

A COMPARATIVE STUDY OF EXCHANGE RATE AND STOCK PRICE IN INDIA

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ABSTRACT

The dynamic linkage between exchange rate and stock prices has been subjected to extensive research for over a decade and attracted considerable attention from researchers worldwide during the Asian crisis of 1997-98. The issue is also important from the viewpoint of recent large cross-boarder movement of funds. In India the issue is also gaining importance in the liberalization era. With this background, the present study examines the causal relationship between returns in stock market and forex market in India. Using daily data, we found that causal link is generally absent though in recent years there has been strong causal influence from stock market return to forex market return. The results, however, are tentative and we need further in-depth research to identify the causes and consequences of the findings.

Keyword: -Stock market, Exchange rate, Foreign Exchange, BSE SENSEX, NSE NIFTY, Correlation

I. INTRODUCTION

Stock prices share a very deep relationship with exchange rates. Exchange rates can be related to be having an impact on the stock prices but in the past there has been no study to examine whether exchange rates impact stock indices returns. Stock indices are an important aspect of the stock market as they represent the overall market scenario to the investors. This helps the investors to make an informed decision regarding investing into stocks. [1] concluded that exchange rates have uneven effects on stock costs, though the results of those were within the short run. Reference [2] complete that no long-term relationship exists between exchange rates and stock costs just in case} of Republic of India and West Pakistan whereas there seems to be a bi-directional relation between exchange rates and stock costs in case of East Pakistan and state. effort impact is additionally a crucial issue that has been taken into thought within the previous studies that try and analyse the impact of 1 variable on the opposite. the idea of effort ought to be completely analysed so as to appear into the depth concerning the factors that have an effect on the stock costs thus, their profit and stock costs can increase. The depreciation of rate of exchange can build adverse effects on exporters and importers. Exporters can have advantage against alternative countries' exporters and increase their sales and their stock costs are going to be higher. That is, currency appreciation has each a negative AND a positive impact on the domestic securities market for AN export-dominant and an import-dominated country, severally (Ma and Kao, 1990). Exchange rates will have an effect on stock costs not just for international and export-oriented companies however conjointly for domestic companies. For a international company, changes in exchange rates can lead to a direct modification in worth of its foreign operations

moreover as a seamless modification within the profit of its foreign operations mirrored in serial financial gain statements. Therefore, the changes in amount of firm's foreign operations might influence stock costs. The Asian crisis of 1997-98 has created a powerful pitch for dynamic linkage between stock costs and exchange rates. throughout the crisis amount, the globe has noticed that the rising markets folded because of substantial depreciation of exchange rates (in terms of US\$) moreover as dramatic fall within the stock costs. This has become vital once more from the read purpose of enormous cross border movement of funds because of portfolio investment and undue to actual trade flows, tho' trade flows have some impact on stock costs of the businesses whose main sources of revenue comes from interchange. on reflection of the literature, variety of hypotheses conjointly support the existence of a causative relation between stock costs and exchange rates. for example, 'goods market approaches' (Dornbusch and Fischer, 1980) counsel that changes in rate of exchanges have an effect on the fight of a firm as fluctuations in exchange rate affects the worth of the earnings worth [and value] of its funds as several firms borrow in foreign currencies to fund their operations and thus its stock price.

A depreciation of the native currency makes commerce product enticing and results in a rise in foreign demand and thus revenue for the firm and its worth would appreciate and thus the stock costs. On the opposite hand, Associate in Nursing appreciation of the native currency decreases profits for Associate in Nursing commerce firm as a result of it results in a decrease in foreign demand of its product. However, the sensitivity of the worth of Associate in Nursing mercantilism firm to rate of exchange changes is simply the alternative to it of Associate in Nursing commerce firm. additionally, variations in exchange rates have an effect on a firm's dealing exposure. That is, rate of exchange movements additionally have an effect on the worth of a firm's future liabilities (or receivables) denominated in foreign currency.

II.LITERATURE REVIEW

Golaka C Nathand G P Samanta(2005) The dynamic linkage between exchange rate and stock prices has been subjected to extensive research for over a decade and attracted considerable attention from researchers worldwide during the Asian crisis of 1997-98. the difficulty is additionally necessary from the point of view of recent massive cross-border movement of funds. In India the difficulty is additionally gaining importance within the alleviation era. With this background, the current study examines the causative relationship between returns available market and forex market in India. mistreatment daily knowledge from March 1993 to December 2002, we tend to found that causative link is usually absent tho' in recent years there has been sturdy causative influence from stock exchange come back to forex market come back. The results, however, square measure tentative and that we would like more in-depth analysis to spot the causes and consequences of the finding[5]

Dr. S. Poornima, M. Ganeshwari (2004) The debate as whether or not the event within the interchange markets have ramifications for the stock markets became one amongst the tenets in monetary economic science. This study tries to investigate the dynamic relationship between stock exchange index and rate of exchange. many applied mathematics tests are applied so as to check the link of each the series. the amount for the study has been taken from 1-07-2014 to 29-07-2016 victimization daily closing indices. during this study, unit root check, for rate of exchange and keen returns, were found to be stationary at the primary distinction itself. Correlation between Exchange Rates and keen returns were found to be negative. Further, investigation into the causative relationship between the 2 variables victimization sodbuster relation check highlighted unidirectional relationship between Exchange Rates and keen returns[6].

ArunaPolisetty, Dr.D.Prasanna Kumar (2016) Predicting currency movements is probably one amongst the toughest exercises in economic science because it has several variables touching its market movement. The changes within the capital market bring transformation within the entire economy of the country. The boom and depression of the capital market ar mirrored altogether sectors of the economy. The interchange market and therefore the stock exchange ar very important for any well-defined financial set-up of a rustic. Stock worth downward movement unendingly within the market forewarns the crisis amount before. This study analyses the dynamic relationship between stock exchange and rate of exchange and explores the semi-permanent and short causative relationship between the stock exchange and therefore the rate of exchange in Asian country for the main decade 2005-2014 of indices BSE Sensex and keen NSE. As America dollar may be a outstanding currency for foreign trade, the rate of exchange of rupee and America dollar has been taken for the study. BSE Sensex NSE keen index may be a bench marking index that's accustomed live the economic development of a rustic like Asian country. the current study conducted from 2005-2014 for an amount of ten years. Correlation between NSE keen, BSE SENSEX with relation to Exchange Rates will be calculated. This explains regarding the link between the variables The existence of a relationship between stock costs and rate of exchange has received considerable attention [7]. Early studies (Aggarwal, 1981; Soenen and Hennigar, 1988) during this space thought of solely the correlation between the 2 variables- exchange rates and stock returns. Theory explained that a amendment within the exchange rates would have an effect on a firm's foreign operation and overall profits which might, in turn, have an effect on its stock costs, looking on the transnational characteristics of the firm. Conversely, a general downward movement of the securities market can inspire investors to hunt for higher returns elsewhere. This decreases the demand for cash, pushing interest rates down, inflicting more outflow of funds and thus depreciatory the currency. whereas the theoretical clarification was clear, empirical proof was mixed.

It was Maysami-Koh(2000), United Nations agency examined the impacts of the rate and rate of exchange on the stock returns and showed that the rate of exchange and rate ar the determinants within the stock costs.

III. RATIONALE OF THE STUDY

To analyze the relationship between Nifty returns and Indian rupee-US Dollar Exchange Rates. Several statistical tests which would be applied in order to study the behaviour and dynamics of both the series. To know the impact of each the statistic on one another. to search out that the cracking returns likewise as Exchange Rates were non-normally distributed or not. to look at whether or not Through unit root take a look at, it establishes each the statistic, rate and cracking returns, or whether or not these square measure stationaries at the extent type itself. to search out that Correlation between cracking returns and Exchange Rates positive or negative. additional to research the causative relationship between the 2 variables victimization creator relation take a look at highlighted one-way relationship between cracking returns and Exchange Rates, running from the previous towards the latter.

IV. OBJECTIVES OF THE STUDY

General Objective:

To study the relationship between exchange rate and stock price in India.

Specific Objectives:

To examine the relationship between Exchange rate and Nifty Index movement of NSE.

To analyse the causal relationship between exchange rate and stock price.

To evaluate the relationship between exchange rate and stock price in India.

To provide or document information for decision makers, planners and researchers.

V. DATA AND METHODOLOGY

The present study is directed towards studying the dynamics between stock returns volatility and exchange rates movement. We focus our study towards Nifty returns and Indian Rupee-US Dollar Exchange Rates. The results from daily data are more precise and are better able to capture the dynamics between exchange rates and Nifty index. The data consists of –

- i) daily closing prices of the Nifty index , used to compute stock returns and
- ii) Indian Rupee/US Dollar ratios on a daily basis, used to compute exchange rates.

The daily returns and exchange rates have been matched by calendar date. Data has been taken from Yahoo! Finance. Line plots of the two time series-namely, Nifty returns and Exchange Rates- are shown in Fig. Daily stock returns have been calculated by taking the natural logarithm of the daily closing price relatives,

i.e. $r = \ln P(t)/P(t-1)$,

where $P(t)$ is the closing price of the t^{th} day. Similarly, natural logarithm of the daily exchange rate relatives have been computed as in $E(t)/E(t-1)$.

The values so obtained have been employed for studying the relationship between stock returns and exchange rates.

The information regarding exchange rate and the value of S&P CNX NIFTY Index were obtained from the Reserve Bank of India and NSE India website.

UNIT ROOT TEST

The time series variables considered in this paper are the stock Index and Exchange rate. In order to avoid a spurious regression situation the variables in a regression model must be stationary or co integrated. Therefore, in the first step, unit root tests performed to investigate whether they are stationary or not. The Augmented Dickey-Fuller (ADF) unit root test is used for this purpose.

VI. CONCLUSION

In this study, we examine the dynamic linkages between the foreign exchange and stock markets for India. While the literature suggests the existence of significant interactions between the two markets, our empirical results show that generally returns in these two markets are not interrelated, though in recent years, the return in stock market had causal influence on return in exchange rate with possibility of mild influence in reverse direction.

These results have detached some fascinating problems concerning the rate and stock value causative relationship. In India, although exchange investment doesn't represent a awfully significant slice of total social unit savings compared to alternative style of money assets, it's going to have a major impact on rate movement as FII investment has contend a dominant role. The results, however, square measure tentative associated there's a desire to undertake an in-depth analysis to deal with the difficulty.

The study targeted on analysing the dynamic relationship between the rate and Indian exchange (NIFTY). At the primary step ADF unit root take a look at is completed to check the stationary of all the variables and located out they're non-stationary at their levels, however becomes stationary at the primary distinction. so the series square measure integrated of order. On the second step Johansen most chance take a look at is completed to seek out whether or not rate and neat Index is co integrated.

The result shows terribly clearly there's no co integration vector between the neat and rate. Then the try wise sodbuster relation take a look at for the study amount is performed because the next step. sodbuster relation take a look at is employed to check the hypothesis of the study and located out that the null hypothesis is rejected. The result discovered that there's a bifacial causative relationship between rate and neat, i.e. changes available market can have an effect on rate and contrariwise. Government and policy manufacturers ought to provide weightage to the current bi-directional causative relationship whereas framing policies.

This analysis through empirical observation examines the dynamics between the volatility of stock returns and movement of Rupee-Dollar exchange rates, in terms of the extent of mutuality and relation. To start with, absolute values of knowledge were reborn to log traditional forms and checked for normality. Application of Jarque-Bera take a look at yielded statistics that thoroughbred non-normal distribution of each the variables.

This posed questions on the stationarity of the two series. Hence subsequently, stationarity of the two series was checked with ADF test and the results showed stationarity at level forms for both the series.

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