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EFFECT OF FOREIGN EXCHANGE RATES ON MOVEMENT OF SHARE PRICE OF NIFTY 50 INDEX

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Abstract
The aim of this research was to examine the interaction between stock prices and exchange rates in national stock exchange with regards to the period from January 1st 2015 to December 31st 2016. The findings have implications for investors, investment managers, regulators, listed companies, financial institutions and other market players. The economic theory points to the relationship between stock price and exchange rates but does not properly define the direction of the relationship. This research used the Pearson product-moment correlation coefficient method to determine the degree of correlation between stock prices and exchange rates. The results indicated that there was a positive relationship between exchange rates and share prices. The analyzed data was presented in the form of statistical charts, graphs, frequency tables and percentages.

Introduction

Many factors, such as enterprise performance, dividends, stock prices of other countries, gross domestic product, exchange rates, interest rates, current account, money supply, employment, their information etc. have an impact on daily stock prices Especially, the continuing increases in the world trade and capital movements have made the exchange rates to be one of the main determinants of business profitability and equity prices. Exchange rate changes affect the competitiveness of firms through their impact on input and output price. When the Exchange rate appreciates, since exporters will lose their competitiveness in international market, the sales and profits of exporters will shrink and the stock prices will decline.

On the other hand, importers will increase their competitiveness in domestic markets. Therefore, their profit and stock prices will increase. The depreciation of exchange rate will make adverse effects on exporters and importers. Exporters will have advantage against other countries' exporters and increase their sales and their stock prices will be higher. That is, currency appreciation has both a negative and a positive effect on the domestic stock market for an export-dominant and an import-dominated country, respectively.

Exchange rates can affect stock prices not only for multinational and export oriented firms but also for domestic firms. For a multinational company, changes in exchange rates will result in both an immediate change in value of its foreign operations and a continuing change in the profitability of its foreign operations reflected in successive income statements. Therefore, the changes in economic value of firm's foreign operations may influence stock prices. Domestic firms can also be influenced by changes in exchange rates since they may import a part of their inputs and export their outputs. For example, a devaluation of its currency makes imported inputs more expensive and exported outputs cheaper for a firm. Thus, devaluation will make positive effect for export firms and increase the income of these firms, consequently, boosting the average level of stock prices.

Research Objective

The study was guided by the following research objectives:

1. To establish the degree of correlation between Foreign Exchange rates and Nifty index 50
2. To determine effects of foreign exchange rates on movement of share price.

Research Methodology

In this study Historical Design was applied. It used secondary sources such as official records, reports and legal websites. The data was based on the national Stock Exchange stock index values for the period between January 2015 to December 2016. This index tracks the performance of the shares of 50 companies as selected by the management of NSE from time to time. The prevailing exchange rates for the same period were selected.

Presentation & Interpretation of Findings

The chapter presents the findings from the field the findings are based on the data collected from NSE namely foreign exchange rates and Nifty 50 Index for the period January 2015 to December 2016.

Analysis and interpretation

Table 1: Foreign exchange rates and Nifty 50 index value from 2015 to 2016

Year	Month	Foreign exchange rates	Nifty 50
2015	January	62.08	8808.9
2015	February	62.02	8901.85
2015	March	62.49	8491
2015	April	62.62	8181.5
2015	May	63.65	8433.65
2015	June	63.78	8368.5
2015	July	63.60	8532.85
2015	August	65.03	7971.3
2015	September	66.24	7948.9
2015	October	65.08	8065.8
2015	November	66.13	7935.25
2015	December	66.51	7946.85
2016	January	67.24	7555.95
2016	February	68.26	6987.05
2016	March	66.93	7738.4
2016	April	66.46	7849.8
2016	May	66.91	8160.1
2016	June	67.25	8287.75
2016	July	67.16	8638.5
2016	August	66.94	8786.2
2016	September	66.76	8611.15
2016	October	66.73	8625.7
2016	November	67.73	8224.5
2016	December	67.81	8185.8

Table 2: Standard Deviation and STD error mean

Paired Samples Statistics				
	Mean	**N**	**Std. Deviation**	**Std. Error Mean**
Foreign Exchange Rates	65.6421	24	1.97738	0.40363
Stock Price	26944.306	24	1429.304	291.75

Table 3: Paired Samples Test

Paired Samples Test							
	Paired Differences Mean	**Std. Deviation**	**Std. Error Mean**	**95% Confidence Interval of the Difference**		**T**	**df**
				Lower	**Upper**		
Foreign Exchange Rates Stock Price	-26878.664	1430.5053	292.00067	-27482.714	-26274.615	-92.050	23

Comparing the difference between two means by using students T Test we get T value -92.050 which is highly significant and show wide gap between foreign exchange rates and share price which are moving negative direction.

Table 4: Correlation coefficient of stock price and foreign exchange rate

Correlations			
		Foreign Exchange Rates	**Stock Price**
Foreign Exchange Rates	Pearson Correlation	1	-0.607
	Sig. (2-tailed)	.	0.002
	N	24	24
Nifty 50 Index	Pearson Correlation	-0.607	1
	Sig. (2-tailed)	0.002	.
	N	24	24

Correlation is significant at the 0.01 level (2-tailed)

A person correlation coefficient was computed to assess the relationship between foreign exchange rates and nifty 50 indexes. The correlation between foreign exchange rates and shares price shows – 0.607 which indicators foreign exchange rate and movement share price are moving in opposite direction.

Table 5: Linear Regression Test

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0.607	0.368	0.340	1.60676

Predictors: (Constant), Nifty 50 Index

The major outputs of simple linear regression are the R. square and the co efficient. The R- squared number in this cast is 36.8% this shows how well our model predict future stock price. The model explains only 36.8% of the variation in stock prices. The foreign exchange rates correlation coefficient of 60.7 tells us that if foreign exchange rate increases by 1% stock prices will decrees 60.7 units.

Table 6: Calculation of ANOVA Test

ANOVA						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	33.134	1	33.134	12.834	.002
	Residual	56.797	22	2.582		
	Total	89.931	23			

Predictors: (Constant), Stock Price b Dependent Variable: Foreign Exchange Rates

Table 7: Coefficients and T test

Coefficients					
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	88.268	6.324		13.957	.000
Stock Price	-8.397E-04	.000	-.607	-3.583	.002

By using ANOVA taking stock price as predict for and foreign exchange rate as dependent we get T test value 12.83 and if is significant at 0.002.

Findings of the Study

- Overall, there was a negative correlation between foreign exchange rates and nifty 50 indexes. Exchange rate decrease which implies deprecation of Indian Rupees and appreciation of US Dollars, the stock price fall also, when stock price rise foreign currency deprecate or Indian Rupees appreciate
- The fluctuations in share prices as a result of changes in foreign exchange rates may cause portfolio managers to liquidate some of the holdings in their portfolios which result decrease in the share price.
- The findings in this research will assist to government in mastering the relationship between exchange rates and share prices. This may assist them employ the monetary policy tools at their disposal to control the exchange rates and consequently averting adverse effect on the stock market.

Recommendations

- The mangers of these companies need to plan in advance for reducing the risk adverse effect of exchange movement on preference of their companies.
- Portfolio managers are required to maximize the wealth for their clients through portfolio values optimizations.
- Investors also need to position themselves in order to benefit from favorable movements in exchange rates to make profit on investment.

Conclusion

The study has established that there was a negative correlation between Foreign Exchange Rates and Stock price index when the exchange rate “increases” it implies appreciation of the foreign currency. Depreciates home currency the stock price fall. The correlation between exchange rate and stock price is negative which indicate both are moving opposite direction.

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