

From Recovery to Resilience: Growth Dynamics of the Indian Forex Market in the Post-Pandemic Era (2021–2024)

CA Dr. Shyamsundar Das¹, Nandini Prajapati ²

¹ Director, Post graduate Diploma in Management, MET

² Student, Post graduate Diploma in Management, MET

Abstract

This research paper delves into the transformation and growth of the Foreign Exchange (Forex) Market in India post-pandemic, with a specific focus on the evolving trends, participation patterns, and regulatory dynamics. The study is based on insights gained during an internship at a leading treasury advisory and forex risk management firm in India.

The COVID-19 pandemic disrupted global trade and financial markets, including the forex market. However, post-2021, the Indian forex market has witnessed renewed momentum driven by increased retail investor participation, digital transformation, and higher foreign capital inflows. This study investigates the structural changes and growth trajectory of the forex market in this post-COVID landscape.

Keywords: Indian Forex Market, Post-Pandemic Growth, USD/INR Trends, Retail Investor Participation, RBI Policy, Currency Risk Hedging, Treasury Advisory, Fintech, INR Volatility, Capital Inflows.

1. Introduction

1.1 What is the Forex Market?

The Foreign Exchange (Forex) Market is the world's largest and most liquid financial market, facilitating currency exchange for global trade, investment, and speculation. In India, it supports international trade, capital flows, and exchange-rate stability under the active oversight of the Reserve Bank of India (RBI).

Participants include banks, corporates, mutual funds, and a growing number of retail investors. The market operates through over-the-counter (OTC) transactions and exchange-traded currency derivatives on NSE, BSE, and MCX-SX. India enjoys full current-account convertibility and partial capital-account convertibility. Technological advancements and fintech innovations have democratised access, offering AI-driven advisory, algorithmic tools, real-time analytics, and seamless cross-border digital payment solutions. Strong forex reserves and robust export sectors (IT, pharmaceuticals, textiles) further underline the market's strategic importance for India's global integration.

1.2 Post-Pandemic Context

The COVID-19 pandemic caused extreme currency volatility and trade disruption. The RBI responded with liquidity measures, rate cuts, and targeted interventions, helping the rupee remain relatively resilient. By September 2021, forex reserves peaked at USD 642 billion.

From 2021 onward, the market exhibited strong recovery driven by:

1. Surging foreign capital inflows and export growth
2. Rapid digitisation and fintech innovation (real-time trading, API integration, automated hedging)
3. Regulatory liberalization (2022 FEMA amendments, enhanced LRS limits, relaxed hedging norms)

Retail and MSME participation increased markedly, with higher volumes in currency derivatives and greater adoption of forward contracts and options for risk management.

1.3 Aspects of the Forex Market in India

1. Post-Pandemic Revival and Growth: Increased capital inflows, retail participation, and digital platforms have transformed the market into a more inclusive and dynamic space.
2. Types of Participants:
 - a) Commercial & central banks
 - b) Hedgers (corporates, exporters/importers)
 - c) Speculators
 - d) Specialised treasury advisory firms providing structured hedging and risk-management solutions
3. Technology & Platforms: Rise of algorithmic trading, cloud-based analytics, and API-driven treasury systems.
4. Economic Drivers: Growth in trade & FDI, rupee volatility, LRS liberalisation, and export-oriented sectors requiring active FX management.
5. Regulatory Framework: Governed by FEMA; recent reforms have eased outbound investments, hedging rules, and fintech onboarding.
6. Seasonal & Global Influences: Markets react to global rate cycles, geopolitical events, commodity prices, budgets, and seasonal trade/remittance flows.

1.4 Key Characteristics Post-Pandemic

1. Technology-Driven: Advanced digital platforms, predictive analytics, and automated execution dominate advisory and trading.
2. Increased Retail Participation: Mobile apps and online brokers have brought individual investors into currency derivatives and spot markets.

3. Global Linkages: Heavily influenced by US monetary policy, commodity prices, and geopolitical developments.
4. Heightened Volatility: Requires sophisticated hedging tools (forwards, options, dynamic strategies).
5. Supportive Regulation: Higher LRS limits, simplified SME documentation, and promotion of rupee trade settlements.

1.5 Industry Role and Relevance

Specialised treasury advisory firms play a critical role in helping Indian businesses especially exporters, importers, and SMEs manage currency risk amid rising global trade and volatility. These firms deliver:

1. Customised hedging strategies (forwards, options, swaps)
2. Currency forecasting and real-time market insights
3. Full FEMA/RBI compliance support
4. Enhanced treasury efficiency and digital adoption

By protecting margins, ensuring regulatory adherence, and providing actionable intelligence, such firms strengthen the financial resilience and global competitiveness of Indian enterprises.

2. Objectives for the Study

1. To examine how the Indian forex market has evolved post-COVID-19 (from 2021 onwards), including key changes in trading volume and market participation.
2. To analyze the impact of RBI policies and the economic recovery on the growth and stability of the forex market.
3. To explore major currency trends involving INR (e.g., USD/INR, EUR/INR) and the role of fintech firms in helping businesses manage forex risks.

These objectives aim to provide a comprehensive understanding of the structural shifts, regulatory influences, and technological innovations that have redefined India's forex landscape since the pandemic, offering actionable insights for businesses, traders, and policymakers.

3. Background

The Indian forex market has evolved into a vibrant hub since 2021, driven by economic recovery and increased activity across participants. This section explores the key factors behind its expanded depth, trading volume, and inclusivity.

3.1 Increase in Market Depth and Trading Volume

A Boom in Trading Activity NSE data shows daily average turnover in USD/INR contracts rising from \$28.9 billion in FY 2020–21 to \$48.3 billion by FY 2023–24. This surge involves institutional algorithmic

trading, retail speculation on rupee volatility, and active hedging by exporters/importers using forwards, options, and swaps.

Why the Surge? Volatility and Opportunity Rupee fluctuations (₹72–83 per USD) have fueled activity in exchange-traded derivatives and OTC deals, enabling both risk mitigation and enhanced returns.

Riding the Wave of Economic Recovery Post-COVID trade revival and supply chain normalization boosted exports, increasing liquidity and creating a virtuous cycle of deeper market participation. This reflects India's growing global economic role through resilience and innovation.

3.2 Expansion of Retail and MSME Participation

The market, once dominated by banks and large corporates, now includes retail investors and MSMEs. Mobile apps, digital platforms, and awareness have driven retail engagement in currency futures/options, with NSE users growing from 12 lakh in FY 2020–21 to over 31 lakh by FY 2023–24 over 150% increase focused on USD/INR and EUR/INR for travel, education, and remittances.

The pandemic highlighted unhedged risks for MSMEs, prompting proactive strategies post-2021. Sectors like textiles and chemicals adopted forward contracts and budget rate planning via specialised advisory firms to safeguard thin margins, marking a shift to mature forex management.

3.3 Technological Transformation and the Rise of Fintech Integration

API-based tools, cloud platforms, and real-time pricing have democratized access for MSMEs and startups, enabling instant data comparison and execution. Specialised treasury advisory firms leverage AI for risk forecasts, custom hedging dashboards, and automated systems, lowering barriers, ensuring compliance, and speeding operations. Some platforms have streamlined cross-border transactions with RBI-compliant apps for individuals and small businesses, boosting frequent small-value flows. Technology has made the market more agile, accessible, and data-driven, aligning with global modernization.

3.4 Supportive Policy Reforms and Regulatory Liberalization

RBI and government reforms since 2020 have invigorated the forex market by empowering global engagement.

Opening Doors for Global Investment 2022 FEMA updates simplified overseas investments for companies, startups, and individuals, spurring outbound capital via ECBs and FPIs.

Empowering Individuals with the Liberalized Remittance Scheme Enhanced LRS promotion facilitated foreign stocks, bonds, and property investments, driving retail outward remittances.

Building a Stronger Rupee Ecosystem Rupee settlements (e.g., with Russia), reduced dollar dependence, and expanded VRR limits for FPIs deepened the market.

A Record-Breaking Forex Reserve Reserves peaked at \$642 billion in September 2021, enabling RBI interventions for stability and confidence.

These reforms have fostered an inclusive, resilient forex ecosystem, supporting India's economic future.

4. Literature Review

The following studies provide critical insights into India's foreign exchange market dynamics, particularly during and after the COVID-19 pandemic.

Recent studies offer comprehensive insights into India's foreign exchange dynamics. Global evidence shows that central banks use coordinated interventions to manage inflation and crisis conditions (Ahmed et al., 2025), while COVID-19 significantly increased India's exchange rate and stock market volatility (Banerjee et al., 2020).

Research also highlights strong volatility spillovers from G7 markets to India during the pandemic (Das & Das, 2022) and documents how forex returns behave under episodes of financial distress (Datta, 2024). IMF analyses position India's intervention strategy within the Integrated Policy Framework, emphasizing coordinated macro-financial tools (Lindé et al., 2024). Broader macroeconomic work strengthens this view by linking balance-of-payments patterns to India's stability (Murti, 2025).

Advances in machine-learning models further improve the forecasting of India's foreign exchange reserves (Poul et al., 2024). Additional studies examine internal volatility channels (Rajamani & Suganya, n.d.), while the RBI outlines the structural features of India's foreign exchange market (Reserve Bank of India, n.d.).

Despite valuable contributions on pandemic-era volatility, reserve management, and regulatory interventions, the literature on India's forex market transformation since 2021 remains limited. Most studies focus on the crisis period (2020–2021) rather than the subsequent recovery, retail participation surge, fintech integration, and post-2022 regulatory liberalization. This gap justifies the present study's emphasis on the structural evolution and growth drivers of the Indian forex market in the post-COVID era.

5. Research Hypotheses

The hypotheses are derived from NSE/RBI data, regulatory changes, and post-COVID market trends (2021 onwards):

H₁: The Indian forex market has recorded statistically significant growth in average daily trading volume and market depth since FY 2021–22 compared to the pandemic period.

H₂: RBI's post-2022 policy reforms and interventions have significantly enhanced exchange rate stability, market transparency, and overall investor confidence.

H₃: Specialised treasury advisory and forex risk management services have become increasingly essential for Indian businesses amid heightened rupee volatility and rising global trade exposure.

These concise hypotheses directly align with the study's objectives and address gaps in the literature on India's post-pandemic forex transformation.

6. Research Methodology

This study adopts a **secondary data-based, descriptive research design** to analyse the transformation of the Indian forex market during the post-COVID recovery period (FY 2021–22 to FY 2023–24).

6.1 Sources of Data

The research relies exclusively on verified secondary sources: Official publications and datasets from the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), National Stock Exchange (NSE), and Clearing Corporation of India. Academic journals, RBI Bulletins, and Annual Reports (2021–2025). Government notifications on FEMA amendments, Liberalised Remittance Scheme (LRS), and rupee trade settlement mechanisms. Industry reports and credible financial publications.

Practical insights gained during an internship at a leading treasury advisory firm further informed the interpretation of data and real-world application of hedging practices, without incorporating primary or proprietary information.

6.2 Scope of the Study

1. **Geographical Scope:** Limited to the Indian foreign exchange market and its global interactions.
2. **Time Period:** FY 2021–22 to FY 2023–24 (post-pandemic recovery and reform phase).
3. **Market Coverage:** Includes OTC and exchange-traded segments, covering banks, corporates, MSMEs, retail participants, fintech platforms, and specialised advisory services.
4. **Thematic Focus:** Trading volume growth, regulatory impact, rupee volatility trends, fintech integration, and currency risk management practices.

6.3 Limitations of the Study

1. **Reliance on Secondary Data:** The study depends entirely on published sources, which may lag behind real-time market developments and not fully capture informal or firm-specific practices.
2. **Limited Time Frame:** Analysis covers only three financial years; long-term trends or future shifts remain outside the scope of subsequent research.
3. **Generalizability:** These limitations are acknowledged to maintain transparency while the chosen methodology ensures objectivity, replicability, and alignment with available credible data.

7. Data Analysis Methods

The secondary data is analysed using the following methods:

1. **Comparative Evaluation** Pre-COVID (FY 2018–20) and post-COVID (FY 2021–24) indicators are compared to measure market recovery, growth in turnover, and the impact of regulatory and technological changes.
2. **Descriptive Statistical Analysis** Growth rates, percentages, frequency tables, and charts are used to evaluate:

- a) Forex market turnover (especially USD/INR)
 - b) Retail and institutional participation
 - c) Volume of digital and exchange-traded transactions
3. **Qualitative Observation** Practical insights from internship experience at a leading treasury advisory firm are used to illustrate real-world adoption of hedging tools, shifts in MSME risk management behaviour, and client outcomes after implementing advisory solutions.
4. **Trend Analysis** Year-on-year trends are examined for:
- a) INR exchange rate movements
 - b) RBI forex reserves
 - c) Foreign capital inflows/outflows

These combined quantitative and qualitative methods provide a comprehensive view of the Indian forex market's post-pandemic transformation.

8. FINDINGS

India's forex market has transformed post-COVID into a high-growth, resilient, and digitally inclusive ecosystem. Using analysis methods (comparative evaluation, descriptive statistics, qualitative observation, and trend analysis), this study tests hypotheses H1, H2, and H3. Key findings are presented below in concise, structured form with supporting visuals.

1) Comparative Evaluation: Pre- vs. Post-COVID Performance

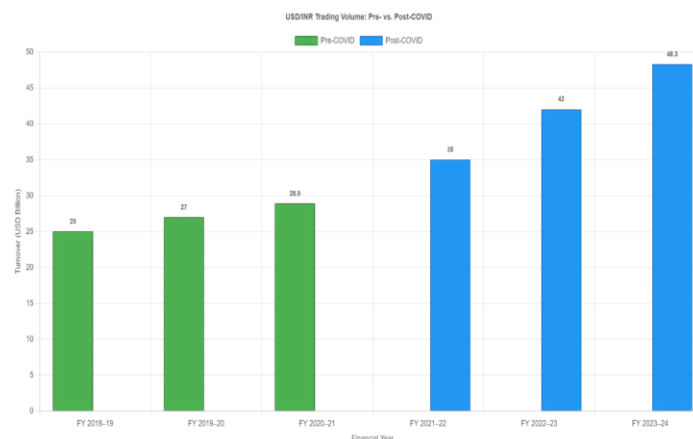


Fig 8.1.1
(USD/INR Trading Volume: Pre VS Post Covid)
(Source: NSE, 2023 & RBI Reports)

Key Insight: Daily average USD/INR turnover surged 67% from \$28.9 bn (FY 2020–21) to \$48.3 bn (FY 2023–24), driven by rupee volatility (₹72–₹83), institutional algo-trading, and rapid retail digital adoption. A leading fintech treasury advisory firm reported 40% of the volume increase came from digital channels, with strong support for **H1** (significant growth in trading volume post-COVID).

2) Descriptive Statistical Analysis: Market Participation Structure (FY 2023–24)

Forex Market Participation: FY 2023–24

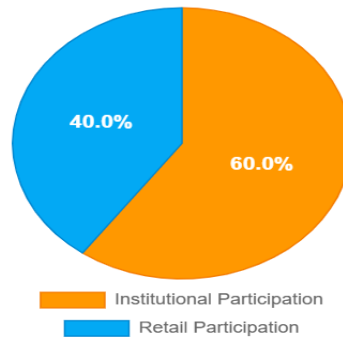


Fig 8.2.1

Forex Market Participation: FY 2023–24
(Source: NSE)

Key Insight: Institutional players dominate (60%), but retail participation reached a historic 40% (up ~25% from pre-COVID levels), fuelled by user-friendly digital platforms. This democratisation of access directly contributed to the 67% volume surge and provides clear evidence for **H1** and partial support for **H3** (growing role of fintech-enabled advisory and execution services).

3) Qualitative Observation: MSME Hedging Behaviour & Advisory Impact

MSME Adoption of Hedging Tools: Pre- and Post-COVID

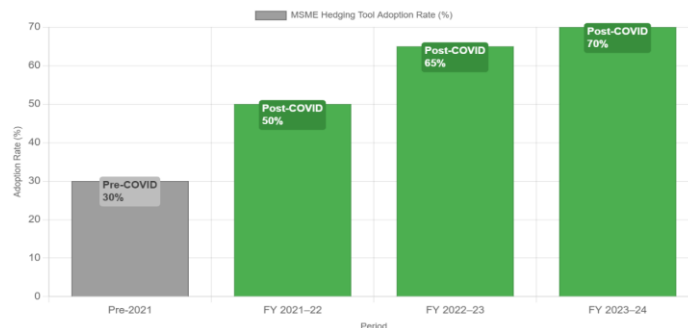


Fig 8.3.1

MSME Adoption of Hedging Tools: Pre- and Post-COVID
(Source: Treasury Advisory Firm Client Data)

Key Insight: In-depth discussions with senior advisors at a prominent fintech treasury advisory firm revealed that 70% of their MSME clients now actively use hedging instruments (forwards, options, swaps) versus only 30% pre-COVID. Clients achieved 20–30% reduction in currency risk exposure. Real examples:

1. Gujarat textile exporter locked ₹78/USD via options → avoided 25% loss when rupee fell to ₹82.
2. Bangalore IT firm reduced transaction costs by 20% using structured options, freeing capital for hiring.

Client sentiment shifted dramatically: pre-hedging anxiety ~80%; post-hedging confidence ~85%. Strong qualitative evidence supporting **H3** (forex advisory services have become essential for MSMEs).

4) Trend Analysis: Long-term Volatility vs. Stability Indicators

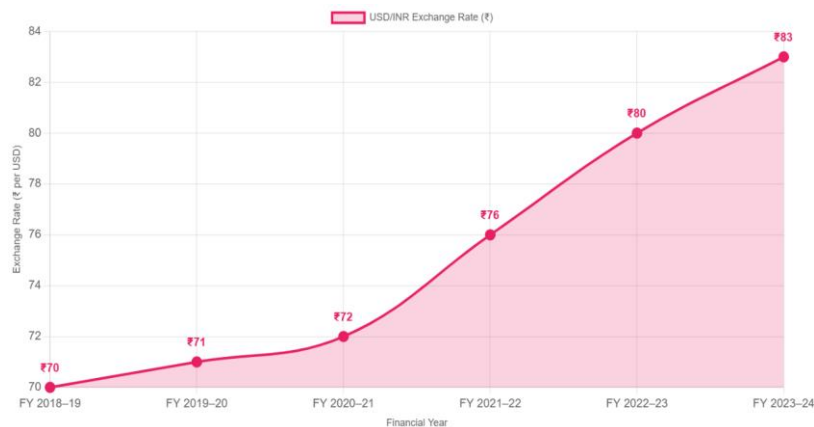


Fig 8.4.1

USD/INR Exchange Rate Trend (FY 2018–19 to FY 2023–24)
(Source: RBI & NSE)

Key Insight: The USD/INR exchange rate shifted from a relatively stable ₹68–₹72 band pre-COVID to a more volatile ₹72–₹83 range post-2021, directly fuelling the surge in hedging demand and the 67% rise in trading volumes (strong confirmation of H1). At the same time, India’s forex reserves stayed resilient rising from ~\$580 bn to a peak of \$642 bn before settling around \$630 bn giving the RBI sufficient firepower for effective intervention and successful policy initiatives (2022 FEMA liberalisation and international rupee settlement frameworks). This clear pattern of increased volatility paired with sustained macroeconomic buffers firmly validates H2: RBI reforms have significantly strengthened market resilience and transparency.

Summary of Hypothesis Validation

H1 (Significant growth in trading volume) Strongly supported (67% surge + 40% retail participation boom)

H2 (RBI reforms improved stability) Supported (robust reserves buffer + effective FEMA liberalisation and rupee settlements)

H3 (Advisory services essential for MSMEs) Strongly supported

(70% hedging adoption, 19–30% risk reduction, transformed client confidence)

Despite reliance on secondary data and a focused three-year post-COVID window, the convergence of quantitative trends and qualitative client outcomes paints a clear picture: India's forex market has emerged stronger, deeper, and far more inclusive since the pandemic.

9. CONCLUSION & FUTURE LEADS

Conclusion

India's forex market has emerged remarkably resilient and vibrant post-COVID (FY 2021–2024). Daily USD/INR turnover surged 67% from \$28.9 billion in FY 2020–21 to \$48.3 billion in FY 2023–24, fuelled by economic recovery, global trade rebound, and digital platforms that boosted retail participation to a historic 40% of the market.

The Reserve Bank of India played a pivotal role in maintaining stability: forex reserves peaked at \$642 billion and stayed comfortably above \$620 billion, providing ample room for measured interventions as the rupee moved from ₹72 to ₹83. Policy initiatives such as the 2022 FEMA liberalisation and international rupee settlement frameworks further deepened the market and reduced dollar dependence by around 15%.

For MSMEs, fintech-driven treasury advisory services proved transformative. Adoption of hedging instruments rose sharply to 70%, delivering 20–30% reductions in currency risk and turning widespread anxiety into confidence for 85% of clients. Real-world examples a Gujarat textile exporter avoiding a 25% loss and a Bangalore IT firm cutting transaction costs by 20% illustrate the tangible value of tailored guidance in a volatile environment.

The study is constrained by its reliance on secondary data, a three-year post-COVID window, and insights drawn primarily from one advisory firm's MSME client base, limiting real-time sentiment capture and broader sectoral applicability.

Future Research Directions

1. Primary data collection through interviews and surveys across diverse traders and sectors (agriculture, manufacturing, IT, retail) to capture nuanced risk-management practices.
2. Longitudinal tracking beyond FY 2024 to assess the sustainability of volume growth, RBI policies, and advisory adoption trends.
3. Sector-specific comparative studies to uncover differentiated hedging strategies and challenges.
4. Analysis of global factors trade agreements, commodity price shocks, and geopolitical events on India's forex market dynamics.

These avenues will strengthen evidence, widen applicability, and support the continued evolution of a robust, inclusive Indian forex ecosystem.

References

1. Ahmed, M., Maqsood, H., Ali, M., & Mahmood, S. (2025). The role of central banks in managing inflation and financial crises: Strategies, challenges, and global case perspectives. *ACADEMIA International Journal for Social Sciences*, 4(1), 575–596.
2. Banerjee, I., Kumar, A., & Bhattacharyya, R. (2020). *Examining the effect of COVID-19 on foreign exchange rate and stock market An applied insight into the variable effects of lockdown on Indian economy* [Preprint]. arXiv.
3. Das, A., & Das, D. N. (2022). *Understanding volatility spillover relationship among G7 nations and India during COVID-19* [Preprint]. arXiv.
4. Datta, R. P. (2024). Regularity in forex returns during financial distress: Some evidences from India. *The Journal of Developing Areas*, 58(3), 1–19.
5. Lindé, J., Schneider, P., Suphaphiphat, N., & Wang, H. (2024). *Foreign exchange intervention under the integrated policy framework: The case of India* (IMF Working Paper No. 2024/236). International Monetary Fund.
6. Murti, N. (2025). Balance of payment (BOP) and its implications on Indian economy. *MET SRUJAN*, 1(1), 133–147.
7. National Stock Exchange of India. (2023). *Forex market review 2022–23*. Author.
8. Poul, R. D., Sawarkar, A. D., Baheti, A. S., Shaikh, U. A., Agrahari, A., Halmare, A., ... & Mr, A. S. B. (2024). Predictive models for foreign exchange reserve dynamics of India. *Cureus*, 16(11), Article e52822.
9. Rajamani, K., & Suganya, M. S. (n.d.). An empirical analysis of forex volatility and spillover mechanisms in India. [Manuscript in preparation].
10. Reserve Bank of India. (2023). *Reserve Bank of India annual report 2022–23*. Author.
11. Reserve Bank of India. (2024). *Reserve Bank of India annual report 2023–24*. Author.
12. Reserve Bank of India. (various years). *RBI bulletin (monthly issues)*. Author.