

“CURRENCY EXCHANGE RATE AND ITS IMPACT ON NIFTY: AN EMPIRICAL INDIAN PERSPECTIVE”

Dr. Smruti Vakil, Dr. Maulik Shah

Assistant Professor, Faculty of Management
GLS University, Ahmedabad
M: 8347010832
dr.smrutivakil@gmail.com

Assistant Professor, Faculty of Management
GLS University, Ahmedabad
M: 9374336396
prof.maulikshah@gmail.com

Abstract

The stock market return is one of the foremost important and most vital metrics for the management and the shareholders of the organizations. One figure that impacts the return on stocks and the interest of speculators within the stock is the foreign exchange rate. In India, foreign direct investment (FDI) is a vital component of stock prices and the drift of FDI may significantly be influenced by changes in exchange rate either devaluing or increasing in value. So, this paper attempt to verify the impact of foreign exchange rates on NIFTY, India's one of the prominent indices. The researcher has tried to find out the cause and effect relationship between exchange rates and stock prices. In order to do so, researcher has applied various test like linear correlation, regression analysis, Dickey-Fuller test, Granger causality test as a result the empirical investigation shows that volatility spillover effect exists in each chosen Indian economic sector over the 10 years period for both USD and INR exchange rate.

Keywords: currency rates, NIFTY, foreign direct investments (FDI), relationship

I. INTRODUCTION

The stock market return is one of the foremost important and most vital metrics for the management and the shareholders of the organizations. The study on the variables that affect the share prices is running the inquire about databases for the most part since the scholar and the applicants need to optimize the management forms and hence give an ensured and stabilized performance of the stock. One figure that impacts the return on stocks and the interest of speculators within the stock is the foreign exchange rate.

Foreign exchange return is additionally vital within the context of macroeconomic management of a nation meaning to say that in case a relationship between the foreign exchange rate and the stock market return is found to exist, at that point the government has the opportunity to oversee the exchange rate and hence the return on the stock market.

The market value of firms and the stock prices can be essentially influenced by numerous variables out of which changes in the exchange rate are vital. There's still no agreement on the relationship between stock market indices and exchange rates in spite of the fact that the subject has been broadly examined. The monetary hypothesis clarifies that the value of a firm ought to be affected by exchange rates and interest rates. The upward and downward exchange rate movements may decide the stock prices of the firms. In India, foreign direct investment (FDI) is a vital component of stock prices and the drift of FDI may significantly be influenced by changes in exchange rate either devaluing or increasing in value. Essentially, the exchange rates are influenced by the movements in stock prices.

II. LITERATURE REVIEW

Alam and Alam (2014) examines the execution of foreign institutional investments within the Indian stock market. After watching the development of FIIs movement and the effect of the exchanging of Foreign Institutional Investors on the execution of the Indian capital market and by analyzing the observational connection between stock market return and FII streams, it is found that the FII net inflows are related with the Sensex and explains the developments within the Indian capital market.

Bohra and Dutt (2011) points at understanding the behavioural design of FII by recognizing the Decade drift investigation of FII venture in India and endeavours to display the relationship between FII turnover and turnover of diverse individual groups of offers in BSE Sensex. The researcher found a positive relationship between the stock market and investment of FII's in a relationship that Sensex takes after the investment behaviour of FII's, but there's some exception seen between the years 2005 and 2008. It moreover appears that the positive or negative development of FIIs leads to a major change/shift within the assumptions of household or related investors within the market and recommends the approach suggests that the specialists can centre on household economic approaches to stabilize the stock market. Mishra P.K., Das K.B., and Pradhan B.B., (2009) evaluated the performance of the Indian capital market by empirically learning the influence of net equity investment by FIIs on stock yields. This study offers the indication of positive correlation between FII net flows into India and stock market yield and correspondingly detected that the actions in the Indian capital market are legitimately elucidated by the FII net inflows.

Bhattacharya Basabi and Mukherjee Jaydeep (2008), examined the landscape of the causal relationship between stock returns, net foreign institutional investment (FII) and exchange rate in India indicating the relationship between stock price and exchange rate is noticeable not due to the existence of foreign institutional investors alone, but attributed to other influences as well. It advocates the policy inference that the experts can emphasize on domestic economic policies to alleviate the stock market.

Gaurav et al. (2010) found a negative correlation between exchange rate and stock returns, and discovered that the stock returns are sensitive to enterprise performance, dividends, stock prices of other countries, gross domestic product, exchange rates, interest rates, current account, money supply, employment, their information etc. Tarika et al. (2011) further argued that exchange rate affects returns of all portfolios in their study evidenced from Taiwan, which motivates researchers to emphasize on foreign exchange rate as a significant macroeconomic variable in determining stock returns. Michael (2009) found a co-movement between exchange rates in explaining stock returns. In a similar study, Abdullah et al. (2012) found no causality between foreign exchange market performance and stock market returns in emerging capital markets. Same argument was strengthened by Lutfur and Jashim (2009) after the analysis of three emerging stock markets. Yasar et al. (2010) tested the causality between exchange rates and stock returns and concluded with a mixed result for different currencies. At the same time Guneratne (2011) disclosed a strong relationship between foreign exchange rate returns and stock prices in Sri Lanka. Thus, the researcher is encouraged to extend the literature by finding the collective dependency of stock market returns on mostly traded exchange rates in the foreign exchange market in Sri Lankan context.

III. RESEARCH METHODOLOGY

A. Problem Statement

To study the "Impact of currency exchange rate on Indian Stock market indices"

B. Objectives Of Study

To Study the relationship between currency exchange rate and stock market indices - NIFTY

C. Research Design

The research used here is CAUSAL RESEARCH as it tries to find out the cause and effect relationship between exchange rates and stock prices. It tries to find out what are the reasons due to which exchange rates fluctuates and what are its impact on the stock prices of the stocks listed in a stock exchange. The data for carrying out the study has been from the various websites, brochures and pamphlets printed by the organization.

D. Sampling Plans

a. Sample units

Sampling units would be the, NSE Index NIFTY 50 & NIFTY MIDCAP 100 and Currency Market Index USD/INR

b. Sample size

The total sample size of the project is 10-years daily data exchange rate & Stock exchange index covering.

c. Sample method

The sampling technique that is used for the purpose of study was Non-probability convenience sampling.

d. Data collection sources: Secondary data collection

Different websites such as nseindia.com, Investing.com, economicstimes.com etc. and different International journals.

e. Data analysis

IV. DATA ANALYSIS: CORRELATION & REGRESSION

A. NIFTY / USD: CORELATION

Hypothesis

H0: There is no significance relation between NIFTY and USD/INR

H1: There is significance relation between NIFTY and USD/INR

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
NIFTY	6601.66	1987.616	2468
USD/INR	56.33	8.421	2468

Table 2: Correlations

		NIFTY	USD/INR
Pearson Correlation	NIFTY	1.000	.799
	USD/INR	.799	1.000
Sig. (1-tailed)	NIFTY	.	.000
	USD/INR	.000	.
N	NIFTY	2468	2468
	USD/INR	2468	2468

From the above table, it has been analyzed that the significant value is 0.000 which is less than 0.05. Therefore, H0 is rejected and H1 is accepted and so, there is significant relation between NIFTY and USD/INR.

B. REGRESSION

Hypothesis

H0: There is no significance impact of USD/INR on NIFTY

H1: There is significance impact of USD/INR on NIFTY

Table 3: Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Change Statistics				
					R Change	Square Change	F Change	df1	df2
1	.799 ^a	.639	.639	1195.036	.639	4358.522	1	2466	.000

a. Predictors: (Constant), USD/INR

b. Dependent Variable: NIFTY

From the above table, it has been analyzed that the significant value is 0.000 which is less than 0.05. Therefore, H0 is rejected and H1 is accepted and so, there is significance impact of USD/INR on NIFTY

OVERALL INTERPRETATION

The above descriptive statistics we took as 2468 historical data in which mean and standard deviation of NIFTY is 6601.66 and 1987.616 respectively.

Correlation table shows that there is relation between NIFTY and USD/INR index is 0.799 reflects that both variable is nearly 80% correlated to each other.

The model summary table shows the value of R-Square and Adjusted R-Square is 0.639 means "There are 63.9% variation in the NIFTY & USD/INR" and the value is more than 50% means the model is good fitting model (goodness of fit)

C. TIME-SERIES ANALYSIS

a. UNIT ROOT TEST (AUGMENTED DICKEY-FULLER TEST)/STATIONARITY TEST

In statistics, a unit root test tests whether a time series variable is non-stationary and possesses a unit root. The null hypothesis is generally defined as the presence of a unit root and the alternative hypothesis is either stationarity, trend stationarity or explosive root depending on the test used. Here the unit root test is applied to check the stationarity in the data.

These tests are known for having low statistical power. Many tests exist, in part, because none stand out as having the *most* power. Tests include:

The **Dickey Fuller Test** (sometimes called a Dickey Pantula test), which is based on linear regression. Serial correlation can be an issue, in which case the Augmented Dickey-Fuller (ADF) test can be used. The ADF handles bigger, more complex models. It does have the downside of a fairly high Type I error rate.

D. NIFTY (CONSTANT MODEL)

Table 4

Null Hypothesis: NIFTY has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=26)

t-Statistic Prob.*

Augmented Dickey-Fuller test statistic		-0.076605	0.9501
Test critical values:	1% level	-3.432808	
	5% level	-2.862512	
	10% level	-2.567332	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(NIFTY)
Method: Least Squares
Date: 06/12/18 Time: 14:46
Sample (adjusted): 5/28/2008 5/25/2018
Included observations: 2466 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NIFTY(-1)	-5.482995	0.000716	-0.076605	0.9389
D(NIFTY(-1))	0.070507	0.020119	3.504581	0.0005
C	2.530521	4.932073	0.513075	0.6079

R-squared	0.004963	Mean dependent var	2.329826
Adjusted R-squared	0.004155	S.D. dependent var	70.69373
S.E. of regression	70.54672	Akaike info criterion	11.35164
Sum squared resid	12257956	Schwarz criterion	11.35871
Log likelihood	-13993.58	Hannan-Quinn criter.	11.35421
F-statistic	6.142209	Durbin-Watson stat	1.995739
Prob(F-statistic)	0.002183		

INTERPRETATION

Validity

Here this model is value if the coefficient value of the Nifty is a negative
We got Nifty coefficient value is -5.482995 hence the test is viable

Hypothesis

H0: Nifty has a unit root meaning that variable is not stationary

H1: Nifty has not a unit root meaning that variable is stationary

T-Statistic

If the absolute test statistics is more than the absolute critical value then we can reject null hypothesis and accept alternative hypothesis. But if the test statistics is less than the critical value, we cannot reject null hypothesis. Rather we accept null hypothesis. (Here Absolute value means Ignore the minus sign)

Absolute test statistics > Absolute critical value: REJECT THE NULL HYPOTHESIS

At 1% Level : 0.076605 > 3.4328 : ACCEPT THE NULL HYPOTHESIS

At 5% Level : 0.076605 > 2.8625 : ACCEPT THE NULL HYPOTHESIS

At 10% Level : 0.076605 > 2.5673 : ACCEPT THE NULL HYPOTHESIS

Hence, we Accept the Null Hypothesis that...

H0: Nifty has a unit root meaning that variable is not stationary

P value

If the P value is less than 5% we can reject null hypothesis and accept alternative hypothesis. But If the P value is more than 5% we cannot reject null hypothesis, rather we accept null hypothesis.

P value < 0.05 : REJECT THE NULL HYPOTHESIS
0.9501 < 0.05 : ACCEPT THE NULL HYPOTHESIS

Hence, we Accept the Null Hypothesis that...

H0: Nifty has a unit root meaning that variable is not stationary

E. NIFTY (LINEAR TREND & CONSTANT MODEL)

Table 5

Null Hypothesis: NIFTY has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on SIC, maxlag=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.067828	0.1143
Test critical values:		
1% level	-3.961766	
5% level	-3.411630	
10% level	-3.127687	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(NIFTY)

Method: Least Squares

Date: 06/12/18 Time: 14:48

Sample (adjusted): 5/28/2008 5/25/2018

Included observations: 2466 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NIFTY(-1)	-0.006362	0.002074	-3.067828	0.0022
D(NIFTY(-1))	0.072715	0.020091	3.619184	0.0003
C	21.02795	7.538721	2.789327	0.0053
@TREND("5/26/2008)	0.018737	0.005784	3.239665	0.0012

R-squared	0.009187	Mean dependent var	2.329826
Adjusted R-squared	0.007979	S.D. dependent var	70.69373
S.E. of regression	70.41112	Akaike info criterion	11.34820
Sum squared resid	12205922	Schwarz criterion	11.35763
Log likelihood	-13988.33	Hannan-Quinn criter.	11.35162
F-statistic	7.609068	Durbin-Watson stat	1.995941
Prob(F-statistic)	0.000046		

INTERPRETATION

Validity

Here this model is value if the coefficient value of the Nifty is a negative

We got Nifty coefficient value is -0.0063 hence the test is viable

Hypothesis

H0: Nifty has a unit root meaning that variable is not stationary

H1: Nifty has not a unit root meaning that variable is stationary

T-Statistic

If the absolute test statistics is more than the absolute critical value then we can reject null hypothesis and accept alternative hypothesis. But if the test statistics is less than the critical value, we cannot reject null hypothesis. Rather we accept null hypothesis. (Here Absolute value means Ignore the minus sign)

Absolute test statistics > Absolute critical value: REJECT THE NULL HYPOTHESIS

At 1% Level : 3.0678 > 3.9617 : ACCEPT THE NULL HYPOTHESIS

At 5% Level : 3.0678 > 3.4116 : ACCEPT THE NULL HYPOTHESIS

At 10% Level : 3.0678 > 3.1276 : ACCEPT THE NULL HYPOTHESIS

Hence, we Accept the Null Hypothesis that...

H0: Nifty has a unit root meaning that variable is not stationary

P value

If the P value is less than 5% we can reject null hypothesis and accept alternative hypothesis. But If the P value is more than 5% we cannot reject null hypothesis, rather we accept null hypothesis.

P value < 0.05 : REJECT THE NULL

0.1143 < 0.05 : ACCEPT THE NULL

Hence, we Accept the Null Hypothesis that...

H0: Nifty has a unit root meaning that variable is not stationary

F. USD/INR (CONSTANT MODEL)

Table 6

Null Hypothesis: USD_INR has a unit root

Exogenous: Constant

Lag Length: 2 (Automatic - based on SIC, maxlag=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.050313	0.7370
Test critical values:		
1% level	-3.432809	
5% level	-2.862512	
10% level	-2.567333	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(USD_INR)

Method: Least Squares

Date: 06/12/18 Time: 15:05

Sample (adjusted): 5/29/2008 5/25/2018

Included observations: 2465 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
USD_INR(-1)	-0.000715	0.000681	-1.050313	0.2937
D(USD_INR(-1))	0.030576	0.020102	1.521041	0.1284
D(USD_INR(-2))	-0.082806	0.020099	-4.119914	0.0000
C	0.051015	0.038779	1.315558	0.1884
R-squared	0.008118	Mean dependent var		0.010178
Adjusted R-squared	0.006909	S.D. dependent var		0.285319
S.E. of regression	0.284332	Akaike info criterion		0.324270
Sum squared resid	198.9581	Schwarz criterion		0.333697
Log likelihood	-395.6623	Hannan-Quinn criter.		0.327695
F-statistic	6.714259	Durbin-Watson stat		2.000346
Prob(F-statistic)	0.000165			

INTERPRETATION

Validity

Here this model is value if the coefficient value of the USD/INR is a negative

We got USD/INR coefficient value is -0.0007 hence the test is viable

Hypothesis

H0: USD/INR has a unit root meaning that variable is not stationary

H1: USD/INR has not a unit root meaning that variable is stationary

T-Statistic

If the absolute test statistics is more than the absolute critical value then we can reject null hypothesis and accept alternative hypothesis. But if the test statistics is less than the critical value, we cannot reject null hypothesis. Rather we accept null hypothesis. (Here Absolute value means Ignore the minus sign)

Absolute test statistics > Absolute critical value: REJECT THE NULL HYPOTHESIS

At 1% Level : 1.0503 > 3.4328 : ACCEPT THE NULL HYPOTHESIS

At 5% Level : 1.0503 > 2.8625 : ACCEPT THE NULL HYPOTHESIS

At 10% Level : 1.0503 > 2.5673 : ACCEPT THE NULL HYPOTHESIS

Hence, we Accept the Null Hypothesis that...

H0: USD/INR has a unit root meaning that variable is not stationary

P value

If the P value is less than 5% we can reject null hypothesis and accept alternative hypothesis. But If the P value is more than 5% we cannot reject null hypothesis, rather we accept null hypothesis.

P value < 0.05 : REJECT THE NULL HYPOTHESIS

0.7370 < 0.05 : ACCEPT THE NULL HYPOTHESIS

Hence, we Accept the Null Hypothesis that...

H0: USD/INR has a unit root meaning that variable is not stationary

G. USD/INR (LINEAR TREND & CONSTANT MODEL)

Table 7

Null Hypothesis: USD_INR has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic - based on SIC, maxlag=26)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.053163	0.5712
Test critical values:		
1% level	-3.961767	
5% level	-3.411631	
10% level	-3.127688	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(USD_INR)

Method: Least Squares

Date: 06/12/18 Time: 15:06

Sample (adjusted): 5/29/2008 5/25/2018

Included observations: 2465 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
USD_INR(-1)	-0.003688	0.001796	-2.053163	0.0402
D(USD_INR(-1))	0.032082	0.020110	1.595313	0.1108
D(USD_INR(-2))	-0.081210	0.020110	-4.038287	0.0001
C	0.171550	0.077751	2.206416	0.0274
@TREND("5/26/2008)	3.796641	2.122978	1.788357	0.0738
R-squared	0.009406	Mean dependent var		0.010178
Adjusted R-squared	0.007795	S.D. dependent var		0.285319
S.E. of regression	0.284205	Akaike info criterion		0.323782

Sum squared resid	198.6998	Schwarz criterion	0.335567
Log likelihood	-394.0609	Hannan-Quinn criter.	0.328063
F-statistic	5.839747	Durbin-Watson stat	1.999982
Prob(F-statistic)	0.000112		

INTERPRETATION

Validity

Here this model is value if the coefficient value of the USD/INR is a negative
We got USD/INR coefficient value is -0.0036 hence the test is viable

Hypothesis

H0: USD/INR has a unit root meaning that variable is not stationary

H1: USD/INR has not a unit root meaning that variable is stationary

T-Statistic

If the absolute test statistics is more than the absolute critical value then we can reject null hypothesis and accept alternative hypothesis. But if the test statistics is less than the critical value, we cannot reject null hypothesis. Rather we accept null hypothesis. (Here Absolute value means Ignore the minus sign)

Absolute test statistics > Absolute critical value: REJECT THE NULL HYPOTHESIS

At 1% Level : 2.05316 > 3.9617 : ACCEPT THE NULL HYPOTHESIS

At 5% Level : 2.05316 > 3.4116 : ACCEPT THE NULL HYPOTHESIS

At 10% Level : 2.5316 > 3.1276 : ACCEPT THE NULL HYPOTHESIS

Hence, we Accept the Null Hypothesis that...

H0: USD/INR has a unit root meaning that variable is not stationary

P value

If the P value is less than 5% we can reject null hypothesis and accept alternative hypothesis. But If the P value is more than 5% we cannot reject null hypothesis, rather we accept null hypothesis.

P value < 0.05 : REJECT THE NULL HYPOTHESIS

0.5712 < 0.05 : ACCEPT THE NULL HYPOTHESIS

Hence, we Accept the Null Hypothesis that...

H0: USD/INR has a unit root meaning that variable is not stationary

H. GRANGER CAUSALITY TEST

Granger causality is a way to investigate causality between two variables in a time series. The method is a probabilistic account of causality; it uses empirical data sets to find patterns of correlation.

Causality is closely related to the idea of cause-and-effect, although it isn't exactly the same. A variable X is causal to variable Y if X is the cause of Y or Y is the cause of X. However, with Granger causality, you aren't testing a true cause-and-effect relationship; What you want to know is if a particular variable comes before another in the time series. In other words, if you find Granger causality in your data there isn't a causal link in the true sense of the word (for example, sales of Easter baskets Granger-cause Easter!). Note: When econometricians say "cause," what they mean is "Granger-cause," although a more appropriate word might be "precedence" (Leamer, 1985).

a. USD/INR CAUSES NIFTY?

Table 8

Pairwise Granger Causality Tests

Date: 06/15/18 Time: 11:36

Sample: 5/26/2008 5/25/2018

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
DUSD_INR does not Granger Cause DNIFTY	2465	7.89973	0.0004

INTERPRETATION

Hypothesis

H0: USD/INR does not Granger Cause NIFTY

H1: USD/INR does Granger Cause NIFTY

F-Statistic & P value

If the P value is less than 5% we can reject null hypothesis and accept alternative hypothesis. But If the P value is more than 5% we cannot reject null hypothesis, rather we accept null hypothesis.

P value < 0.05 : REJECT THE NULL HYPOTHESIS

0.0004 < 0.05 : REJECT THE NULL HYPOTHESIS

Hence, we Accept the Alternative Hypothesis that...

H1: USD/INR does Granger Cause NIFTY

I. HYPOTHESIS TEST SUMMARY

Table 9: HYPOTHESIS TEST SUMMARY

NAME OF TEST	APPLIED ON	SINIFICANCE VALUE	DECESION	OUTCOME
Correlation	NIFTY / USD	0.000	H0 Rejected	There is significant relation between NIFTY and USD/INR.
Regression	NIFTY / USD	0.000	H0 Rejected	There is significance impact of USD/INR on NIFTY
Unit Root Test	NIFTY (Constant Model)	0.9501	H0 Accepted	NIFTY has a unit root meaning that variable is not stationary
	NIFTY (Linear Trend & Constant Model)	0.1143	H0 Accepted	NIFTY has a unit root meaning that variable is not stationary
	USD/INR (Constant Model)	0.7370	H0 Accepted	USD/INR has a unit root meaning that variable is not stationary
	USD/INR (Linear Trend & Constant Model)	0.5712	H0 Accepted	USD/INR has a unit root meaning that variable is not stationary
Granger Causality Test	USD Causes NIFTY?	0.0004	H0 Rejected	USD/INR does granger cause NIFTY

V. FINDINGS

From the correlation it is founf that there is significant relation between NIFTY and USD/INR and from the regression we found that There are 63.9% variation in the NIFTY & USD/INR i.e there is 63.9% impact and the value is more than 50% means the model is good fitting model (goodness of fit)

We found that there is significant impact of currency exchange rate of USD/INR on NIFTY based on Granger Causality test.

Based on past last 10 years data of currency exchange and stock market indices, The Correlation between USD/INR exchange rate and Stock market indices such as NIFTY is 79.9% represent that USD/INR rate is likely related to Indian stock market indices and for economy of our country

VI. CONCLUSION

The purpose of the research question was to identify the dynamic volatility relation from exchange rate to the Indian stock market indices. As we mentioned earlier that this purpose of the study is to create a better understanding and performance of the investors while diversifying their portfolios locally or hedging their risk internationally. Thus, we served our purpose by figuring out the relation and increasing the knowledge of the investors. Empirical investigation shows that volatility spillover effect exists in each chosen Indian economic sector over the 10 years period for both USD and INR exchange rate. Therefore, the investors should act accordingly. Our recommended act from this study, that during the volatile stock market indices the investors should diversify their portfolios domestically and in case of stable stock market indices, investors may have international diversification.

In conclusion we can say that *Yes, there is impact from changes in US Dollar and INR exchange rates on the performance of Indian Stocks.* Thus, we fulfilled our purpose by answering our research question.

REFERENCES

- [1] Foreign Exchange Reserve and its Impact on Stock Market. (2012). Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1005.3005&rep=rep1&type=pdf>.
- [2] Impact of Foreign Exchange rate on stock prices. (2013, February). Retrieved from <http://www.iosrjournals.org/iosr-jbm/papers/Vol7-issue3/G0734551.pdf>.
- [3] in.investing.com. (2018, 05). Retrieved from <https://in.investing.com/indices/cnx-midcap-historical-data>.
- [4] in.investing.com. (2018, 05). Retrieved from <https://in.investing.com/currencies/usd-inr-historical-data>.
- [5] in.tradingview.com. (2018, 05). Retrieved from <https://in.tradingview.com/chart/?symbol=OANDA:USDINR>.
- [6] INDIAN TOURISM INDUSTRY. (n.d.). Retrieved from <http://www.indianmirror.com/indian-industries/tourism.html>.
- [7] International Journal of Economics and Financial. (2015). Retrieved from <http://www.econjournals.com/index.php/ijefi/article/viewFile/1510/pdf>.
- [8] Introduction to Indian Foreign Exchange Market. (n.d.). Retrieved from http://nptel.ac.in/courses/110105031/pr_pdf/Module5-5.pdf.
- [9] The Effect of Foreign Exchange Market Returns on Stock Market Performance in Sri Lanka. (2015, November). Retrieved from https://www.researchgate.net/publication/286451582_The_Effect_of_Foreign_Exchange_Market_Returns_on_Stock_Market_Performance_in_Sri_Lanka.
- [10] What's the relationship between stock returns and exchange rates? (2015, July). Retrieved from <https://www.weforum.org/agenda/2015/07/whats-the-relationship-between-stock-returns-and-exchange-rates/>.
- [11] www.bseindia.com. (2018, 05). Retrieved from <https://www.bseindia.com/indices/IndexArchiveData.aspx>.
- [12] www.nseindia.com. (2018, 05). Retrieved from https://www.nseindia.com/products/content/equities/indices/historical_index_data.htm.