
Monetary Policy and Profitability Performance in the Banking Sector-Case of Commercial Banks in India

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ABSTRACT

The purpose of this study is to investigate the impact of monetary policy changes on inflation and banking sector interest profitability in India. The banking system is the most dominant segment of the financial sector. Indian banks are well regulated and have emerged stronger under the regulator's watchful eye. Their unassailability could be well gauged by the health of an economy. The banks are primarily responsible for mobilizing the savings of the people for the investment use and to facilitate borrowing, lending and several other activities that accounts for economic development. The paper focuses to find out that whether the monetary policy instruments act as an important driver to regulate inflation or recession in subsequent years and further to assess the extent to which it impacts the profitability status of the banks.

Keywords: *Central Bank, Monetary policy, Profitability, Inflation.*

INTRODUCTION

Financial services are provided by the finance industry which includes various organizations such as banks, mutual fund companies, insurance companies, financing firms, investment houses, stock brokerages and many more. The sole purpose of these institutes is to manage and regulate the fund hence a sound regulatory framework is required for the safety and soundness of community investment and consumer protection. The recent global financial turmoil has revealed the fact that the proper and prudential functioning of banking system is very essential for the sound financial health and the growth of the economy. Central bank being the monetary authority of the nation is responsible for the financial stability of the nation hence directly or indirectly regulates the money creation activity of the banks through monetary policy tools. Indian banking system is at par to the global standards by following the Basel norms II since 2009.

Banks profitability plays a vital role at both micro and macro level in the economy. At the micro level, profitability is essential for the successful execution of banking business and facing the ever growing competition in the financial markets. Whereas, at the macro level, a sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system. (Aburime, 2009).

Reserve bank of India (RBI) is the designated monetary authority of India. It was established on April 1, 1935 in accordance with the provisions of the Reserve Bank of India Act, 1934. The central office of RBI has been moved to Mumbai from Calcutta ever since 1937. Governor takes

charge of the central office and the policies are formulated here. With the advent of nationalization in 1949, RBI is fully owned by government of India.

RBI functions as the monetary authority of the country and is responsible for formulating implementing and monitoring the monetary policy with the prime objective of maintaining price stability and ensuring adequate flow of credit to productive sectors. Country's banking and financial system rests on broad banking operations parameters. These guidelines are crucial to maintain public confidence in the system, to protect depositor's interest and provide cost-effective banking services to the public. The purpose may be seeking a loan to invest in a property, to startup a new business or may be to expand the existing one. It also impacts the individuals decision to plan one's saving so that it fetch more returns, may be through fixed deposits with the banks, investing in bonds or through the stock market.

Monetary policy regulates the economic performance that could be replicated by the macroeconomic variables such inflation, GDP and employment. It regulates the money supply by frequently targeting rate of interest in order to promote economic growth and stability. Monetary policy upholds the relationship between the rates of interest in an economy, which could be well understood as the price of money that one has to pay to borrow funds from the bank and the total money supply in an economy. RBI also facilitates external trade and payment and is responsible for the systematic development and maintenance of foreign exchange market in India. (RBI)

Monetary policy affects both real sector as well as the financial market. It affects the real sector with the long and

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variable lag whereas financial market bears the direct short run implications. Conduction of monetary policy is possible through strategies and tactics. Strategy seeks to achieve final objectives and short run operational procedures are regulated by tactical considerations. Monetary aggregate and exchange rate are the explicit intermediate target to strategically handle Monetary and exchange rate targeting. Inflation targeting is characterized by an explicit final goal in terms of the rate of inflation. Intermediate targets being variables such as monetary aggregate or exchange rate are not directly controlled by the RBI. There also needs to be the stable relationship between the operating target and the intermediate target. Operating target is used to indicate the policy intent to the public and it paves the way for the transmission of the monetary process. RBI has all rights reserved to influence the operating target for instance, bank reserves, base money or benchmark interest rate but it is ultimately the market forces that along with the RBI determines the final outcome. (YV Reddy, 2002)

In 1970s, Monetary Policy gained recognition and during this period various countries adopted either money supply or exchange rate as their intermediate targets. But during late 1980's, globalization, technological advancements and large movement of capital across borders brought some crucial changes in this model. To smoothen the conduction process of monetary policy some countries have recently shifted to direct inflation targeting wherein the objectives and the essential framework for monetary policy is explicitly communicated to the public. This framework bestows monetary authorities with enough freedom to use the instruments of monetary policy to the best of their competence. (YV Reddy, 2002)

Monetary policy is a macroeconomic tool through which monetary authority of a country regulates the supply of money by frequently targeting a rate of interest aiming to promote economic growth and stability. Out of the four monetary transmission channels vis-a-vis, quantum channel, interest channel, exchange rate channel and asset price channel, we chose interest rate channel and quantum channel which are of concern to policy makers. Quantum channel relates to money supply and credit and it affects the real output and price level directly through changes in the reserve money. Interest rate channel indirectly affects real activities through the changes in the interest rates.

The purpose of this study is to indicate the impact of monetary policy instruments used for inflation targeting on the CPI and the profitability of the commercial banks. RBI, being the sole monetary authority is responsible for financial stability, persistent growth and to regulate inflationary pressures in the economy. It operates through its tools and in turn signals the commercial bank to work in tandem.

Interest income forms a major segment contributing to the profitability of the bank. In this paper we would like to study the significance of changes in monetary policy tools on the interest profitability of the bank.

REVIEW OF LITERATURE

Chari, et al. (1995) investigated "the relationship between inflation and output, in the data and in standard models reporting that empirical cross-country studies generally find a nonlinear, negative relationship between inflation and output"; the relationship cannot be effectively reproduced by standard models due to their standard narrow assumption. He further concludes in his study that banking and financial regulations are significant enough than any other measure to gauge the impact of Monetary policy on growth.

The heterogeneous response of banks to the changes in the monetary policy plays a very crucial role in the transmission process of the policy. In their working paper series, Sophocles N. Brissimis and Delis (2010) examined that the banks response to the monetary policy stance related to the risk taking and lending issues depends on the internal factors for instance, liquidity with the bank, capitalization and the market power. The empirical analysis was based on the panel datasets of US and euro area, which reveals the difference in the responses of individual banks to the changes in the policy interest rates. "It is argued that the extensive heterogeneity in banks' response identifies overlooked consequences of bank behavior and highlights potential monetary sources of the current financial distress."

Abu Sayeed and Mohammad Ziaul Hoque (n.d.) conducted a comparative study on Private and Public Bangladesh commercial banks (BCBs). They focused their study on "asset and liability management", and concluded that private BCB's are far better in asset management than liability management when compared with public banks.

A study by Flamini, et al. (2009) revealed that the banks' profitability in Sub-Saharan Africa (SSA) are comparatively high than the other regions. Banks profitability study was conducted on the sample size of 389 banks in SSA and the findings revealed that the size of the banks, diversified banks activities and the private ownership plays a significant role in determining the higher returns on assets. "Bank returns are affected by macroeconomic variables, suggesting that macroeconomic policies that promote low inflation and stable output growth do boost credit expansion. The results also indicate moderate persistence in profitability. The paper gives some support to a policy of imposing higher capital requirements in the region in order to strengthen financial stability."

Chuku (2009) studied the impact of monetary policy shocks on output and prices in Nigeria, using structural

vector auto regression (SVAR) model and assumed that the unexpected changes in output and price within that period remained untraced by the central bank. The study conducted with the three major alternative policy instruments, broad money (M2), Minimum Rediscount Rate (MRR) and the real effective exchange rate (REER) revealed their effects on output and prices. "The quantity-based nominal anchor (M2) has modest effects on output and prices with a very fast speed of adjustment. While, innovations on the price-based nominal anchors (MRR and REER) have neutral and fleeting effects on output." They finally concluded that (M2) is the most influential instrument with the central bankers for the monetary policy implementation and suggested that quantity based nominal anchor should be given more weight age compared to price based nominal anchor. Hence, it is imperative to correctly identify the impact of monetary policy changes to facilitate superior policy making.

Morris and Sellon (1995) studied that due to frequent changes in the banking industry the scope of banks have been strengthened in the monetary transmission mechanism. Monetary policy to a great extent regulates the borrower's dependency on banks credit and lending operations and the stance of restrictive monetary policy on economy may be well influenced by the banks credit channel. Banks undergo structural changes by altering their credit channels to enforce the monetary policy stance. The research paper analyzed that the constrained monetary policy had little significance on the bank lending. "Some borrowers are dependent on bank credit and sudden disruptions in bank lending could alter their spending decision and affect the level of economic activity."

Hamdan and Masig (2008) in their research paper attempt to test the "hypothesis that in the context of a relatively developed banking system and effective monetary policy framework the speed of adjustment of the deposit rates would be faster than that of the lending rates in response to a change in monetary policy instrument such as the discount rates. This knowledge of the speed of adjustment is crucial for an effective transmission and implementation of a change in monetary policy instrument. The test of hypothesis on a set of industrial and developing countries based on the 'Auto-Regressive Distributed Lag' (ARDL) methodology, tends to suggest that the deposit rates adjust faster than the lending rates in most of the industrial countries as well as in those developing countries in which the banking system appears to be relatively more developed. The findings are plausible and have strong policy implications for both the industrial and developing countries."

However, per the study conducted by Punita Rao (2006), the overall monetary and macroeconomic condition in India were found to be satisfactory and in line with the monetary

policy expectations. However, some need was felt for the advancement in the financial sector reforms with the ongoing watch on domestic and external situation by the RBI. Monetary policy supports the provision of adequate liquidity to facilitate credit growth and investment demand in the economy with cautiously watching the fluctuations in the price level.

FINANCIAL SECTOR REFORMS

Prior to 1991, in the pre-reform period, the direct instruments being selective credit control, cash reserve ratio and interest rate regulations were the only tools available to neutralize the monetary impact of the government's budgetary. The administered interest rate regime kept the yield rate of the government securities artificially low. The periodic hikes in the Statutory Liquidity ratio (SLR) were must to generate the demand for government securities.

Post reform, a significant difference was witnessed, investments and financial products were now market driven and the yields on government securities were linked to the market. Interest rate rationalization, eventually gave banks substantial freedom to determine their major rates. As a result Open Market operations (OMO) became an effective tool in the hands of RBI to rein short term volatilities in the foreign exchange market. In April 1997, bank rate was reactivated and subsequently with the introduction of fixed repo rate later in December, an informal corridor with the repo rate as the floor and bank rate as the ceiling was created in the money market. Eventually, in June 2000, the introduction to Liquidity Adjustment Facility (LAF) has eased the modulation of liquidity conditions and short term interest rates on a daily basis, while signaling the stance of policy through changes in the bank rate. (Reddy, 1997)

The financial sector reforms in 1991 thus set across the wave of major transitional changes in the Indian financial system. The major objectives of the financial sector reforms aimed at removing the external constraints bearing on the profitability of banks, at improving the financial health of banks by introducing appropriate prudential norms and at institutional strengthening including improving the competitiveness of the financial system. (Dr. Rangarajan) The Indian economy moved from a regulated to deregulated and liberal regime. The impact was significantly reflected on the instruments and framework of the monetary management. The two main objectives of monetary policy are to maintain price stability and ensure economic growth by providing adequate credit to the productive sector. (Reddy, 1997)

The growth in M3 (broad money) is also an important indicator for the desired functioning of the monetary policy. During the end of the Financial Year 2010, the growth rate in M3 and Non food credit went beyond the RBI's forecasted

projections of 16.5% and 16% respectively. The banking system failed to mobilize deposits due to the steady decline in the interest rates on the time deposits in lagged response to the policy rates. But eventually with the growing demand for bank credit, deposit rates were triggered and moved up in the recent times.

The recent financial crisis was suitably dealt with both conventional and unconventional fiscal and monetary policy measures by various governments and central banks across the globe. The Indian government and RBI joined hands together to minimize the impact of global financial crisis in India. During 2008-09, monetary management responded to the spillover effects of global financial crisis and addressed instinctively the slackening domestic demand conditions by reducing the CRR, which brings strong initial expansionary effect. RBI changed its policy stance to monetary easing looking at the easing inflationary pressures and moderation of growth. RBI's monetary easing sends the signal across banks which in turn reduced their deposits and lending rates. (Subbarao, 2009)

MONETARY POLICY INSTRUMENTS- OPERATING PROCEDURES

Bank Rate - It is the rate at which the central bank rediscounts the eligible bills of exchange of the commercial banks and other financial intermediaries and is also termed as discount rate. It is actually meant to regulate the money supply in an economy. Bank rate was reactivated in 1997 and since then it is used as a major signaling tool of the monetary policy stance to modulate the liquidity condition and the inflationary expectations in the economy. The increase in bank rate is a prompt indication to curb the money supply in the economy and vice versa. It signals the commercial bank to raise their deposit rates and the prime lending rates to ensure the continuity of making profit. Commercial banks are free to regulate interest rate on their term deposit on the approval of their board members. Bank rate was gradually reduced to 6.25 percent in October 2002 from being 11 percent in Jan 1998 and a further reduction of 25 basis points was seen in April 2003. Since then the bank rate is kept unchanged at 6 percent.

Cash Reserve Ratio (CRR) - Reserve requirement techniques of central bank are very important credit control tools to regulate the credit creation capacity of the commercial banks. Commercial banks are responsible to provide credit or loan in the economy. It is imperative to regulate liquidity else an unregulated growth in liquidity could direct the economy into inflationary phase. CRR is used to drain the excess liquidity or to inject liquidity in the economy. With the increase in CRR, banks are now not in the position to lend as earlier because of less funds now available to them.

This helps to suck out the excess money from the circulation hence control inflationary pressures in the economy by curbing the money supply.

As we know interest income is one of the main components of banks total earning, thus there seems to be a direct relationship between interest income generated and the money made available to the public. With increased CRR, funds available with the banks for lending purpose are now reduced and in order to maintain the profitability banks now persist to increase their prime lending rates (PLR). Per the Section 42(1) of the RBI Act 1934, Scheduled Commercial Banks are required to maintain with RBI, on a fortnightly basis, an average cash balance within the range of three percent to twenty percent of the total of the Demand and Time Liabilities. (RBI) Since September 2008, monetary policy in India has been designed largely to mitigate the adverse impact of global financial crisis on the Indian economy. The conduct of monetary policy had to contend with the high speed and the magnitude of external shock and its spill-over effect through the real, financial and confidence channels. The stance of policy is inured to preserve financial stability and the growth momentum. The CRR was reduced by 400 basis points from 9 percent to 5 percent in between October 2008 and March 2009. (Subbarao, 2009)

Statutory liquidity ratio (SLR)- Every Commercial bank is required to maintain a certain amount of liquid asset in the form of cash, precious metals and approved securities apart from the cash with the central bank. SLR works out as the ratio of liquid assets to demand and time deposits. Since October 1997, SLR stands unchanged at 25%. In December 2008, during the global financial crisis, SLR was reduced by 100 basis points to 24%. The policy initiatives taken by RBI had the major thrust on providing ample rupee liquidity, to ensure comfortable dollar liquidity and to make market conducive for the flow of credit to the productive sectors. (Reddy, 2008)

Towards the last quarter of 2009-10, some inflationary signals were apparent and the economy also seemed to revert back to its pre-crisis growth trajectory, with growth in the first half of 2010-11 estimated at 8.9 per cent. Gauging the economic situation, in November 2009, SLR was raised by 100 basis points to 25%. (Subbarao, 2010). SLR is thus an important tool of central bank to regulate the credit growth in the country.

Repo rate is known as repurchase rate and is regulated by the central bank. It is the rate at which the commercial banks borrow short-term money from the central bank. When central bank raises the repo rate, the borrowing from RBI becomes a pricey affair. Therefore, when the need is felt to reduce the money in circulation, central bank raises the repo

rate hence the borrowing cost for commercial increases. On the contrary, the repo rate could be reduced to make borrowing cheaper for the commercial banks.

Reverse Repo rate is the rate at which banks park their short-term excess liquidity with the RBI. A change in reverse repo is also meant to regulate the money circulating in the banking system. An increase in the reverse repo rate means that the commercial banks can now park their excess funds with the RBI and earn higher rate of interest.

Prime lending rate (PLR) and Deposit Rate (DR) - The rates of deposit or lending are indirectly governed by the RBI. This means that the RBI does not directly fix the deposit or lending rates of banks but uses some instruments which indirectly affect these rates. Often, after the RBI's decision to raise repo and reverse repo rates, commercial banks also raise their lending and deposit rates. Hike in lending rates eventually results in the hike in home, auto or any other loan rates. These policy changes are meant to tame inflation.

DATA SET

This study considers the effect of seven macro economic variables namely, bank rate, repo rate, reverse repo, statutory liquidity ratio, cash reserve ratio, prime lending rate and deposit rate on CPI and profitability of commercial banks. The choices of variables are justified because they represent both quantum and interest rate channel. CRR and SLR represent quantum channel whereas rest of the variables represent interest rate channel.

For the variables this study considers simple logarithmic transformation of raw data on all nine variables. Log transformation is useful in handling the exponential growth of a series and also to stabilize the variability. After liberalization in 1992, there have been significant changes on the Indian macroeconomic front. By 1997 the liberalization was already completed and the second generation reforms were in place. By 1997, Indian rupee was fully convertible on capital account and the process of complete current account convertibility has already begun. So it can be truly said that by the end of last millennium the Indian economy has transformed itself into a stable and market driven. Hence the sample period of 2000-2010 is justified.

For continuous positive data measured on an interval scale, a log transformed analysis should

frequently be preferred to an untransformed analysis. One of the most powerful transformations is to use log values for the data since logarithms 'shrink' the spread of data; this is used in plotting rank-size relationships, for example. A milder transformation which may be applied is the use of square roots and square values.

EMPIRICAL STUDY

Monetary policy plays a very significant role to maintaining economic stability in the country. During the financial crisis, RBI combated the economic slowdown by maintaining ample liquidity and lowering the policy rates to stimulate the private demand of the borrowers. CRR has been reduced from 9 percent in August 2008 to 5 percent in January 2009. Later in February 2010, it was once again raised to 5.5 percent and eventually accommodated to 6 percent till date. SLR was also raised in December 2009 from 24% to 25% and was again reduced by 100 basis points in December 2010. The current upturn in monetary and credit aggregates substantiates that the recovery is holding grip or more apparently the reversal in the direction of inflation is being signal out.

Monetary policy changes signals out the underlying cause of regulating the money in circulation. The increase in CRR, bank rate, reverse repo and repo rate, are the tools with RBI to curb the money supply in the economy. In turn commercial banks make desired adjustments in their respective PLR's and DR's. To study the impact of monetary policy tools, on the inflation, a regression equation is being estimated with inflation as a dependent variable and rest all the variables treated as independent variables.

$$INF_t = \beta_0 + \beta_1 CRR + \beta_2 DR + \beta_3 PLR + \beta_4 BR + \beta_5 RR + \beta_6 Repo + \beta_7 SLR$$

INF- inflation (CPI)

CRR- Cash reserve Ratio

DR- Deposit Rate

PLR-Prime lending rate

BR-Bank Rate

Repo-Repurchase Rate

RR-Reverse Repo

REPO-Repurchase rate

SLR-Statutory liquidity Ratio

In the current situation when, inflation is rising in major Asian economies, Indian government too is struggling between maintaining growth momentum and reining inflation. Monetary policy's momentous role is apparently perceptible by frequently changing CRR, repo and the reserve repo rates.

To study the impact of monetary policy tools on the inflation, a regression equation is being estimated with inflation (CPI) as dependent variable and rest all variables are treated as independent variables.

The regression coefficients of most of the independent variables except DR are found to be statistically significant. R square and adjusted R square also gives a good indication that the credit control policies are effective enough to tackle the inflationary or deflationary pressures in the economy. To regulate inflation rate in the economy, central bank raises CRR to increase cash reserves and reduce loanable funds available with the banks. Bank rates and repo rates are also increased so that the availability of funds from central bank also becomes a costly affair for the commercial bank. Commercial banks to maintain their profitability in turn raises their PLR and Deposit rates. With the hike in PLR, loans are available at higher interest rates. At the same time to enhance the deposit reserves, banks also raise the deposit rates to attract deposits from the customers.

To study the impact of monetary policy tools, on the profitability of the banks, a regression equation is being estimated with profitability as a dependent variable and rest all variables are treated as independent variables.

$$PRO_t = \beta_0 + \beta_1 CRR + \beta_2 DR + \beta_3 PLR + \beta_4 BR + \beta_5 RR + \beta_6 Repo$$

PRO- Profitability in terms of Interest Income.

CRR- Cash Reserve Ratio

DR- Deposit Rate

PLR- Prime Lending Rates

BR- Bank Rate

RR-Reverse Repo

REPO-Repurchase arte

SLR-Statutory liquidity Ratio

This study considers the ICICI bank as a proxy of the private sector banks in India. This selection is naturally justified as ICICI is the largest private sector bank in India. In the case of private sector bank, it is evident from the regression coefficients that CRR, BR, PLR, Repo and Reverse Repo are significant and inversely related to the profitability of the banks. Coefficient of DR is insignificant in this case. Seemingly, there are various investment options available to park individuals saving or funds other than depositing money with the bank, so the change may not bring significant impact on deposits with the banks. The value of R square and adjusted R square signifies that the independent variables in the model all-together have a significant bearing on the interest profitability of the banks however, there are many other factors responsible for the total profitability.

SBI bank is considered as the proxy of public sector banks in India. The regression coefficients of CRR, BR, Repo, Reverse Repo and PLR are significant, they are inversely related to the profitability of the banks however coefficients of DR is insignificant even in this case.

Dependent Variable: CPI

Method: Least Squares

Sample: 1 120

Included observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.73561	1.289832	5.997376	0.0134
CRR	-0.2648	0.046021	-5.7539	0.0036
BR	-1.13226	0.094932	-11.9271	0.0012
DR	0.006248	0.054897	0.113804	0.9096
SLR	-3.28523	0.903954	-3.63429	0.0004
PLR	-0.54206	0.128201	-4.22824	0.0013
REPO	-0.45351	0.074714	-6.06991	0.0016
RR	-0.13181	0.060729	-2.17049	0.0321
R-squared	0.909535	Mean dependent var	2.733378	
Adjusted R-squared	0.903881	S.D. dependent var	0.065842	
S.E. of regression	0.020413	Akaike info criterion	-4.88093	
Sum squared resid	0.04667	Schwarz criterion	-4.6951	
Log likelihood	300.856	Hannan-Quinn criter.	-4.80547	
F-statistic	160.8637	Durbin-Watson stat	0.883026	
Prob(F-statistic)	0.00545			

Profitability of ICICI bank (Private Sector)

Dependent Variable: ICICI

Method: Least Squares

Sample: 1 31

Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.354881	21413.97	2.033663	0.0532
CRR	-5.29943	4858.426	-1.6907	0.0414
BR	-3.20679	9857.051	-3.2533	0.0034
DR	7.022301	11563.11	0.607302	0.5494
PLR	-5.79516	18189.22	-3.18604	0.004
REPO	-5.48062	20289.05	-2.70127	0.0125
RR	7.275057	12701.64	5.727651	0
R-squared	0.841523	Mean dependent var	6.733887	
Adjusted R-squared	0.801904	S.D. dependent var	2.707631	
S.E. of regression	12.05111	Akaike info criterion	1.722221	
Sum squared resid	34.85504	Schwarz criterion	1.754601	
Log likelihood	-25.9944	Hannan-Quinn criter.	1.732776	
F-statistic	21.2403	Durbin-Watson stat	1.451601	
Prob(F-statistic)	0.00241			

Profitability of SBI bank (Public Sector)

Dependent Variable: SBI

Method: Least Squares

Sample: 1 31

Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.20539	0.947322	5.494849	0.0012
CRR	-0.00115	0.214929	-1.75343	0.0325
BR	-2.221	0.436061	-5.09332	0.0008
DR	0.682418	0.511535	1.334061	0.1947
REPO	-2.48571	0.897557	-2.76942	0.0107
RR	2.389537	0.561901	4.252592	0.0003
PLR	-3.61991	0.804663	-4.49867	0.0001
R-squared	0.902972	Mean dependent var		4.063681
Adjusted R-squared	0.878715	S.D. dependent var		0.153082
S.E. of regression	0.053312	Akaike info criterion		-2.82962
Sum squared resid	0.068213	Schwarz criterion		-2.50582
Log likelihood	50.85911	Hannan-Quinn criter.		-2.72407
F-statistic	37.22516	Durbin-Watson stat		1.644491
Prob(F-statistic)	0.00018			

CONCLUSION

The financial turmoil and the global recession that started in 2007 impacted the profitability and revenues of the businesses across the globe. Indian banking system rests on the strong financial fundamentals, rigid monetary guidelines and watchful risk appetite. Monetary policy tools were sound enough to combat the impact of global recession through its tools. Since September 2008, it's respond intended mostly to shield Indian economy from the adverse impact of global financial crisis. It responded well to the slackening economic growth in the milieu of global

turmoil by accommodative policy and hence providing ample liquidity to the productive sectors by reducing the CRR, repo and SLR.

In January 2010, RBI felt that the monetary policy was more consistent with the crisis situation other than with the fast recovering economy and accommodative policy would be likely to complicate inflationary problem. During the recent time, heightened inflationary pressures have exerted pressure on the policy to align itself with growing phase of the economy. On April 24, 2010, RBI hiked CRR by 25 basis points from 5.75 per cent to 6 percent which resulted in the absorption of 12,500 crore of excess liquidity from the system. Since March 2010, key policy rates, Repo and Reverse Repo are hiked, eight times in a year, latest on March by 25 basis points, leaving repo and reverse repo at 6.75 per cent and 5.75 per cent, respectively. CRR was left untouched at 6%.

Looking at the empirical results, commercial banks interest profitability is certainly impacted by the policy changes but when the policy tightens its stance, commercial banks have enough flexibility to re-adjust their lending rates and deposit rates to narrow down the impact on its profitability due to the hike in policy rates. The Reserve Bank monitors the macroeconomic conditions, predominantly the price level, and ensures adequate liquidity to achieve credit growth and facilitate investment demand in the economy. Banks work in tandem to the monetary policies stance to bring out the desired result in the economy.

Appendix:1

Autonomy of the Central Bank: Changing Contours in India

TABLE 1 : CASH RESERVE RATIO AND INTEREST RATES - 2008-09						
(in per cent)						
	April	May	June	July	August	September
	2008	2008	2008	2008	2008	2008
	(1)	(2)	(3)	(4)	(5)	(6)
a. CRR	7.50	8.25	8.25	8.75	8.75	9.00
b. Bank Rate	6.00	6.00	6.00	6.00	6.00	6.00
c. Prime Lending Rate ⁽²⁾	12.25-12.75	12.25-12.75	12.50-12.75	12.75-13.25	13.25-14.00	13.75-14.00
d. Deposit Rate ⁽³⁾	8.25-9.00	8.25-8.75	8.25-9.00	8.75-9.50	8.75-10.00	8.75-10.00
e. Call Money Rate ⁽⁴⁾						
Borrowing						
(i) High	7.50	8.25	10.25	10.25	10.04	15.25
(ii) Low	2.00	6.00	6.50	5.80	4.55	6.35
Lending						
(i) High	7.50	8.25	10.25	10.25	10.04	15.25
(ii) Low	2.00	6.00	6.50	5.80	4.55	6.35

<http://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Statistical%20Tables%20Relating%20to%20Banks%20of%20India>

REFERENCES

- ❖ Aburime, Uhomoibhi Toni (2009), Impact of Political Affiliation on Bank Profitability in Nigeria, *African Journal of Accounting, Economics, Finance and Banking Research*, Vol. 4, No. 4, pp.61-75
- ❖ Bourke, P. (1989), Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia, *Journal of Banking and Finance*, pp. 65-79.
- ❖ Brissimis and Delis (2010), Bank Heterogeneity and Monetary Policy, *European Central Bank- Euro system*, Working Paper No. 1233.
- ❖ Chari, V.V., Jones, L. E., and Manuelli, R. E. (1995), The Growth effect of Monetary policy, *Federal Reserve Bank of Minneapolis Quarterly Review*, Vol.19, No.4, pp. 18-32.
- ❖ Chuku, A. Chuku (2009), Measuring the Effect of Monetary Policy Innovations in Nigeria: A Structural Vector Autoregressive (SVAR) Approach, *African Journal of Accounting, Economics, Finance and Banking Research*, Vol. 5, No.5, pp. 112-129.
- ❖ Flamini V., McDonald C., and Schumacher L. (2009), The Determinants of Commercial Bank Profitability in Sub-Saharan Africa, working paper.
- ❖ Hamdan, Bassam. and Masih, Mansur (2008), The Impact of Monetary Policy on Deposit and Lending Rates in Industrial and Developing Countries: An Application of Ardl Approach, *Journal of International Finance & Economics*.
- ❖ Reddy, V. Y. (2008), Annual Policy Statement for the Year 2008-09, India: RBI Parameters of Monetary policy in India. Online Available at: http://www.google.co.in/search?source=ig&hl=en&rlz=1G1GGLQ_ENI N265&=&q=moetary+policy+instruments&aq=f&aqi=g-sx10&aql=&oq=
- ❖ Reddy, Y.V. (2002), Monetary and Financial Sector Reforms in India: A Practitioner's Perspective, Online Available at: <http://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/28593.pdf> [Accessed 10 March 2011]
- ❖ Reddy Y.V. (1997), Financial Sector Reforms in India - Recent Trends, Online Availbale at: http://www.rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=235 [Accessed 10 March 2011]
- ❖ Sayeed, M. A. and Hoque, M. Z. (n.d.). Impact of Asset and Liability Management on Profitability: A study on public vs private commercial banks in Bangladesh. Available at <http://wbiconpro.com/30%5B1%5D Sayeed.pdf> (Accessed 7th November, 2011)
- ❖ Subbarao, D. (2009), Annual Policy Statement for the Year 2009-10, India: RBI. [Online] Available at: <http://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=4936&Mode=0> [Accessed 10 March 2005]
- ❖ Subbarao, D. (2010), Annual Policy Statement for the Year 2010-11, India: RBI, [Online] Available at: <http://www.rbi.org.in/scripts/NotificationUser.aspx?Id=5602&Mode=0> [Accessed 10 March 2005]