Chapter I

Introduction

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1.1 INTRODUCTION

Indian foreign exchange market plays an imperative role in the international trading activities of an Indian economy. It assists the economy to meet the financial needs of international trade transactions, namely, exports and imports of goods and services, and other non trade transactions, such as, foreign inward and outward investments, foreign currency denominated loans and guarantees. The primary function of Indian foreign exchange market is to trade with the domestic and foreign currencies worldwide and it has undergone tremendous changes in the recent era. After liberalisation it has recorded an explosive growth in the trading capacity. According to the report of Bank of International Settlements 2016, the average daily turnover of the foreign exchange market is $ 5.1 trillion. Due to an increase in trading of currencies day by day the turnover of foreign exchange market has increased.

Exchange rate is a conversion of one nation currency into other nation currency and it is an inevitable indicator for the policymakers, investors, importers, exporters, bankers and arbitragers etc., Exchange rate fluctuates from time to time. The extreme variations in the exchange rate value - appreciation and depreciation are considered as an eminent factor in international trade environment for conversion of the currencies. Volatility of exchange rate is always an uncertainty aspect, where the presence of volatility cannot be easily predicted and forecasted. Higher volatility leads to more risk in the exchange rate where it creates hindrance to the investors and traders in their decision making in the international business to a large extent. There are many unpredictable causes in the Indian economy that affect the instability of exchange rate, such as, financial scams, huge external debts, currency wars, natural resources, global economic crisis, political factors, employment rate etc., which affect the demand and supply of the currency in the foreign exchange market. Foreign Exchange Management Act (FEMA) 2000 has been amended for the maintenance of foreign exchange market activities. The act has been introduced to easen the conversion of currency for trade and payments in foreign exchange transactions and to avoid the speculation activities.

In the current scenario, Indian currency has depreciated against foreign currencies due to several macroeconomic determinants in the economy which directly or indirectly influence the exchange rate fluctuations. The exchange rates are determined through the flow of capital between the countries, rate of inflation and interest rates of the economy of the respective country. All the macroeconomic variables that influence the exchange rate fluctuations are unstable and volatile due to boon or bane prevailing in the economy. They determine the fluctuations in the exchange rate and affect the economy as a whole. Currency depreciation greatly affects the trade performance of the country. International trade plays a momentous role in economic growth of the country which can be promoted by stabilised exchange rate. In India, the trade percentage share of GDP is 20.5 per cent (According to the report of World Trade Organisation 2015-17). According to the report of Ministry of Commerce and Industry 2017-18, India's share in global trade has increased from $660.2 billion in 2016-17 to $767.9 billion in 2017-18 by 16 per cent with the increase of exports (Times new bureau, 2018) still revealing a deficit trade balance. Traders for the conversion of currencies engage in the foreign exchange market to hedge their risk. Earlier, Indian currency has been pegged with the other currency and the introduction of Liberalised Exchange Rate System (LERMS) has paved the way for a system of market determined exchange rate system.

1.2 STATEMENT OF THE PROBLEM

India is one of the fastest growing economies among the Asian economies in the world with a growth rate of 6.7 per cent (According to economic survey 2016-17). The sustainable economic developments of the country's sectors have marched towards a competitive economy with the developed economies. International Trade acts as a driving force to enlargen the economic growth by way of promoting domestic commodities through exports to the foreign countries and by stabilising exchange rates. Exchange rate is a crucial element to enhance the level of competitiveness of the trade among the developed and developing countries. Exchange rate is highly volatile in nature. It not only affects the country's trade but affects the macroeconomic performance of the country as well. The extreme variation in the exchange rate has created pressure on the economy, such as, difficulty for the investors to invest, rise in external debts, high inflation rate and inadequacy of foreign exchange reserves which have made a country more competitive among the other countries. Generally, appreciation and depreciation of the Indian currency influence the prices of exports and imports of goods and services. Indian currency has witnessed huge depreciation against foreign currencies which has made expensive for the traders to import and gain more on export of goods and services. Depreciation of the Indian currency has witnessed a high and persistent trade deficit over an elongated period. A continuous trade deficit over a prolonged period of time is one of the major problems in a developing country like India, where it relies more on imports than the exports which creates economic imbalance in the country. However, the trade balance has witnessed high and persistent trade deficit during the recent years, along with a contra effect on macroeconomic determinants.

There are a number of studies conducted by researchers discretely on the topics 'Movements of exchange rate', 'factors affecting the exchange rate movement' and 'Role of exchange rate in trade' in developed and developing economies. There are barely few studies which have been taken up by the researchers by combining these aspects with the Indian currency in respect of the Indian economy. This has elucidated the need for studying the exchange rate volatility of Indian rupee against major currencies, macroeconomic determinants influencing the exchange rate and impact of exchange rate fluctuations of currencies on trade balance in India. The research in different dimensions of foreign exchange market will guide and assist the policy makers and economists to take economic and monetary measures for the sustainable economic development and to maintain stability in the foreign exchange market.

1.3 OBJECTIVES OF THE STUDY

The study focuses on the following objectives:

1) To study the Indian rupee appreciation and depreciation against select foreign currencies during the study period.
2) To analyse the volatility of Indian rupee against select foreign currencies.
3) To identify the macroeconomic determinants affecting the fluctuations of Indian rupee against select foreign currencies.
4) To examine the impact of exchange rate fluctuations of select foreign currencies on trade balance in India.

1.4 HYPOTHESES

The following null hypotheses have been framed for the study:

1) There is a absence of exchange rate volatility of select foreign currencies in the Indian foreign exchange market.
2) The macroeconomic determinants do not have a significant influence on the exchange rate.
3) Exchange rate fluctuations do not affect exports, imports and trade balance

1.5 SCOPE OF THE STUDY

Exchange rate plays a vital role in a country's level of trade in the economy and it is determined by several macroeconomic factors. The present study aims to ascertain the different dimensions of foreign exchange market by predicting the appreciation and depreciation of the exchange rate, currency volatility of Indian rupee against the select foreign currencies, the macroeconomic determinants influencing the movement of currency and the impact of fluctuations of the select foreign currencies on trade balance in India. The select four major currencies, such as, US dollar, Euro, Pounds Sterling and Japanese Yen used for international trading transactions of the country, listed in the Reserve Bank of India website and the currencies widely used for currency derivatives have been taken for the study. Based on the theories of exchange rate and international trade, the macroeconomic determinants that influence the fluctuations of the exchange rate and which are measurable, such as, Foreign exchange reserves, Foreign direct investment, Interest rate, Inflation rate, Crude oil prices, Gold prices, Money supply and Index of Industrial Production have been considered for the study to analyse the determinants of exchange rate. Index of Industrial Production is taken as a proxy variable, due to non availability of monthly data of Gross Domestic Product(GDP), the variables, such as, exports, imports and trade balance have been considered to explore the impact of exchange rate fluctuations of select four currencies on trade balance in the Indian economy.

1.6 RESEARCH METHODOLOGY

The following methodology has been adopted to analyse the macroeconomic determinants, movement of exchange rate, and its impact on trade balance:

i) Period of the study

The study covers a period of 10 years from the post crisis, which has shown a persistent volatility in the currency - from the emerging market economies to the transmission of Indian foreign exchange market in the Indian economy i.e., from 2007 - 2008 to 2016 - 2017.

ii) Source of Data

The study is based on secondary data. The data have been collected from the secondary sources, namely, Handbook of Statistics on Indian economy, Reserve Bank of India monthly bulletins, official websites of Ministry of Finance - Government of India, International Monetary Fund and from journals, books and articles.

iii) Sampling Design

Reserve Bank of India reference rate has listed four major currencies in the website, namely, US dollar, Pound Sterling, Euro and Yen. All these four major currencies have also been widely used for currency derivatives, namely, Indian rupee against US dollar (INR/USD), Pound Sterling (INR/BRITISH POUNDS), Japanese Yen (INR/YEN) and Euro (INR/EUR) in the Indian foreign exchange market. These have been considered as the sample for the study. The time series data of daily and monthly observations for a continuous period of ten years from 1st April 2008 to 31st March 2017 have been taken for the study. Purposive sampling method has been adopted in the study.

iv) Framework of Analysis

The following statistical and econometric tools have been used to analyse the data

- Percentage analysis
- Descriptive statistics (Mean, Standard deviation, Skewness, kurtosis, Jarque bera test)
- Unit root test
- ARCH LM -Test

- GARCH model
- Vector Autoregression
- Autoregressive Distribution Lag model
- Granger causality test
- Correlation analysis
- Regression analysis

1.7 IMPORTANCE OF THE STUDY

Indian foreign exchange market is one of the largest financial markets in the world. Exchange rate is a monetary tool of external sector in the economic growth of the country. The fluctuations of the exchange rate influence the purchasing power of the people through their income, interest rate of the country, trading practices and investment pattern of investors. The persistent level of exchange rate volatility would be due to the unpredictable events prevailing in the economy. The present study analyse the currency volatility which would be helpful to the policy makers, traders, foreign investors, business persons, economists and Government of India. It will be of immense use to the economy to understand how the exchange rate fluctuations affect the trade performance by identifying the macroeconomic factors that affect the variations in the exchange rate which changes from time to time. The findings of impact of exchange rate on trade balance of the study would help Government of India to enlarge the country’s exports with the focus on foreign trade policies 2015-2020. Hence, this study would assist Reserve Bank of India (RBI) to take fiscal and monetary measures for the development of the economy.

1.8 LIMITATIONS OF THE STUDY

The study is subject to the following limitations:

1. The study is confined to macroeconomic factors which are quantifiable in nature. Hence, the factors such as, political, market, technological, and legal are not taken for the study.

2. The trading performance of United States, United Kingdom, Japanese and European economies in relation to India has not been considered in this study.

1.9 CHAPTER SCHEME

The study has been presented in eight chapters

- **Chapter I** deals with Introduction, Statement of the problem, Objectives of the study, Scope of the study, Importance of the study, Research methodology, Statistical tools used and Limitations of the study.
- **Chapter II** deals with the Review of Literature.
- **Chapter III** presents the Overview of Indian foreign exchange market, macroeconomic factors affecting exchange rate and trade performance in India.
- **Chapter IV** presents the appreciation and depreciation of Indian rupee against select foreign currencies.
- **Chapter V** elucidates the volatility of Indian rupee against select foreign currencies.
- **Chapter VI** examines the macroeconomic determinants affecting the fluctuations of Indian rupee against select foreign currencies.
- **Chapter VII** analyse the impact of exchange rate fluctuations of select foreign currencies on trade balance in India.
- **Chapter VIII** summarises the findings, offers suggestions and conclusion and also presents the scope for further research.