

IMPACT OF INFLATION ON S AND P NIFTY INDEX

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Abstract

This paper examines the relationship and impact of WPI on S & P Nifty Index using Granger Causality, Vector Correction Model, Johansen Cointegration Test and Regression Analyses. S & P Nifty Index is considered as the representative of stock market as it is the most popular Indian stock market indices. The secondary time series data is collected from RBI hand book of statistics ranging from 1991 to 2018 being used for the analyses. Thus the results firstly acknowledges that there is a short run relationship between macroeconomic variable namely WPI&Nifty index. Secondly documents their long run relationship between macroeconomic variables namely WPI & Nifty index. Finally concludes that the WPI have a significant negative impact in determining S & P Nifty index. Thus the movement of macro-economic factor WPI plays an imperative role in influencing the movement of stock market NIFTY index.

Key words: WPI, S & P Nifty Index, Granger Causality, Vector Correction Model, Johansen Co-integration Test and Regression Analyses.

Introduction

The stock market is refers to an organized exchange where shares of stock are traded. The movement of stock market depends on the coherent performance of the investor. The stock market is very important to both industry point of view and investors' point of view. Macro-economic variables will have force over the stock market. So, study of finding the relation among stock market and the economic variables is very important. This study will help researchers, educationists, investors, policy makers. In this paper importance is given for pre dominant macro variables which affect the stock markets in large. One of the vital challenges for India to become super economy in the world would be to control Inflation and maintain bullish sentiments in economy of the nation. Stock market is one of the major barometers of the economy. The last decade has been characterized by historically vulnerable rates of Inflation virtually the world over. Almost all emerging countries are taking steps to control inflation as rising inflation can be matter of concern for the country's economy.

Review of literature

AmithVikramMegaravalli &Gabriele SampagnaroLouis Murray (2018) examines the long-run and the short-run relationship between India, China and Japanese stock markets and key macroeconomic variables such as exchange rates and inflation (proxied by consumer price index) of ASIAN 3 economies (India, China and Japan). Monthly time series data spanning the period from 2008 January to November 2016 has been used. The unit root test, the cointegration test, Granger causality test and pooled mean group estimator have been applied to derive the long-run and short-run statistical dynamics. The findings of pooled estimated results of ASIAN 3 countries show that exchange rate has a positive and significant long-run effect on stock markets while the inflation has a negative and insignificant long-run effect. In the short run, there is no statistically significant relationship between macroeconomic variables and stock markets. This study emphasizes on the impact of macroeconomic variables on the stock market performance of a developing economy (India and China) and developed economy (Japan). Mohsina Habib and Khalid Ul Islam (2017) tries to establish the impact of various macroeconomic variables on

Mohsina Habib and Khalid Ul Islam (2017) tries to establish the impact of various macroeconomic variables on the performance of the Islamic stock market for India. Compatible with the Efficient Market Hypothesis (EMH), a number of macroeconomic variables have been documented to impact the performance of the stock market. The Arbitrage Pricing Theory (APT) laid the theoretical basis for the relationship between stock returns and macroeconomic variables which has been later on empirically tested by a large number of studies. It has used the Ordinary Least Square (OLS) Regression to study the impact of macroeconomic variables including inflation, industrial production, exchange rate, interest rates and money supply on the Islamic stock returns. The various diagnostic tests including the Breusch-Godfray Serial Correlation Lagrange Multiplier (LM) test, the Breusch-



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Pagan-Godfray test and the Jarque-Berra test have been used to check whether the residuals of OLS are pure white noise. The findings of our study suggest that exchange rate and interest rates have a significant impact on the Islamic stock market. The implications of the study are that exchange rates and interest rates should be controlled so as to improve the performance of the Islamic stock market in India.

B. Nikita et.al.,(2017) The stock market is referred as the barometer of Indian economy; it is the indicator of the country's economic condition. Many studies have established the relationship between Indian stock returns and macro-economic variables such as gold price, oil price, exchange rate, etc. This study investigates the relationship between the Indian stock returns and the Macro economic variables viz interest rate of India, interest rate of USA, inflation rate of India, inflation rate of USA, GDP growth rate of India and GDP growth rate of USA. Quarterly data was collected for a period from January, 2000 to December, 2015 for all the macro economic variables. Regression Model was used to analyze the data, the variables Itre tested for stationarity, serial correlation, heteroscedasticity and normality. The study found that the GDP growth rate of India and USA are the significant predictors of S&P CNX Nifty return.

VivekPanwar (2017) Events related to monetary policy and Inflation are keenly awaited by stock market participants and other economic agents. Past studies have observed that these events announcements first transmit to the stock market and then to the real sector. In the current research work It have used data from Indian economy but unlike the previous studies It have used broader market index CNX500, consisting of 500 stocks covering 97.3% of market capitalization. Further, It have also considered the impact on key sectoral indices such as, IT, Financial Services, Consumer goods and Energy. It employ event study methodology and calculate AAR and CAAR around the announcement date of the events. In some cases, the results show difference in magnitude and direction depending on whether It use national index Nifty, index of 50 stocks, or broader CNX 500. It have also observed differences in impact of the events on sectoral indices.

VanitaTripathiand and Arnav Kumar (2015) Equity investment is assumed to be a good hedge against inflation since long time. This paper examines short run causal relationship between inflation and stock return in emerging BRICS markets. The study covers a comprehensive period of 13 years from the year 2000 to 2013 using quarterly data. The regression results reveal a significant positive relationship between changes in inflation and stock return to changes in inflation in Russia, India and South Africa and bidirectional causality in China. Hence, there seem to be a cause and effect relationship between stock returns and inflation in emerging markets. The results are of pertinent importance in today's context where emerging markets are facing the problems of rising inflation and stock returns to ensure better regulation of the markets. For investors particularly large and institutional investors the study findings support trading based on inflation forecasts efficiency of Indian stock market.

VanitaTripathi and Arnav Kumar(2014) Stocks are generally considered to be a good hedge against inflation because of their tendency to move together. This paper examines long term relationship between inflation and stock returns in BRICS markets using panel data for the period from March 2000 to September 2013. Correlation results reveal a significant negative relationship between stock index and inflation rate for Russia and a significantly positive relationship for India & China. ADF, PP and KPSS unit root tests indicate non-stationary characteristic of the data. Further It find no long term co-integrating relationship between stock index values and inflation rates using Pedroni panel co integration test. These findings have important implications for policy makers, regulators and investment community at large. There may seem to be short term contemporaneous relationship between inflation and equity returns but in the long run they do not seem to be significantly integrated. Changes in inflation may bring some short run movement in stock return but certainly equity does not seem to be a good hedge against inflation in long run at least in emerging BRICS markets.

Sagarika Mishra and Harminder Singh (2012) test whether the stock market in India is driven by macro-economic fundamentals. It use a non-parametric approach to determine whether any variables are nonlinearly related with



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stock returns and the variability of stock returns by taking monthly observations from 1998 to 2008. It considers exchange rate, interest rate, industrial production, inflation and foreign institutional investments as macroeconomic factors. Further, it employs a semi-parametric approach to see whether any of the macro-variables have a significant nonlinear impact on the stock return and on the variability of stock return. Our results suggest that of the Ordinary Least Square and semi-parametric approaches, the semi-parametric approach better explains the stock returns and volatility

Gagan Deep Sharma and MandeepMahendru (2010) analyzes long term relationship between BSE and macroeconomic variables, vis-à-vis, change in exchange rate, foreign exchange reserve, inflation rate and gold price. The multiple regression equation model (Galton, 1877) in order to investigate the relationship among these factors. The period of the study is January 2008 to January 2009. Results reveal that there is high correlation between the empirical results reveal that exchange rate and gold prices highly effect the stock prices on the other hand the influence of foreign exchange reserves and Inflation on the stock price is upto limited extend only.

Shahid Ahmed(2010) investigates the nature of the causal relationships between stock prices and the key macro economic variables representing real and financial sector of the Indian economy for the period March, 1995 to March, 2007 using quarterly data. These variables are the index of industrial production, exports, foreign direct investment, money supply, exchange rate, interest rate, NSE Nifty and BSE Sensex in India. Johansen's approach of cointegration and Toda and Yamamoto Granger causality test have been applied to explore the long-run relationships while BVAR modeling for variance decomposition and impulse response functions has been applied to examine short run relationships. The results of the study reveal differential causal links between aggregate macro economic variables and stock indices in the long run. However, the revealed causal pattern is similar in both markets in the short run. The study indicates that stock prices in India lead economic activity except movement in interest rate. Interest rate seems to lead the stock prices. The study indicates that Indian stock market seems to be driven not only by actual performance but also by expected potential performances. The study reveals that the movement of stock prices is not only the outcome of behavior of key macro economic variables but it is also one of the causes of movement in other macro dimension in the economy.

Jagan Gaur and Mihir Dash()With the global financial crisis, the Indian economy is witnessing a downturn, with an overall impact of its macroeconomic indicators. In particular, performance of the economy as a whole and the performance of the stock market are expected to be closely inter-linked; fundamental analysis proposes that knowledge of economic conditions and macroeconomic factors would enable investors to anticipate/predict stock market performance. This study examines the impact of selected macroeconomic factors on stock market performance in India using the Granger causality test. The results of the study showed that the only macroeconomic factor which had a significant causal effect on the performance of Indian stock markets was movements in net FIIs.

Research Gap

Many researchers have employed many tools and analysed it, but with a different outlook intended to analyse a combine effect using unit root, granger causality, Johansen co integration, vector error correction model and regression analyses to give an insight of a detailed technical analyses with empirical results.

Significance of The Study

The analysing the impact of WPI on NIFTY helps in determining the stock index movements and earn speculative profits, facilitate in formulating policies.

Scope of The Study

The study takes into consideration the time series secondary data of WPI and S&P NIFTY INDEX collected from RBI hand book of statistics and the period of study is from 1991 to 2018.



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Research Methodology

Intended to employ ACF and PACF to test at which order of integration the variables turn to be stationery. Secondly to employ Granger Causality to test the causation, thirdly the Co integration analyses to test the long run relationship between the variables and Vector Error Correction Model to check the short run relationship between the variables and finally to analyze the impact by employing Regression Analysis. The whole sale price index is used as a proxy of inflation the independent variable and the standard and poor nifty 50 index as dependent variable. The secondary time series data is collected from RBI hand book of statistics ranging from 1991 to 2018 being used for the analyses.

Objectives of The Study

- 1. To investigate the causality between the WPI and S & P Nifty Index.
- 2. To analyze the long run relationship between WPI and S & P Nifty Index.
- 3. To determine the short run relationship between WPI and S & P Nifty Index.
- 4. To study the impact of WPI on S & P Nifty Index.

Hypothesis of The Study

- H1 WPI Granger causes impact on S & P Nifty Index.
- H2 There exist a long run relationship between WPI and S & P Nifty Index.
- H3 There exist a short run relationship between WPI and S & P Nifty Index.
- H4 There is a positive impact of WPI on S & P Nifty Index.

Limitations of The Study

- 1. There are many macroeconomic variables that have an impact on the stock market index, but in this article it uses only one macro-economic variable i.e., WPI.
- 2. The period of study is restricted from 1991 to 2018.

Data Analysis And Interpretation:

Auto Correlation Function

In the following section ACF has been computed to find the stationarity of the **S&P NIFTY 50** data. **S& P NIFTY 50**

	Auto correlations				
	Series:	S&P NIFT	Y 50		
Lag	Autocorrelation	Std.	Box-Ljung Statis		atistic
		Error ^a	Value	Df	Sig. ^b
1	.630	.179	12.339	1	.000
2	.339	.176	16.059	2	.000
3	.089	.173	16.328	3	.001
4	.118	.169	16.813	4	.002
5	.097	.165	17.153	5	.004
6	.094	.162	17.492	6	.008
7	.146	.158	18.348	7	.010
8	.133	.154	19.091	8	.014
9	.128	.150	19.814	9	.019

Table 1.1, Acf Of S&P Nifty 50



		10	.129	.146	20.591	10	.024	
		11	.145	.142	21.632	11	.027	
		12	051	.138	21.767	12	.040	
		13	224	.134	24.566	13	.026	
		14	311	.129	30.360	14	.007	
		15	225	.124	33.622	15	.004	
		16	183	.120	35.965	16	.003	
		a. Th (whit	e underlying proces e noise).	ss assumed	is indeper	Idenc	e	
		b. Ba	sed on the asympto	tic chi-squa	are approx	imat	ion.	
			G	raph 1.1				
			S&	P NIFTY 50				
	1					E	Ceeffeer Upper Co Lowia Co	t nfdence Lint ni dono: Timit
	0.2							
ACF	0							
	-0.5-							
	-1.5-	11	3 1 5 1 7 5 J Lag Num	- 11 11 - 12 - Der	2 14 15 18			

It has been clearly identified by ACF that the S & P Nifty 50 data in its zero order of integration found to be non stationery. Hence the PACF has been conducted to find stationarity of S & P Nifty 50 data with respective difference order.

Partial Autocorrelations				
Serie				
Lag	Partial	Std.		
	Autocorrelation	Error		
1	.630	.189		
2	095	.189		
3	142	.189		
4	.248	.189		
5	070	.189		
6	006	.189		
7	.211	.189		

PACE of S& P NIFTY 50. TABLE 1.2



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8102	.189
9 .042	.189
10 .145	.189
049	.189
336	.189
13058	.189
14061	.189
15069	.189
044	.189



It is been found from PACF that S &P Nifty 50 is stationery at the integrate order of one S &P Nifty 50 Inflation

-	Table 1.3						
	Auto correlations						
	Series: INFLATION						
Lag	Lag Autocorrelation Std. Box-Ljung Statist			atistic			
		Error ^a	Value	df	Sig. ^b		
1	.844	.179	22.152	1	.000		
2	.730	.176	39.361	2	.000		
3	.626	.173	52.513	3	.000		
4	.495	.169	61.091	4	.000		
5	.411	.165	67.275	5	.000		
6	.331	.162	71.446	6	.000		
7	.263	.158	74.220	7	.000		
8	.159	.154	75.283	8	.000		



9	.065	.150	75.472	9	.000
10	.007	.146	75.474	10	.000
11	106	.142	76.027	11	.000
12	195	.138	78.033	12	.000
13	258	.134	81.764	13	.000
14	301	.129	87.193	14	.000
15	330	.124	94.215	15	.000
16	342	.120	102.415	16	.000
a. The underlying process assumed is independence					
(white noise).					
b. Based on the asymptotic chi-square approximation.					



It has been clearly identified by ACF that the INFLATION data in its zero order of integration found to be non stationery. Hence the PACF has been conducted to find stationarity of INFLATION data with respective difference order.

_	Table 1.4, Pacf of Inflation				
	Partial Autocorrelations				
	Series: INFLATIO	N			
Lag	Partial Autocorrelation	Std. Error			
1	.844	.189			
2	.062	.189			
3	015	.189			
4	146	.189			
5	.061	.189			
6	023	.189			
7	.007	.189			
8	198	.189			
9	061	.189			
10	.042	.189			
11	207	.189			



12	098	.189
13	025	.189
14	.052	.189
15	037	.189
16	017	.189



It is been found from PACF that INFLATION is stationery at the integrate order of one INFLATION (1).

Garanger Causallty Test

	-	e e e e e e e e e e e e e e e e e e e		
Pairwise Granger Causality	Tests			
Date: 05/21/19 Time: 05	5:56			
Sample: 1991 2018				
Lags: 1				
Null Hypothesis:	Obs	F-Statistic	Prob.	
WPI does not Granger Cause NIFTY	27	0.08112	0.7782	
NIFTY does not Granger Cause WPI 6.74960				

The granger causality test has been conducted to identify the causation. It has been found from the test that there is unidirectional causation & NIFTY does cause WPI and WPI does not cause NIFTY. Therefore the present value of WPI has been caused by lag 1 value of NIFTY.



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Vector Error Correction Model

Table	1.6.Vcem- Wpi And Nifty	
Lanc	1.0, v cem- vv pi Anu ranty	

Vector Error Correction Estimates				
Ι	Date: 05/21/19 Tin	ne: 06:10		
Sample (adjusted): 1994 2018				
Included	l observations: 25 a	ifter adjustments		
Standa	ard errors in () & t-	statistics in []		
CointegratingEq:	CointEq1			
NIFTY(-1)	1.000000			
WPI(-1)	33.36919			
	(4.94870)			
	[6.74302]			
C	-13791.85			
Error Correction:	D(NIFTY)	D(WPI)		
CointEq1	-0.000702	-0.030556		
	(0.06176)	(0.00686)		
	[-0.01136]	[-4.45558]		
D(NIFTY(-1))	-0.108272	0.010460		
	(0.23981)	(0.02663)		
	[-0.45149]	[0.39284]		
D(NIFTY(-2))	-0.167516	-0.013862		
	(0.24089)	(0.02675)		
	[-0.69542]	[-0.51827]		
D(WPI(-1))	-0.024571	0.323953		
	(1.72163)	(0.19116)		
	[-0.01427]	[1.69466]		
D(WPI(-2))	-1.352010	0.383856		
	(1.47530)	(0.16381)		
	[-0.91643]	[2.34331]		
C	448.8955	-11.22270		
	(183.974)	(20.4275)		
	[2.44000]	[-0.54939]		
R-squared	0.088310	0.536273		
Adj. R-squared	-0.151609	0.414239		
Sum sq. resids	9875596.	121753.2		
S.E. equation	720.9495	80.05037		
F-statistic	0.368082	4.394469		
Log likelihood	-196.5572	-141.6094		
Akaike AIC	16.20458	11.80875		
Schwarz SC 16.49711		12.10128		
Mean dependent 368.0048		-18.56400		
S.D. dependent	671.8191	104.5931		
Determinant resid	l covariance (dof			
adj.)		3.26E+09		
Determinant resid	l covariance	1.88E+09		
Log likelihood	•, •	-337.8819		
Akaike informatio	on criterion	28.15055		
rz criterion		28.83312		



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It has been found from the results that the short run disturbance in long run relationship have been corrected in short period for both NIFTY and WPI. The variables NIFTY and WPIareidentified as adjusting variables since sign of the variables is negative.

Jhonson Cointegration Test

$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$								
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Date: 05/21/19 Time: 06:07							
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Sample (adjusted): 1993 2018						
Trend assumption: No deterministic trend (restricted constant)Series: NIFTY WPILags interval (in first differences): 1 to 1Unrestricted Cointegration Rank Test (Trace)HypothesizedTrace0.05No. of CE(s)EigenvalueStatisticCritical ValueNone *0.37124522.7538920.261840.0222At most 1 *0.33710410.689559.1645460.0255Trace test indicates 2 cointegratingeqn(s) at the 0.05 level***denotes rejection of the hypothesis at the 0.05 level***MacKinnon-Haug-Michelis (1999) p-valuesUnrestricted Cointegration Rank Test (Maximum Eigenvalue)HypothesizedMax-Eigen0.050.05No. of CE(s)EigenvalueStatisticCritical ValueProb.**None0.37124512.0643415.89210None0.37124512.0643415.892100.1823At most 1 *0.33710410.689559.1645460.0255Max-eigenvalue test indicates no cointegration at the 0.05 level***denotes rejection of the hypothesis at the 0.05 level***denotes rejection of the hypothesis at the 0.05 level**Max-eigenvalue test indicates no cointegration at the 0.05 level**denotes rejection of the hypothesis at the 0.05 level**denotes rejection of the hypothesis at the 0.05 level**denotes rejection of the hypothesis at the 0.05 level*Unrestricted Cointegrating Coefficie	Iı	ncluded obser	vations: 26 after a	djustments				
Series: NIFTY WPILags interval (in first differences): 1 to 1Unrestricted Cointegration Rank Test (Trace)HypothesizedTrace0.05No. of CE(s)EigenvalueStatisticCritical ValueProb.**None *0.37124522.7538920.261840.0222At most 1 *0.33710410.689559.1645460.0255Trace test indicates 2 cointegratingeqn(s) at the 0.05 level****** denotes rejection of the hypothesis at the 0.05 level*****MacKinnon-Haug-Michelis (1999) p-valuesUnrestricted Cointegration Rank Test (Maximum Eigenvalue)Prob.**HypothesizedMax-Eigen0.05.No. of CE(s)EigenvalueStatisticCritical ValueProb.**None0.37124512.0643415.892100.1823At most 1 *0.33710410.689559.1645460.0255Max-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-valuesUnrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):NIFTYNIFTYWPIC0.0003140.011253-4.753382-0.000315-0.0023750.697271Unrestricted Adjustment Coefficients (alpha):D(NIFTY)D(NIFTY)-125.4399-407.3740LD(WPI)-56.7364724.985041Cointegrating Equation(s):Log likelihood-359.3281<	Trend assumptio	n: No determi	inistic trend (restri	icted constant)				
Lags interval (in first differences): 1 to 1Unrestricted Cointegration Rank Test (Trace)HypothesizedTrace0.05No. of CE(s)EigenvalueStatisticCritical ValueProb.**None *0.37124522.7538920.261840.0222At most 1 *0.33710410.689559.1645460.0255Trace test indicates 2 cointegratingeqn(s) at the 0.05 level****** denotes rejection of the hypothesis at the 0.05 level****MacKinnon-Haug-Michelis (1999) p-valuesUnrestricted Cointegration Rank Test (Maximum Eigenvalue)Prob.**HypothesizedMax-Eigen0.05*No. of CE(s)EigenvalueStatisticCritical ValueProb.**None0.37124512.0643415.892100.1823At most 1 *0.33710410.689559.1645460.0255Max-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):*NIFTYWPIC*0.0003140.011253-4.7533820.000315-0.0023750.697271*Unrestricted Adjustment Coefficients (alpha):**D(NIFTY)-125.4399-407.3740*D(WPI)-56.7364724.98504*1 Cointegrating Equation(s):Log likelihoo		Ser	ies: NIFTY WPI					
Unrestricted Cointegration Rank Test (Trace)HypothesizedTrace0.05No. of CE(s)EigenvalueStatisticCritical ValueProb.**None *0.37124522.7538920.261840.0222At most 1 *0.33710410.689559.1645460.0255Trace test indicates 2 cointegratingeqn(s) at the 0.05 level*** denotes rejection of the hypothesis at the 0.05 level**WacKinnon-Haug-Michelis (1999) p-valuesUnrestricted Cointegration Rank Test (Maximum Eigenvalue)Prob.**HypothesizedMax-Eigen0.050.1823None0.37124512.0643415.892100.1823None0.37124512.0643415.892100.1823At most 1 *0.33710410.689559.1645460.0255Max-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-valuesUnrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):NIFTYNIFTYWPIC0.0003140.011253-4.753382-0.000315-0.000315-0.0023750.697271Unrestricted Adjustment Coefficients (alpha):D(NIFTY)-125.4399-407.3740D(WPI)-56.7364724.98504NIFTYWPICNIFTYWPICNIFTYWPICNiFTYWPI <td></td> <td>Lags interval</td> <td>(in first difference</td> <td>es): 1 to 1</td> <td></td>		Lags interval	(in first difference	es): 1 to 1				
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D(NIFTY)-125.4399-407.3740D(WPI)-56.7364724.985041 Cointegrating Equation(s):Log likelihood-359.3281Normalized cointegrating coefficients (standard error in parentheses)NIFTYWPIC	Unrestricted Adjustment Coefficients (alpha):							
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Normalized cointegrating coefficients (standard error in parentheses)NIFTYWPIC	1 Cointegrating Equation(s): Log likelihood -359.3281							
NIFTY WPI C	Normalized cointegrating coefficients (standard error in parentheses)							
	NIFTY	WPI	С					

Table 1.7, Johonson Cointegration Test- Wpi And Nifty



1.000000	35.84696	-15142.49		
	(6.96350)	(2593.92)		
Adjustment coef	ficients (stand	ard error in paren	theses)	
D(NIFTY)	-0.039377			
	(0.04715)			
D(WPI)	-0.017810			
	(0.00559)			

It is found from the co-integration test that NIFTY & WPI do have long run relationship at five percent significance level. If NIFTY index is increased by one time WPI will increases by 35.84696 times. Therefore there is a positive relationship between NIFTY & WPI.

Regression Analyses Fdi On Nifty

Nifty= $_0 + _1WPI_t + U_t$

Where

Nifty = Standard and Poor Nifty Index WPI = Whole Sale Price Index (Inflation) 0 = Constant 1 = Slope parameter

 $U_t = Error term$

Nifty = 7455.881 + (-13.103)WPI t = (7.408) (-4.535)

Sig = 0.000 0.000

 $R_2 = 0.442$

Table 1.8

Model Summary					
Model R R Square Adjusted R Std. Error of the					
		_	Square	Estimate	
1	.665 ^a	.442	.420	2167.58713	
a. Predictors: (Constant), INFLATION					

	Table 1.9							
	ANOVA ^a							
Model Sum of Squares df Mean Square F Sig						Sig.		
	Regression	96625871.185	1	96625871.185	20.566	.000 ^b		
1	Residual	122159283.675	26	4698433.987				
	Total	218785154.860	27					
	a. Dependent Variable: S & P NIFTY 50							
	b. Predictors: (Constant), INFLATION							



Table 1.10	
Coefficients	

	Coefficients ^a						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		В	Std. Error	Beta			
1	(Constant)	7455.881	1006.484		7.408	.000	
	INFLATION	-13.103	2.889	665	-4.535	.000	
a	a. Dependent Variable: S & P NIFTY 50						

It is found from the results that the model is good fitted. The impact of WPI is negative, if WPI increases by one time the NIFTY will decrease by -13.103 times. Since the ₁is significant, the impact of WPI on NIFTY is significant.

Findings

- 1. The Auto correlation function (ACF) interprets that NIFTY and WPI data in its zero order of integration found to be non-stationery.
- 2. The Partial auto correlation function (PACF) interprets that NIFTY and WPI data is found to be stationery at the integrate order of one NIFTY 1 and WPI 1.
- 3. The Granger Causality test identifies that there is unidirectional causation & NIFTY does cause WPI and WPI does not cause NIFTY. Therefore the present value of WPI has been caused by lag 1 value of NIFTY.
- 4. The VECM analyses discloses that the short run disturbance in long run relationship have been corrected in short period for both NIFTY and WPI. The variables NIFTY and WPIareidentified as adjusting variables since sign of the variables is negative.
- 5. The co-integration analyses identifies that the NIFTY & WPI do have long run relationship at five percent significance level. If NIFTY index is increased by one time WPI will increases by 35.84696 times. Therefore there is a positive relationship between NIFTY & WPI.
- 6. The regression result reveals that the model is good fitted. The impact of WPI is negative; if WPI increases by one time the NIFTY will decrease by -13.103 times. Since the ₁is significant, the impact of WPI on NIFTY is significant.

Sugessions

- 1. Analyze the past time series data of NIFTY and WPI which facilitates in determining each other. Hence forth facilitates in making estimates and earn speculative profits.
- 2. Scrutinize& validate the data of causality which facilitates in finding the cause and effect relationship between NIFTY and WPI.
- 3. Scrutinize& validate the data of the variable WPI of long run time series data as they have positive relationship between S & P Nifty Index and helps in knowing with positive effect on future S & P Nifty Index. As the variable NIFTY increase the peak in long run lead by the increase in WPI in long run. "A better predictors with positive effect on long run co-integration.
- 4. Keep up a live watch on WPI because it is an influencing factor on Nifty Index & helps in determining the index as highly significant macroeconomic variable.
- 5. Empirical result shows that the effects of macro variable on market volatility are also sensitive to the length of the sample period.
- 6. The government should try to shield the real economy from their vagaries.
- 7. The findings will help to develop effective visions to set and fulfill government's economic policies (monetary and financial) to achieve stability in financial market, asset allocation decision making and risk management.
- 8. The results show that changes in macroeconomic variable are trading rule by investors to gain continually supernormal profits in the stock exchange market. It is suggested that current as well as past knowledge about the development of variable are also important. It implies that the sensible investor in India can attain abnormal returns using historical data of index and macroeconomic indicators. This may enable the



traders and investors to work out profitable strategy for trading or to take investment decision. Investors can forecast how index changes if WPI fluctuate.

- 9. The government should intervene to encourage investment by reducing rate of taxation thus, granting incentive for creation of wealth, controlling interest rate so as to aid the growth of the stock market and improving the regulatory environment and decreasing red tape.
- 10. One of the important policy implications is that the monetary authorities should be very cautious in implementing exchange rate and monetary policies as they may have adverse repercussions on the Nifty Index (stock market).
- 11. The effect of macroeconomic variables on stock market returns has attracted much attention in developed and emerging economies due to their implications in the financial markets. It will help Investors as a guide in forecasting stock market viability and to decide whether it is worthwhile to invest in it. Increased awareness and knowledge of the relationships between macro economic variable and index will help global investors to enhance short and long-term investment decisions-makings since they have the necessary information on the trends and prospects of economic especially the potential growth of the stock markets index.

Conclusion

Stock market is considered as the barometer for the economic health of any country. The various phases of business and economic cycle are also reflected in the movement of stock market index. The epoch making changes in the stock market substantiates the relationship between the macroeconomic factor of a country and stock market movement. Thus the results firstly acknowledges that there is a short run relationship between macroeconomic variable namely WPI &Nifty index. Secondly, it is documented that there is a long run relationship between macroeconomic variables namely WPI &Nifty index. Finally concludes that the WPI have a significant negative impact in determining S & P Nifty index. Thus the movement of macro economic factorWPI plays an imperative role in influencing the movement of stock market NIFTY index.

Hence, in order to better management of stock market behaviour the WPI can be used as controlling tools. Hence it has been proved that financial markets significantly promote economic development at the same time economic development upholds the financial markets stability. Therefore establishing strong relationship between financial markets and economic systems is necessary for the sustainability of both financial markets and economic systems.

References

- 1. AmithVikramMegaravalli &Gabriele SampagnaroLouis Murray (2018)Macroeconomic indicators and their impact on stock markets in ASIAN 3:A pooled mean group approach,
- B.Nikita, P. Balasubramanian and Lakshmi Yermal (2017)Impact of key macroeconomic variables of India and USA on movement of the Indian stock return in case of S&P CNX nifty,2017 International Conference on Data Management, Analytics and Innovation (ICDMAI)Date of Conference: 24-26 Feb. 2017
- 3. Gagan Deep Sharma and MandeepMahendru (2010) Impact of Macro-Economic Variables on Stock Prices in India, Global Journal of Management and Business Research, Vol. 10, No. 7, 2010, 18 Pages Posted: 2 May 2011.
- 4. Jagan Gaur and Mihir Dash () Macroeconomic Factors And Performance Of Indian Stock Market
- Mohsina Habib And Khalid Ul Islam (2017) Impact Of Macroeconomic Variables On Islamic Stock Market Returns: Evidence From Nifty 50 Shariah Index, Journal of Commerce & Accounting Research Volume 6 Issue 1 January 2017
- 6. Sagarika Mishra and Harminder Singh (2012)Do macro-economic variables explain stock-market returns? Evidence using a semi-parametric approach, Journal of Asset Management, Volume 13, Issue 2, pp 115–127
- Shahid Ahmed (2010)Aggregate Economic Variables and Stock Markets in India, International Research Journal of Finance and Economics, No. 14, pp. 141-164, 2008, 24 Pages Posted: 18 Oct 2010 Last revised: 20 Nov 2010



IJBARR E- ISSN -2347-856X ISSN -2348-0653

- 8. VanitaTripathi and Arnav Kumar(**2014**)Relationship between Inflation and Stock Returns Evidence from BRICS Markets Using Panel Co Integration Test, International Journal of Accounting and Financial Reporting, Vol 4, No. 2, Dec 2014, pp 647-658
- VanitaTripathiand and Arnav Kumar (2015) Short Run Causal Relationship between Inflation and Stock Returns - An Empirical Study of BRICS Markets, Asian Journal of Management Applications and Research, Vol.05, No.01, 13 Pages Posted: 23 Aug 2015
- VivekPanwar (2017) "Indian Stock Market Reaction To Interest Rate And Inflation Announcements" 19th International Scientific Conference on Economic and Social Development, Melbourne, Australia, 9-10 February 2017, 424.