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**MEASURING CORRELATION BETWEEN INFLATION RATE AND  
WEIGHTED AVERAGE LENDING RATE OF PRIVATE AND PUBLIC  
SECTOR BANKS IN INDIA**

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**ABSTRACT**

*Last 10 years, inflation rates are decreasing and lending rates of banks are either in steady or decreased position. In this context, the study has endeavored to analyse the relationship between inflation rate and lending rate of private and public sector banks in India. The time period of the study is from 2010 to 2019. Inflation rate is compared with weighted average lending rates with the help of regression and ANOVA tools. The study concludes that moderate significant relationship present in inflation rate and weighted average lending rate of private and public banks in India.*

**KEYWORDS:** *Weighted Average Lending Rate (WALR), Inflation Rate*

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**INTRODUCTION:**

Prime lending rate is the interest rate that commercial banks charge from their most credit-worthy customers. Bank's best customers consist of large co-operations. It is also important for retail customers, as the prime rate directly affects the lending rates which are available for mortgage, small businesses, and personal loans. As there are numerous interest rates, a base rate is needed to make a relation between the different rates. So a base rate, that is, a prime lending rate is evolved. Our Indian government gets involved in it to control inflation by adjusting the level of money in our economic system. The central government uses interest rates to control money supply and consequently, the inflation rate. When the interest rates are high, it becomes more expensive to borrow money and savings become attractive. When the interest rates are low, banks are able to lend more, resulting in an increased supply of demand. The central bank of the country changes interest rates with the broader purpose of stabilizing the national economy.

**1) Kohnehshahri and Karnami (2007):** stated that high interest rates have been an essential component of many stabilization programmes in countries with chronic inflation during the 1980s. The results of the study showed a unidirectional causality from interest rate to inflation rate in 40 Islamic countries. The findings presented practical policy implication for decision makers in the area of macroeconomic planning, particularly for Islamic countries. The results implied that banks must reduce interest rates to decrease inflation.

- 2) **Rao and Nailwadi(2010):** Some amount of inflation is actually desirable for the economy because of its relationship with employment and economic growth. However, too much inflation is not good for the economy. Rising inflation, an economic disease, has disturbed the minds of governments, economists, and the public as they feel the punch of inflation due to rise in price of all commodities. The rise in prices has made life miserable in India and other developing and poor countries.
- 3) **Maheshwari&Biyani(2012):** A high rate of inflation is harmful for the growth of the economy, but its mild dose may be able to sustain high growth. There is a trade-off between inflation and growth.
- 4) **Reserve Bank of India (2009):** Prime lending rate is interest rate that commercial banks charges from their most credit-worthy customers. In banking parlance, BPLR means benchmark prime lending rate. Generally, a bank's best customers consist of large corporations.
- 5) **Ramahi, (2010):** The Central government uses interest rates to control money supply and consequently , the inflation rate. When the interest rates are high, it becomes more expensive to borrow money and savings become attractive.

### Objectives of the Study

1. To investigate Is there any relationship exists between inflation rate and weighted average lending rate
2. To assess whether this relationship is significant or not,

**Research Methodology:** The study is mainly uses secondary data for analysis of the relationship between inflation rate and weighted average lending rate of public and private banks in India,data is collected from website of Reserve bank of India. Weighted average lending rates given quarterly but average rates are considered for this study. The period of the study is for ten years from 2010 to 2019

### Hypotheses:

H0<sub>1</sub>: There is no significant liner relationship between inflation rates and weighted average lending rates of public sector banks in India.

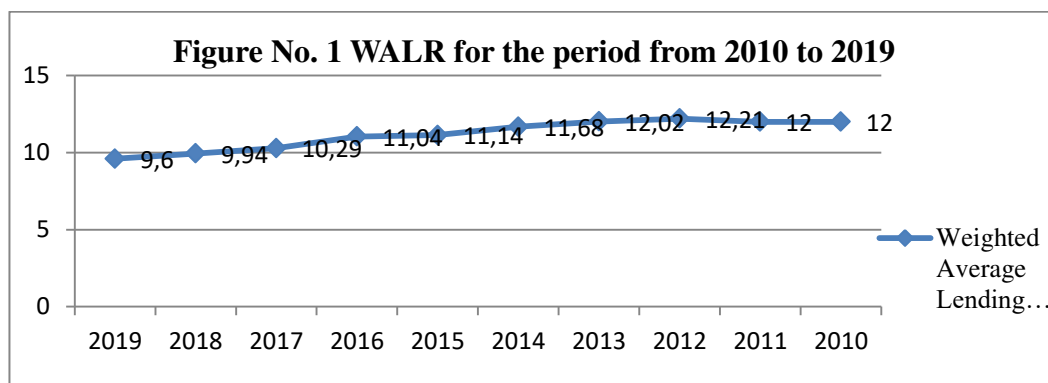
H0<sub>2</sub>: There is no significant linear relationship between inflation rates and weighted average lending rates of private sector banks in India.

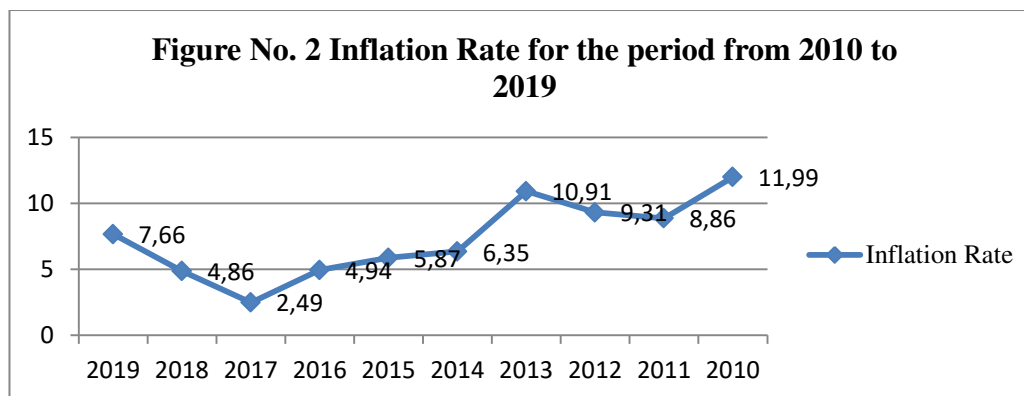
### RESULTS AND DISCUSSION:

#### 1) Public Sector Banks

**X = Weighted Average Lending Rates (WALR)**

**Y = Inflation Rate**





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<b>Regression Statistics</b>	
<b>Multiple R</b>	<b>0.661</b>
<b>R Square</b>	<b>0.437</b>
<b>Adjusted R Square</b>	<b>0.367</b>
<b>Standard Error</b>	<b>0.759</b>
<b>Observations</b>	<b>10</b>

<b>ANOVA</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>Significance F</b>
<b>Regression</b>	3.594	1	3.59	6.23	0.037
<b>Residual</b>	4.613	8	0.57		
<b>Total</b>	8.207	9			

For the purpose of analysis, data were collected from Reserve Bank of India. Weighted Average Lending Rates of Private and Public sector banks are considered. Inflation rate is selected as the Y variable and Weighted Average Lending Rate of Public Sector banks as X variable average yearly data taken for each variable. The figure 1 represents the average weighted lending rate of public sector rate recorded 12% in the year 2010, thereafter it was in a stable position up to 2013. Then, it began to decrease in 2019; WALR of public sector rate attained a value of 9.6% in 2019. It showed an decreasing trend for 10 years with an exception of the year 2011.

The figure no. 2 represents the average inflation rate for ten years. Starting at the rate of 11.99% in the year 2010, then it decreased up to 8.86 in the year 2010, then it decreased up to 8.86 in the year 2011, slightly increased in 2012 and reached up to 10.9 % in 2013. Thereafter sharply came down by 6.35 in the year 2014 and remained down up to 2.49 I the year 2017 again it rose in the year 2018 and 2019. It recorded 7.66%. it was always in the decreasing position except in 2012 and 2019. It is clear that the inflation rate year shows a fluctuating trend for the past ten years.

**Public Sector Regression Analysis of Inflation Rate and Weighted Average Lending Rate:**

The table shows the regression equation of X on Y :  $-X0.21Y-9.632$ , Regression equation X on Y gives the most probable values of X-inflation for the given values of Y-WALR. Slope of the curve is 0.212 which shows the change in X for per unit change in Y. This implies that whenever there is a change in the WALR, it will lead to a per unit change of 0.212 in the inflation rate. The value of  $R^2$  reported 0.43 which indicates moderate relation between inflation rate and weighted average lending rate.

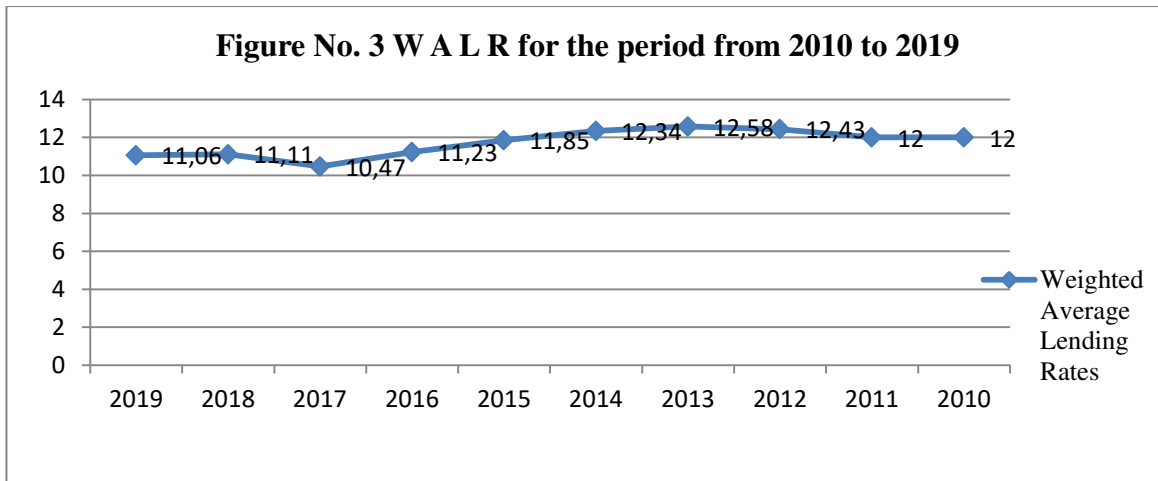
From the ANOVA table, the test statistics is calculated as 6.23 with p value 0.03 the calculated value is lower than the table value  $H_0$  is to be accepted.

Decision-Accept  $H_0: B_1=0$  There is no significance linear relationship between inflation and weighted average lending rate.

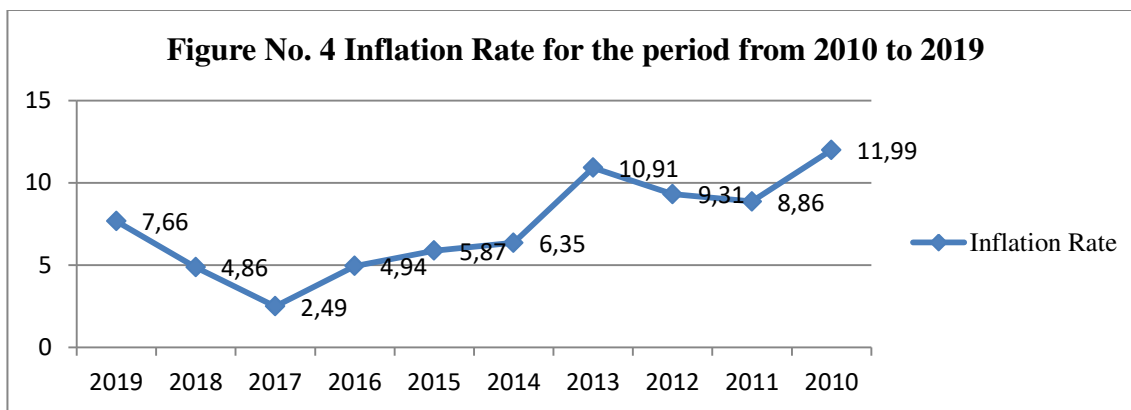
2) Private Sector Banks

X = Weighted Average Lending Rates (WALR)

Y = Inflation Rate



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**Regression Statistics**

Multiple R	0.745
R Square	0.555
Adjusted R Square	0.499
Standard Error	0.499
Observations	10

ANOVA	SS	df	MS	F	Significance F
Regression	2.448	1	2.448	9.98	0.013
Residual	1.961	8	0.245		
Total	4.41	9			

**Private Sector Regression Analysis of Inflation Rate and Weighted Average Lending Rate:**

The table shows the regression equation of X on Y :  $-X0.175Y-10.41$ , Regression equation X on Y gives the most probable values of X-inflation for the given values of Y-WALR. Slope of the curve is 0.175 which shows the change in X for per unit change in Y. This implies that whenever

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there is a change in the WALR, it will lead to a per unit change of 0.175 in the inflation rate. The value of  $R^2$  reported 0.55 which indicates moderate relation between inflation rate and weighted average lending rate.

From the ANOVA table, the test statistics is calculated as 9.98 with p value 0.013 the calculated value is higher than the table value  $H_0$  is to be accepted.

**Decision-Accept  $H_0:B_1=0$  There is significance linear relationship between inflation and weighted average lending rate.**

### **FINDINGS**

- 1) The average weighted lending rate of public sector banks have been decreasing trend since 2010 to 2019.
- 2) The average inflation rate showed decreasing trend from 2010 to 2019, except in the year 2013 and 2019.
- 3) Inflation rate recorded very low in the year 2017 that 2.49
- 4) The weighted average lending rates of private sector banks have been decreasing trend but slight change from 12 to 11.06 during the year 2010 to 2019.
- 5) A change I the WALR of public sector banks will lead to a per unit change of 0.212 in the inflation rate
- 6) A change in the WALR of private sector banks change of 0.175 in the inflation rate
- 7) There is no significant linear relationship existing between inflation rate and weighted average lending rate of public sector banks in India. Suggestions:
- 8) There is significant linear relationship existing between inflation rate and weighted average lending rate of private sector banks in India.

### **CONCLUSION:**

It is concluded that Indian government in curtailing and stabilizing prives in the economy would fail if interest rates are not put under control. Certainly, the government should try to check inflation in the country, and at the same time, the banks should try to make their lending rates more flexible. This would go a long way in achieving price stability in the country.

### **REFERENCES:**

1. Adolfson, M. (2007). Incomplete exchange rate pass-through and simple monetary policy rules. *Journal of International Money and Fiance*,26(2),468-494. And *Industry*,2007, December, 3-5, Bayview Hotel Georgetown, Penang.
2. Ayodele,F.B., & Idowu, O.S. (2010). Long run causal relationship between interest rate and general price level under deregulated regime in Nigeria. *Indian Journal of Economics and Business*, 9 (3), 447-459
3. Choudhri, E.U., & Hakura, D.S. (2006). Exchange rate pass-through to domestic prices: Does the inflationary environment matter? *Journal of International Money and Finnce*, 25 (3),614-539.
4. Clark, T.E., & Davig, T. (2008). An empirical assessment of the relationships among inflation and short and long term expectations. Research working paper: 2008/05, Federal Reserve Bank of Kansas City.
5. Gul, E., & Ekinci, A. (2006). The casual relationship between nominal interest rates and inflation: The case of Turkey. *ScientificJournal of Administrtive Development*,4 (21), 54-69.

6. Hossein, A., Kohnehshahri, L.A., & Karami, A.. (2007). The relationships between interest rates and inflation changes: An analysis of long-term interest rate dynamics in developing countries. In International Economic Conference on Trade
7. Irfan, H., & Amen, U. (2011). Impact of monetary policy on gross domestic product, (GDP). Interdisciplinary Journal of Contemporary Research in Business, 3 (1), 1348-1361
8. Jha,R., & Dang, T. N. (2011)Inflation variability and the relationship between inflation and growth. ASARC Working Paper 2011/08.
9. Leduc, S., Still, K., Stark, T. (2007). Self-fulfilling expectations and the inflation of the 1970s:
10. Maheshwari, N., & Biyani, R. (2012). Inflation and its effects on the Indian economy. Indian Journal of Finance, 6 (4), 28-34.
11. Reserve Bank of India. (2019). Structure of Interest Rates: WALR of Public and Private Sector Banks.