed exchange-rate promise. Investors who track these measures alongside the policy rate get a better view of vulnerability and policy space than nominal rate comparisons alone.

Financial regulators should map currency and maturity mismatches across banks, corporates and non-bank intermediaries. Stress tests should combine depreciation, higher local rates, widening spreads and a liquidity haircut. Supervisors should examine whether hedges remain effective under counterparty stress and whether collateral calls could force asset sales. Derivatives markets can help firms manage risk, but the concentration of positions and settlement demands must be monitored. Macroprudential buffers should be built in good times, when risk appetite is high and borrowing appears cheap.

LIMITATIONS AND RESEARCH AGENDA

The paper's main limitation is that its empirical illustration is a contemporaneous monthly association, not a causal evaluation. The sample includes structural breaks, pandemic disruptions, a major inflation shock, changing index composition and evolving market access. A single constant coefficient may be misleading. Market-feed history is a secondary distribution of exchange data, and vendor conventions can affect exact closes and timestamps. Some current policy-rate pages update at different speeds; dates are reported alongside values to avoid implying synchronized observations. The paper does not construct an independently verified CPI panel or a monthly policy surprise series.

Future research could build a high-frequency event study around FOMC, BoJ, BoE and RBI announcements. The treatment should be the unexpected change in the policy path, separated where possible into target and forward-guidance components. Outcomes could include NIFTY futures, India VIX futures or options, the rupee spot and non-deliverable forwards, Indian government bond futures, sovereign spreads and foreign portfolio flows. Event windows must account for market hours and overlapping information releases. A placebo test on non-announcement days and robustness to alternative windows would help determine whether an estimated response reflects the policy event.

FINAL OUTPUT

Global interest rates influence emerging markets through expected policy paths, real yields, term premia, dollar funding, capital flows, exchange rates, credit and risk appetite. Inflation is the central bridge between nominal rates and real decisions, but the source and persistence of inflation determine the appropriate response. A rate increase associated with stronger growth can have different effects from one caused by inflation uncertainty or a higher term premium. For emerging markets, the most important exposures often arise from currency mismatch, short-term external funding, imported inflation and market liquidity rather than from the policy-rate differential alone.

The India illustration finds a substantial negative monthly association between NIFTY returns and changes in India VIX, and a negative association with US VIX changes and rupee depreciation in a simple conditional model. The estimated relationship between equity returns and US ten-year yield changes is imprecise. These outcomes caution against claims that global rate movements mechanically predict Indian equities. India VIX is best used as a measure of option-implied uncertainty within a broader market and macroeconomic dashboard. It signals the expected scale of movement, not direction or cause.