IMPACT OF MONETARY POLICY OF INDIA WITH SPECIAL REFERENCE TO CRR, REPO & REVERSE REPO RATE IN CURBING INFLATION – AN ECONOMETRIC STUDY

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ABSTRACT

In the recent past, the thrust of the monetary policy of India was on reducing the annual inflation rate. During the year 2009 to 2011, the inflation in India has crossed historical records and reached to unprecedented levels, and lying in the range of 9 – 14 %. The monetary authorities are striving hard to curb the inflation by adopting several monetary policy measures, the important amongst which are changes in CRR, repo and reverse repo rate, which directly influence the money supply in the market with immediate effect without creating any distortions in the economy. In this paper the econometric study of impact of changes in CRR, repo rate and reverse repo rate adopted by the monetary authorities in curbing inflation is carried out and the model is formulated to evaluate the various alternatives to suggest the suitable policy based on the existing market scenario which can be implemented to curb the existing level of inflation.

INTRODUCTION

The monetary policy of any country refers to the regulatory policy, whereby the monetary authority maintains its control over the supply of money for the realization of general economic objectives. Monetary policy can be broadly defined as "the deliberate effort by the Central Bank to influence economic activity by variations in the money supply, in availability of credit or in the interest rates consistent with specific national objective." In the context of developing economies like India, monetary policy acquires a wider role and it has to be designed to meet the particular requirements of the economy. It stimulates or discourages spending on goods and services and, thus, influences economic activities and prices by regulating the supply of money, and the cost and availability of credit to producers and consumers in the economy. Households and business units make spending and investment decisions based upon current and expected future monetary policy actions. The various sectors of the economy respond in different ways, depending on the extent to which they are borrowers or lenders and the importance and relative availability of credit to the sector. By affecting the demand side of the economy, monetary policy tries to damp or perhaps even eliminate business fluctuations - economy-wide recessions and booms arising from fluctuations in aggregate demand.

In India, the three major objectives of economic policy are growth, social justice (equitable distribution of income and wealth) and price stability. Of these, price stability is perhaps the one that can be pursued most effectively by the monetary authorities of the country. The monetary policy of an economy operates through three important instruments, viz., the regulation of money supply, control over aggregate credit and the interest rate policy. In pre-reform period, given the largely underdeveloped state of financial system, regulated nature of financial markets and plan priorities, the RBI often resorted to the direct instruments of monetary policy like CRR, SLR and interest rate for allocating credit and regulating money supply in the economy. Gradual liberalization and globalization of the economy, strengthening and development of the financial system, restrictions on the automatic monetization of fiscal deficit and various other changes in the economy had made it possible for the RBI to operate with the indirect instruments of monetary policy such as bank rate, repo rate and OMOs (open market operations). Accordingly, there has been a distinct shift in the monetary policy framework and operating procedures from direct instruments of monetary

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control to market based indirect instruments in the recent years. The thrust has been to provide the market mechanism a greater role in the economy, to provide the banks more operational flexibility and to bring the allocative efficiency in the economy. In the recent years, the thrust of the monetary policy was to reduce the annual inflation rate. Since the year 2009 the inflation in India has crossed historical records and reached to unprecedented levels, and lying in the range of 9 - 14 %. The monetary authorities are striving hard to curb the inflation by adopting several monetary policy measures, the important amongst which are changes in CRR, repo and reverse repo rate, which directly influence the money supply in the market with immediate effect without creating any distortions in the economy. That is the reason, they are perceived to be the most appropriate by the monetary authorities to curb the existing inflation, and hence changed 16 times during the year 2009 to 2011. Hence the efforts are made in this paper to make the econometric study of impact of changes in CRR, repo rate and reverse repo rate adopted by the monetary authorities in curbing inflation. Also the econometric model is formulated to evaluate the suitable policy based on the existing market scenario which can be implemented to curb the existing level of inflation.

CASH RESERVE RATIO (CRR)

Banks in India are statutorily required to maintain certain proportion of their Net Demand and Time Liabilities (NDTL) (net of inter-bank liabilities) as cash in hand or balance with the RBI. In pre 2006 period the minimum CRR requirement imposed by the statute was 3 per cent and the maximum was 15 per cent. These limits constrained the use of CRR as an instrument of monetary policy. With the amendment to the RBI Act 1934, effective from June 22, 2006, the RBI permitted to fix the CRR for Scheduled Commercial Banks (SCBs) without any floor rate or ceiling rate for monetary stability considerations. It is also no longer obligatory for the RBI to pay interest on the CRR balances maintained by the Scheduled Commercial Banks (SCBs).

The CRR remained a powerful instrument of monetary policy in pre-reform period as financial markets were not developed for open market operations. The RBI used this instrument more frequently than the other instruments of monetary policy in the pre-liberalized period to combat the inflationary pressures. In the post-liberalized period, with number of financial sector reforms in place, the RBI is attempting to reduce the emphasis on the use of CRR as an instrument of monetary control. Pursuing the medium-term objective of reducing the CRR, the RBI had reduced the CRR progressively from the peak of 15 per cent of NDTL in 1992 to 4.5 by 2003. However, the CRR has remained one of the important tools of monetary policy even in post reform period and has been used for liquidity management and stabilization, taking into account the liquidity conditions, inflation trends and other macro-economic developments. For example, RBI has raised CRR to 5 percent during the period from September 2004 till August 2008 to combat the inflationary expectations during this period and in response to the knock on the effect of the global financial crisis on the Indian economy. Again, till April 2010 it has raised to 6 percent. Thus, CRR is perceived to be the important measure till date by RBI in combating inflation. The CRR during the period January 2009 to October 2011 is given below in table 1.

REPO/REVERSE REPO RATE

In India, two types of repo are in operation: inter-bank repo and RBI repo. Inter-bank repos are permitted under regulated conditions and used for raising funds to meet short term mismatches between demand and supply of funds. Besides banks, primary dealers are allowed to undertake both repo/reverse repo transactions. Non-bank participants are allowed in the repo market only as lenders. They can lend funds to other eligible participants. All government securities are eligible for repo. Repos have also been permitted in PSU bonds and private corporate securities provided they are held in the dematerialized form in a depository and the transactions are done in the recognized stock exchanges.

All Scheduled Commercial Banks (excluding Regional Rural Banks (RRBs) and Primary Dealers (PDs) having current account and SGL account with RBI, Mumbai, are eligible to participate in the repo and reverse repo auctions. Traditionally, the RBI had been using the terms repo and reverse repo for the absorption and injection of liquidity respectively. However, since October 29, 2004, RBI has adopted internationally accepted uses of these terms and now uses repo and reverse repo to represent injection and absorption of liquidity respectively.

As the tenure of repo/reverse repo in India

is 1 to 14 days this instrument has been used by the RBI for managing day to day or short-term liquidity. Over a period of time the repo/reverse repo rates set by the RBI have become a sort of signaling rates along with bank rate and these rates provide a corridor for the call money market. Repo and reverse repo rates are also used as a part of Liquidity Adjustment Facility (LAF) operations, which reflect the day to day pressure on marginal liquidity in the system. These rates constitute the interest rate corridor under LAF and, hence, any variation in these rates is perceived by the market as short-term interest rate signal arising from change in the stance of the RBI when the bank rate has remained unchanged. Hence are taken as a part of the study. The changes in repo and reverse repo rates are given below in table 1 during the period January 2009 to October 2011.

Table 1: Inflation vs CRR, Repo/Reverse Repo Rates during January 2009 to October 2011

Date	CRR	Repo rate	Reverse *Repo rate*	*Inflation (%)*	
				Before (Previous month	*After (End of current month)*
5 Jan 2009	5.00	5.50	4.00	9.70	10.45
5 Mar 2009	5.00	5.00	3.50	9.63	8.03
21 Apr 2009	5.00	4.75	3.25	8.70	8.63
19 Mar 2010	5.75	5.00	3.50	14.86	13.33
20 Apr 2010	6.00	5.25	3.75	13.33	13.91
2 Jul 2010	6.00	5.50	4.00	13.73	11.25
27 Jul 2010	6.00	5.75	4.50	11.25	9.88
16 Sept 2010	6.00	6.00	5.00	9.82	9.70
2 Nov 2010	6.00	6.25	5.25	9.70	8.33
25 Jan 2011	6.00	6.50	5.50	9.30	8.82
17 Mar 2011	6.00	6.75	5.75	8.82	8.82
3 May 2011	6.00	7.25	6.25	9.41	8.72
16 Jun 2011	6.00	7.50	6.50	8.72	8.62
26 Jul 2011	6.00	8.00	7.00	8.43	8.99
16 Sept 2011	6.00	8.25	7.25	10.06	9.39
25 Oct 2011	6.00	8.50	7.50	9.39	9.34

Source : Compiled from RBI (2011), Handbook of Statistics on Indian Economy and RBI (2011), Annual Report.

METHODOLOGY

The research study carried out is casual research study. The data collected for the study is secondary in nature. The objective of the study is to carry out an econometric study of the impact of changes in CRR, Repo rate and reverse repo rate in curbing the inflation. The following hypotheses are set for the study:

Hypotheses:

1. Change in CRR reduces the inflation.
2. Change in Repo/Reverse repo rate reduces the inflation.

Using the data on CRR, Repo and Reverse repo rate verses inflation during the various periods where the changes in CRR were significant, the hypothesis is tested about its impact on inflation using table 2. Similarly, the hypothesis is tested about the impact of changes in repo/reverse repo rate on inflation using table 1. An econometric study of impact of changes in CRR, Repo and Reverse repo

rate in curbing inflation is carried out during the period January 2009 to October 2011 as monetary authority adopted several changes in these parameters to combat inflation during this period. The econometric models are established to study the impact of existing monetary policy on combating inflation and recommended a model which can be suggestive to formulate the future course of action for combating inflation.

DATA ANALYSIS AND INTERPRETATIONS

Hypothesis 1

H0: There is no significant difference between changes in CRR and inflation.

H1: Change in CRR reduces the inflation.

To test the above hypothesis, the data for change in CRR rate and inflation before and after the CRR change is taken during the period during April 2008 to April 2010 which is given as below in Table 2. The above mentioned period is selected because during this period the changes in CRR were more frequent.

Table 2: CRR vs Inflation

Date	*CRR rate*	*Inflation (%)*	
		Before (Previous month	*After (End of current month)*
26 Apr 2008	7.75	7.87	7.75
10 May 2008	8.00	7.81	7.69
24 May 2008	8.25	7.75	7.69
5 July 2008	8.50	7.69	8.33
19 July 2008	8.75	7.69	8.33
30 Aug 2008	9.00	9.02	9.77
11 Oct 2008	6.50	9.77	10.45
25 Oct 2008	6.00	10.45	10.45
8 Nov 2008	5.50	10.45	9.70
17 Jan 2009	5.00	9.70	10.45
13 Feb 2010	5.50	16.22	14.86
27 Feb 2010	5.75	14.86	14.86
24 Apr 2010	6.00 (till date)	14.86	13.91

Source: Compiled from RBI (2011), Handbook of Statistics on Indian Economy and RBI (2011), Annual Report.

On the basis of table 2, the output for t statistics is computed which is given as below in table 3.

Table 3: Computation of statistic for CRR vs Inflation (For table B)

t-Test: Paired Two Sample for Means		
	Before	*After*
Mean	10.31846154	10.32615385
Variance	9.265430769	6.933942308
Observations	13	13
Pearson Correlation	0.980615631	
Hypothesized Mean Difference	0	
Df	12	
t Stat	-0.040056975	
t Critical one-tail	1.782287548	

Thus, from the table 3 above, it can be seen that the coefficient of correlation is 0.9806 which is high between inflation before and after the change. Also, since t stat is much lesser as compared to t critical obtained at 12 degrees of freedom and 5 % level of significance, it can be concluded that the null hypothesis is accepted. Hence there is no significant difference between the changes in CRR on inflation. Thus, the hypothesis that the change in CRR has reduced inflation is false.

Hypothesis 2

H0: There is no significant difference between changes in repo/reverse repo rate and inflation.

H1: Change in repo/reverse repo rate reduces the inflation.

To test the above hypothesis, the data for change in repo/reverse repo rate and inflation before and after the change in repo/reverse repo rate is taken during the period during January 2009 to October 2011 as given above in Table 1. On the basis of table 1, the output for t statistics is computed which is given as below in table 4.

Table 4: Repo & Rev Repo vs Inflation (For table A)

t-Test: Paired Two Sample for Means		
	Before	*After*
Mean	10.303125	9.763125
Variance	3.83083625	2.93671625
Observations	16	16
Pearson Correlation	0.884228483	
Hypothesized Mean Difference	0	
Df	15	
t Stat	2.362460011	
t Critical one-tail	1.753050325	

From the table 4 above, it can be seen that the coefficient of correlation is 0.8842 which is high between inflation before and after the change. Also since t statistics is greater than t critical value obtained at 15 degrees of freedom and 5 % level of significance, it can be concluded that the null hypothesis is rejected. Hence there exists a significant difference between the changes in repo/reverse rates on reducing inflation. Thus, the hypothesis that the change in repo/reverse repo has reduced inflation is true.

During the period January 2009 to October 2011, Indian economy witnessed record high inflation and monetary authorities were highly concerned about combating the persistently high inflation. The monetary authorities made several changes in the monetary policy in terms of changes in CRR, repo and reverse repo rate for combating the inflation and obtained mixed response to the changes. As seen above, it is statistically verified that CRR does not help much in curbing inflation, but repo and reverse rate has reduced inflation to certain extent. Now the econometric study is carried out to evaluate the impact of each of these parameters i.e., CRR, repo and reverse repo rate on curbing inflation and also to test whether there exists significant variation between these parameters used as an instrument by RBI and inflation in Indian economy.

The table 5 below gives the summary output of regression and ANOVA for inflation verses CRR computed by using table 1. The linear regression model is established between inflation and CRR as given below:

Table 5: SUMMARY OUTPUT of Regression and ANOVA for Inflation vs CRR

Regression Statistics					
Multiple R	0.125171582				
R Square	0.015667925				
Adjusted R Square	-0.054641509				
Standard Error	1.75988149				
Observations	16				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.69018375	0.69018375	0.222842429	0.644156101
Residual	14	43.36056	3.097182857		
Total	15	44.05074375			
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	6.656	6.596717226	1.008986708	0.330102554	
CRR	0.536	1.135444336	0.472061891	0.644156101	
		Inflation = 6.656 + 0.536 CRR			

From the analysis of variation (ANOVA) table as given in table 5, it can be seen that calculated F is less than significance F at (1, 14) degrees of freedom and 5 % level of significance. Thus, it is concluded that there is no significant variation between changes in CRR and inflation.

If we look at the model of inflation and CRR as given above, it can be seen that if CRR is zero, inflation will be 6.656, and if CRR is one, it add to inflation by 0.536. It can be thus, interpreted as CRR makes marginal contribution in influencing inflation to lack of significant variation between changes in CRR and inflation. Also R2 i.e., coefficient of determination comes to be 0.0156, which implies that the given model explains only 1.56 % influence of the relationship between inflation and CRR and hence 98.44% influence remains non-determinable. Hence model explaining relationship between inflation and CRR cannot be considered for measuring the impact of monetary policy on curbing the inflation.

The table 6 below gives the summary output of regression and ANOVA for inflation verses repo rate computed by using table 1. The linear regression model is established between inflation and repo rate as given below:

Table 6: SUMMARY OUTPUT of Regression and ANOVA for Inflation verses Repo Rate

Regression Statistics					
Multiple R	0.400512101				
R Square	0.160409943				
Adjusted R Square	0.100439224				
Standard Error	1.625347577				
Observations	16				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	1	7.066177285	7.066177285	2.674804424	0.124223615
Residual	14	36.98456647	2.641754748		
Total	15	44.05074375			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	13.31739078	2.210881947	6.023564847	3.12566E-05	
Repo rate	-0.558901744	0.34173499	-1.63548293	0.124223615	
Inflation = 13.3173 - 0.5589 Repo rate					

From the analysis of variation (ANOVA) table as given in table 6, it can be seen that calculated F is greater than significance F at (1, 14) degrees of freedom and 5 % level of significance. Thus, it is concluded that there exists significant variation between changes in repo rate and inflation.

If we look at the model of inflation and repo rate as given above, it can be seen that if repo rate is zero, inflation will be 13.3173, and if CRR is one, it reduces inflation by 0.5589. It can be thus, interpreted that if only repo rate is considered for analyzing impact, it is clear that it also makes marginal contribution in influencing inflation irrespective of significant variation between changes in repo rate and inflation. Also R2 i.e., coefficient of determination comes to be 0.1604, which implies that the given model explains only 16.04 % influence of the relationship between inflation and repo rate and hence 83.96% influence remains non-determinable. Hence model explaining relationship between

inflation and repo rate cannot be considered for measuring the impact of monetary policy on curbing the inflation irrespective of significant variations.

The table 7 below gives the summary output of regression and ANOVA for inflation verses reverse repo rate computed by using table 1. The linear regression model is established between inflation and reverse repo rate as given below:

Table 7: SUMMARY OUTPUT of Regression and ANOVA for Inflation verses Reverse Repo Rate

Regression Statistics					
Multiple R	0.438032172				
R Square	0.191872184				
Adjusted R Square	0.134148769				
Standard Error	1.594603205				
Observations	16				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	1	8.452112409	8.452112409	3.323992223	0.089695838
Residual	14	35.59863134	2.542759382		
Total	15	44.05074375			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	12.45618003	1.52996746	8.141467289	1.11602E-06	
Rev Repo rate	-0.52228946	0.286471395	-1.8231819	0.089695838	
Inflation = 12.4561 - 0.5222 Rev Repo rate					

From the analysis of variation (ANOVA) table as given in table 7, it can be seen that calculated F is greater than significance F at (1, 14) degrees of freedom and 5 % level of significance. Thus, it is concluded that there exists significant variation between changes in reverse repo rate and inflation.

If we look at the model of inflation and reverse repo rate as given above, it can be seen that if reverse repo rate is zero, inflation will be 12.4561, and if CRR is one, it reduces inflation by 0.5222. It can be thus, interpreted that if only reverse repo rate is considered for analyzing impact, it is clear that it makes marginal contribution in influencing inflation irrespective of significant variation between changes in repo rate and inflation. Also R2 i.e., coefficient of determination comes to be 0.1918, which implies that the given model explains only 19.18 % influence of the relationship between inflation and reverse repo rate and hence 80.82% influence remains non-determinable. Hence model explaining relationship between inflation and reverse repo rate cannot be considered for measuring the impact of monetary policy on curbing the inflation irrespective of significant variations.

The table 8 below gives the summary output of regression and ANOVA for inflation verses repo and reverse repo rate computed by using table 1. The linear regression model is established between inflation verses repo and reverse repo rate as given below:

Table 8: SUMMARY OUTPUT of Regression and ANOVA for Inflation verses Repo & Reverse Repo Rate

Regression Statistics					
Multiple R	0.57249256				
R Square	0.327747731				
Adjusted R Square	0.224324305				
Standard Error	1.509284406				
Observations	16				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	2	14.4375313	7.218765651	3.168989302	0.075676284
Residual	13	29.61321245	2.277939419		
Total	15	44.05074375			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	1.908030519	6.666470008	0.286213021	0.779225164	
Repo Rate	5.343290987	3.296344821	1.620974527	0.129014489	
Rev Repo Rate	-5.066646621	2.816553892	-1.79888148	0.095283484	
Inflation = 1.9080 + 5.3432 Repo rate - 5.0666 Rev Repo rate					

From the analysis of variation (ANOVA) table as given in table 8, it can be seen that calculated F is greater than significance F at (1, 13) degrees of freedom and 5 % level of significance. Thus, it is concluded that there exists significant variation between changes in repo and reverse repo rate and inflation.

If we look at the model of inflation verse repo and reverse repo rate as given above, it can be seen that if repo and reverse repo rate is zero, inflation will be 1.9080, and if both are assumed to be one, it makes marginal correction in inflation rate. It can be thus, interpreted that if repo and reverse repo rate both are considered for analyzing impact, it is clear that it makes marginal contribution in correcting inflation irrespective of significant variation between changes in repo, reverse repo rate and inflation. Also R2 i.e., coefficient of determination comes to be 0.3277, which implies that the given model explains now 32.77 % influence of the relationship between inflation and repo and reverse repo rate and hence 67.23 % influence remains non-determinable. Hence model explaining relationship between inflation and repo and reverse repo rate also cannot be considered solely for measuring the impact of monetary policy on curbing the inflation irrespective of significant variations.

The table 9 below gives the summary output of regression and ANOVA for inflation verses CRR, repo and reverse repo rate computed by using table 1. The linear regression model is established between inflation and CRR, repo and reverse repo rate as given below:

Table 9: SUMMARY OUTPUT of Regression and ANOVA for Inflation verses CRR, Repo & Reverse Repo Rate

Regression Statistics					
Multiple R	0.86429269				
R Square	0.747001853				
Adjusted R Square	0.683752317				
Standard Error	0.963706237				
Observations	16				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	3	32.90598722	10.96866241	11.8103925	0.000680449
Residual	12	11.14475653	0.928729711		
Total	15	44.05074375			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	-23.09832879	7.040226273	-3.28090716	0.006569071	
CRR	3.676680284	0.824489715	4.459340389	0.000780039	
Repo Rate	8.804947798	2.243364799	3.924884531	0.002017234	
Rev Repo Rate	-8.619785141	1.967025608	-4.3821418	0.000892939	
Inflation = -23.0983 + 3.6766 CRR + 8.8049 Repo rate - 8.6197 Rev Repo rate					

From the analysis of variation (ANOVA) table as given in table 9, it can be seen that calculated F is greater than significance F at (3, 12) degrees of freedom and 5 % level of significance. Thus, it is concluded that there exists significant variation between changes in CRR, repo and reverse repo rate and inflation.

If we look at the model of inflation and CRR, repo and reverse repo rate as given above, it can be seen that the combined effect of these three parameters can be considered for analyzing impact on inflation as R2 i.e., coefficient of determination comes to be 0.7470, which implies that the given model explains 74.70 % influence of the relationship between inflation and CRR, repo and reverse repo rate and hence only 25.30% influence remains non-determinable. Hence model explaining relationship between inflation and CRR, repo and reverse repo rate can be considered as the best for measuring the impact of monetary policy on curbing the inflation as they show significant variations. Thus, if the above model is used for formulating the suitable policy for curbing the inflation which takes into account the various independent variables as CRR, repo rate and reverse repo rate, and dependent variable as inflation, then based on the market conditions, these rates can be varied (increased on decreased) based on suitability to market conditions. The possible impact of such changes on inflation are worked out and summarized in the table 10 below on the basis of the present values of CRR, repo rate and reverse repo rate. This table may be used as a ready-reckoned for formulating the best course of action for curbing the inflation.

Table 10: Possible Impact of Changes in CRR, repo and reverse repo rate on Inflation under various scenarios

Cases	CRR	Repo	Rev Repo	Inflation		CRR	REPO	REV REPO	Inflation
Present	6	8.5	7.5	9.1552					
1	6 6 6	8.5 8.5 8.5	7.75 8 8.25	7.000275 4.84535 2.690425		constant	constant	Increased	falls
2	6.25 6.5 6.75	8.57.5 8.5 8.5	10.07435 7.5 7.5	increased 10.9935 11.91265		constant	Constant	rises	
3	6 6 6	8.75 9 9.25	7.5 7.5 7.5	11.356425 13.55765 15.758875		constant	increased	Constant	rises
4	6 6 6	8.5 8.5 8.5	7.25 7 6.75	11.310125 13.46505 15.619975		constant	constant	Reduced	rises
5	6 6 6	8.25 8 7.75	7.5 7.5 7.5	6.953975 4.75275 2.551525		constant	reduced	Constant	falls
6	5.75 5.5 5.25	8.5 8.5 8.5	7.5 7.5 7.5	8.23605 7.3169 6.39775		reduced	constant	Constant	falls
7	6 6 6	8.25 8 7.75	7.25 7 6.75	9.1089 9.0626 9.0163		constant	reduced	Reduced	falls
8	5.75 5.5 5.25	8.5 8.5 8.5	7.25 7 6.75	10.390975 11.62675 12.862525		reduced	constant	Reduced	rises
9	5.75 5.5 5.25	8.25 8 7.75	7.5 7.5 7.5	6.034825 2.91445 -0.205925		reduced	reduced	Constant	falls
10	6 6 6	8.75 9 9.25	7.75 8 8.25	9.2015 9.2478 9.2941		constant	increased	increased	rises
11	6.25 6.5 6.75	8.5 8.5 8.5	7.75 8 8.25	7.919425 6.68365 5.447875		increased	constant	increased	falls
12	6.25 6.5 6.75	8.75 8.75 8.75	7.5 7.5 7.5	12.275575 13.194725 14.113875		increased	increased	Constant	rises
13	6 6 6	8.25 8 7.75	7.75 8 8.25	4.79905 0.4429 -3.91325		constant	reduced	increased	falls

14	5.75	8.5	7.75	6.081125		reduced	constant	increased	falls
	5.5	8.5	8	3.00705					
	5.25	8.5	8.25	-0.06703					
15	5.75 5.5 5.25	8.75 9 9.25	7.5 7.5 7.5	10.43728 11.71935 13.00143		reduced	increased	Constant	rises
16	6.25 6.5 6.75	8.25 8 7.75	7.5 7.5 7.5	7.873125 6.59105 5.308975		increased	reduced	Constant	falls
17	6.25 6.5 6.75	8.5 8.5 8.5	7.25 7 6.75	12.22928 15.30335 18.37743		increased	constant	Reduced	rises
18	5.75 5.5 5.25	8.75 9 9.25	7.75 8 8.25	8.28235 7.4095 6.53665		reduced	increased	increased	falls
19	6.25 6.5 6.75	8.25 8 7.75	7.75 8 8.25	5.7182 2.2812 -1.1558		increased	reduced	increased	falls
20	6.25 6.5 6.75	8.75 9 9.25	7.25 7 6.75	14.4305 19.7058 24.9811		increased	increased	Reduced	rises
21	5.75 5.5 5.25	8.25 8 7.75	7.75 8 8.25	3.8799 -1.3954 -6.6707		reduced	reduced	increased	falls
22	5.75 5.5 5.25	8.75 9 9.25	7.25 7 6.75	12.5922 16.0292 19.4662		reduced	increased	Reduced	rises
23	6.25 6.5 6.75	8.25 8 7.75	7.25 7 6.75	10.02805 10.9009 11.77375		increased	reduced	Reduced	rises
24	5.75 5.5 5.25	8.25 8 7.75	7.25 7 6.75	8.18975 7.2243 6.25885		reduced	reduced	Reduced	falls
25	6.25 6.5 6.75	8.75 9 9.25	7.75 8 8.25	10.12065 11.0861 12.05155		increased	increased	increased	rises

CONCLUSION

The econometric analysis carried out on the various models given in table 5 - 9, shows that the most suitable model to evaluate the impact of monetary measures with reference to CRR, Repo & reverse repo rate on inflation is the model represented in table 9 having highest R2 value. On the basis of this model, the various scenarios of monetary measures are forecasted with reference to inflation in table 10, which can be ready-reckoned based on the market scenario. Also the cases where CRR is changing and either repo or reverse repo is changing

is worked out and which suggests that in cases numbered 9, 11, 14 and 16, the inflation rate falls for respective changes in CRR & repo and reverse repo rates. Thus, if suitable monetary measure is adopted, it helps in curbing the pervasive effect of inflation.

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