An Empirical study of Consumer price Index on BSE SENSEX

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Abstract

The Consumer Price Index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food, and medical care. It is calculated by taking price changes for each item in the predetermined basket of goods and averaging them. The main objective of this study is to check how consumer price index affects the BSE sensex. In this paper null hypothesis is taken and to prove that null hypothesis is correct for this correlation and regression analysis tools are used for the analysis.

Keywords: Consumer price Index, Hypothesis, Sensex.

I. Introduction

Inflation indicates a significant increase in the normal price of the country over the long term. This is against price stability. In economics, price stabilization is not used in the sense of price stabilization[IX]. At lower price ranges from 2 to 3 percent per year, favourable in economic development, sometimes it is desirable. However, the general price increase (in double digits numbers) and the worst name of inflation has been experienced for a long time. There is intimidation on the phenomenon of inflation for the common man, especially those of goods that are not comparable to the rise in labour prices. The country is normally counted based on a few indicators[VI][VIII]. An index number is the only one that shows how a set of total variables can change over time or from one location to another. In India, we use two main indices to assess inflation or price levels.

I.i. Consumer Price Index

Price change CPI on the buyer's perspective. This is a true indicator of the common man[II][I]. It reflects personal inflation. The CPI is designed to measure changes over time at the retail prices of the selected goods and services that the consumer's customer has chosen to spend on their earnings[III]. In India, up to January 2012, there are only four CPIs who have been released on national level:
(1) Industrial Workers (IW) (base 2001),
(2) Agricultural Labourer (AL) (base 1986-87) and
(3) Rural Labourer (RL) (base 1986-87)
(4) Urban Non-Manual Employees (UNME) (base 1984-85)
The new series of CPI began in 2012. In this order, the Central Statistical Office of
the Ministry of Statistics and Program Implementation (CSO)
(a) Entire urban population viz CPI (Urban);
(b) Entire rural population viz CPI (Rural)
(c) Urban + Rural population will also be compiled based on above two CPIs.
The Indian Committee has recommended that the reasonable limitation of inflation is
not clear but to review the monetary system performance (SA Chakravarthy
Committee), as a general guideline, the price is more than 4 percent. Rangarajan
considered 6% inflation as an external limit[X]. The Tarapur Committee has
recommended a 3 percent inflation rate. Hence, the acceptable inflation rate in India
is between 3-7 percent. Continuous high inflation has serious consequences for the
performance of the economy[XII]. Over the past few years, India has been constantly
in high inflation. This is a decline in high inflation. Now, whether the role of inflation
can play a role or not an open question. Yes, then what is the reduced growth rate of
inflation? There are a lot of discussions about the government and the RBI's ability to
overcome inflation[XII]. The RBI has been hampered by ever-increasing interest
rates and investments and therefore has been criticized for growth.

II. Literature Review

Over the past few years, the Indian economy has seen high inflation and
decreasing growth during this period. On the one hand, prices of many commodities have grown
exponentially, and on the other hand, the industrial production is low. Even though this
period is still not classified as 'inflation', the Indian economy will reach this horrible
stage if the situation is further aggravated. Negotiations on inflation, demand
reductions or price increases have also been facing its impact on India's economy.
Inflation and Inflation [IV]. The resulting phenomenon is the supply flotation as a
result of the inflation or the structural problems of the country after the Government
of India.
Based on the effect of monetary policy in monetary policy, its study suggests that the
monetary policy of monetary policy lowers the annual inflation rate. During the study
from 2009-11, he found that inflation has surpassed historic records that reach 14%.
Based on this study, CRR concluded that the RBI was the most important way to
prevent inflation. Inflation in the last six months dropped to 7.17 percent by January
2015 and reached 4.36 in July. Inflation in the last decade was a high of 4-14 percent
in 2009. Reserve Bank of India CRR reviewed mid-quarter policy review to keep a balance between growth and inflation [V].

The oil price rise on prices of other commodities in India and the prices of the product using monthly data from their paper in April 1994 to December 2000 examined[VII]. This document is to study the four-equation VAR model inflation in inflation, inflation and inflation and the increase in money and output.

II.i. Objectives of the study

This paper aims to make a deeper analysis of the factors that have caused inflation in India over the past few years.

To check that the consumer price index effects the BSE sensex or not.

Null Hypothesis

Alternative Hypothesis

There is no significant Relationship between Consumer price Index and stock price

There is a significant Relationship between Consumer price Index and Stock Price

II.iEmpirical Analysis

| Null Hypothesis | Alternative Hypothesis |
|-----------------|------------------------|
| There is no significant Relationship between Consumer price Index and stock price | There is a significant Relationship between Consumer price Index and Stock Price |

II.iEmpirical Analysis

| Inflation CPI | BSE-Sensex |
|---------------|------------|
| Range         | 1170.960   | 32968.835  |
| Minimum       | 7.040      | .165       |
| Maximum       | 1178.000   | 32969.000  |
| Mean          | 430.10359  | 8245.95295 |
| Std. Error    | 51.399797  | 1526.761351|
| Std. Deviation| 320.991627 | 9534.621581|
| Variance      | 103035.625 | 90909008.695|
| Skewness      | 0.94       | 1.22       |
| Kurtosis      | -0.06      | 0.32       |

Table.1. Descriptive Statistical Analysis

In this study, data collected from BSE-Sensex and inflation CPI variables collected from September 1981 to 2018. BSE Sensex and Inflation CPI (below 4.1 below a detailed statistical analysis of the closure of 39 years GP). According to Header Land (1986), BSE Sensex 1.22 and Inflation CPI 0.94 Indexed curve, values greater than 0.2 indicate great curve.
The recorded kurtosis for BSE SENSEX is 0.32 and Inflation CPI is -0.06 which is normal according to George, D., & Mallery, M. (2010) values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution.

**Fig.1.** Trend analysis of BSE SENSEX and Inflation CPI

Depending on the two variables, the variable depicts a trend analysis based on another independent variable called BSE Sensex and Figure 1 below the Trend Analysis of BSE Sensex and Inflation CPI. The upper graph represents an axis annual ending BSE SENSEX and another axis, the annual inflation rate.

There are many examples of inverse relationship in 39 observations on dotted arrows. When pointing to the red dotted line, the Sensex inflation rate rarely rises with a white arrow or rarely when the rate of inflation is falling.

**II.iii Correlation Metrics**

| Correlation  | BSE SENSEX | Inflation CPI |
|--------------|------------|---------------|
| BSE SENSEX   | 1          |               |
| Inflation CPI| 0.968      | 1             |

**Table.2.** Summary of Correlation statistics

Relationship inflation CPI and BSE - SENSEX shows two variables A summary correlation analysis illustrates. In the case of inflation CPI, the Sensex will rise as inflation rises. Rising inflation is a traditional indicator of depression or decline in the CPI economy. In this research study, the correlation between the SENSEX and
Inflation CPI, \( p = 0.968 \), correlation between literary relationship and empirical reports. However, there is a researcher in the current study because there is a constant relationship between the two stock market indices and the creator between the inflation CPI in India.

**IV.iv Regression Analysis**

Summary of Regression

| Model | R | R Square | Adjusted R Square | Std. Error of Estimate |
|-------|---|----------|-------------------|-----------------------|
| 1     | .968\(^a\) | .937 | .935 | 2421.987485 |

*Table.3. Regression Model*

| Model    | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|----------|-----------------------------|---------------------------|---|------|
| (Constant) | -4121.846                    | 653.883                   | -6.304 | .000 |
| Inflation CPI | 28.755                        | 1.224                      | .968 | 23.493 | .000 |

*Table.4. Linear Regression*

There is zero from compilations for the popular value of inflation CPI (GP). The hyphenation that the p-value multiplier for inflation CPI (GP) is equivalent to zero. Low p-honour (<0.05) shows that it is invalid and rejected. Thus, p-value data analysis from table-3 consists of two important values for an independent variable. However, due to regression importance based on p-value, the alternative hypothesis is accepted when the vacuum hypothesis is rejected.

**V. Conclusion**

The study found that the gross economic variables have a positive effect on the inflationary CPI. Based on correlation and retreat, it is personally recognized, and variable inflation has shown the importance of influencing the CPI sensex. It rejected the variable null hypothesis. Hence, the price of gold has a positive effect and is associated with the Sensex.
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