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Review article

Dynamics of the exchange rate in India

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A R T I C L E I N F O

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A B S T R A C T

Exchange rate is act as the main role in the integral part of the economic development. India is also facing this issue like the other Asian countries impact of increase exchange rate on the growth of the economy. It is source of the external funds and act as the channel between risk and investment. In this research, we have taken the data from 1998 to 2008 and applied the ADF test, normality test and Jarqu e-Bera statistics test for taking the proper results about the impact of exchange rate on the development of India. Normality test explains the nature of the data. Our results showed that increase exchange rate has negative impact on the stock exchange of India. We suggest that the government should focus on the exchange rate policy.

1. Introduction

In simple words, exchange rate volatility is also known as the name of risk and uncertainty. Most of the studies have shown that volatility in prices has two types 1)upwards 2)downward both are showing that exchange rate can be appreciate and can be depreciate. Exchange rate depends upon the supply and demand. Stock market return is considered the most important metric for the shareholders of the organization. Why the share prices are flocking it is most interesting topic for every researchers. Fr enhancing the economic condition stock market is come on most of sensitive assets. Which makes the causal association between macroeconomic variables and stock prices. This topic did not take the attention of policy makers also take the attention of economists. Shaock

prices is best way for policy makers to predict about the upcoming policies. In the modern area, globalization has created the different links for the development of financial market.

2. Impact of exchange rate volatility on the growth of the stock exchange

Robust of the studies have been observed that there is causal association between stock market and exchange rate. Exchange rate is crucial element for analysis the performance of the stock exchange. Stock prices has the main tool through which investors can take proper decision about the future investments. For the better investment public must be aware about the stock market prices. It is also act as the risk seeker. There are no of variables, which have influenced on the stock market performance. Exchange rate is such the shock that can block the stock market. Therefore most of the researchers take it for analysis the performance of the stock market. Exchange rate is also affected on the industries production. This thing has proved that there is negative association between increase exchange rate and stock market.

3. Overview of Bombay stock exchange

Bombay stock exchange is the oldest stock exchange of India. It is most faster stock exchange regarding to trade. It was organized in 1876. It has the 11th no in the world. Near about 5700 companies listed in it. Large capitalization is the reason that huge no of investors want to invest their money in it. According to the rules and regulation of securities act, Bombay stock exchange was known as the recognized stock exchange. It is also famous with the name of derivate market. In the Bombay stock exchange the operation system is electronic. In this way; investors can invest their money throughout the world and at any time.

4. Objectives

1) The prime objective of this paper is to find out the impact of exchange rate of Indian stock exchange.
2) Impact of stock exchange from the last few years.
3) In this paper, we have also shown the capitalization of Bombay stock exchange.
4) How can increase the foreign investors in Indian stock exchange.

5. Problem statement

Impact of exchange rate on the Bombay stock exchange.

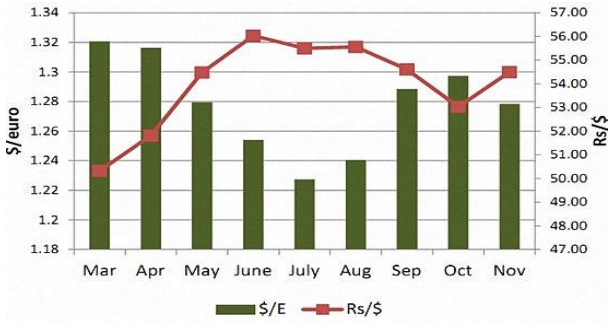


Fig. 2. Global exchange rates movement.

6. Literature review

Rabia and Khakan explored the impact of exchange rate on the stock market of Malaysia. For this purpose, they had taken the data from year 1998 to 2008 and applies the VAR model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate. Aggarwal analyzed the impact of exchange rate on the stock market Austria. For this purpose, they had taken the data from year 1999 to 2009 and applies the ECM

model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate.

Babu and Prabheesh examined the impact of exchange rate on the stock market of Bahrain. For this purpose, they had taken the data from year 1996 to 2006 and applies the unit root model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate. Ajayi and Mougoue observed the impact of exchange rate on the stock market of Indonesian. For this purpose, they had taken the data from year 1993 to 2004 and applies the regression analysis model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate.

Doong et al. studied the impact of exchange rate on the stock market of Bahamas. For this purpose, they had taken the data from year 1999 to 2012 and applies the VAR analysis model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate. Joseph analyzed the impact of exchange rate on the stock market of INDIA. For this purpose, they had taken the data from year 1998 to 2008 and applies the OLS model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate.

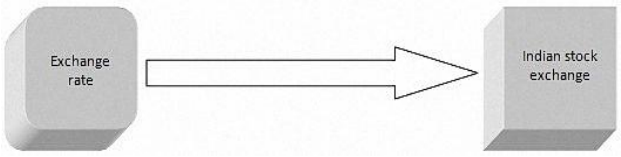
Yau and Nieh observed the impact of exchange rate on the stock market of Bangladesh. For this purpose, they had taken the data from year 1995 to 2015 and applies the Autogressive model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate. Wu explored the impact of exchange rate on the stock market of USA. For this purpose, they had taken the data from year 1998 to 2008 and applies the multi regression model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate.

Takeshi viewed the impact of exchange rate on the stock market of UK. For this purpose, they had taken the data from year 1995 to 2005 and applies the OLS model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate. Parkinson examined the impact of exchange rate on the stock market of Malaysia. For this purpose, they had taken the data from year 1997 to 2007 and applies the ECM model. Their results are showing that there is negative association between exchange rate volatility and stock market. This study suggested that policy makers should work in the case of decrease the exchange rate.

7. Gaps in literature

1) In the prior studies, nobody had discussed about the impact of exchange rate on the other variables.
2) From the last few decades, nobody has viewed both increase and decrease impact on the Bombay stock exchange.
3) Impact of stock exchange on the monetary policy of India.
4) Which factors are affected on the growth of economy?

8. Theoretical framework



9. Methodology

In the paper, we are viewing the linkage between Indian stock rate movements and volatility. For this proper results, we have used the daily data.

$$r = \ln P(t)/P(t-1)$$

Table 1
Results of augmented dickey fuller test.

	Stock returns	Exchange rates
Observations	355	355
Mean	-0.001165	0.000126
Median	-0.001715	0.000217
Maximum	0.061572	0.031269
Minimum	-0.110131	-0.011267
Std. Deviation	0.016261	0.003247
Skewness	-0.195281	0.197228
Kurtosis	4.112681	9.026138
Jarque-Bera	47.11652	540.1171
Probability	0.000000	0.000000
Sum	-0.719532	0.282188
Sum Sq Dev.	0.218016	0.018118
Result	Not Normal	Not Normal

ADF Test Statistic -9.522262 1% Critical Value* -3.9892 5% Critical Value -3.42272 5% Critical Value -3.42272 10% Critical Value -3.1375 *MacKinnon critical values for rejection of hypothesis of a unit root.

Table 2
ADF on return series.

	Coefficient	Std. Error	t-Statistic	Prob.
Return (-1)	-1.151239	0.120893	-9.526361	0.0000
D (Return (-1))	0.203939	0.104893	1.944731	0.0591
D (Return (-2))	0.187599	0.090453	2.073497	0.0327
D (Return (-3))	0.158121	0.074293	2.128202	0.0320
D (Return (-4))	0.040239	0.054393	0.739231	0.4690
C	0.000119	0.002893	0.039136	0.9612
@TREND(1)	-1.45E-05	1.44E-02	-1.006103	0.3122
R-squared	0.479675	Mean dependent var		5.87E-09
Adjusted	R-0.4703256	S.D. dependent var		0.035239
S.E. of regression	0.0261577	Akaike info criterion		4.442913
Sum squared resid	0.228498	Schwarz criterion		4.350219
Log likelihood	762.1738	F-statistic		51.31296
5Durbin-Watson	2.0091137	Prob(F-statistic)		0.000000
	Stock exchange		**Exchange rates**	
Nifty returns	7.000000		-0.086784	
Exchange rates	-0.097797		9.000000	

10. Empirical analysis

In methodology, there are four main steps1) Normality test2) Jarque. Bera statistics3) ADF. The purpose of normality test to determine the nature of the data and Jarque bera statistics for the disturbing purpose. We also checked that data is stationary or not. The values of Skeweness and Kurtosis are showing that these are normally disturbed. Skeweness value are 0.28538 and 0.247329 respectively. Mean and variance are constant here. ADF results are -9.522393 and -8.078962 respectively, at level form data are stationary.

11. Conclusion

The prime objective of our study to find out the association exchange rate and stock maker; According to William (1998) there is long run association between stock exchange and stock market. For this purpose, they have

applied the latest models to find out the better results. According to Pettron (1999) there is inverse relationship between stock market and exchange rate.

Policy recommendation

1) There is need of proper polices for the investment in stock exchange in the condition of decreasing exchange rate.
2) Government should give attention towards the issue of high stock exchange.
3) There should make polices about the controlling exchange rate, it is best way to increase the investors.

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