

Price Inflation and Its Consequences in Brazil

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Abstract:

In this paper, we examine the impact of inflation on the stock exchange of Brazil and we have taken data from 1987 to 2015 and applied ADF, unit root test and applied Granger causality for checking the associations between inflation and economic growth of Brazil. Our results are showing that there is an association between inflation and economic growth of Brazil. Due to an increase in prices of goods and services, there are no changes to boost growth of the economy. We suggested that policy makers should make adequate policies to control the inflation level in Brazil. Most of the time, it is seen that inflation has a negative impact on the performance of any developing as well as underdeveloping countries.

Keywords: Brazil, ADF, Granger, causality, boost, policy makers.

Introduction:

From the last few decades, the association between inflation and the stock process is seen as a most debatable topic. Furthermore, most studies have proved that there is a negative relationship between inflation and stock prices. According to Fama (2015), inflation has impacted the real economy of the country. There is evidence that during high inflation, industrialized economies could not work properly. For instance, in the era of financial crisis, the economy was affected badly. Due to inflation, investors did not take decisions properly. The aim of this paper is to analyze the impact of inflation on the stock prices of Brazil. Most emerging countries have been facing this problem that how can they control the country's rate of inflation. Due to currency devaluation, we have selected Brazil here. It is known as the 11th market for exports of goods and services and its economy was known as a flagship. Its market capitalization was high in 1998 and plays a crucial role for the development of the economy. It was seen that inflation is a threat for all types of emerging countries. However, for a few years, the equity market of Brazil was under performance and inflation rates interrupted their performance. Due to the event of the Pacific Rim economies, the stock prices of Brazil were affected badly. The Brazil stock exchange is known as a famous derivatives exchange in the state of America. In the year of 2007, net profit was high at 46% in Brazil. Bolsa and Mercadorias is the founder of the Brazil stock exchange. The stock exchange has a vital role for the development of the economy and the Brazil stock exchange performance was outstanding from the last few years. It has the best trading system and it is also the best option for investment. The investors of Brazil use an online system for the exchange of securities. This saying is not wrong that the GDP of any country depends upon the development of the stock exchange. Furthermore, it is true that the stock exchange is a tool to cut financial crisis.

Inflation rate in Brazil:

Figure no1:



Objectives:

- 1) Impact of inflation on GDP of Brazil
- 2) Impact of inflation on performance of Brazil
- 3) Impact of inflation on development of Brazil.

Problem statement;

Impact of inflation on performance of Brazil.

Literature review;

Rabia najaf, about impact of inflation on stock exchange of Nigeria .For this purposed, they had taken 1998 to 2014 and applied ECM model .Their results are exploring that there is negative impact of inflation on stock exchange of Nigeria [1].

Awokiyesi F, Observed that impact of inflation on stock market of India .For this purpose, they had taken data from 1999 to 2009 and employed ARCH model .Their results are showing that there is significant negative impact of inflation on stock exchange [2].

Bernanke J.H, Studied about impact of inflation on stock exchange of Pakistan .For this purposed, they had taken 1993 to 2003 and applied VECM model .Their results are exploring that there is negative impact of inflation on stock exchange [3].

Datta, K. & Kumar, C ,Viewed about impact of inflation on stock exchange of Indonesia .For this purposed, they had taken 1998 to 2014 and applied GARCH model .Their results are exploring that there is negative impact of inflation on stock exchange [4].

Espinoza O.S, Thomas P. & Piana V, and Studied about impact of inflation on stock exchange of New York .For this purposed, they had taken 1998 to 2014 and applied ECM model .Their results are exploring that there is negative impact of inflation on stock exchange [5].

Khan, M. S & Senhadji A, Viewed about impact of inflation on stock exchange of USA .For this purposed, they had taken 1998 to 2014 and applied GARCH model .Their results are exploring that there is negative impact of inflation on stock exchange [6].

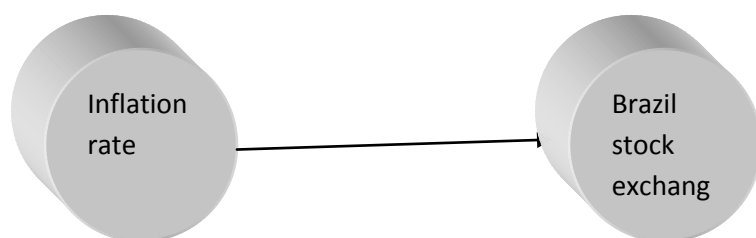
Madhukar, S. & Nagarjuna, B, and Viewed about impact of inflation on stock exchange of Italy .For this purposed, they had taken 1998 to 2014 and applied GARCH model .Their results are exploring that there is negative impact of inflation on stock exchange [7].

Mehari, M. & Wondafrash, A ,Examined about impact of inflation on stock exchange of France .For this purposed, they had taken 1991 to 2015 and applied multiregression model .Their results are exploring that there is negative impact of inflation on stock exchange [8].

Prasanna, S. & Gopakumar, K., and Viewed about impact of inflation on stock exchange of china .For this purposed, they had taken 2000 to 2015 and applied OLS model .Their results are exploring that there is negative impact of inflation on stock exchange [9].

Sergii, P Observed about impact of inflation on stock exchange of Japan .For this purposed, they had taken 1998 to 2014 and applied VECM model .Their results are exploring that there is negative impact of inflation on stock exchange [10].

Theoretical framework:



Methodology:

We applied regression analysis to find the relationship between economic variables and inflation rate .Hence, this relationship is helping to find the relationship between macroeconomic variables and inflation. We used secondary data and collected data from central bank .for this purpose we have taken data of 28 years and from 1987 to 2015.

Equation:

$$Y = \alpha_0 + \alpha_1 X_1 + U_t$$

Where;

Y = Gross Domestic Product proxy for Economic Growth (Dependent Variable)

X1 = Inflation Rate (Independent variable)

α_0 = the intercept of the equation

α_1 = the co-efficient of Inflation Rate (independent variable)

U_t = the Stochastic Error Term

Table 1: Regression Result

Dependent Variable: LOGGDP Method: Least Squares
 Date: 04/11/14 Time: 12:45 Sample: 1987 2015
 Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.944737	0.154608	38.45014	0.0000
LOGINF	-0.273103	0.126193	-2.164178	0.0395
R-squared	0.147827	Mean dependent var	5.622758	
Adjusted R-squared	0.116265	S.D. dependent var	0.240978	
S.E. of regression	0.226538	Akaike info criterion	-	
		Schwarz criterion	0.065343	
Sum squared resid	1.385619	F-statistic	0.028955	
Log likelihood	2.947457	Prob(F-statistic)	4.683665	
Durbin-Watson stat	0.200609		0.039463	

Table 2: Unit Root Test Results For LogGDP

ADF Test Statistic	-	1% Critical Value*	-3.7345
	2.2831868	5% Critical Value	-2.9909
		10% Critical Value	-2.6348

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(LOGGDP,3) Method: Least Squares
 Date: 03/12/15 Time: 12:04
 Sample(adjusted): 1991 2014
 Included observations: 24 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGGDP(-2),1)	-	1.490489	-	0.0336
	3.403063	2.283187		
D(LOGGDP(-2),1)	1.087308	1.110156	0.979422	0.3392
D(LOGGDP(-1),2)	0.264733	0.473745	0.558802	0.5822
C	0.009915	0.012403	0.799172	0.4332
R-squared	0.703165	Mean dependent var	0.009583	
Adjusted R-squared	0.6586405	S.D. dependent	0.103901	

var			
S.E. of regression	0.060704	Akaike info criterion	-
Sum squared resid	0.073705	Schwarz criterion	-
Log likelihood	35.37465	F-statistic	15.79252
Durbin-Watson stat	1.191243	Prob(F-statistic)	0.000017

Table 3: Causality Test Result

Pairwise Granger Causality Tests Date: 02/13/14

Time: 13:15 Sample: 1986 2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
LOGINF does not Granger Cause LOGGDP	28	0.03817	0.96262
LOGGDP does not Granger Cause LOGINF		2.74922	0.08592

R - Rejected
A - Accepted

Results:

In table no 1, the values of r^2 show that there is 15% variation and there is found a negative coefficient. Thus it is seen that there are fluctuations in the inflation rate of Brazil from the last few decades. In table no 2 the results of unit root revealed that variables are stationary at level 1,5% and 10%. The results of ADF are showing that values of GDP. Table no 3 are showing high probability and value of F-statistics is 3.74. It is also seen that there is a unidirectional relationship.

Recommendations:

On the basis of given results, it is proved that high inflation rate is badly influenced on interest rate. Inflation is a reason for a stable investment level therefore; economy is badly in a high inflation situation. A good performance of economy can be improved with help of per capita income. For boost economy; there is need of high investment level. This paper is trying to show that policy makers should have made policies against inflation.

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