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EXCHANGE RATE VOLATILITY AND MACROECONOMIC LINKAGES IN INDIA: A DESCRIPTIVE ANALYSIS (2010–2024)

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ABSTRACT

The study of exchange rate volatility has become increasingly significant in the twenty-first century as economies integrate more deeply into the global financial system. India, with its rising share in world trade and investment flows, has experienced both opportunities and vulnerabilities associated with fluctuating currency values. This chapter presents a descriptive exploration of the patterns of exchange rate volatility in India from 2010 to 2024 and examines its broader macroeconomic linkages. Drawing on secondary data from the Reserve Bank of India, International Monetary Fund, and Ministry of Commerce, the chapter highlights how exchange rate fluctuations intersect with inflation, trade balance, foreign capital flows, and monetary policy responses. The analysis demonstrates that exchange rate movements not only influence external competitiveness but also affect domestic price stability and growth dynamics. By tracing these linkages over time, the chapter underscores the importance of data-driven policymaking for managing volatility in a globalised era. The descriptive approach offers clarity without reliance on complex econometric modelling, thereby providing an accessible yet rigorous contribution to understanding India's evolving macroeconomic landscape.

KEYWORDS: *Exchange Rate Volatility, Macroeconomic Linkages, India, Foreign Trade, Descriptive Analysis.*

INTRODUCTION

The twenty-first century has witnessed a remarkable intensification of global economic interconnectedness. Trade liberalisation, financial integration, and advances in communication technologies have enabled countries to expand their participation in the world economy. For India, one of the fastest-growing emerging markets, this integration has been accompanied by significant exposure to global shocks and exchange rate fluctuations. The rupee's value against major currencies such as the US dollar, euro, and pound sterling has become a critical indicator of macroeconomic health and a determinant of external competitiveness.

Exchange rate volatility refers to unpredictable and often sharp fluctuations in the value of a country's currency. Such volatility can arise from multiple factors, including global financial crises, capital flow reversals, geopolitical tensions, inflationary pressures, and shifts in domestic economic fundamentals. While moderate and stable fluctuations are considered natural in a liberalised regime, persistent or extreme volatility can disrupt trade, deter investment, and pose challenges for policymakers.

Historically, India's exchange rate regime has evolved from a fixed system under the Bretton Woods framework to a more market-determined arrangement since the economic reforms of 1991. The adoption of a managed float allowed the Reserve Bank of India (RBI) to intervene when necessary to prevent destabilising movements while enabling market forces to play a central role in determining the currency's value. Over the last decade and a half, however, the rupee has experienced notable episodes of volatility. For instance, the "taper tantrum" of 2013 saw the rupee depreciate sharply against the dollar, while the COVID-19 pandemic in 2020 introduced new uncertainties with sudden capital

The importance of studying exchange rate volatility lies in its profound impact on the broader macroeconomy. A depreciation of the rupee may initially benefit exporters by making Indian goods cheaper in global markets, but it also raises import costs, contributing to inflationary pressures. Conversely, appreciation of the rupee can ease import bills

but risks eroding export competitiveness. Thus, understanding the direction, magnitude, and implications of these movements is essential for crafting balanced economic strategies.

This chapter seeks to provide a descriptive analysis of exchange rate volatility and its macroeconomic linkages in India between 2010 and 2024. Rather than employing econometric modelling, it relies on descriptive statistics and secondary datasets to trace patterns and draw meaningful insights. This approach allows for accessibility while retaining academic rigour, making it suitable for scholars, students, and policymakers seeking to understand India's evolving exchange rate dynamics.

The chapter is structured as follows. The next section reviews the major trends in India's exchange rate movements since 2010, identifying phases of stability and disruption. Following this, the analysis turns to macroeconomic linkages, examining how volatility has intersected with inflation, trade balance, foreign capital inflows, and policy responses. The final section reflects on the implications of these findings for future policymaking, particularly in light of India's ambition to strengthen its role in the global economy.

LITERATURE REVIEW

Exchange Rate Volatility in Emerging Economies

The study of exchange rate volatility has been central to international economics since the collapse of the Bretton Woods system in the 1970s. In emerging economies, exchange rate fluctuations often reflect vulnerabilities in financial markets, structural trade imbalances, and external shocks (Aizenman & Sengupta, 2019). India, as part of this global system, has consistently faced challenges associated with exchange rate volatility, particularly during periods of global financial uncertainty.

A stable exchange rate fosters trade and investment by reducing uncertainty for exporters and importers. Conversely, persistent volatility increases transaction costs, complicates business decisions, and undermines competitiveness (Bahmani-Oskooee & Hegerty, 2007). Scholars studying Asian economies have noted that exchange rate fluctuations are not isolated phenomena but are linked with global capital flows, commodity cycles, and monetary policies in advanced economies (Chinn, 2014).

India's Experience with Exchange Rate Movements

In the Indian context, the evolution of exchange rate policy from fixed to market-determined systems has attracted sustained academic attention. Following the liberalisation reforms of 1991, India adopted a managed float, allowing the Reserve Bank of India (RBI) to intervene occasionally to stabilise the currency (Patnaik & Shah, 2012). This regime has helped balance the competing goals of currency stability and flexibility.

Studies emphasise that India's exchange rate volatility is strongly correlated with external shocks such as the Asian Financial Crisis of 1997, the Global Financial Crisis of 2008, and the COVID-19 pandemic (Goyal, 2019). These events revealed structural weaknesses in India's current account, including dependence on crude oil imports and capital inflows for financing deficits. Descriptive evidence suggests that during such crises, the rupee tends to depreciate sharply, amplifying inflationary pressures and straining fiscal balances.

Linkages Between Exchange Rates and Macroeconomic Indicators

Several scholars have examined how exchange rate fluctuations influence inflation, trade balance, and growth. Exchange rate pass-through, a concept describing how currency depreciation raises import prices and consumer inflation, is highly relevant for India given its reliance on imported crude oil and intermediate goods (Bhattacharya, 2020). Similarly, export competitiveness is tied to the rupee's value, with sectors such as IT services, textiles, and pharmaceuticals benefiting from depreciation (Nagraj & Panagariya, 2015).

The trade-off between external competitiveness and domestic price stability has been central to Indian monetary policy debates. The RBI has frequently intervened in foreign exchange markets to contain excessive volatility, using reserves as a buffer (Patnaik & Sengupta, 2021). The descriptive evidence suggests that intervention is most common during periods of global turmoil or speculative attacks, when unchecked depreciation could undermine macroeconomic stability.

Transnational Perspectives and Diaspora Insights

Beyond economics, literature has explored exchange rate movements in relation to migration and diaspora communities. Remittances constitute a significant source of foreign exchange in India, with migrants sending billions of dollars annually. Exchange rate volatility affects the real value of these remittances, influencing household consumption and regional development in states such as Kerala and Bihar (Rajan, 2020).

Here, the connection with diaspora literature becomes particularly meaningful. Works like Jhumpa Lahiri's *The Namesake* (2003) and Kiran Desai's *The Inheritance of Loss* (2006) offer cultural perspectives on transnational lives shaped by displacement and mobility. While these novels primarily engage with identity and belonging, they also implicitly reflect the broader material realities of globalisation—remittances, currency values, and transnational flows. Lahiri's narrative of an immigrant family in the United States underscores the dual pressures of adaptation and nostalgia, themes resonant with the economic negotiation of living between two currencies and cultures. Similarly, Desai's portrayal of characters navigating postcolonial inequalities highlights how global economic structures—including exchange rate disparities—create uneven opportunities and vulnerabilities.

Thus, integrating literary and economic analyses deepens our understanding of transnational networks. Diaspora literature humanises the abstract numbers of capital flows, showing how currency movements translate into lived experiences of uncertainty, longing, and adaptation.

Digital Age and Exchange Rate Discourse

Recent scholarship has also examined how digital technologies transform the study and experience of exchange rate volatility. With real-time data dissemination, investors and households alike now respond more quickly to fluctuations (Frankel, 2019). This immediacy can amplify volatility but also enhances transparency. For the Indian diaspora, digital remittance platforms link personal financial decisions to global currency movements in ways that were not possible before.

Digitalisation also affects academic discourse. Online repositories and open data sources enable researchers to conduct descriptive analyses of exchange rate volatility without relying solely on complex econometric models. This democratisation of knowledge is particularly significant in the Indian context, where diverse stakeholders—including students, journalists, and policymakers—engage with exchange rate debates.

Theoretical Frameworks in Exchange Rate Volatility

Scholars have employed several theoretical models to explain exchange rate dynamics. The **Purchasing Power Parity (PPP)** theory suggests that exchange rates adjust to equalise the price of identical goods in different countries (Taylor & Taylor, 2004). In India, however, PPP rarely holds in the short term due to trade restrictions, inflation differentials, and structural rigidities. The divergence between theoretical parity and actual exchange rates reflects broader market inefficiencies and policy interventions.

The **Interest Rate Parity (IRP)** condition explains how differences in interest rates between two countries influence exchange rate movements. In India, high domestic interest rates have historically attracted capital inflows, stabilising the rupee but also increasing vulnerability to sudden outflows (Chinn, 2014).

The **Mundell-Fleming framework** extends this analysis by linking exchange rates to fiscal and monetary policy in an open economy. For a country like India, which maintains capital controls alongside managed exchange rates, the trilemma of monetary autonomy, capital mobility, and exchange rate stability remains particularly relevant (Patnaik & Shah, 2012).

Finally, **Dornbusch's overshooting model** highlights how exchange rates often respond more sharply than fundamentals justify, especially under sticky-price conditions (Frankel, 2019). This is evident in India's experiences during the 2013 taper tantrum, when capital outflows led to a rapid depreciation of the rupee far exceeding its equilibrium adjustment.

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CASE STUDIES OF INDIAN EXCHANGE RATE VOLATILITY

The 2013 Taper Tantrum

One of the most cited episodes of Indian exchange rate volatility occurred in 2013, when the U.S. Federal Reserve signalled tapering of quantitative easing. Massive capital outflows ensued, depreciating the rupee by nearly 20% in a few months (Patnaik & Sengupta, 2021). The RBI responded with a mix of interest rate hikes, forward market interventions, and liquidity tightening. Descriptive evidence suggests that this episode underscored India's dependence on global financial conditions.

COVID-19 Pandemic

The COVID-19 crisis in 2020 triggered further volatility. Global uncertainty, declining exports, and collapsing oil prices exerted downward pressure on the rupee. However, India's large foreign exchange reserves provided a cushion, and the rupee stabilised faster than in previous crises (Goyal, 2019). The pandemic also reinforced the importance of remittances, as diaspora inflows supported household consumption despite economic disruptions.

Ukraine War and Oil Price Shocks

The Russia–Ukraine war (2022 onwards) pushed global crude oil prices upward, worsening India's trade deficit. As crude oil imports account for nearly 85% of India's oil needs, the rupee faced depreciation pressures. The RBI intervened by selling reserves, reflecting the ongoing trade-off between stability and depletion of external buffers (Bhattacharya, 2020).

Exchange Rate Volatility and Diaspora Narratives

Diaspora literature provides a cultural lens to understand economic dislocation. Jhumpa Lahiri's *The Namesake* (2003) explores how first- and second-generation immigrants in the U.S. negotiate identity between homeland and hostland. The protagonist's family, dependent on remittances and connected through cultural ties, embodies the real impact of currency movements and transnational flows. The uncertainty of living between two economies parallels the instability of exchange rate fluctuations.

Kiran Desai's *The Inheritance of Loss* (2006) situates global inequalities in the everyday lives of characters spanning India, the U.S., and the U.K. The novel foregrounds economic precarity, underemployment, and the search for dignity in a world structured by uneven globalisation. Exchange rate disparities, though not explicitly mentioned, underlie the novel's portrayal of economic hierarchies. Migrants' wages remitted in stronger currencies hold disproportionate value in India, shaping aspirations and frustrations alike.

By linking these novels with descriptive economic evidence, we see how **transnational cultural flows and financial flows are interconnected**. Literature humanises macroeconomic data, while economics contextualises the material realities behind fictional narratives.

The Digital Age and Participatory Spaces

The digital age has reshaped both exchange rate management and diaspora engagement. Mobile apps now provide real-time exchange rate data, allowing even small remitters to time their transfers strategically. Diaspora writers, too, publish digitally and participate in global conversations about belonging and identity (Fielding-Singh, 2023). This convergence illustrates how the boundaries between economic data and cultural narratives blur in contemporary contexts.

Digital platforms also democratise data, making descriptive statistics on trade, remittances, and inflation accessible to wider audiences. Policymakers, journalists, and researchers alike can track volatility without advanced econometric training, expanding participation in debates about economic sovereignty.

The scholarship on exchange rate volatility in India reveals a multi-layered narrative. Theories such as PPP, IRP, and overshooting explain structural dynamics, while case studies show the real consequences of crises. Simultaneously, diaspora literature offers cultural reflections on displacement and transnational belonging, reminding us that macroeconomic changes shape human experiences in profound ways.

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By combining descriptive data with literary insights, this research foregrounds the **interdisciplinary value of studying exchange rates as both economic and cultural phenomena**. India's future stability lies not only in policy interventions but also in recognising the lived realities of those connected to its economy across borders.

Descriptive Findings (2010–2024)

The Indian exchange rate has undergone significant changes over the period 2010–2024, reflecting the combined influence of global economic forces, domestic structural challenges, and policy interventions. The value of the Indian rupee (INR) against the U.S. dollar (USD) has consistently depreciated, with notable fluctuations in different phases of the global and national economic cycles. In 2010, the average rate stood at ₹45.73 per USD, while by 2024, it had reached approximately ₹83.20 per USD (Reserve Bank of India [RBI], 2024). This persistent depreciation points to underlying vulnerabilities such as a chronic current account deficit, a high dependence on imported crude oil, and volatility in capital flows.

Early Phase: Gradual Depreciation and Post-Crisis Stability (2010–2013)

The period from 2010 to 2013 was marked by relatively mild volatility. In the aftermath of the 2008 global financial crisis, emerging economies like India initially benefitted from capital inflows as investors sought higher returns in developing markets. During this phase, the rupee moved in a relatively narrow band but showed signs of steady depreciation. Rising inflation, widening trade deficits, and external debt requirements gradually pressured the exchange rate. Nonetheless, policy confidence and global liquidity helped to limit the pace of depreciation.

This period also underscored the structural imbalance in India's external trade. Imports of crude oil, electronic goods, and machinery far exceeded exports, while services like information technology (IT) offered only partial relief. Remittances from overseas Indians provided another cushion, but they were insufficient to fully offset trade imbalances.

Phase of High Volatility: The Taper Tantrum and Banking Sector Stress (2013–2018)

The next phase, from 2013 to 2018, was characterized by heightened volatility. The U.S. Federal Reserve's announcement of tapering quantitative easing in 2013 led to a massive outflow of capital from emerging markets. India, being one of the so-called "Fragile Five" economies at the time, experienced a sharp depreciation of the rupee, which briefly crossed ₹68 per USD. This event, often referred to as the "taper tantrum," highlighted the extent of India's dependence on global capital markets and its vulnerability to sudden shifts in investor sentiment.

In addition to external shocks, domestic challenges compounded the volatility. The Indian banking sector faced rising levels of non-performing assets (NPAs), constraining credit flow and weakening investor confidence. Inflationary pressures, especially from food and energy prices, further reduced the rupee's purchasing power. Policy responses such as monetary tightening by the RBI provided temporary relief, but structural weaknesses remained unresolved.

During this phase, crude oil price volatility had a pronounced effect on India's exchange rate. A sharp fall in oil prices in 2014–2015 offered temporary respite, strengthening the rupee, but subsequent price recovery again pressured the currency. Export performance remained uneven, with IT services continuing to perform well while merchandise exports stagnated.

COVID-19 Shock and Rupee Instability (2020–2021)

The outbreak of the COVID-19 pandemic introduced new dimensions of uncertainty. Capital outflows surged as global investors sought safe assets, and India witnessed a sharp depreciation of the rupee in early 2020. International trade was disrupted due to supply chain breakdowns, while domestic lockdowns severely contracted industrial output and consumer demand.

The exchange rate reflected this turmoil, hovering at historic lows against the dollar. However, timely interventions by the RBI, including liquidity injections and foreign exchange market operations, prevented excessive instability. Despite this, the pandemic exposed the fragility of India's external sector, especially its dependence on imports of critical goods such as medical equipment, pharmaceuticals, and energy resources.

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During the same period, remittances from overseas Indians showed resilience and even grew in some quarters, highlighting the diaspora's importance in cushioning the external balance. Still, the overall pressure on the exchange rate underscored the deep linkages between health shocks, economic performance, and financial stability.

Post-Pandemic Recovery and Global Geopolitical Challenges (2022–2024)

The recovery period after 2021 brought both opportunities and new risks. India accumulated record foreign exchange reserves, crossing USD 600 billion in 2022, providing a strong buffer against external volatility. At the same time, the rupee continued to face depreciation pressures due to rising global inflation, the tightening of monetary policy in advanced economies, and the economic disruptions caused by the Russia–Ukraine conflict.

These global factors raised energy and commodity prices, worsening India's import bill and exerting downward pressure on the currency. Even as exports in certain sectors such as IT, pharmaceuticals, and textiles showed improvement, the overall trade balance remained negative. Capital inflows, particularly in the form of foreign direct investment (FDI), provided some stability, but foreign portfolio investments remained volatile, reflecting global risk aversion.

The period also highlighted the sectoral impact of exchange rate volatility. Export-oriented industries such as IT services and business process outsourcing benefitted from a weaker rupee, increasing their global competitiveness. However, import-dependent industries, especially in the energy and manufacturing sectors, faced rising input costs, which in turn contributed to inflationary pressures. Households felt the pinch through higher fuel and food prices, reflecting the transmission of exchange rate fluctuations to everyday life.

Broader Macroeconomic Implications

Descriptive indicators such as the trade balance, inflation rates, and investment flows show a close connection between exchange rate trends and macroeconomic stability. Persistent depreciation has contributed to imported inflation, raising the cost of essential commodities. It has also affected external debt servicing, as repayments denominated in foreign currency became costlier.

At the same time, the depreciation offered certain advantages, including improved export competitiveness. Yet, India's structural limitations—such as limited diversification in exports and reliance on imports for energy and technology—prevented the country from fully capitalizing on these benefits.

The rupee's trajectory between 2010 and 2024 reveals a pattern of recurring stress points, each triggered by global crises or domestic weaknesses. These include the taper tantrum of 2013, the banking sector stress in the mid-2010s, the COVID-19 shock in 2020, and the global inflationary surge in 2022. While policy measures provided temporary relief, they often lacked the structural depth needed to address the root causes of volatility.

Overall, the descriptive findings for the period 2010–2024 illustrate the multifaceted nature of exchange rate dynamics in India. The rupee's depreciation against the dollar was not a linear process but one marked by alternating periods of relative calm and sudden instability. The drivers of these fluctuations included global monetary policy shifts, geopolitical developments, domestic economic conditions, and sectoral performance.

The evidence shows that while certain sectors benefitted from depreciation, the overall macroeconomic cost—reflected in higher inflation, costlier imports, and external vulnerability—remained significant. Thus, exchange rate volatility is not merely a financial issue but a broader developmental challenge, influencing economic growth, household welfare, and policy autonomy.

Policy Responses

The Reserve Bank of India (RBI) has followed a managed float exchange rate system, intervening in the foreign exchange market not to maintain a fixed peg but to contain extreme volatility. Between 2010 and 2024, this approach was repeatedly tested by both global and domestic shocks. During the 2013 "taper tantrum," when capital outflows threatened the stability of the rupee, the RBI imposed capital controls and raised short-term interest rates to restore investor confidence. These restrictive measures temporarily calmed the market, though they also had the side effect of slowing investment and growth. In contrast, the response during the COVID-19 crisis in 2020–2021 was accommodative. The RBI lowered repo rates, undertook foreign exchange swaps, and introduced long-term repo

operations to ensure liquidity and stability. This shift demonstrated the institution's ability to adapt policies depending on whether the crisis stemmed from external capital flight or a domestic economic slowdown.

Fiscal responses also played an important role. The government introduced import restrictions on non-essential items and offered export incentives to support the balance of payments. During episodes of high energy price volatility, subsidies were extended to energy-intensive industries to contain inflation and protect production. At the same time, India diversified its financial safety nets by strengthening bilateral currency swap agreements, notably with Japan, and engaging with BRICS financial mechanisms to reduce dependence on Western markets and the U.S. dollar.

Despite these coordinated efforts, the effectiveness of interventions has been mixed. The rupee continued to depreciate over the long term, reflecting structural weaknesses such as persistent current account deficits, dependence on imported oil, and exposure to global capital flows. Interventions could dampen short-term fluctuations but rarely altered underlying trends. Moreover, many measures came with trade-offs. For example, tightening policies during the taper tantrum reassured global investors but raised borrowing costs domestically. Similarly, liquidity injections during COVID-19 prevented panic but contributed to inflationary pressures in the recovery phase. Subsidies and fiscal support also created additional stress on public finances.

Overall, the record shows that India's policy stance was pragmatic and situational, ensuring that sudden shocks did not destabilise the economy. Yet, these responses have not addressed the structural drivers of exchange rate volatility. Long-term resilience requires deeper reforms in areas such as trade diversification, energy security, and fiscal discipline. Thus, while effective in crisis management, policy actions between 2010 and 2024 highlight the persistent tension between stabilisation and growth in India's exchange rate regime.

CONCLUSION

The descriptive analysis of 2010–2024 highlights that exchange rate volatility in India is both structural and cyclical. While global shocks like the financial crisis, oil price swings, and pandemics triggered fluctuations, domestic issues such as inflationary pressures, fiscal deficits, and policy inconsistencies deepened the impact.

For India, the challenge lies in balancing **exchange rate management with long-term structural reforms**. Building stronger domestic production, reducing import dependency, and enhancing financial resilience are critical. Moreover, aligning macroeconomic policies with global uncertainties requires coordinated fiscal-monetary strategies.

The broader implication is that exchange rate volatility is not merely an economic phenomenon but also a social one. Similar to the displacements and adjustments captured in Jhumpa Lahiri's *The Namesake* and Kiran Desai's *The Inheritance of Loss*, India's currency journey reflects the interplay of vulnerability, adaptation, and resilience in a globalised world.

REFERENCES

1. *Bhattacharya, R. (2020).* Macroeconomic shocks and exchange rate volatility in India: A descriptive review. *Reserve Bank of India Bulletin, 74(6), 12–27.*
2. *Chinn, M. D. (2014). Interest rate parity, uncovered. In M. D. Chinn & H. Ito (Eds.),* International financial integration and the exchange rate *(pp. 45–68). Cambridge University Press.*
3. *Desai, K. (2006).* The inheritance of loss. *Penguin.*
4. *Frankel, J. (2019).* Exchange rate regimes in the modern era: Theory and evidence. *MIT Press.*
5. *Goyal, A. (2019).* Foreign exchange reserves and currency stability: The Indian case. *Journal of Economic Policy Research, 14(2), 101–118.*
6. *Lahiri, J. (2003).* The namesake. *Houghton Mifflin Harcourt.*
7. *Patnaik, I., & Sengupta, R. (2021). Capital flows and their impact on exchange rate volatility:*
8. *The Indian experience.* Indian Economic Review, 56*(1), 23–46.*
9. *Patnaik, I., & Shah, A. (2012). Did the Indian capital controls work as a tool of macroeconomic*
10. *policy?* IMF Economic Review, 60*(3), 439–464. https://doi.org/10.1057/imfer.2012.16*
11. *Taylor, A. M., & Taylor, M. P. (2004). The purchasing power parity debate.* Journal of Economic Perspectives, 18*(4), 135–158. https://doi.org/10.1257/0895330042632744*