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FLUCTUATIONS IN THE VALUE OF INDIAN RUPEES AT PAR WITH U.S. DOLLARS –AN EMPYRICAL STUDY

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A currency demand and fluctuation rate is the key to understand any economy's value that affects various factors leading through a thin line for one to be claimed as a smooth or chaotic flow of working according to its respectful reserves and currency patterns. The INR is primarily influenced by the market forces and the RBI trades vigorously in the market of currency to withstand and retain low instability in handling the exchange rate. Therefore, a comparison between INR and USD would be shown in this research paper that massively emphasis on the forms of how and why the currency value differs from each other, be it by the factors of economic, political or social force that governs economy. Analysis of current/fiscal account, statistical data, floating exchange rate and a look into the history decisions will give this research a vivid understanding of the currency reflection on the phases of economy (inflation and recession), forex, or a well-planned political aspect that is willingly showcasing the depreciation of values for a stable economy plan in India against USA.

According to / report,1 USD = 10.34 INR in (1983) and after 20 years 1 USD was of 47.5 INR (2003). It has been 359.39 % Δ in Indian Rupees against US Dollar. Due to government market intervention, fiscal & monetary policy and many other factors affecting economy and exchange rate of India . Factors such as, purchasing power of people, migration, trades of commodities and labor of the country affects its currency depreciation or appreciation rate that consist of a major impact of foreign exchanges. Currency value depends on the continuous activities taken place in the economy of a developed or developing country's investments that highlights the varied money arrays.

Money vs. Currency

Money is an intangible system of value that provides the means for the ongoing exchange of goods and services in a society. Money has taken many forms since it overtook the system of bartering. Currency is a tangible form of it. So, instead of, say, bartering agricultural produce for the clothing you may need, you can use currency (paper notes and coins) to obtain it. Money is used in a variety of ways, all related to its future use in some kind of transaction. Money is also referred to as a unit of account. That means it can be used to account for changes in the value of items over time. Businesses use money as a unit of account when they prepare a budget or give assets a value. Profits and losses are established and relied upon using money as a unit of account.

Statement of the Problem

The persistent decline in rupee is a cause of concern. Depreciation leads to imports becoming costlier which is a worry for India as it meets most of its oil demand via imports. Apart from oil, prices of other imported commodities like metals, gold etc., will also rise pushing overall inflation higher. Even if prices of global oil and commodities decline, the Indian consumers might not benefit as depreciation will negate the impact. The depreciating rupee will add further pressure on the overall domestic inflation and since India is structurally an import intensive country, as reflected in the high and persistent current account deficits month after month, the domestic costs will rise on account of rupee depreciation. Exchange rate risk also drives away foreign investors which in turn depreciates the local currency. Some of the principal factors that cause fluctuation in the exchange rate between two countries are inflation, interest rates, current account deficits, public debt, trading terms, political stability and economic performance. In this concern this study aims to explore the dynamics, factors influencing and effects of fluctuations in the exchange rate of Indian rupee.

Objectives of the Study

1. To study the historical exchange rate data between the Indian Rupee and the US Dollar.
2. To analyze the factors that contributes to the fluctuations in the exchange rate.
3. To understand the impact of macroeconomic factors such as GDP, inflation, FDI and trade deficit on Indian Rupee against USD

Methodology

This study has based on Secondary data only. The Secondary data have been collected through published articles Particularly, Updated Financial Report, Foreign exchange market, Reserve bank

Bulletin and Foreign Trade Report. The researcher also gathered information from various journals, magazines, newsletters, books, internet sources and several previous research studies.

Limitations of the study:

- This study covers Exchange Rate of Indian Currency with US Dollar only..
- This study covers only the major influencing factors of Dollar and Indian Currency.
- The data have been collected only for value Indian Currency at par with US Dollar
- No primary data were administered for this study

Review of the Literature

Anshu Grewal MRIEM, Rohtak, Haryana (India) (2013)" Impact of Rupee- Dollar Fluctuations on Indian Economy Challenges for RBI & Indian Government" In this study suggest that Grim global economic outlook along with high inflation, widening current account deficit and FII outflows have contributed to this fall. RBI has responded with timely interventions by selling dollars intermittently. But in times of global uncertainty, investors prefer USD as a safe haven.

Sunita Mishra (2014) "Empirical Analysis of Rupee Fluctuations against Us Dollar in Post Liberalization Period (1991-2013) In India**"** In her work has addressed that there is no two opinion about that RBI governor successfully managed the free fall of rupee during 2013-14 for which he got worldwide appreciation. Recently the government has also hinted that it would go with RBI in the fight against inflation.

Kanika Khera, Inderpal Singh (2015), " In their Research work the Effect of Macro Economic Factors on Rupee Value" This study suggest that the exchange rate is 85.2% dependent on Independent variables, i.e., Lending Interest Rate, Inflation, GDP, Current account Deficit, and FDI. λ The regression model predicts the outcome variable i.e., exchange rate, significantly well. Significance is 0.0045 which is less than 0.05

Nidhi Garg& Dr. Shakti Singh (2018)",Rupee-Dollar Fluctuation and its Impact on Indian Economy". This research paper study suggest that to attract investments, RBI can ease capital controls by increasing the FII limit on investment in government and corporate debt instruments and introduce higher ceilings in ECB's. Government can create a stable political and economic environment. However, a lot depends on the Global economic outlook and the future of Euro zone which will determine the future of INR.

Babu Rao Gona, Manamani Shook,(2019)“Exchange rate policy modeling and forecasting the exchange rate”: Indian rupee vis-à-vis the U.S. dollar. From the analysis, it came to know that the impulse response functions confirm that a shock to exchange rate produces movements in the other variables. Finally, in the model, the variables may impact either positively or negatively.

Mr. Shravan (2022), “Impact of COVID-19 on Indian Currency**”** This study suggest that important relation among inflation, foreign investment, current account deficit, export - import and depreciate in rupee value with response to the US dollar for post - Covid 19 period. Due to depreciation in the value of rupee impact on capital inflow, FDI& Import are adversely affected. This led to widening of current account deficit, foreign capital outflow, inflation. The analysis of this paper concluded that Indian rupee value highly depreciated in period of post Covid – 19.

Exchange Rate Policy of India and USA

In the post-independence period, India’s exchange rate policy has seen a shift from a par value system to a basket-peg and further to a managed float exchange rate system. With the breakdown of the Bretton Woods System in 1971, the rupee was linked with pound sterling. In order to overcome the weaknesses associated with a single currency peg and to ensure stability of the exchange rate, the rupee, with effect from September 1975, was pegged to a basket of currencies till the early 1990s. The United States does not have a specific exchange rate policy. Instead, the value of the U.S. dollar is determined by the foreign exchange market, where buyers and sellers of currencies trade based on supply and demand. The Federal Reserve, the central bank of the United States, can influence the value of the dollar through its monetary policy, such as setting interest rates, but it does not have a formal exchange rate policy.

Influence of Interest Rates

In most cases, a central bank cannot directly set interest rates for loans such as mortgages, auto loans, or personal loans. However, the central bank does have certain tools to push interest rates towards desired levels. For example, the central bank holds the key to the policy rate—the rate at which commercial banks get to borrow from the central bank. As a result, monetary policy changes that impact national interest rates change the value of that country's currency. A residual impact of raising or decreasing interest rates is that country's currency's value will become stronger or weaker, and downstream impacts on global exchange rates occur. Let's take a look at how monetary policy changes currency value and relative currency strength.

The below table clearly discusses national Interest rates and its effect currency values & Exchange Rates. It is clearly identified that there was strong Negative Correlation Co-efficient found in between the Exchange Rate with Interest Rate (Repo Rate) = -0.600405932. In the other side, it was obtained that there was strong Positive correlation Co-efficient presented in between the Exchange rate with Interest Rate (FED Rate)= 0.634970842/ This shows that there is strong Positive correlation have in between the Exchange rate and Interest Rate of USA

Inflation and its Effect on Exchange Rate

The rate of inflation in a country can have a major impact on the value of the country's currency and the rates of foreign exchange it has with the currencies of other nations. However, inflation is just one factor among many that combine to influence a country's exchange rate.

- Inflation refers to the general increase in prices within an economy over time.
- Inflation can also be thought of as a decrease in the purchasing power of money.
- Inflation is closely related to interest rates, which can influence exchange rates.

Table No. 1

Inflation Rate of India vs and its Effect of Exchange Rates

Year	Exchange Rate	India Inflation	USA Inflation
2013	58.5978	11.06	1.46
2014	61.0295	6.67	1.62
2015	64.1519	4.91	0.12
2016	67.1953	4.95	1.26
2017	65.1216	3.33	2.13
2018	68.3895	3.94	2.44
2019	70.4203	3.73	1.81
2020	74.0996	6.62	1.23
2021	73.918	5.13	4.7
2022	82.7862	5.72	6.5

Source: Secondary Data

The above table clearly explains the Inflation level vs Inflation of America and its effects of Exchange Rate. It is clearly understood that there a weak Negative Correlation found in between the Inflation level of India and the Exchange Rate is = -0.34499. In the other side, it was obtained that the correlation between the Exchange rate and USA Inflation rate recorded = 0.755457. This shows that there is strong Positive correlation have in between the Exchange rate and Inflation Level of USA.

Foreign Investments and Impact on Currency Value

Foreign currency effects are gains or losses on foreign investments due to changes in the relative value of assets denominated in a foreign currency. A rising domestic currency means foreign investments will have lower returns when converted back to the local currency. On the other hand, a declining home country currency will increase the domestic currency returns of foreign investments. Various strategies exist to deal with or reduce this type of currency risk. Foreign investments are complicated by currency fluctuations and conversions between countries. A high-quality investment in another nation may lose money because that country's currency declined. Foreign-denominated debt used to purchase domestic assets has also led to bankruptcies in many emerging market economies. Movements in currencies can have a substantial impact on the returns from foreign investments. Investing in securities that are denominated in an appreciating currency can boost total returns. However, investing in securities denominated in a depreciating currency can reduce profits.

Table No. 2
Analyse the Foreign Portfolio Investment and Exchange Rate (FPI)

Year	Exchange Rate	FPI
2013	58.5978	62287.9
2014	61.0295	256211.9
2015	64.1519	63662.21
2016	67.1953	-23079.1
2017	65.1216	200048.1
2018	68.3895	-80917.2
2019	70.4203	135993.6
2020	74.0996	103158
2021	73.918	50088.66
2022	82.7862	-132815

Source: Secondary Data

The above table clearly explains the correlation between the Indian Foreign Portfolio Investments and Exchange Rate. It is clearly understood that there is moderate negative obtained. The Correlation found in between Indian Foreign Portfolio Investments and Exchange Rate is-0.557154448

Impact of Economy Cycle on Currency Value

The GDP of a country is a representation of the dollar value of goods and services that have been produced within that country, generally over the span of one year. The GDP may also be thought of as the basic size of the country's economy.

Changes in the GDP reveal changes in economic growth and can directly impact the relative value of a country's currency. A high GDP reflects larger production rates, an indication of greater demand for that country's products. An increase in demand for a country's goods and services often translates into increased demand for the country's currency.

Table No. 3
Analyse the Relationship between Exchange Rate & GDP Rate

Year	Exchange Rate	GDP (Billions of US $)	Per Capita (US $)	Growth Annual % Change
2013	58.5978	1856.722121	1438.0575	6.3861
2014	61.0295	2039.127446	1559.8645	7.4102
2015	64.1519	2103.587814	1590.1739	7.9963
2016	67.1953	2294.797981	1714.2804	8.2563
2017	65.1216	2651.472946	1957.9688	6.7954
2018	68.3895	2702.929719	1974.3778	6.4539
2019	70.4203	2831.552223	2047.2327	3.7379
2020	74.0996	2667.687952	1910.4215	-6.5961
2021	73.918	3176.295065	2256.5904	8.6812

Source: Secondary Data

The above table clearly shows the correlation between the Relationship Between Exchange Rate & Indian GDP Rate with growth of annual Changes. It was found that there is Strong positive relationship occurred in between the Exchange Rate and GDP growth rate of India in US Dollar has registered 0.88036024. This shows that a strong positive was there is in the Exchange Rate and GDP Growth rate of India

Findings of study

- INR is primarily influenced by the market forces and the RBI trades vigorously in the market of currency to withstand and retain low instability in handling the exchange rate.
- US Dollar to Indian Rupee Exchange Rate is at a current level of 82.86, down from 82.93 the previous market day and up from 75.02 one year ago.
- The dollar was first adopted as the currency of the United States in 1785, replacing the Continental currency.
- Indian exports contracted for the 13^{th} month in a row in December 2015 as outward shipments shrank 14.75% to $22.2 billion amidst a global demand slowdown.
- US consumer price inflation which was edging up since October 2021 hit 8.6 per cent in May 2022, its highest level since December 1981, driven by high energy and food prices.

- India launched its 5 Year Plan, the Indian Rupee resulting used to peg with the U.S. dollar at a rate of 7.5 rupees = 1 dollar until 1971.
- The United States does not have a specific exchange rate policy. Instead, the value of the U.S. dollar is determined by the foreign exchange market, where buyers and sellers of currencies trade based on supply and demand.
- It is clearly identified that there was strong Negative Correlation Co-efficient found in between the Exchange Rate with Interest Rate (Repo Rate) = -0.600405932.
- It was obtained that there was strong Positive correlation Co-efficient presented in between the Exchange rate with Interest Rate (FED Rate)= 0.634970842
- It is clearly understood that there a weak Negative Correlation found in between the Inflation level of India and the Exchange Rate is = -0.34499.
- It was found that there is Strong positive relationship occurred in between the Exchange Rate and GDP growth rate of India in US Dollar has registered 0.88036024.

Conclusion

Whatever the fed bank do, it will affect the whole World as US dollar is considered as global currency reserve and India is not immune from that. Even though Emerging country (BRICS) are want to destroy the dominance of USA dollar after know it's dominance position whilst given sanction to the country which inject troops to the Ukraine (Russia) from SWIFT network and they wanted to trade with their own currencies but they will have to far to go as still global central bank has 60 % of their reserve as US dollar for trade settlement.However India purchase oil from Russia at discount rate despite the sanctions of western nations considered it as interest of Indian people , they have been negotiation between two countries to trade with Indian rupee through Vostro account but there is no data which determine Indian rupee trade and many of the settlements are settled through US dollar and rest of this UAE dirhamand major reason is that Russia is not willing to accumulated large amount of Indian rupee they wanted to use Indian rupee to trade with other countries as trade are favourable to them.

Finally this study suggest that fluctuation of Indian rupee and USA dollar will intact and whatever the USA bank will do, it will impact Indian rupee and there is a possibilities fluctuations may be moderate in future given India initiatives like digital hub, bilateral trade with friendly nations, Indian company strong valuations, and emerging market are try to given their contribution to the world trade with their own currencies.

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