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## Foreign exchange reserves in India: Composition and impact

**K Poongothai and S KalaiPriya**

**Abstract**

In today's world, large Foreign Exchange Reserves and its strengthened balance of payments symbolizes the country's strength and worth, as it indicates the strong backing the currency of the country has. There are many Macroeconomic variables attracting the Foreign Exchange Reserves for a nation. The study is an attempt in such nature of analysing the impact of the Foreign Exchange Reserve holdings on Inflation (both consumer price index and wholesale price index) in India. The variables taken for analysis are on the basis of earlier studies of various nations including IMF. Conclusion based on results shows the better influence posed by the Foreign Exchange Reserves on inflation.

**Keywords:** Foreign exchange reserves, wholesale price index, consumer price index and IMF

### 1. Introduction

One major development in global financial system for the past two decades has seen the rapid growth of Foreign Exchange Reserves. In India, the approach in holdings as well as management of Foreign Exchange Reserves has been directed towards the wealth maximisation of the nation, other than maintaining trade balances and others, irrespective of costs involved in it. In today's world, large Foreign Exchange Reserves and its strengthened balance of payments symbolizes the country's strength and worth, as it indicates the strong backing the currency of the country has. Hence, it attracts the confidence of international community present inside the country, as well as in the globe towards the country while a low Foreign Exchange Reserves signals the opposite. It is then necessary for the emerging economy to hold large Foreign Exchange Reserves against disruptive effect of abrupt capital outflows.

### 2. Problem Discussed

Since the collapse of the Bretton Wood system many nations especially low income and developing nations have made tremendous increase in their accumulation of external reserves. India is one amongst the eight Asian nations (as on January 2014) of the top ten Foreign Exchange Reserves (excluding currency swap and outstanding loans of IMF or others) holding nations in the globe. Indian reserve holding accumulation has seen an extreme increase in the past twenty years, which rose from US \$ 5.8 million in 1990-1991 to US \$ 2.9 billion in 2012-2013. India has its own place and pace amongst other nations in the globe towards foreign reserve accumulation. Foreign investment followed by external commercial borrowings of domestic firms has led to rise in accumulation of Foreign Exchange Reserves of the nation. Irrespective of volatility in accumulations, Indian reserves holdings is rising steadily. In such case, the Foreign Exchange Reserves have a significant impact on its inflation and economic growth of the nation. There are also a various factors contributed towards the growth Foreign Exchange Reserves during the past. With this setting, the researcher has framed the following research questions.

- To analyse the impact of Foreign exchange Reserves on Inflation in India.

### 3. Literature Samples

- Imran Sharif Chaudhry *et al.* (2011) <sup>[1]</sup>, "Foreign Exchange Reserves and Inflation in Pakistan: Evidence from ARDL Modelling Approach" found hike in prices of goods and services and foreign exchange are two important aspects which are blamed for such

bumpy vacillation in economic growth of the world economies like all other political, social and economic factors. The study traced out the nature of relationship and speed of adjustment in the concerned variable due to fluctuations in the level of foreign exchange reserves. The results indicate that the rise in foreign exchange reserves leads to lower the rate of inflation in Pakistan during the study period.

- Andreas Steiner (2009) [2], “Does the Accumulation of International Reserves Spur Inflation? A Panel Data Analysis” stated that Central Banks’ international reserve holdings have increased significantly in the recent past. This paper assesses the consequences for monetary policy both on theoretical and empirical grounds. The study found that on the level of individual countries, the growth of domestic Central Banks assets is the major monetary determinant of inflation. The growth of reserves, however, causes inflation in a subsample including only moderate inflation rates.

**4. Objectives**

The primary objective of the study is

- To examine the impact of Foreign Exchange Reserves on Inflation (WPI and CPI) in India.

**5. Hypotheses for the Study**

**H<sub>01</sub>:** There is no impact of Foreign Exchange Reserves on Wholesale Price Inflation.

**H<sub>02</sub>:** There is no impact of Foreign Exchange Reserves on Consumer Price Inflation.

**6. Methodology of the Study**

**6.1 Sources of Data**

The study is based on secondary data and the data reliable for analysis are collected from Statistical handbook of Indian Economy 2016 and the website of Reserve bank of India.

**6.2 Period of the Study**

The study covers the period of 10 years from 2006-2007 to 2015-2016

**6.3 Tools Used For Analysis**

The collected data have been used for analysis with the help of Descriptive statistics and Regression.

**7. Significance of the Study**

Foreign Exchange Reserves accumulation has gained significance both for the welfare of the nation internally and internationally. The study has its implications beneficial to policymakers, various officials of government, investors both from domestic and abroad as well as Non-resident Indians, academicians and future researchers. The study possesses academic relevance in new theoretical and practical knowledge undoubtedly.

**8. Limitations of the Study**

The major limitations of the study are

- The study is made only in consideration with India and not applicable to any part of the globe.
- The study fully depends on the secondary data, which has its own limitations.

**9. Analysis**

**Table 1:** Foreign Exchange Reserves Of India (1950-1951 TO 2015-2016) (in US \$ Million)

Year	Sdr	Gold	Foreign Currency Assets	Reserve Tranche Position	Total Reserves
1951-1960	0	247	1290.7	0	1537.7
1961-1970	0	248	432.67	0	694.89
1971-1980	308.6	303.9	2633.9	0	3246.4
1981-1990	235.9	403	4940.2	0	5579.1
1991-2000	42.1	3676.3	18014.4	0	21732.9
2001-2010	505.3	6814.5	153788.5	930.37	161852.6
2011-2016	1502	20115	336104	2456	360176

Source: Statistical Handbook of Indian Economy 2016

Table 1 indicates the growth of Foreign Exchange Reserves in India since the enactment of first five-year plan. The growth was not static and has undergone many fluctuations due to various causes. The declaration of emergency and liberalization played a major role in accumulation of Foreign Exchange Reserves of the nation. The nation at present has enough reserves to meet uncertainties of having nearly 375 billion US Dollars.

**Regression Analysis of Foreign Exchange Reserves and Inflation in India during the Period from 2006-2007 to 2015-2016**

**H<sub>01</sub>:** There is no impact of Foreign Exchange Reserves on Wholesale Price Inflation.

**Table 2:** Regression analysis of Foreign Exchange Reserves and Wholesale Price Index Inflation of India during the period from 2004-2005 to 2013-2014

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F Value	Sig	Significant/ Non –significant
1	.560 <sup>a</sup>	.314	.237	.14265	14.113	.000	Significant

- a. Predictors: (Constant), RESERVE
- b. Dependent variable: WPI INFLATION

Table 2 shows the Regression analysis of Foreign Exchange Reserves and Wholesale Price Index Inflation of India during 2004-2005 to 2015-2016. The relationship between the variables is found with the R<sup>2</sup> value of 0.314, which

states that the Foreign Exchange Reserves have not contributed highly for the Wholesale Price index inflation in India during the study period. The calculated F value is more than the table value and hence, the null hypothesis is

rejected and there is a significant impact by Foreign Exchange Reserves on Wholesale Price Inflation.

**H<sub>02</sub>:** There is no impact of Foreign Exchange Reserves on Consumer Price Inflation.

**Table 3:** Regression Analysis of Foreign Exchange Reserves and Consumer Price Index Inflation of India during the Period 2006-2007 TO 2015-2016

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F Value	Sig	Significant/ Non-significant
1	.840 <sup>a</sup>	.706	.673	.11520	21.622	.001	Significant

c. Predictors: (Constant), Reserve

d. Dependent variable: Wpi Inflation

Table 3 shows the Regression analysis of Foreign Exchange Reserves and Consumer Price Index Inflation of India during 2006-2007 to 2015-2016. The relationship between the variables is found with the R<sup>2</sup> value of 0.706, which states that the Foreign Exchange Reserves have contributed significantly for the Consumer Price index inflation in India. The calculated F value is more than the table value and hence, the null hypothesis is rejected and there is a significant impact by Foreign Exchange Reserves on Consumer Price Inflation.

3. Statistical Handbook of Indian Economy 2013, Reserve Bank of India.
4. Databases of Economic and Political weekly.
5. Annual reports of Reserve Bank of India (various issues).
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## 10. Suggestions

The suggestions based on findings are:

- To have an increased intrinsic value to the nation, Foreign Currency Assets and gold reserves of India should be maximized, which can also be used in the reigns of crisis and war.
- A separate authority looking after the Foreign Reserve Management can be builded up for proper control of the reserves.
- The oil prices can also be reduced to a considerable extent through proper direction of excess reserves, the result of which can reduce inflation of the nation.

## 11. Conclusion

Globally, emerging economies are found competing with the developed economies in accumulating foreign reserves. The reserves accumulated were used as an insurance cover against various economic shocks and will be used for the same in future. The countries intended to hold foreign reserves because they think only about prestige of being among the top nations in the globe in reserves accumulation, regardless of exchange rate or inflationary considerations. The various macroeconomic variables induced the Foreign Reserves holdings during the past decade in India have much impact on various inter disciplinary aspects. The reserves' collision with inflation was drastic with financial crisis crossing in its way. Thus, the reserves holding can be prolific if given elegant notice.

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