

Depreciation of Rupee with Respect to US Dollar

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Abstract— The depreciation of the rupee has become a household topic nowadays and with the rupee hitting lower and lower levels it is instilling the citizens of India with fear. A country’s economic system is vastly dependent on how its currency is doing and it is our job to at least understand the rupee’s situation briefly. This paper will focus on how the rupee value has changed since 1947, some of the causes and effects of a depreciated rupee in current time and the measures the government has already taken and what it, along with the citizens, can further do to help grow the rupee or at least keep it from falling further. Specifically speaking about the causes and effects, the paper will touch up on the topics of interest rate hikes, imports and exports, increased cost of traveling and education abroad, increasing oil prices, fiscal deficit and gold prices. All the research done is through online resources from trusted websites with a main objective of providing an understanding to the readers about the Indian economy and rupee fluctuations.. It would also like to show that the rupee depreciation has more negative effects than positive effects and strict measures should be taken to improve it.

1.INTRODUCTION

Currency depreciation is the fall of a currency in comparison to another foreign currency. It is the loss of value of a country’s currency on the basis of a typical floating exchange rate system. For example, if 1 dollar was approximately 60 rupees in 2014 and 1 dollar is approximately 78 rupees in 2022 we can conclude that the rupee has depreciated. The Indian Rupee has depreciated not only against the US Dollar but many other currencies too, though the main focus of this research paper is the Dollar vs Rupee ratio as the US Dollar is considered a global currency. There are two types of exchange rates : fixed exchange rate and fluctuating/flexible exchange rate. Due to foreign exchange rate the value of a currency keeps fluctuating constantly while under the fixed exchange rate it remains constant with respect to another particular currency or gold. In the post-independence period from 1947 to 1971 India followed the par value system of exchange rate whereby the rupee’s external par value was fixed at 4.15 grains of fine gold (Dua and

Ranjan, 2010). RBI maintained the par value of the rupee within the margin of +1%/-1% using pound sterling as an intervention currency (Dua and Ranjan, 2010). The Bretton Woods System then collapsed in December of 1971 and the rupee was linked to the pound sterling (Dua and Ranjan, 2010). The pound itself was fixed with the US dollar under the Smithsonian Agreement of 1971, due to which the dollar: rupee ratio remained pretty stable too (Dua and Ranjan, 2010). After that in September 1975, the rupee was pegged to a basket of currencies (names of which were kept secret) to overcome weaknesses of single currency peg and ensure stability of the rupee (Dua and Ranjan, 2010). In July 1991 the effective pegged exchange rate system came to an end and market determined exchange rates (flexible exchange rate) came into play from March 1993. Ever since then till 2010 the rupee has primarily depreciated against the dollar except for in the time periods 2003-2005 and 2007-2008 due to the dollar’s global weakness and large capital inflow into India (Dua and Ranjan,2010). In 2016 and 2020 due to the demonetization and Covid-19 pandemic respectively the rupee reached its respective all-time lows. Now, at the time of writing this paper on June 10th 2022 the Rupee is at another all-time low with the dollar equalling 78.1484 rupees.

Table I: Dollar: Rupee ratio from 1947 to 2022

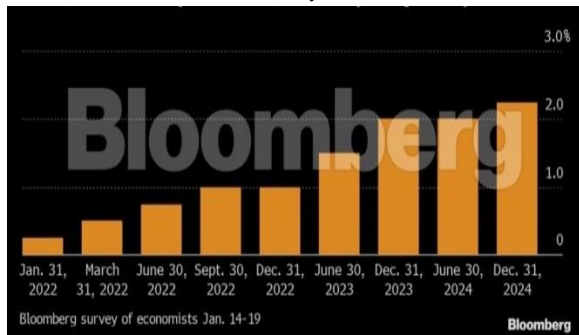
Year	Dollar to rupee	Year	Dollar to rupee	Year	Dollar to rupee	Year	Dollar to rupee	Year	Dollar to rupee
1947	4.76	1963	4.76	1979	8.13	1995	32.43	2011	46.67
1948	4.76	1964	4.76	1980	7.86	1996	35.43	2012	53.44
1949	4.76	1965	4.76	1981	8.66	1997	36.31	2013	56.57
1950	4.76	1966	6.36	1982	9.46	1998	41.26	2014	62.33
1951	4.76	1967	7.5	1983	10.1	1999	43.06	2015	62.97
1952	4.76	1968	7.5	1984	11.36	2000	44.94	2016	66.46
1953	4.76	1969	7.5	1985	12.37	2001	47.19	2017	67.79
1954	4.76	1970	7.5	1986	12.61	2002	48.61	2018	70.09
1955	4.76	1971	7.49	1987	12.96	2003	46.58	2019	70.39
1956	4.76	1972	7.59	1988	13.92	2004	45.32	2020	75.8
1957	4.76	1973	7.74	1989	16.23	2005	44.1	2021	73.93
1958	4.76	1974	8.1	1990	17.5	2006	45.31	2022(June)	78.15
1959	4.76	1975	8.38	1991	22.74	2007	41.35		
1960	4.76	1976	8.96	1992	25.92	2008	43.51		
1961	4.76	1977	8.74	1993	30.49	2009	48.41		
1962	4.76	1978	8.19	1994	31.37	2010	45.73		

Source:<http://164.100.47.193/fileupload/current/126629.pdf>

2. USA FED RATE HIKE AND INFLATION

In May of 2022, The United States of America Federal Reserve raised its interest rate by 50 base points (one hundredth of a percentage point) (Harris, 2022). This was done to fight against the increased rates of commodities due to inflation (Rao, 2022). The Covid-19 pandemic had a huge impact on the economy of the USA with supply chain issues and workers shortage. This led to increase in prices amidst the growing demand for resources/ commodities. Adding on to this was the Russia-Ukraine war which increased oil and gas prices across the globe. To maintain the economic and financial stability of the nation the Fed decided to combat the problem with increased interest rates so that companies and individuals will have to pay more to borrow money, in turn reducing the demand. For Indian companies, this is likely to impact availability and cost of overseas finance. Foreign Institutional Investors (FIIs) are investors or companies that invest in countries which are not where their headquarters are located. They are outside entities investing in a nation’s financial markets. FIIs have sold more than about 29 billion dollars’ worth of shares in the year 2021-2022 so far (Jayakumar, 2022). The increase in Fed rates impacts FIIs in developing countries like India. Higher rates of interest in the USA will lead these companies or investors to pull out money from the Indian market. The cumulative Foreign Portfolio Investments (FPI) flow in fiscal 2021 was \$3.76 billion, which has been more than offset by the FPI outflow of \$4.6 billion in January 2022 alone (Jayakumar, 2022). As money keeps flowing out of Indian markets, the dollar-rupee rate keeps depreciating and hitting lower levels.

Figure I: Expected increase in Fed rates over the next two years.



Commerce and industry ministry, RBI, X-Rates

3.IMPORTS AND EXPORTS

Foreign trade is one of the spaces that is directly affected by the depreciation of the rupee. India is primarily an import-based country and with the depreciating rupee the cost of imports is increasing, putting pressure on the Indian economy. With the increase in dollar: rupee ratio importers will now have to pay more money to obtain the same resource they obtained at a lower cost in previous years. For example: - The cost of 1kg apples in the USA is 1 dollar and an Indian importer will have to pay 1 dollar to get them. In 2014 the importer would have had to pay approximately 60 rupees for the apples but now with the depreciated rupee they will have to pay approximately 78 rupees. Companies importing raw materials, capital intensive sectors and foreign borrowings will be hurt the most; this in turn will have a say in the stock markets of which these companies are a part ("What is the Rupee Appreciation And Depreciation Impact on Stock Market", 2022). With the increase in cost of imports comes the increase in inflation in the country too. Headline inflation in March stood at 6.95%, coming in above the RBI’s comfort level of 6% for a third consecutive month. This means that we will have to spend more on commodities and that the household budget will get tighter (Shroff, 2022).

Exports have had the opposite effect. Exports are booming since and becoming more competitive in the global market. The country’s merchandise exports during April-February period stood at \$374.05 billion, a jump of 45.80 per cent over \$256.55 billion in the year-ago period (Batra, 2022). A weakened rupee benefits a country’s exporters and they now obtain more money for the same good/service. With the increase in export value and higher price of imports, consumers will start preferring to buy from the domestic industry. They will obtain goods at a cheaper price while also encouraging/improving the domestic industry. (Batra, 2022)

Figure II: Impact of rupee depreciation on imports, exports and inflation between 2013 and 2021



THE IMPACT OF ₹ FALL

	Depreciation of ₹ against \$ in %	Growth in merchandise exports in %YoY	Growth in yoy merchandise imports in %	WPI fuel and power inflation in %YoY	WPI inflation in manufactured items
2013-14	11.13	4.66	-8.3	7.09	3.03
2015-16	7.03	-15.48	-14.96	-19.68	-1.8
2018-19	8.47	8.75	10.42	11.57	3.6
2020-21	4.75	-6.9	-16.91	-8.02	2.7

Source: Commerce & Industry ministry, RBI, X-Rates

Commerce and industry ministry, RBI, X-Rates

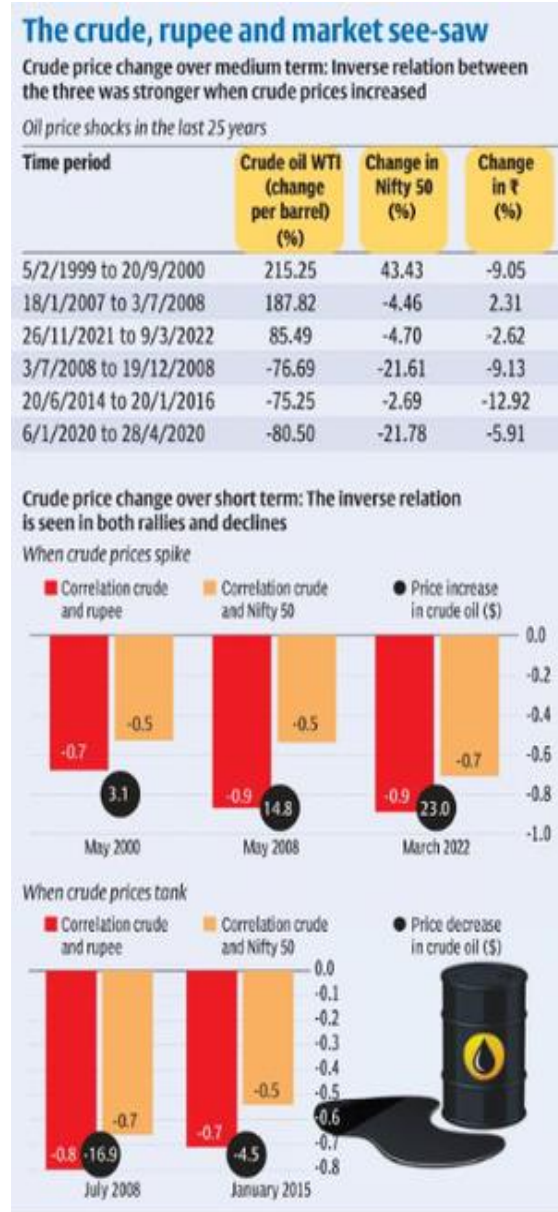
4.INCREASED COST OF ABROAD TRAVEL

Due to revenge travel (the urge to do a lot of traveling before being unable to do so again) and the alleviation of Covid-19 lockdown and Covid-19 restrictions people are looking to travel more and more. A point to be considered before planning is that airplane ticket prices to holiday shopping prices have all increased with the fall in rupee. Long distance destination travels such as the UK, USA, and Europe have mainly increased in expense but this will fall back to normal once the oil prices reduce and the rupee appreciates again (Deepika, 2022). As overseas travel has become expensive, one advantage to India is that domestic tourism is increasing. The domestic tourism levels have already crossed the pre-pandemic levels and are increasing week by week (Deepika, 2022). There is increasing demand for Jammu, Kashmir, Leh, Goa, Himachal Pradesh, and Adaman and Nicobar Islands. Similar to the trends shown by transportation costs, the cost of education abroad is increasing too. Parents are having to spend more money to send their children abroad and pay for their studies (Neogi, 2022). The dream to study in these universities abroad is becoming distant for aspirants and for people already studying there sustaining themselves is becoming harder. When the rupee falls, the rupee amount required to pay in dollars will become higher. Hence even if the actual tuition price in dollars does not increase, the money in rupees needed to be spent is going up. As people sending money from India are facing a disadvantage, people sending money from the USA (NRIs) are having an advantage as each dollar

gets converted into more rupees than before (Neogi,2022).

5.EFFECT OF INCREASING OIL PRICES

Figure III: The relation between the rupee, Nifty50 and crude oil prices

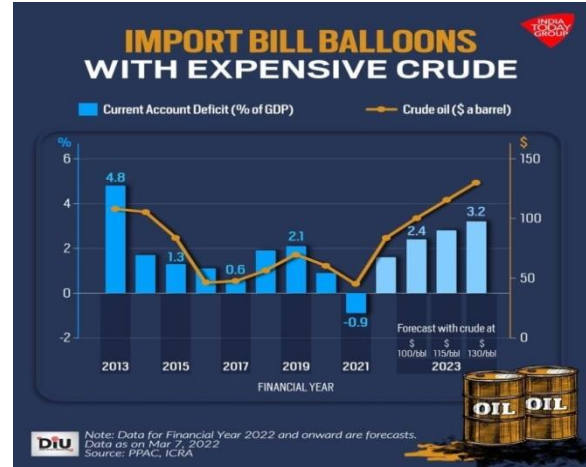


Source: <https://www.thehindubusinessline.com/data-stories/data-focus/how-do-crude-price-movement-impact-rupee-stock-market/article65245491.ece>

India is a huge importer of crude oil. It imports over 80% of its crude oil usage, mainly from gulf countries such as Saudi Arabia, Iran and Iraq. When we import

stuff from other countries we pay in an internationally exchangeable currency which is usually the US dollar. As per a Bank of Baroda report published on January 19 2022, a 10% increase in crude oil prices will lead to an increase of 0.9% in the Wholesale Price Index (WPI). It will also lead to the increase in Consumer Price Index (CPI) by 5%, meaning with an increase of 10% of prices of oil there will be an increase of 5% in prices of goods in India (Gupta and Mazumdar, 2022). The report also says than with an increase of oil prices by 10%, India's Current Account Deficit (CAD is the shortfall between the money received by selling products to other countries and the money spent to buy goods and services from other nations) will increase by approximately 15 billion dollars or 0.4% of the GDP (Gupta and Mazumdar, 2022). This in turn leads to the depreciation of the rupee, and since we import by paying in dollars we will have to flush out higher amounts of money. Analyzing the relationship between the oil prices and rupee in the past 25 years we can see the following results:- In 1999 due to strong need for oil by China and India the prices rose by 215.25% in 19 months and as a result the rupee depreciated by 9% (Murthy, 2022). In 2007 although the oil prices soared to a high of 145 dollars per barrel due to tensions between US and Iran along with demand from other nations., the rupee appreciated by 2.3% (Murthy, 2022). In 2022 due to the Russia-Ukraine War the oil prices reached 140 dollars a barrel in March while the rupee is again depreciating. It was found that when crude oil prices move sharply in either direction in a short period (say one month), then the rupee and the Nifty50 move in the opposite direction in many instances; but when the period of extended crude price shocks are considered (spanning several months), the relationship is very weak during crude price decline (Murthy, 2022, para 3 and 4). Crude oil has been determining the way the rupee moves since a long time, and usually with increasing crude oil prices the rupee depreciates, leading to inflation which affects the Indian economy.

Figure IV : The trends of Current Account Deficit and crude oil



6.FISCAL DEFICIT AND IMPACT OF GOLD

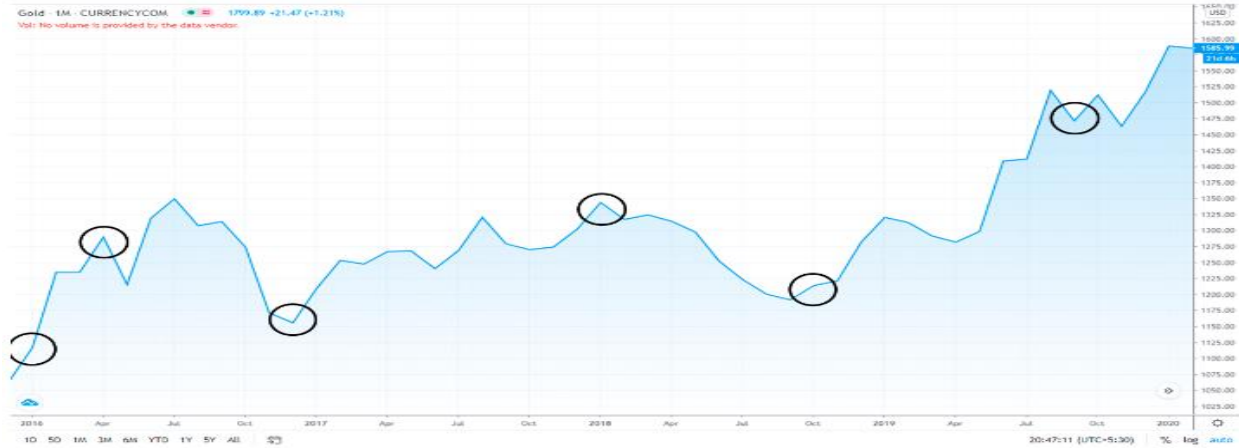
Fiscal deficit is the shortfall of the government's revenue in comparison to its expenditure. In simple terms it is the difference between the total revenue earned and total expenditures of a country in a fiscal year. The fiscal deficit of India in 2021-22 came out to be 6.71% of the GDP which translates out to be 15, 86,537 crore rupees (India's Fiscal Deficit For 2021-22 At 6.7% Of GDP, n.d.). As the Indian Government borrows more money to finance their fiscal deficit, the debt continues growing further due to which the interest rates grow. As the spike in the money the government borrows increases, the risk of rating agencies downgrading India's credit system also increases (Kaul, 2020). This then leads to the further falling of the Indian Rupee.

India has an obsession with gold and most of this luxury is imported by our country from foreign nations. With the increasing gold prices and high import of a country, its currency's value decreases. The gold rates fluctuate daily and if India is exporting more than importing, the Indian Rupee will increase when the gold rates increase (How currencies are affected by gold, n.d.). The vice versa will happen if the exports triumph over the imports. Importing gold can also lead to inflation in the currency. If the central bank of a country imports gold then it will be printing a larger number of currency notes to pay for it. The increase/surplus of currency notes will lead to inflation. Gold prices and the fiat currency (a currency that is not dependent on any commodities) usually have an inverse relationship whether it be with Indian

Rupee or the US Dollar (How currencies are affected by gold, n.d.). The graphs below connect the trends between gold prices and the US Dollar; there will be a

similar relationship between gold prices and Indian Rupee.

Figure V: Line chart representing prices of gold between 2016 and 2020



Source: <https://smartmoney.angelone.in/chapter/amp/the-relation-between-gold-usd-and-the-inr/>

Figure VI: Line chart representing the value of the dollar as a currency between 2016 and 2020



Source: <https://smartmoney.angelone.in/chapter/amp/the-relation-between-gold-usd-and-the-inr/>

If we analyze Figure V and Figure VI carefully we can observe the inverse relationship between the currency and gold prices. For example, in the start of 2016 when the gold lost value the dollar appreciated, and in April 2016 when the gold was on a high the dollar depreciated. (The Relation Between Gold, USD, and the INR, n.d.)

7.MEASURES THE GOVERNMENT HAS TAKEN

The last time the government exclusively acted on this issue was in 2018 when they proposed a series of changes to curb the falling of the rupee. Focusing on

those measures will be the main priority of this section in the research paper.

- Manufacturing companies borrowing up to 50 million dollars through External Commercial Borrowings (ECBs) will be able to do so only for 1 year and not 3 years as done previously (Mundargi,2021) ECBs are loans taken by an Indian company from a non-Indian company. ECBs have become a form of major capital like FDI and FII (Jose, 2016). ECBs also contribute a large percentage of the total capital flow into the country.

- Exemption from withholding tax for issuance of masala bonds and removing restrictions on Indian banks' market making in masala bonds. Masala bonds are rupee denominated instruments issued by Indians to foreign investors with an aim to attract investments/funds for projects. Indians have long availed loans from foreign entities in dollars, but due to this they have to pay more rupees to clear the loan when the rupee depreciates. In the case of masala bonds the loan is given in rupees itself and the risk gets transferred to the investors who will have to take into account how the economy and rupee is doing (The Financial Express, 2018) the demand for masala bonds is dependent upon how well the rupee is doing. If the rupee is depreciating then the foreign investors are unlikely to increase rupee-denominated assets. The money raised by the companies with masala bonds flows back into the country, strengthening the rupee. This was applicable only till March 31, 2019 (Government moves to stabilize rupee, 2018).
- Steps to reduce the amount of imports and increase exports. This includes stopping the import of non-essential goods while keeping a focus on exporting domestic goods. (Government Steps in to Curb Rupee Fall, 2018)
- Removal of the conditions 'FPIs (Foreign Portfolio Investors) investment in a single corporate entity cannot exceed 20% of its corporate bond portfolio' and 'FPIs cannot invest more than 50% of an issue of corporate bonds' (Government moves to stabilize rupee, 2018). This will serve to attract more FPIs into the country thus helping improve the rupee.
- Reviewing the mandatory hedging conditions for infrastructure ECB loans. This step will help decrease the demand for dollars in the Indian market. (Government Steps in to Curb Rupee Fall, 2018)
- In 2014 the "Make in India" initiative was launched to control imports and increase exports. The success of this movement was anticipated to boost Indian Rupee,

8.WHAT CAN THE GOVERNMENT AND PEOPLE DO FURTHER?

1. Reducing the usage of oil and gas as India imports most of it from other countries. We have to rely more on public transport and other environment friendly modes of transport. This not only is a step towards helping the rupee, but also a step towards a better environment. (Prabhu,2018)
2. Reduction in usage and purchase of gold.
3. Increase duty on imports of non-essential items. Choosing locally manufactured goods rather than imported ones. Reducing the demand in the market for imported goods and directing efforts towards making India export oriented. (Ali,2018)
4. Strengthening of the banking system.
5. Working and trading in non-dollar currencies, especially the rupee.
6. Limiting the amount of funds Indian firms can invest abroad while trying to make India more lucrative for foreign investments.

9.CONCLUSION

The depreciation of a currency has far more pressing consequences than just hurting national pride. As it can be understood through this research paper the rupee's fall has an effect even at the individual level, affecting our day to day lives. The only thing observed in favor of a weak rupee is the improvement of international competitiveness of Indian exports. A point to note in this research paper is that, inflation and the rupee changes are based on a wide array of factors and a single factor cannot have a decisive say as to in which direction the trend will go. Both domestic and international conditions are indicating that there will be continued pressure on the rupee, especially with the already decided Fed rate hike in the coming years. In my observation, the rupee is likely to fall further or remain constant rather than appreciate. Even with all the factors affecting the rupee, it does not mean that the rupee is doomed to only depreciate further forever. The rupee can appreciate in later years if the government takes a few steps, however long they may be. Only with continuous effort, though a very difficult task, will the dollar: rupee ratio goes back to 1:60.

10.LIMITATIONS

The entire data collected is secondary with the paper mainly covering the current year of 2022. All mistakes

with respect to this research paper are made by only me and further scope for research is definitely present.

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