

A Study on Fluctuating INR and USD Currency Patterns

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Abstract: This research paper discovers the impact of INR and USD variations of currency on Indian economy. The factors which have been created INR to depreciate were the weakening of current account deficit, capital flight of India, trade deficit rise in oil price and higher inflation. This paper also suggests the correlation between various currencies, that are, Pounds sterling, Japanese Yen, INR, USD that shows the monetary values of such countries where the investors can make decisions to invest their capital accordingly. Due to depreciating INR investors shell out money from India and purchase dollars, this has played a major role in the currency fluctuations patterns. It can be said that the global exchange rate is inflated from some variables, such as, global economic slowdown, evidenced to be significant in prompting the volatility. According to the findings the INR against USD with show a massive fluctuation relating to the Eurozone crisis (2011) had triggered the dive in INR. The abbreviating conditions can be better off by limiting the debt instruments and heft taxes through getting the intervention of RBI in the Indian economy respectively against USD monetary flow decisions of the currency and FOREX market.

Keywords: INR and USD, currency fluctuation, demand and supply, foreign exchange market.

Date of Submission: 14-09-2018

Date of acceptance: 29-09-2018

I. Introduction

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. (Geneva Reports on the World Economy 7).

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. (Thilak Venkatesan 2017).

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 economical, 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 FEDAI 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 (Thilak Venkatesan 2017).

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.

II. Review of Literature

(Ayush Singh, 2016), studied the impact of INR-USD on Indian economy. The factors which have been affecting the currency rates and leads to depreciation of Indian Rupee against US Dollar and affects a lot of economic growth indicators such as demand and supply of currencies, inflation, changing interest rates and other technical factors.

(M. Srikanth, 2014), analyzed that the foreign exchange currencies were greatly influenced by the forward markets which were very inclined to the changing interest rates, inflation, balance of payments and other macroeconomic factors. Over the years, Indian foreign exchange markets have been proved to be

profound, liquid and competent. Indian forward and futures market would continue to take the same position in the Indian foreign exchange market as these both are unique in terms of minimizing the exchange rate risk.

(Vinay Narang,2014), stated that India had been in current account deficit in the early 2000s, the reason being it was backed by capital flows. A surplus was noticed in the balance of payments due to this because capital flows was more than the current account deficit. Currently Rupee is less than unpredictable inclination; caused by abrupt alters in the forces of demand and supply in forex markets. In no time duration rupee has decreased in value more than 20%. In 2013, a peak leap of 68.85 INR of 1 US Dollar, shown in the exchange rate market has illustrated a major surprise to the Country. A main global affair which highlighted the sudden drop of INR against USD depicted the contraction of quantitative lessening and limiting the supply of US \$ 85 billion per month to improve US economy as stated by the Chairman of US Federal Reserve, Mr. Ben Bernanke.

(Prof Michael,2013), analyzed with the USD & INR historical data to understand as how the Indian Rupee affects the Indian economy. This paper has set up a regression model that can best forecast the INR-USD exchange rate. Regression analysis assist to key the most significant variables those hypothetically affect foreign exchange rates, Balance of Trade, Unemployment Rates, Stock Indices, Interest Rates and Inflation rate.

(Dr R Venkata Raman,2015), This study examined the extended bond between Stock Returns and four foremost Foreign Exchanges in India throughout the duration of the year time preliminary from 2000-January to 2014-June. On smearing the methods, such as, Multiple Break Point test, Unit-root test, Vector Error Correction Model, Johansen's Co- Integration. The outcome recommend that US dollar and Euro had lasting connection with CNX 500, Sensex and Nifty which was created numerically important. Experiments portray no extended term adding with Yen and GPB. Exchange rate impact the profits of the firm and also affect the returns on stock.

(Umanth Kumaraswamy,2017); Stock return and foreign exchange rates became substantial since 1997. Floating interest rate affects volume of trade and resilience in equity, which in turn subjects to economic and financial risks in the foreign exchange markets. An establishment from a study powerfully considers that Stock and Exchange Rate of Return were fixed at the point at itself and the definite relationship were contrary link returns from Foreign Exchange Rates and Indian Stock Market takings through the chosen study phase.

III. Need for Study

This topic highlights the main importance of currency fluctuation rates that happens quite frequently between the values of USD and INR because of the economic and political influences on the economy. The relationship of forex markets with the changing interest rates of the country's currency caused by the difference in the trades, monetary flow patterns and demand/supply of it. The recent fluctuations in 2018 and the factors leading to it.

Statement of the problem

The currency fluctuation between INR and USD by studying the different parameter emphasizes on not only the bad impression caused in an economy due to it, but also a reality checks of the global survival leading to many economic and political conflicts.

Through the method of correlation to investigate the significant issues that are responsible for such frequent fluctuation in both the currencies and its respective change in interest rates.

Objective of the study

- To analyze the fluctuations of INR against USD.
- To study the correlation between USD, Pound Sterling, Japanese Yen and Euro.
- To understand the investing decisions of the foreign investors to illustrate the position of global economic conditions.

IV. Research Methodology

This learning is based on the secondary data. The essential data, the INR/USD exchange rate was collected from the database on the Indian economy provided by the RBI. Other sources of data were collected from websites, reports and articles. Location of the study was India and USA. The study period was from 2010 to 2018. Foreign institutional investors were allowed to openly invest in the Indian stock market after 1997. The analysis of the data was done by correlation method. The data had been collected from various articles such as Perspectives on Forward Premium in India Forex Market by Maram Srikanth, Impact of Rupee- Dollar Fluctuations on Indian Economy by Ayush Singh.

Data Analysis and Interpretation
Correlation

Table1. Correlation among different currencies for the year 2018

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	.363**	1		
Euro	.441**	.910**	1	
Japanese Yen	.692**	.668**	.709**	1

The maximum positive correlation is seen between Euro and Pound Sterling (0.910) while the minimum positive correlation is between USD and Pound Sterling (0.363).

Table2. Correlation among different currencies for the year 2017

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	-.030	1		
Euro	-.313**	.788**	1	
Japanese Yen	.591**	-.277**	-.313**	1

The maximum positive correlation is shown by Pound Sterling and Euro (0.788) while the minimum negative correlation is seen between USD and Euro as well as Japanese Yen and Euro (-0.313).

Table3. Correlation among different currencies for the year 2016

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	.017	1		
Euro	-.224**	.550**	1	
Japanese Yen	-.292**	-.458**	.381**	1

The maximum positive correlation is seen in Pound Sterling and Euro (0.550) and there is minimum negative correlation between Pound Sterling and Japanese Yen (-0.458).

Table4. Correlation among different currencies for the year 2015

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	.834**	1		
Euro	.593**	.684**	1	
Japanese Yen	.776**	.526**	.661**	1

The maximum positive correlation is seen between Pound Sterling and USD (0.834) and the minimum positive correlation is between Pound Sterling and Japanese Yen (0.526).

Table5. Correlation among different currencies for the year 2014

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	-.016	1		
Euro	-.041	.840**	1	
Japanese Yen	-.268**	.856**	.875**	1

The maximum positive correlation is seen between Euro and Japanese Yen (0.875) and the minimum negative correlation is seen between USD and Japanese Yen (-0.268).

Table6. Correlation among different currencies for the year 2016

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	.953**	1		
Euro	.976**	.985**	1	
Japanese Yen	.795**	.792**	.793**	1

The maximum positive correlation is seen between Pound Sterling and Euro (0.985) and the minimum positive correlation is seen between Japanese Yen and Pound Sterling (0.792).

Table7. Correlation among different currencies for the year 2012

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	.936**	1		

Euro	.802**	.916**	1	
Japanese Yen	.858**	.724**	.498**	1

The maximum positive correlation is seen between US Dollar and Pound Sterling (0.936) and the minimum positive correlation is seen between Euro and Japanese Yen (0.498).

Table8.Correlation among different currenciesfor the year2011

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	.959**	1		
Euro	.820**	.905**	1	
Japanese Yen	.958**	.933**	.864**	1

The maximum positive correlation is seen between US Dollar and Pound Sterling (0.959) and the minimum positive correlation is seen between US Dollar and Euro (0.820).

Table9.Correlation among different currencies for the year2010

	US Dollar	Pound Sterling	Euro	Japanese Yen
US Dollar	1			
Pound Sterling	.721**	1		
Euro	-.627**	-.064	1	
Japanese Yen	.335**	.086	-.151	1

The maximum positive correlation is seen between US Dollar and Pound Sterling (0.721) and the minimum negative correlation is seen between US Dollar and Euro (-0.627).

Rise and fall in INR against US Dollar

US Dollar



The Rupee had touched all time low by 53.40 to 1 dollar on December 2011. The fall was nearly 21 per cent since August 2011 (when it was 44.04). The proximate causes were the weakening current account deficit and capital flight from India. Eurozone crisis had caused the Euro to drop against the dollar (by almost 9 % since August), which had consistently triggered the Rupee to plunge against the dollar.

After the plunge of 2011, in August 2013 rupee had fall to 68 against dollar was major single-day drop since October 1995. Due to trade deficits, a rise in oil prices India imports just about 80% of its oil and there are fears the higher prices will tip to higher inflation and a worsening of India's deficit.

In the year 2014, INR was ahead of other Asia-Pacific currencies. INR was Rs61.8 against the USD initially but it recorded a gain of 327paise in a period of six months, reason being the fund inflows. There was a deep fall in INR in August when the INR touched its lowest Rs68.80.

In the year 2016, the INR started with Rs66 and had a further fall to Rs68 on January similar to the fall on September 2013. The major factor stated to be the global economic slowdown due to devaluation of China's Yuan. Crude oil prices are major in terms of currency fluctuations as US has most of the imports of crude oil and decline in its prices leads to strengthening of Dollar. Other impacting factors were FII and India's Trade Deficit.

INR has seen to be one of the worst performing currencies in 2018 due to strengthening of US Dollar and further compared to the peers. The reinforcement of global financial conditions has impact on the currencies

leading to low values. The rising interest rates in the US has allowed more investments making the currency stronger. Investors shell out money from India and purchase Dollars. Investors attitude also has a major role to play in the currency fluctuation.

V. Conclusion

The study analyzed the effects on economy growth and factors affecting to drop in the value of currency. Indian rupee had drop against US Dollar coming to all time low 70 INR2018. Eurozone crisis had triggered the dive in Indian rupee in 2011. Ugly global economic outlook along with high inflation, broadening current account deficit and FII losses have contributed to this drop beside Indian companies were also broadcasting massive foreign exchange losses due to the weakening of Indian rupee.

This study used CORRELATION model correlating USD, Pound Sterling, Japanese Yen and Euro evaluating maximum and minimum relationship between them. The period of study was of 8 years from August 2010 to July 2018. It can be said that global exchange rate is inflated from some variables which evidenced to be significant prompting the volatility.

The currency fluctuations undoubtedly have been illustrating the impacts of Global economics and Euro zone on INR. The crude oil, political agendas and the attitude of foreign institute investors pressurizing the very urge of monetary flows in the economy resulting in the foreign exchange losses for many companies in India due to depreciation of INR. Although, put off in imports and more of exports in the Indian trades improving the current account deficit. A prediction according to UBS report (Business Standards), Indian currency may fluctuate between 68 to 72 INR against US Dollars in the limited time span because of growing external threats to the financial economy. The Hindu News added that in case of continuous downfall in the value of INR, the RBI will intervene by seeking perks for FII and limiting the debts instruments to prevent from worsening of the Indian currency.

According to our findings, the INR against USD will show a massive fluctuations regarding to various factors showcased in this research paper through eliminating the hefty taxes by the Indian government to promote the domestic institutional investments in the economy, development from the trades and schemes that will interests the foreign investors to build up the worth of the INR in Global economics. The legitimacy of the currency influenced by deficits and surpluses should be accountable for the stability of survival and competitiveness in the currency markets.

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Taher Ali Kapadiya,, Aishwarya Tak, Smrity Singh, Dr Varsha Agarwal "A Study on Fluctuating INR and USD Currency Patterns " *IOSR Journal of Business and Management (IOSR-JBM)* 20.9 (2018): 57-61.