



A STUDY ON CONSISTENCY OF INDIAN RUPEES IN COMPARISON WITH USD FOR THE LAST QUARTER OF FINANCIAL YEAR ENDING ON 31 MARCH 2023

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Abstract

The stability and uniformity of currencies are crucial for promoting economic growth and facilitating international trade in the dynamic and always changing world of finance. The Indian Rupee (INR) occupies a major position among the diverse range of currencies in use as a result of India's standing as the world's second-most populous country and one of its most developed economies. In-depth understanding of the performance and consistency of the Indian Rupee relative to the US Dollar during the last quarter of the fiscal year ending on March 31, 2023, is the goal of this inquiry. Currency fluctuations have an impact on a variety of areas, including trade, investments, and foreign exchange reserves, which affects the stability of an economy. The Indian Rupee denoted by the letter INR and United states dollar is denoted by USD in this research work. . This research will look at a variety of economic variables, including trade balances, interest rates, and changes in macroeconomic policy, as well as exchange rates and inflation levels. These factors were examined in order to assess the stability, volatility, and relative value of the Indian Rupee as well as the underlying causes of currency movements. Policymakers, businesses, investors, and individuals involved in cross-border transactions involving the Indian Rupee will all benefit greatly from the findings of this study. The research results showed that the High Level of Consistency of INR with USD during the period of study i e from Jan 2023 to March 2023. In other words the result outcome clearly indicated that the INR values as against USD are not volatile during the period of study and volatility is negligible.

Key Words: Uniformity of Currencies, Promotion of Economic Growth, Cross order, Transactions, Volatility, Stability, IND & USD.

Introduction

In the dynamic and constantly evolving global financial arena, the Stability and uniformity of currencies play a pivotal role in fostering economic growth and facilitating international trade. Within the wide array of currencies in circulation, the Indian Rupee (INR) holds a significant position due to India's status as the second-most populous nation and one of the world's rapidly advancing economies. This investigation seeks to gain deeper insights into the performance and consistency of the Indian Rupee in contrast to USD during the final quarter of the fiscal year concluding on March 31, 2023. Currency fluctuations exert influence on diverse sectors, encompassing trade, investments, and foreign exchange reserves, thereby impacting a country's economic equilibrium. Represented by the symbol I, the Indian Rupee has undergone fluctuations in recent years, attributed to an array of factors including global market conditions, geopolitical shifts, and domestic economic strategies. An assessment of the Indian Rupee's performance vis-à-vis the United States Dollar (USD) will yield valuable insights into its global market competitiveness and consistency in value.

This study will encompass an examination of a spectrum of economic indicators, ranging from exchange rates and inflation levels to trade balances, interest rates, and macroeconomic policy shifts. By scrutinizing these elements, we aim to identify the underlying drivers behind currency fluctuations and gauge the Indian Rupee's performance in terms of steadiness, volatility, and relative worth.



The results derived from this inquiry will serve as crucial insights for policymakers, enterprises, investors, and individuals engaged in cross-border transactions involving the Indian Rupee.

These findings will facilitate a better comprehension of the risks and opportunities inherent in currency exchanges, investments, and trade, thereby contributing to informed decision-making processes and strategies for risk management.

To summarize, the objective of this research is to provide insights into the stability of the Indian Rupee within the final quarter of the fiscal year concluding on March 31, 2023. Through a comparative analysis involving the United States Dollar, we seek to glean valuable information regarding its steadiness, competitive standing, and attractiveness within the global financial realm. The outcomes of this investigation will enhance our comprehension of the Indian Rupee's global trade significance and its role as an internationally recognized currency.

In exchange rate systems that float, exchange rates are established within the foreign exchange market. This market is open to a diverse array of buyers and sellers, and currency trading transpires continuously, 24 hours a day, excluding weekends (i.e., trading occurs from 20:15 GMT on Sunday until 22:00 GMT on Friday). The spot exchange rate signifies the current exchange rate, while the forward exchange rate pertains to an exchange rate quoted and traded on the present day but for execution and settlement on a designated future date.

Factors influencing exchange rate fluctuations

- **Balance of Payments:** A significant international balance of payments deficit or trade deficit indicates a demand for foreign exchange that surpasses supply, resulting in an increase in the foreign exchange rate and currency depreciation.
- **Interest Rate Level:** Higher domestic interest rates relative to foreign interest rates attract capital inflow, bolstering the demand for domestic currency, causing currency appreciation and foreign exchange depreciation.
- **Inflation Factor:** Elevated inflation erodes the purchasing power of money, leading to currency depreciation and foreign currency appreciation.
- **Fiscal and Monetary Policy:** Expansive fiscal and monetary policies and inflation tend to devalue domestic currency, while tightening policies stabilize the currency and enhance its value.
- **Speculation:** Anticipating currency appreciation, speculators purchase a significant amount, boosting the exchange rate. Conversely, expecting depreciation, they sell in large quantities, leading to immediate currency exchange rate decline.
- **Government Market Intervention:** Government interventions through currency trading impact exchange rates when fluctuations adversely affect the economy or policy objectives.
- **Economic Strength of a Country:** While high economic growth rates might not immediately benefit the local currency's performance in the foreign exchange market, they contribute to long-term currency strength. Increased demand for a currency can result from increased transaction or speculative demand. Transaction demand correlates with a country's business activity, GDP, and employment levels. Central banks can adjust the money supply to match changes in demand due to business transactions.



Research Design

Review of Literature

1. A Research has been undertaken by Onkar Shivraj Swami & Santosh Kumar Pandey and Puneet Pancholy of Reserve Bank of India in the year 2016 with the title “Value-at-Risk Estimation of Foreign Exchange Rate Risk in India” and the outcome of their research shows that when returns are non-normal, VaR model based on the assumption of normality significantly underestimates the risk. Their empirical results based on backtesting show that most accurate VaR estimates are obtained from Student's t VaR model.

Link: <https://journals.sagepub.com/doi/abs/10.1177/2319510X16650057>

2. A Research has been undertaken by Ganapati Mendali of Sambalpur University in the year 2016 with the title “A study of the effects of exchange rate variability on foreign trade and prices in India” and the outcome of their research shows that in the long run, exchange rate variability has not affected India's aggregate exports and imports (volume) significantly. Another notable finding contrary to the general belief is that the global financial crisis has also no long run effect either on aggregate exports or imports. The study finds the following short run effects: (i) the lagged values of export/import are found to be significant; this is true for the period before financial crisis as well as the period including the crisis (whole period); (ii) foreign income has significantly (positively) affected exports for the whole period; (iii) exchange rate volatility and relative prices have significant negative impact on imports for the whole sample period; (iv) the lagged value of relative prices has significant negative impact on imports for the time period ‘before financial crisis’.

Link: <https://shodhganga.inflibnet.ac.in/handle/10603/276777#>

3. A Research has been undertaken by Ioannis N. of The Arthur J. Kania School of Management in the year 2017 with the title “Exchange Rate Movement: Efficiency in the Foreign Exchange Market” and the outcome of their research shows that the empirical results for these three major exchange rates (four currencies) show that relative efficiency exists. The most efficient market is the dollar/euro one; the other two markets (dollar/pound and yen/dollar) are not efficient. Also, statistical tests of economic fundamentals and expected change in the exchange rate are used to capture the future spot rate's volatility and predictability by using the current spot (random walk) for the variables of the four economies. The adequacy of the specification of the different models is performed to determine the exchange rate movement.

Link: <https://www.proquest.com/openview/ded813ad79c4ba39e0cdf44c14220ef/1.pdf?pq-origsite=gschoIar&cbl=2046325>

4. A Research has been undertaken by Thilak Venkatesan and M. S. Ponnamma of Bangalore University and TATA Consultancy Ltd in the year 2018 with the title “An Analysis of Macroeconomic Factors Affecting Foreign Exchange Rate” and the outcome of their research show that the Indian economy contributes a higher GDP growth compared to other emerging economies. The increase in the GDP, aids well for a strong foreign exchange along with other economic factors such as gross domestic savings, forex reserve, inflation and so on. The various initiatives taken by the government recently to attract more foreign capital through various investment schemes and reduce interest rate as well assists to achieve a stabilized exchange rate in India.

Link: https://www.researchgate.net/profile/Thilak-Venkatesan/publication/327923959_Empirical_Analysis_of_the_Determinants_of_Dividend_Payouts_of_Indian_Banking_Stocks_Using_Panel_Data_Econometrics/links/5c552fdd299bf12be3f52352/Empirical-Analysis-of-the-Determinants-of-Dividend-Payouts-of-Indian-Banking-Stocks-Using-Panel-Data-Econometrics.pdf

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5. A Research has been undertaken by Sebastiaùn Fanelli & Ludwig Straub Center for Monetary and Financial Studies (CEMFI) in the year 2020 with the title “Theory of Foreign Exchange Interventions” and the outcome of their research shows that by intervening in the bond markets, the central bank can affect the exchange rate and the spread between home- and foreign-bond yields. Such interventions allow the central bank to address the pecuniary externality, but they are also costly, as foreigners make carry- trade profits. We analytically characterize the optimal intervention policy that solves this trade-off: (a) the optimal policy leans against the wind, stabilizing the exchange rate; (b) it involves smooth spreads but allows exchange rates to jump; (c) it partly relies on “forward guidance”, with non-zero interventions even after the shock has subsided; (d) it requires credibility, in that central banks do not intervene without commitment.

Link: <https://www.nber.org/papers/w27872>

Research Gap

From the Above Literature Reviews, It is apparent that , Despite the importance of understanding the consistency of the Indian Rupee in comparison with USD during the last quarter of the financial year ending on 31 March 2023, there is a notable dearth of comprehensive research on this specific topic. While numerous studies have explored the overall performance of the Indian Rupee against major currencies, there is a significant research gap in analyzing its consistency in comparison with USD during this specific period. While existing literature may offer insights into the general determinants of currency fluctuations, there is a dearth of comprehensive empirical analysis specifically focused on the Indian Rupee's consistency against USD during a specific time frame, particularly in the context of the last quarter of the financial year 2022-2023. Existing research often focuses on short-term fluctuations or long-term trends without delving into the consistency aspect within a specific financial quarter. As such, a comprehensive study that examines the Indian Rupee's consistency against these four standardized currencies during the specified time frame can provide valuable insights for policymakers, businesses, and investors, aiding them in making informed decisions and managing currency-related risks more effectively.

Statement of Problem

In the ever-evolving global financial landscape, the Indian Rupee's exchange rate has been subject to significant fluctuations, impacting various stakeholders such as businesses, investors, policymakers, and the general public. The last quarter of the financial year 2022-2023 has been particularly critical, with numerous economically potentially influencing currency movements. Despite its importance, there exists a noticeable gap in research that specifically examines the consistency of the Indian Rupee against USD during this specific period.

This study seeks to address the following key problems

1. Lack of Comprehensive Analysis: The existing literature provides a general understanding of factors affecting currency fluctuations but lacks comprehensive empirical analysis on the Indian Rupee's consistency against USD during the specified quarter, impeding a holistic view of its performance.

2. Implications for Stakeholders: The absence of an in-depth study on the Indian Rupee's behavior against these standardized currencies during the last quarter of the financial year 2022-2023 hinders the ability of businesses, investors, policymakers, and the public to make informed decisions and strategies based on a deeper understanding of currency consistency.



By investigating these research gaps, this study aims to provide valuable insights into the behavior of the Indian Rupee during a critical period, shedding light on the determinants of its consistency against the USD. The findings of this research will contribute to a more informed approach towards managing currency risks and optimizing financial decisions in the context of the Indian economy.

Objectives of Study

- 1. To Analyze Exchange Rate Trends:** Investigate and compare the exchange rate trends of the Indian Rupee against USD during the last quarter of the financial year 2022-2023 to identify any consistent patterns or significant deviations.
- 2. To Assess Risk and Volatility:** Evaluate the risk and volatility associated with the Indian Rupee compared to USD to help stakeholders, including businesses and investors, make informed decisions related to currency exposure and hedging strategies.
- 3. To Support Financial Decision Making:** Provide valuable information for businesses engaged in international trade and investment to make informed financial decisions during the last quarter of the financial year 2022-2023, considering the exchange rate behavior of the Indian Rupee.

By achieving these objectives, the study aims to deepen our understanding of the Indian Rupee's behavior in comparison USD, offering valuable insights for various stakeholders and contributing to the broader understanding of currency dynamics in the global financial landscape.

Limitations of Study

The study on "A Study on Consistency of Indian Rupees in comparison with USD for the last quarter of the financial year ending on 31 March 2023" may encounter certain limitations. These limitations are as follows

- 1. Data Availability and Quality:** The availability and quality of data for certain economic indicators and geopolitical events may be limited or subject to discrepancies, potentially affecting the accuracy and reliability of the study's findings.
- 2. Short Timeframe:** The study focuses on the last quarter of the financial year 2022-2023, which may not provide a complete picture of the long-term trends and factors influencing the Indian Rupee's consistency against the selected currencies.
- 3. External Events & Factors:** Unforeseen external events, such as unexpected political or economic shocks, may significantly impact currency fluctuations during the specified period, making it challenging to isolate the specific drivers of the Indian Rupee's behavior.
- 4. Exchange Rate Volatility:** Currency markets can be highly volatile, and the Indian Rupee's exchange rate may experience significant fluctuations during the study period, making it difficult to establish consistent patterns.
- 6. Generalizability:** The study focuses on a Single Currency and a specific time frame, limiting the generalizability of the findings to other currencies or different time periods.

Despite these limitations, the study aims to provide valuable insights into the behavior of the Indian Rupee during the specified period, thereby contributing to the understanding of currency dynamics in a specific context. Researchers should acknowledge and address these limitations appropriately to ensure the study's integrity and validity.

Research Particulars

- 1. Nature of Research :-** Empirical
- 2. Type of Data :-** Secondary Data



3. **Nature of Data :-** Quantitative Data
4. **Method of Sampling :-** Convenience Sampling
5. **Tools Used in Data Analysis**
 - **Descriptive Statistics:** Descriptive statistics, of Standard Deviations and Variance Analysis were employed which can provide a summary of the Volatility/Stability and variability of exchange rate data and economic indicators for the INR and the USD.

Data Analysis & Interpretation

Standard Deviation of fluctuations of USD to INR in the Month of January 2023

Standard deviation for January	0.554408013
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Interpretation: With a standard deviation of 0.554, it can be inferred that the exchange rate fluctuations during January 2023 were relatively low. This suggests that the majority of exchange rate values were closely clustered around the mean value, indicating a period of stability or minimal volatility.

Standard Deviation of fluctuations of USD to INR in the Month of February 2023

Standard deviation for February	0.268108996
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Interpretation: A standard deviation of 0.26 suggests that the exchange rate fluctuations during february 2023 were of moderate magnitude. While not extremely high, there was still a noticeable degree of variability in the exchange rate values.

Standard Deviation of fluctuations of USD to INR in the Month of March 2023

Standard deviation for March	0.283587917
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Interpretation: A standard deviation of 0.28 suggests that the exchange rate fluctuations during March 2023 were of moderate magnitude. While not extremely high, there was still a noticeable degree of variability in the exchange rate values.

Standard Deviation and Variance Analysis of fluctuations of USD to INR in the 4th Quarter of FY 2023

Standard deviation for Quarter	0.537887
Variance Analysis Factor	0.413456

Interpretation: A standard deviation of 0.53 suggests that the exchange rate fluctuations during Q4 2023 were of moderate magnitude. This indicates a noticeable level of variability in the exchange rate values over the entire quarter.

Findings and Conclusions

It was found that a standard deviation of 0.53 suggests that the exchange rate fluctuations during Q4 2023 were of moderate magnitude. This indicates a noticeable level of variability in the exchange rate values over the entire quarter.



In conclusion, this study delved into the fluctuations of the Indian Rupee (INR) in relation to the US Dollar (USD) during the fourth quarter of 2023. Through a comprehensive analysis of the standard deviation of Variance Analysis significant insights were derived, shedding light on the behavior and trends of these currency pairs.

These findings not only contribute to the comprehension of INR fluctuations but also underscore the intricate relationship between economic events and currency value. However, there remains a plethora of avenues for further research, including the evaluation of long-term trends, comparative analyses with additional currencies, and the exploration of central bank interventions. By continuing to delve into these areas, we can deepen our understanding of the multifaceted dynamics that drive currency fluctuations, providing valuable insights for policymakers, investors, and researchers alike.

Suggestions and recommendations

1. **Volatility Analysis by Economic Events:** Investigate how specific economic events, such as interest rate decisions, trade agreements, or geopolitical tensions, impact the observed fluctuations in exchange rates. This could provide a deeper understanding of the drivers behind the fluctuations.
2. **Long-Term Trends and Forecasting:** Extend the analysis to identify long-term trends in the exchange rates and develop models to forecast future fluctuations. This could involve incorporating economic indicators, inflation rates, and global economic conditions to provide insights into the potential trajectory of exchange rates.
3. **Macro-Economic Indicators and Exchange Rates:** Research the relationship between key macroeconomic indicators, such as GDP growth, inflation, and trade balances, and their impact on exchange rate fluctuations. This could provide insights into how fundamental economic factors drive currency movements.
4. **Comparative Analysis of Exchange Rate Volatility:** Compare the exchange rate volatility of INR with other emerging market currencies to determine if there are common patterns or unique characteristics that emerge in different regions.

These research directions could help deepen the understanding of exchange rate fluctuations and their underlying drivers, providing valuable insights for policymakers, investors, and researchers.

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Annexures

USD to INR Exchange Rates for Q4 of FY 2023

Jan-23		Feb-23		Mar-23	
Date	\$1 -INR Rate	Date	\$1 -INR Rate	Date	\$1 -INR Rate
01-01-2023	82.7433	01-02-2023	81.7158	01-03-2023	82.4181
02-01-2023	82.6856	02-02-2023	82.0487	02-03-2023	82.3494
03-01-2023	82.7762	03-02-2023	82.4916	03-03-2023	81.712
04-01-2023	82.6606	04-02-2023	82.494	04-03-2023	81.7128
05-01-2023	82.6444	05-02-2023	82.3269	05-03-2023	81.7423
06-01-2023	82.2735	06-02-2023	82.7218	06-03-2023	81.8576
07-01-2023	82.2736	07-02-2023	82.7388	07-03-2023	82.0722
08-01-2023	82.2616	08-02-2023	82.6583	08-03-2023	81.9603
09-01-2023	82.1432	09-02-2023	82.5436	09-03-2023	82.0112
10-01-2023	81.64	10-02-2023	82.495	10-03-2023	82.0184
11-01-2023	81.7087	11-02-2023	82.4891	11-03-2023	81.9655
12-01-2023	81.0903	12-02-2023	82.5179	12-03-2023	82.0187
13-01-2023	81.2851	13-02-2023	82.5611	13-03-2023	82.4219
14-01-2023	81.2846	14-02-2023	82.8623	14-03-2023	82.3091
15-01-2023	81.2847	15-02-2023	82.7207	15-03-2023	82.7132
16-01-2023	81.6453	16-02-2023	82.7166	16-03-2023	82.6418
17-01-2023	81.56	17-02-2023	82.8083	17-03-2023	82.5312
18-01-2023	81.4209	18-02-2023	82.8142	18-03-2023	82.536
19-01-2023	81.255	19-02-2023	82.7731	19-03-2023	82.5441
20-01-2023	80.9763	20-02-2023	82.7206	20-03-2023	82.5196
21-01-2023	80.9762	21-02-2023	82.8987	21-03-2023	82.6627



22-01-2023	80.9647	22-02-2023	82.8434	22-03-2023	82.5195
23-01-2023	81.5146	23-02-2023	82.6357	23-03-2023	82.2535
24-01-2023	81.6303	24-02-2023	82.9334	24-03-2023	82.3474
25-01-2023	81.5048	25-02-2023	82.9291	25-03-2023	82.3474
26-01-2023	81.4584	26-02-2023	82.9275	26-03-2023	82.3483
27-01-2023	81.5235	27-02-2023	82.6728	27-03-2023	82.2404
28-01-2023	81.5155	28-02-2023	82.6411	28-03-2023	82.1643
29-01-2023	81.5058			29-03-2023	82.246
30-01-2023	81.5691			30-03-2023	82.1028
31-01-2023	81.786			31-03-2023	82.1807

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