The Influence of Macro-Economic Factors on Stock Prices of KSE 100 Index

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Abstract: **The ultimate purpose of this research was to examine the influence of inflation, interest rate and exchange rate upon the stock prices of KSE 100 index of Pakistan. In this study the author has used the time series annually data of 25 years with the time period from 1993 to 2017and with the usage of this data there are four tests applied descriptive test, unit root test, Johansson co integration test and vector error correction model test. According to the results of the above mentioned tests there is no short term and long term significant relation between macro-economic factors (inflation, interest rate and exchange rate) and stock prices of KSE 100 index of Pakistan. Hence, the inflation, interest rate and exchange rate do not influence the stock prices of KSE 100 index of Pakistan stock exchange.**

Key words**: Inflation, interest rate, exchange rate, stock prices of KSE 100 index**

I. INTRODUCTION

Macroeconomic factors affect the presentation of stock market. Many investors believe interest rates, exchange rate, inflation are extremely essential in the middle of these macroeconomic factors which influence the presentation of the market of stock. A huge number of researches have been carrying out to conclude the connection between macroeconomic factors and prices of stock in the very past. The result of these researches explains that there is very strong association between the macroeconomic factors and prices of stock. Some other studies have showed no connection between country's economies and with financial markets of developing countries, like markets of Asia, (Fung, Lie, & Moreno, 1990)had explained it by telling that "macroeconomic variables cannot be trustworthy pointers for the price of stock market activities in the markets of Asia due to incapability of markets of stock to completely capture data regarding the vary in macroeconomic essentials." A massive number of well-known researchers formeda connection in some countries like, between the macroeconomic pointers and financial market. The results of so many of studies had explained that with the minor amount of variation, the there will be connection between fundamental macroeconomic factors and process of stock market. Though, according to great researcher(Hoguet, 2008), there would be a negative connection in the middle of inflation and prices of stock. When during the study disparity in outcome come into view among rate of exchange and prices of stock. A big positive connection was recognized by (Smith Jr & Watts, 1992)between rates of exchange and prices of stock, while a few studies in the identical field portrayed a big negative connection(Ajayi, Friedman, & Mehdian, 1998). After this, there is opposite relationship among rate of interest, prices of stock as well as rate of exchange. Rate of Interest is the price of borrowing and it used as rate of discount to price cut in cash flows for future of financial assets. So, rise in rate of interest guides reduce in prices of stock because essential return rate on stocks increases which guides decrease in prices of stock. Events of monetary establishment have an essential crash prices of stock and variation of rate of interest indicate fine or terrible data to investors(Lobo, 2000).Rate of exchange and market of stock as well has a connection. Foreign investors change their profits on stocks in the home currency of them. The foreign investors do get influenced when home currency becomes stronger and transformed into less strong currency. Rate of Exchange has inverse connection with the prices of stock. The prices of Stock reduce when rate of exchange raise and diminish in rate of exchange have positive crash on the market of stock. A quick boost in inflation moreover affects badly the performance of market of stock. Growing inflation measured as bad reports by many investors due to it portray terrible economic situation in country and those investors believe unconfident regarding their speculation in the market of stock. They suppose tense monetary strategy in coming time by Fed to organize price rises which in spin manage supply of money and firms undergo to obtain finance from some banks because of superior charge of borrowing with very tense credit conditions. In other case of diminishing rate of inflation, it portrays good economic situation and pull investors to spend in the market of stock.

The connection between the macroeconomic factors and prices of stock has been broadly studied in progressed markets of capital and literature upon the above factors back date to 1970s. Though, multifactor replica has been progressed as a descriptive thing of the disparity in prices of equity and these researches have usually paying attention on progressed markets. The connection between macroeconomic factors and prices of stock has been inspected in ESMs (Emerging Stock Markets) after the 1980s. Though, interest to invest in budding markets has matured significantly over the earlier

period decade. (Harvey & Ginsberg, 1995)explains that the returns and the risks in ESMs (Emerging Stock Markets) have been originated to be advanced, relation to progressed markets.

Objective of the study:

The general and usual objective of this research is that to find out the influence of the macroeconomic variables on the price of stock from 1993 to 2017. In Pakistan there were more than one stock exchanges but few years ago these stock exchanges got club in one stock exchange and that is known as the Pakistan stock exchange and that's why there are very few studies are present on the Pakistan stock exchange and that's why the data which is got use in this study is about all the stock exchanges. There are so many people who invest in the stock market and this is very harmful that they have very less researched knowledge about the fluctuation of the stock prices in the stock market of Pakistan and therefore it is very important to make some research about this topic and that's why this study is held. This is very important to know this impact because there are very few studies upon this topic and problem. There is some other specific objectives are here below,

II. LITERATURE REVIEW

There have been so many studies undertaken to scrutinize the smash of macroeconomic variables at the stock prices of rising countries. In some past decades, there were many researchers, financial analysts, and some practitioners have gotten to foresee the connection between stock markets and the macroeconomic parameters like as inflation, exchange rate and interest rate etc. They have gotten conduct studies to set up the conclusion of macroeconomic variables on the stock prices and vice-versa and the outcome of all of those studies are in dissimilar direction.

(Bahmani-Oskooee & Sohrabian, 1992) got conduct a study and he examined the connection between variations in exchange rate of dollar inthe answer to the variation stock prices. For this reason he took per month data of U.S stock prices and the exchange rates ranges from the period of 1974-1978. By the application of simple regression techniques, then he found a positive conclusion between the stock prices and the exchange rates and this connection was healthier in short than in the long run.(Solnik, 1987) he recognized the outcome of a number of variables (rate of interest, inflation, exchange rate) on the prices of stock. To arrive at a convincing decision he utilized the month vise data of nine most urbanized nations (U.S, Japan, Germany, U.K, France, Canada, Netherlands, Switzerland, and Belgium). He furthermore recognized that there is the positive effect on depreciation but the findings are statistically immaterial on US stock market as comparison with changes in probable inflation and rates of interest. (Muhammad, Rasheed, & Husain, 2002)have studied to find the connection between the stock prices and the exchange rate they got use month vise data for period of the 1980-1986. The judgment discovered a strong kind of negative connection between the stock prices andthe exchange rate. In addition to this when they tried to found the above connection for unlike periods, they got establish a negative connection of the revaluation on the stock prices.(Gemmill, 1996)in a Keynesian vision of the connection between the stock prices and the interest rate in his vision he got speculate that arise in the supply of themoney willsupport the people to move surplus money in stock market and many savings accounts, than raise in prices of the stocks effect diminish the rate of interest. Therefore, the connection between stock prices and the rate of interest are negatively connected arise in stock prices diminish the interest rate. This study means that if the interest rate goes up then the price of the stock will go down and similarly if the interest rate goes down then obviously the prices of stock will go down.(Hunjra, Chani, Ijaz, Farooq, & Khan, 2014)found the connection between the stock prices and rate of interest. The study mainly dealt with stock prices and with money supply. According to this study a diminish in supply of money raise interest rate and rise in the money supply falls down the rate of interest. His study which was counted in the United States of America in 1918 to 1968, 9 out of 12 significant market falls down throughout the period of monetary tightening, by changes in supply of money will turn down the stock prices and in the end the interest rate too. This study tells us that the relation or connection between the interest rate and prices of the stock are very closely directly proportional to each other. Lobo (2000) has studied the impact of interest rate fluctuations on stock prices. He has examined behavior of the stock after thefederal fund rate declare and he did find that before the announcements ofthe raise in the federal fund rate the irregularity inthe pricetuning gets narrow. He also did find that the stock market response faster to news of the over pricing than news ofthe underpricing. He had finally concluded that the target rate declaration has major impact on the stock prices andtherefore convey new kind of information to stock market.

Hypothesis:

This study is conducted to test the following experimental hypothesis;

H11: there is influence of interest rate upon prices of KSE-100 Index

H01: there is no influence of interest rate upon prices of KSE-100 Index

H12: there is influence of exchange rate upon prices of KSE-100 Index

H02: there is no influence of exchange rate upon prices of KSE-100 Index

H13: there is influence of inflation upon prices of KSE-100 Index

H03: there is no influence of inflation upon prices of KSE-100 Index

III. RESEARCH METHODOLOGY

3.0 Introduction:

This chapter is consisted upon some subsections and these sections are five in numbers. And these sections help to find the data and understand the proper scenario of the entire chapter. So, Section number one provides the information about the data set of study that what kind of data is getting used in this study and from where it is obtained and section number two tells about the econometric model. Section number three consisted upon the description of variables. Section number four tells us about the data source and section number five describes about the analytical techniques. As we all know that the methodology is the main part of the research study and therefore this was important to describe it properly and with well manner. There are following steps that describe this with well way.

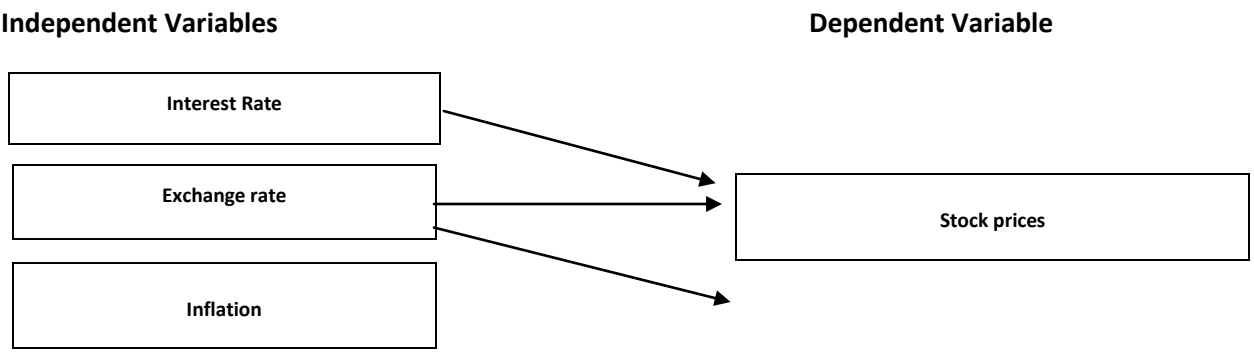
3.1 Data set:

The data which is used in this study is collected and obtained by the world development indicator and this the universal site and the data of this site is very trustworthy and therefore the data of this site about our variable is very useful and that's why we obtained the data about the interest rate, exchange rate and the inflation and these are our independent variables and we want to see the influence of these factors on the stock prices of the Pakistan. It would be very helpful for the investors of the stock and this is just because of that Pakistan is developing country and as all knows that the stock market and stock index is the back bone of every country so therefore. The data which is used in this study is taken form WDI and this data is downloaded in soft form in the excel sheet and this data was in raw form but that was not a good way to show the data so therefore we have converted it in the column shape to use it for the furthers tests.

3.2 Econometric Model:

There is the model of the variable of our sturdy and there are four variables and we are doing this research to find out the relation among these variables and in simple words to see the influence of these macroeconomic variables upon the prices of stock of Pakistan. As there is mentioned below that there are four variables and three of them are independent and one is dependent variable.

Influence of macroeconomic variables on stock prices on KSE-100 index



Econometric Model:

$$B_0SP = B_1\,(IR)\; B_2(ER)\; B_3\,(IN)$$

3.3 Description of Variables:

Stock prices: the stock price is the highest amount at somebody is willing to pay for the stock, or the lowest amount that it can be bought for. There is we are going to see what is the relation of stock prices with the economic factors. Any price of share is that price of any solitary share of huge figure of marketable stocks of a entity, derivative or extra monetary asset. Price of Stocks is determined by outlook of business income, or earnings. If traders believe that company's income are elevated, or will go up additional, they offer up the stock prices.

One mode that stockholders create a return upon their speculation is while they purchase a stock small and put on the market it high. And if the corporation doesn't perform healthy and the shares reduce in worth, after that the stockholders drop element or still all of their speculation when they put up for sale.

A next method that stockholders income is occurs if the corporation pays a profit on shares. These are typically periodical payments dispersed to stockholders upon a per share base. The company's floorboard of directors shell out dividends out of income. It is only method to prize stockholders, who are real proprietor of the corporation, for their speculation. It's particularly significant for companies and that is gainful, but it may not exist rising rapidly.

Interest Rate: the section of a loan that is charged as interest to the borrower, characteristically articulated as an annual percentage of the loan outstanding. But here we are using real

interest rate and that is the real interest rate is the rate of interest an investor, saver or lender receives (or expects to receive) after allowing for inflation. It can be expressed more properly by the Fisher equation, which states that the real interest rate is just about the nominal interest rate minus the inflation rate. Rates of interest are sometimes applied in many circumstances where borrowing and lending is alarmed. Persons have a loan of money to buy homes, fund scheme, start company, disburse college tuition, etc. industry get loans to finance capital plan and enlarge their function by acquire permanent and long-run assets like land, buildings, trucks and machinery etc. The money which is got lend has to be repay while in a single amount at a few preset date or according to monthly based installments, which is frequently the case. That money is to be repaid is typically extra than the on loan amount since lenders desire to be rewarded against their loss of usage of that money throughout the era that the finances are get loaned out; and lender might have spent the money in its place of lending that out. With the lending a huge asset, the person who lends can have been capable to produce returns from asset should that have determined to utilize it themselves? The disparity between the whole refund sum and the real loan on which is the interest is charged. The interest that is charged is a rate of interest that is functional on the primary amount.

Exchange Rate: In finance, an exchange rate is the rate at which one currency will be exchanged for another. It is also regarded as the value of one country's currency in relation to another currency. The spot exchange rate refers to the current exchange rate. Exchange rate refers the economic progress of the country that what is the worth of the currency of that country against the US dollar and if the value of that currency is less than dollar then that means it is less developed. So, therefore it has some relation with the prices of stock or not.A rate of exchange is that kind of price of a country's currency in conditions of a new kind of currency. In this way, a rate of exchange has two apparatus, the home currency and an overseas currency, and can be citation also straight or not directly. In a straight of direct quotation, the unit price of overseas currency is getting expressed in conditions of the home currency. In a not direct quotation, the unit price of home currency is getting expressed in conditions of the overseas currency. All exchange rates are getting quoted in standards next to the US dollar currency. Though, rates of exchange can be quoted too next tonemore nations currency, and which are identified as cross currency.

Inflation: Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling. Central banks attempt to limit inflation, and avoid deflation, in order to keep the economy running smoothly. Inflation means it is the increasing price of commodities and services with the passage of time. According to an economics expression and that means we have to use up further to fill up your gas container, purchase a can of milk or obtain a hairgrip. Inflation raises your charge of living. In addition, Inflation decreases the buying authority of every unit of that currency. U.S. dollar inflation has decreased the worth of dollar. Evaluate the dollars worth now by that in history. As the prices go up, your money purchases fewer. That's the way that how inflation decreases your level of living with the passage of time. That is the reason that why the President Reagan said, "Inflation is as aggressiveas robber, as terrifying as carrying weapons robber, and as harmful as hit man." Nowhere additional on that how the inflation affects your life. So, rate of inflation is the percentage of raise or reduce of prices throughout a particular era. It's typically against a year or month. The percentage informs that you how rapidly prices go up throughout the era. For example, now if the price rises rate against a container of gas is 2 percent per year, then the prices of gas will be increased 2 percent next year.So, that means a container that is having costs $2.00 current year will cost $2.04 after that year.

3.4 Data source:

The data which is used in this study is secondary data and it kind of data is obtained from the different sites and we have got this data from the world development indicator which is very reliable site. There are so many site from which we could take the data but we obtained the data from this we realized it authentic. Secondary data actually is that kind of data which is not collected from the questionnaires in fact it is collected from other sites because people had worked upon it.

IV. ANALYSIS

Descriptive Test:

	SP	INF	OER	RIR
Mean	-11.28500	8.464277	65.05033	4.223684
Median	18.47000	7.805294	59.99756	4.277556
Maximum	177.3800	20.28612	104.7691	7.543484
Minimum	-696.2500	2.539516	28.10718	-4.367507
Std. Dev.	165.7108	4.385417	24.37994	2.383164
Skewness	-3.043273	0.636745	0.233726	-1.782759

According to this test there are we have discussed the dependent and independent variables and dependent variable is stock prices and independent variables are inflation, interest rate and exchange rate and we have seen here the mean, median, max, min, std. deviation and skewness of these variables. This test is applied from the Eviews9 software so, we can declare that the dependent variable variances of difference from independent variables.

Unit Root Test of all variables:

Stock prices:

Null Hypothesis: D(SP) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=5)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.832485	0.0000
Test critical values:	1% level	-3.769597	
	5% level	-3.004861	
	10% level	-2.642242	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(SP,2)
Method: Least Squares
Date: 01/29/18 Time: 06:47
Sample (adjusted): 1995 2016
Included observations: 22 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SP(-1))	-1.412234	0.206694	-6.832485	0.0000
C	4.141376	41.32357	0.100218	0.9212

R-squared	0.700073	Mean dependent var	5.955455
Adjusted R-squared	0.685076	S.D. dependent var	345.3803

Unit root test is applied upon the stock prices of Pakistan and according to this test we can say that the data is stationary at 1st difference and there is also level of significance because probability is less than 0.005 so that's why.

Inflation:

Null Hypothesis: D(INF) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=5)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.902459	0.0001
Test critical values:	1% level	-3.769597	
	5% level	-3.004861	
	10% level	-2.642242	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(INF,2)
Method: Least Squares
Date: 01/29/18 Time: 06:54

Sample (adjusted): 1995 2016
Included observations: 22 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF(-1))	-1.262136	0.213832	-5.902459	0.0000
C	-0.480198	0.799462	-0.600652	0.5548

R-squared	0.635296	Mean dependent var	-0.053702
Adjusted R-squared	0.617061	S.D. dependent var	6.034805

In this test, according to this test the data is also stationary here at 1st difference and there is also significance level because the probability level is less than 0.005 and therefore there is significance level.

Exchange rate:

Null Hypothesis: D(OER) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=5)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.394254	0.0225
Test critical values:	1% level	-3.769597	
	5% level	-3.004861	
	10% level	-2.642242	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(OER,2)
Method: Least Squares
Date: 01/29/18 Time: 06:56
Sample (adjusted): 1995 2016
Included observations: 22 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(OER(-1))	-0.732848	0.215909	-3.394254	0.0029
C	2.466202	1.069659	2.305595	0.0320

R-squared	0.365502	Mean dependent var	-0.020889
Adjusted R-squared	0.333777	S.D. dependent var	4.478084

The end result of the unit root test for exchange rate is obtainable. Exchange rate variable was because of tests to unit roots at its level forms and first differences. The outcome of approximately all variables was stationary at 1stdifference and the null hypothesis is rejected of significance. Significance value of test is 0.005 but prob. it means we can declare that significance value is the satisfactory value.

Interest Rate:

Null Hypothesis: D(RIR) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.609830	0.0002

Test critical values:	1% level	-3.788030
	5% level	-3.012363
	10% level	-2.646119

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RIR,2)
Method: Least Squares
Date: 01/29/18 Time: 06:58
Sample (adjusted): 1996 2016
Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RIR(-1))	-2.065653	0.368220	-5.609830	0.0000
D(RIR(-1),2)	0.427711	0.216448	1.976049	0.0637
C	0.321156	0.619435	0.518465	0.6104

R-squared	0.770970	Mean dependent var	0.072519
Adjusted R-squared	0.745522	S.D. dependent var	5.616457

As we can see that there is the unit root test is applied upon all the variables that had used in this study and this test is applied to find out that whether this data is stationary or not and according to the result we found that this data is stationary because probability is less than 0.005 in the matter of all the variables and this test is applied upon the first level.

Johnson Test:

Date: 01/29/18 Time: 06:59
Sample (adjusted): 1995 2016
Included observations: 22 after adjustments
Trend assumption: Linear deterministic trend
Series: CK100 INF OER RIR
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.623770	44.67115	47.85613	0.0966
At most 1	0.542240	23.16494	29.79707	0.2380
At most 2	0.226083	5.973911	15.49471	0.6986
At most 3	0.015135	0.335505	3.841466	0.5624

Trace test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.623770	21.50621	27.58434	0.2468
At most 1	0.542240	17.19103	21.13162	0.1632

At most 2	0.226083	5.638406	14.26460	0.6599
At most 3	0.015135	0.335505	3.841466	0.5624

Max-eigenvalue test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

CK100	INF	OER	RIR
0.010476	0.101422	0.005223	0.443009
0.010122	0.010965	0.026714	-0.441561
0.006040	0.367252	-0.000130	0.038971
0.001517	0.099017	0.047279	0.099159

Unrestricted Adjustment Coefficients (alpha):

D(CK100)	-56.45597	28.31902	-35.92761	13.34470
D(INF)	0.142352	-0.763510	-0.622803	0.028219
D(OER)	-2.352375	-0.339983	0.425505	-0.029034
D(RIR)	-1.180396	1.378533	-0.363734	-0.138512

1 Co integrating Equation(s): Log likelihood -278.2943

Normalized co integrating coefficients (standard error in parentheses)

CK100	INF	OER	RIR
1.000000	9.681733	0.498543	42.28952
	(6.00880)	(0.89874)	(11.7418)

Adjustment coefficients (standard error in parentheses)

D(CK100)	-0.591412
	(0.37841)
D(INF)	0.001491
	(0.00443)
D(OER)	-0.024643
	(0.00550)
D(RIR)	-0.012365
	(0.00652)

2 Cointegrating Equation(s): Log likelihood -269.6988

Normalized cointegrating coefficients (standard error in parentheses)

CK100	INF	OER	RIR
1.000000	0.000000	2.908943	-54.44788
		(1.24417)	(15.6314)
0.000000	1.000000	-0.248964	9.991744
		(0.16523)	(2.07593)

Adjustment coefficients (standard error in parentheses)

D(CK100)	-0.304767	-5.415372
	(0.51599)	(3.61350)
D(INF)	-0.006237	0.006066
	(0.00549)	(0.03845)
D(OER)	-0.028084	-0.242311
	(0.00754)	(0.05283)

D(RIR)	0.001588	-0.104603
	(0.00755)	(0.05287)

3 Cointegrating Equation(s): Log likelihood -266.8796

Normalized cointegrating coefficients (standard error in parentheses)

CK100	INF	OER	RIR
1.000000	0.000000	0.000000	75.81065
			(20.5437)
0.000000	1.000000	0.000000	-1.156512
			(0.97782)
0.000000	0.000000	1.000000	-44.77864
			(9.87741)

Adjustment coefficients (standard error in parentheses)

D(CK100)	-0.521753	-18.60986	0.466369
	(0.54032)	(13.0600)	(0.93269)
D(INF)	-0.009998	-0.222660	-0.019572
	(0.00541)	(0.13082)	(0.00934)
D(OER)	-0.025514	-0.086043	-0.021423
	(0.00799)	(0.19320)	(0.01380)
D(RIR)	-0.000609	-0.238185	0.030709
	(0.00805)	(0.19448)	(0.01389)

Now, our variables dependent and independent were not stationary at level and all were stationary upon first difference or integrated of order "one". At the then level, we had to perform co-integration test to ensure that if there is some probable co-integration between dependent variable and independent variables or not. For performing this, Johansen co-integration test had engaged. According to our clear model, the dependent variable is stock prices and our independent variable inflation, interest rate and exchange rate is from working capital. Our null hypothesis states that there is no co-integration between the variables and the alternative hypothesis and concludes as existence of co-integration among them. As test consequences are shown are significant at a long run relationship. There is no trend.

ECM test:

Dependent Variable: D(CK100)
Method: Least Squares
Date: 01/29/18 Time: 07:06
Sample (adjusted): 1994 2016
Included observations: 23 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF)	23.80710	25.15282	0.946498	0.3589
D(OER)	13.89866	16.91704	0.821577	0.4242
D(RIR)	-1.277158	17.85536	-0.071528	0.9439
C	-37.56587	242.9919	-0.154597	0.8792
CK100(-1)	-0.205052	0.603373	-0.339843	0.7387
INF(-1)	-1.455648	14.93340	-0.097476	0.9236
OER(-1)	1.518711	1.951059	0.778403	0.4484
RIR(-1)	-20.44639	23.57578	-0.867262	0.3995

R-squared	0.461726	Mean dependent var	5.250870
Adjusted R-squared	0.210532	S.D. dependent var	202.3641

In this test, According to co-integration outcome, long run vectors were established among stock prices and the independent factors. Based on our model Bo (SP) =B1 (INF) +B2 (IR) +B3 (ER) we have to guess the long run coefficient and the error correction model for determine short run coefficient. And as we can see that there are insignificant and probabilities are also more than 0.05 and therefore there is no relation between the variables because to have some relation there must be the significance and also must be the first D value should be in negative sign.

V. CONCLUSION

The main purpose of this study was to find out or investigate the relationship or influence of macro-economic factors upon stock prices of KSE-100 Index of Pakistan Stock Exchange. So, any stock market is a very risky and good profit making thing as well because so many factors affect this market and therefore we conducted this study weather inflation, interest rate and exchange rate makes some influence upon stock prices.

After the entire study and all the research and tests we concluded that inflation, interest rate and exchange rate have no influence upon the stock prices of Pakistan weather it is long run or short run relationship.

If we talk about previous studies then we would find that some previous studies also conclude this thing and as we would mention, (Hussainey & Khanh Ngoc, 2009) conclude that there is no impact of interest rate upon prices of stock while it is short term of long term.(Hussin, Muhammad, Hussin, & Razak, 2012)according to this study we would find that this study also given results like exchange rate has no impact upon the stock prices and there are so many other studies that have given similar results.

So, therefore under the light of this study we observed and concluded that there is no influence of mentioned macro-economic factors upon the stock prices of KSE 100 index of Pakistan Stock Exchange.

REFERENCES

[1]. Ajayi, R. A., Friedman, J., & Mehdian, S. M. (1998). On the relationship between stock returns and exchange rates: tests of Granger causality. *Global finance journal*, *9*(2), 241-251.

[2]. Bahmani-Oskooee, M., & Sohrabian, A. (1992). Stock prices and the effective exchange rate of the dollar. *Applied economics*, *24*(4), 459-464.

[3]. Fung, H.-G., Lie, C.-J., & Moreno, A. (1990). The forecasting performance of the implied standard deviation in currency options. *Managerial Finance*, *16*(3), 24-29.

[4]. Gemmill, G. (1996). Transparency and liquidity: A study of block trades on the London Stock Exchange under different publication rules. *The journal of Finance*, *51*(5), 1765-1790.

[5]. Harvey, W. D., & Ginsberg, M. L. (1995). *Limited discrepancy search.* Paper presented at the IJCAI (1).

[6]. Hoguet, G. R. (2008). Inflation and Stock Prices. *State Street Global Advisors*, 1-10.

[7]. Hunjra, A. I., Chani, M. I., Ijaz, M. S., Farooq, M., & Khan, K. (2014). The Impact of Macroeconomic Variables on Stock Prices in Pakistan.

[8]. Hussainey, K., & Khanh Ngoc, L. (2009). The impact of macroeconomic indicators on Vietnamese stock prices. *The Journal of Risk Finance*, *10*(4), 321-332.

[9]. Hussin, M. Y. M., Muhammad, F., Hussin, M. A., & Razak, A. A. (2012). The relationship between oil price, exchange rate and Islamic stock market in Malaysia. *Research Journal of Finance and Accounting*, *3*(5), 83-92.

[10]. Lobo, B. J. (2000). Asymmetric effects of interest rate changes on stock prices. *Financial Review*, *35*(3), 125-144.

[11]. Muhammad, N., Rasheed, A., & Husain, F. (2002). Stock Prices and Exchange Rates: Are they Related? Evidence from South Asian Countries [with Comments]. *The Pakistan Development Review*, 535-550.

[12]. Smith Jr, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of financial Economics*, *32*(3), 263-292.

[13]. Solnik, B. (1987). Using financial prices to test exchange rate models: A note. *The journal of Finance*, *42*(1), 141-149.