

# Monetary Policy of Reserve Bank of India : Role of Bank Lending

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## Abstract

The global meltdown of 2008 challenged the sanctity of the monetary policy of the Central banks worldwide. However, it is a fact that the monetary policy is a vital tool in the hands of the Central bank of any country for stabilizing the economy. India is no exception to it. Reserve Bank of India (RBI), the central bank of the country, also uses this tool for rejuvenating the economy. This is where monetary tools like repo rate, reverse repo rate, and cash reserve ratio emerge. The present paper reviewed the current state of the monetary policy of RBI with respect to its focus on the objective of price stability and its impact on the Indian economy through the credit channel of monetary transmission mechanism.

**Keywords:** Reserve Bank of India, monetary policy, Indian economy, interest rate

**JEL Classification:** E4, E5, E6

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The U.S. subprime mortgage crisis impacted the whole world. Economies are still experiencing recessionary conditions. The financial crisis entered a new turbulent phase since 2008, shaking the confidence of global investors in financial markets. A greater number of banks got affected by the global recession. However, Indian banks, being conservative in approach, were not much impacted. However, the incident raised a question mark on the effectiveness of bank lending for them as well.

Monetary policy actions impact the economy. For example, any monetary tightening tends to reduce the economic activity, at least in the short run. There has been extensive research on the art of monetary policy-making by central banks in the aftermath of the recent global financial crisis. Various dimensions of monetary policy-making- its objectives, tools, and the complexities arising from global macro-economic environment have received wide academic attention in recent times. There is a vast empirical literature available which seeks to explain the impact of monetary policy on the real economy. However, there is no consensus in explaining how monetary policy shocks get transmitted through the economy.

Therefore, economists turned their attention to conditions in financial markets like imperfect information and other frictions to provide a plausible answer. This strand of literature is collectively known as "the credit view or credit channel of the monetary policy transmission." According to this view, any increase in the short term interest rate tends to increase the external finance premium of the borrower (the external finance premium is the difference between the cost of raising funds externally and the opportunity cost of internal funds).

Credit channel is supposed to work in two ways. One is the 'balance sheet channel,' where any monetary policy change affects the balance sheets and income statements of the borrowers. The second aspect of credit channel focuses entirely on the 'supply of loans' by the lending institutions, and in particular, commercial banks.

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Commercial banks play a very important and distinct role in the supply of credit in the financial sector. Any kind of monetary tightening like open market sale by the Central bank drains bank reserves and reduces the retail deposits and in turn reduces the supply of loans. Borrowers face a shortage of credit, which might affect their spending (Mishkin, 1995).

## **RBI's Monetary Policy: The Catalyst of Diversification in the Economy**

The Indian economy has witnessed many ups and downs and with every adversity, it has come out to be much stronger than before. It has achieved high growth since the early 1980s on account of broad-based economic reforms that touched every segment of the economy. The story of Indian reforms is by now well-documented (Ahluwalia, 2002), and same is expected for future as well despite the low phase in the recent past. There is still vast demand on the production side for infrastructure investment, from the public and private sector, both through public private partnerships. Furthermore, the service sector has shown consistently a high growth rate, ranging from the hospitality industry, to entertainment industry, to tourism and of course, the financial services industry. In order to meet all the challenges emerging thereof, the banking system has to respond adequately to them. Hence, the role of RBI's monetary policy is quite crucial.

In the present paper, an assessment is done of RBI's monetary policy with regard to its focus on containing inflation in the Indian economy through a tight monetary policy. The RBI has been using its key policy rate, repo rate, to pursue the objective of price stability.

### **The Monetary Policy: A Brief Overview**

Monetary policy has well defined objectives. Central banks try to achieve these objectives by formulating a consistent monetary policy framework. However, the day-to-day management of monetary policy is done through an operating procedure. As put forward by Deepak Mohanty, Executive Director, RBI, it requires certain steps which are as follows (Mohanty, 2011) :

- (1)** Defining an operational target,
- (2)** Setting a policy rate which could influence the operational target,
- (3)** Setting the width of corridor for short term market interest rates,
- (4)** Conducting liquidity operations to keep the operational interest rate stable within the corridor,
- (5)** Signaling of policy intentions.

Most Central Banks in the world now signal their monetary policy stance by setting interest rates in the money market. Therefore, the operating target is short-term market interest rates. However, the efficacy of monetary policy largely depends on how the signals are transmitted through financial markets and how households and businesses respond to these signals. That is, how the changes in market interest rates impact the spending and investment decisions of firms and businesses, thus affecting the aggregate demand and output in the economy.

RBI, like other major central banks in the world, has changed its monetary policy framework from monetary targeting to that of interest rate targeting. Its major objective has remained price stability ,that is, maintaining low and stable prices. Following the recommendations of the Narasimham Committee II (1998), RBI gradually developed the liquidity adjustment facility (LAF) from the interim liquidity adjustment facility (ILAF), which was introduced in April 1999. The LAF was operated through overnight fixed repo rate and reverse repo rate from November 2004.

The operating procedure of RBI underwent a major change since May 2011 as announced in its monetary policy statement. The modified operating procedure has made the following changes : The weighted average overnight call money market rate has become the operating target of monetary policy (Mohanty, 2011). The repo

rate has been made the only one independently varying policy rate. A new marginal standing facility (MSF) has been introduced under which scheduled commercial banks (SCBs) can borrow overnight at their discretion up to 1% of their respective NDTL at 100 basis points above the repo rate. The revised corridor is defined with a fixed band of 200 basis points. The repo rate is in the middle with reverse repo rate being 100 basis points below it and MSF at 100 basis points above it (Mohanty, 2011).

## **Literature Review**

Any monetary policy shock impacts the economy through various channels. In the conventional channel, money affects the aggregate spending and hence, the output. In terms of the standard IS-LM framework, there are only two assets - money and bonds. Hence, there is no special role of credit or bank intermediated loans as they are lumped together with all other financial assets. However, in a financial system, under situations of asymmetric information and moral hazards, bank loans are not close substitutes of financial assets like bonds. Hence, households and small and medium firms depend more heavily on the banking sector for their credit requirements. Therefore, bank loans assume a critical role as a channel through which monetary policy stimulus can affect the economy.

The theoretical model for bank lending channel was developed by Bernanke and Blinder (1988). They made a model within the IS-LM construct to analyze the role of bank loans. They argued that the bank lending channel exists only under the condition that bank loans and bonds are viewed by borrowers as imperfect substitutes. However, the implications of this model are hard to test empirically. The first kind of empirical testing was done on the credit channel view by Bernanke and Blinder (1992). They used a vector autoregression analysis (VAR) on U.S. data of a monetary policy stimulus provided by federal funds rate. The results indicated an immediate decline in the volume of securities and deposits and a delayed decline in the volume of bank loans.

Peek and Rosengren (1995) developed a model of a bank's optimal loan supply, showing that capital-constrained and capital-unconstrained banks react differently to changes in monetary policy. Capital constrained banks tend to increase their loan supply with an increase in the benchmark interest rate, while unconstrained banks were found to decrease their loan supply.

A substantial amount of empirical work was conducted on the U.S. economy by Kashyap and Stein (1995, 2000). Their results supported the view that bank lending channels existed in the U.S. They also found evidence that monetary policy has a greater impact on the smaller banks with less liquid balance sheets. Kashyap, Stein, and Wilcox (1993) looked at the lending pattern of banks in terms of loans and commercial papers in order to separate the effects of loan demand from loan supply. Their results indicated that in a situation of monetary tightening, the supply of bank loans fell ; whereas, there is an increase in the issuance of commercial papers.

Milne and Wood (2009) argued regarding the effects of the bank lending channel. According to the authors, the amplification effect occurred when monetary tightening leads to an outflow of bank funds and a reduction in bank lending. They further used multinational aggregated data, and showed that bank deposits do not decrease more than lending due to tighter monetary policy.

In the Indian context, the only exhaustive study on the bank lending channel was done by the Reserve Bank of India (RBI, 2006). The study found the existence of the bank lending channel for the time period from 1993-94 to 2002-03 in India. The main findings of the study corroborated the view that banks tend to cut bank lending and adjust their funds in response to an adverse monetary policy shock.

## **Objective of the Study**

The Reserve Bank of India has followed a contractionary monetary policy in response to high inflation in the Indian economy. This paper seeks to analyze the impact of monetary tightening in terms of the 'credit channel' of monetary policy transmission mechanism in the Indian context. We will first try to assess the overall impact of

monetary policy in India on the real spending and output from 2008-09 to 2012-13. Next, we will explore the lending pattern of commercial banks and their impact on investments made by firms.

## Methodology

We used data sets related to the banks' credit advance to the firms and households between the time period from 2008 to 2013. This time period is significant because during this period, the Reserve Bank of India adopted a tight monetary policy stance by increasing the repo and/or reverse repo rate as well as the cash reserve ratio (CRR). However, we have taken both quantity variable cash reserve ratio (CRR) and short term interest rates (repo rate and reverse repo rate) to assess the impact of monetary tightening on the Indian economy. In case of India, a quantitative variable like CRR is still a very important instrument of monetary policy. 2001 onwards, the RBI started playing an increasingly important role in stabilizing the call money market rate by directly intervening in the interbank call money market under the liquidity adjustment facility (LAF).

The intervention takes the form of open market operations on a daily basis at a fixed rate signified by repo rate. The objective is to stabilize the call money market rate and bring it within the range of repo and reverse repo rate. Therefore, the repo and reverse repo rate have become more significant in the short run. It is important to note here that RBI adopted a new operating procedure in 2011, by which repo rate was made the only one independently varying policy rate. The weighted average overnight call money rate became an operating target of monetary policy.

**Table 1. Policy Rates of Reserve Bank of India**

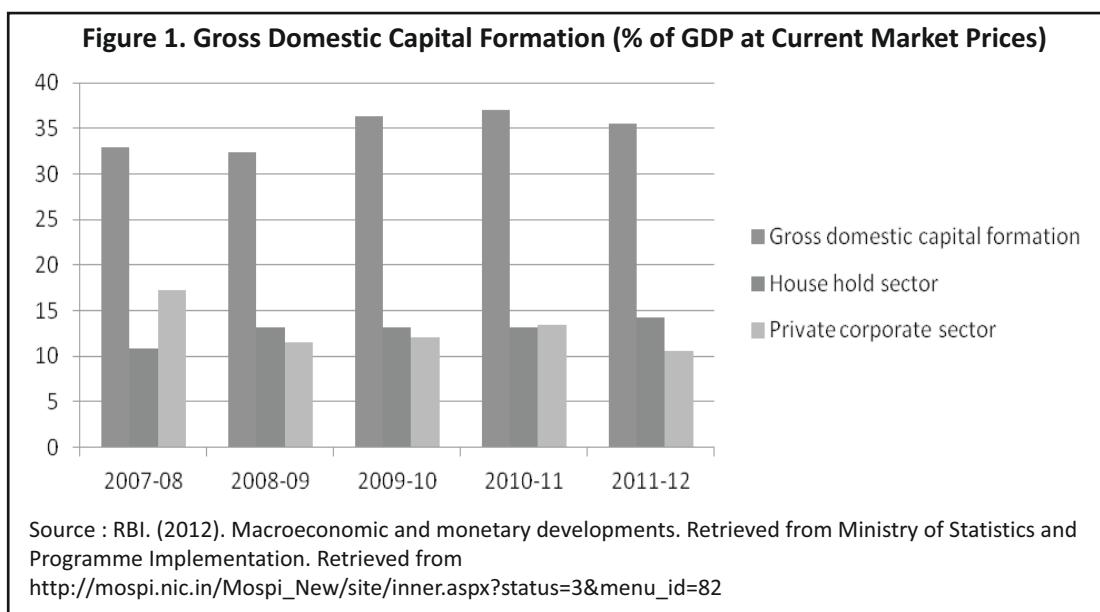
Effective Date	Repo Rate Rate (%)	Reverse Repo Rate (%)	Cash Reserve Ratio Effective Date	Ratio
3.7.2013	7.25	6.25	09.02.2013	4
19.3.2013	7.5	6.5	03.11.2012	4.25
29.01.2013	7.75	6.75	22.09.2012	4.5
17.04.2012	8.0	7.0	10.03.2012	4.75
25.10.2011	8.5	7.5	28.01.2012	5.5
16.09.2011	8.25	7.25	24.04.2010	6
26.07.2011	8	7	27.02.2010	5.75
16.06.2011	7.5	6.5	13.02.2010	5.5
03.05.2011	7.25	6.25	17.01.2009	5
17.03.2011	6.75	5.75	08.11.2008	5.5
25.01.2011	6.5	5.5	25.10.2008	6
02.11.2010	6.25	5.25	11.10.2008	6.5
16.09.2010	6	5	30.08.2010	9
20.04.2010	5.25	3.75	19.07.2008	8.75
19.03.2010	5	3.5	05.07.2008	8.5
21.04.2009	4.75	3.25	24.05.2008	8.25
05.03.2009	5	3.5	10.05.2008	8
05.01.2009	5.5	4	26.04.2008	7.75
08.12.2008	6.5	5	10.11.2007	7.5

Source: RBI. (2013). Handbook of statistics on the Indian economy. Retrieved from <http://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Handbook+of+Statistics+on+Indian+Economy>

**Table 2. Interest Rates in the Indian Economy**

Year	Call Money Rate	Savings Rate	Deposit Rates Maturity above 5 yrs	Lending rates
2008-09	7.06	3.5	7.75-8.50	11.50-16.75
2009-10	3.24	3.5	7.00-7.75	11.00-15.75
2010-11	5.75	3.5	8.50-8.75	8.25-9.50
2011-12	8.12	4	8.50-9.25	10.00-10.75
2012-13	4	4	8.50-9.00	
2013-14	4	4	8.50-9.00	

Source: RBI. (2013). Handbook of statistics on the Indian economy. Retrieved from <http://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Handbook+of+Statistics+on+Indian+Economy>



In order to analyze the bank lending channel, we considered the various components of assets and liabilities of commercial banks. All data are taken from the Handbook of Statistics (Reserve Bank of India), various issues, and Press releases of Central Statistical Office (CSO).

## Analysis and Results

The results and analytical discussion are depicted in the Table 1. If we look at the measures taken by the RBI to implement monetary tightening, the short term interest rates were used predominantly. The CRR was hiked to 6% in September 2010 and was then gradually reduced to 4% in July 2013. The Reserve Bank of India started increasing the repo rate from 2010 onwards, and it continued to do so till 2013 end. The repo rate was increased to 5% and the reverse repo rate was increased to 3.5% in April 2010. These rates were gradually increased to 8.5% and 7.5% respectively in October 2011. Similarly, the cash reserve ratio was also increased from 5.5% in February 2010 to 6% in April 2010. This led to a rise in deposit rates as well as lending rates of the banks, as can be inferred from the Table 2.

The Indian economy has witnessed exceptionally high inflation in the recent years. The inflation rate by wholesale price index (WPI) increased from 3.8% in 2008-09 to 9.6% in 2009-10 and remained at 6% in 2013-14. Going by the consumer price index - industrial workers (CPI-IW), retail inflation was much higher. It was almost

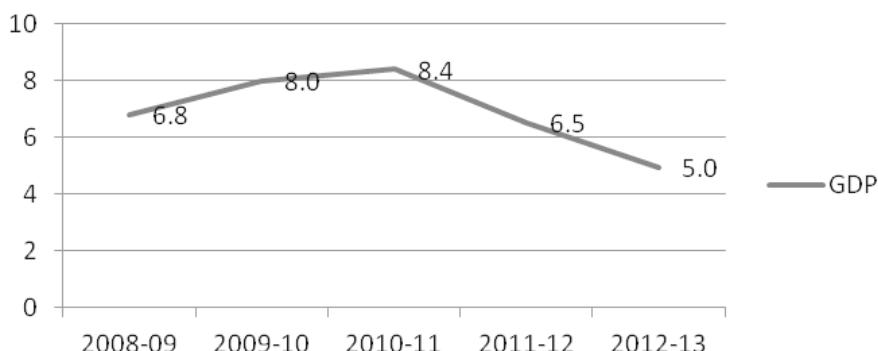
**Table 3. Gross Capital Formation (at 2004-05 prices) (in ₹ crore)**

Private Corporate Sector	2008-09	2009-10	2010-11	2011-12
construction	92,096	115,198	166,748	156,387
machinery & equipment	405,300	428,380	508,454	494,843

Source: RBI (2012), op. cit.

**Figure 2. Gross Domestic Product (GDP) Growth Rate (in %)**

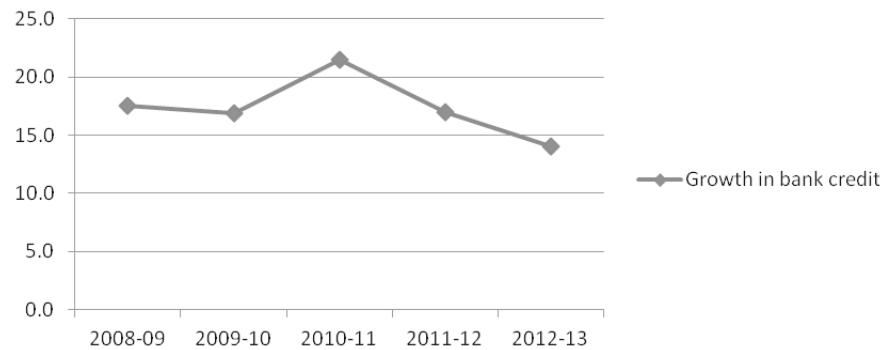
**GDP**



Source: RBI (2012), op. cit.

**Figure 3. Growth in Total Bank Credit (%)**

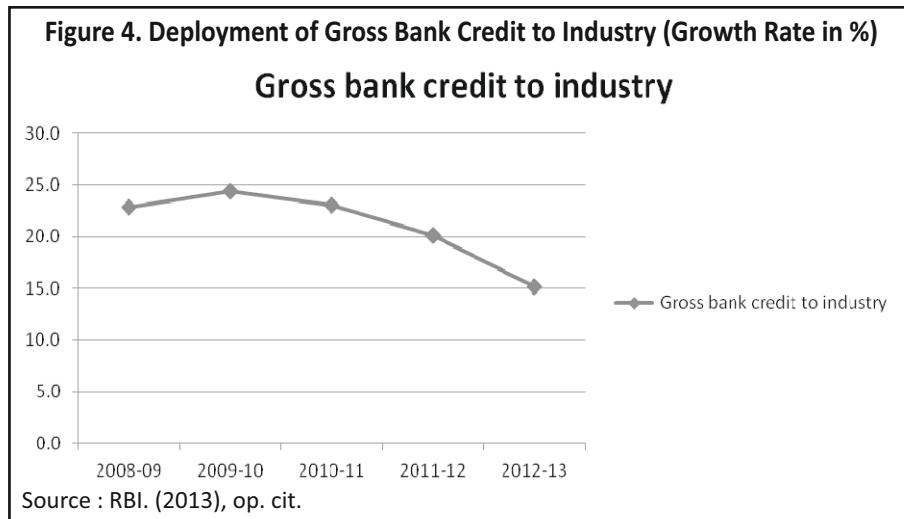
**Growth in bank credit**



Source: RBI. (2013), op. cit.

a double digit inflation during the same period. In 2008-09, the figure was 12.4%, and in 2013-14, it was 9.7%.

Monetary tightening by the RBI slowed down the real activity in the Indian economy. From the Figure 1, it is evident that gross fixed capital formation and capital formation by the corporate sector, that is, business fixed investment came down. The investment in construction and machinery & equipment came down in 2011-12, as depicted in the Table 3. In order to explain the effect of monetary tightening on the overall economic activity in terms of credit channel view, we need to look at the borrowers' balance sheets as well as the supply of loans by the banking sector. Any rise in interest rate increases the interest costs for the firms and thus reduces the net cash flows. Given the fixed and quasi fixed costs such as wage payments as well as stocks of inventories, this further weakens the financial positions of firms. So far as rising cost of borrowing affects spending on long term assets



**Table 4. Industry Wise Deployment of Gross Bank Credit, Outstanding (Growth Rate In %)**

Year	Small scale industry	Large and medium industry
2008-09	27.4	22.0
2009-10	22.1	24.8
2010-11	1.8	26.2
2011-12	12.4	22.0
2012-13	20.3	14.4

Source: RBI. (2013), op. cit.

including consumer durables, the aggregate demand gets adversely affected. Hence, it also impacts the total revenue and profits of the firms negatively. This becomes more pronounced in the case of small and medium firms, who primarily depend on banks for their borrowings. In a situation of monetary tightening, these firms have to cut back on production. Hence, a fall in investment directly reduces output and GDP growth. If we look at the GDP growth of the Indian economy from 2010 onwards, we find a continuous slowing down of the economy. The GDP growth rate came down from 8.4% in 2010-11 to 5% in 2012-13.

One rough measure to assess the supply of bank loans is to look at the growth of total credit disbursed by the banking sector. From the Figure 2, it is clearly apparent that from 2008-09 onwards, there has been a consistent decline in the rate of growth of credit except in 2010-11. The Figure 3 depicts that the growth rate in total credit came down to 14.1% in 2012-13 from a peak of 2011-12, when the Reserve Bank of India started increasing the repo rate and reverse repo rate. This fall in deployment of credit is more acute when we look at the growth rate in gross bank credit disbursed to the industry as a whole, as is clear from the Figure 4. Hence, it can be inferred that there has been a secular decline in the growth rate of credit since 2008- 09 onwards. Even the industry wise disbursement of gross credit by banks came down, which is evident from the Table 4.

## Conclusion

The policy of monetary tightening pursued by the RBI has severely affected the real economy of late. Looking at the components of the aggregate demand, we find that investment in physical capital by the corporate sector has been severely affected. This can be explained by the credit channel of monetary transmission mechanism. On the one hand, the rising cost of capital has weakened the financial positions of the firms, particularly small and

medium firms, who are primarily dependent on banks for funds. The rising interest costs as well as declining revenue and profit have reduced their net cash flows. This has been exacerbated by the fall in the supply of credit by the banking sector. Therefore, we find the evidence of both the balance sheet channel and bank lending channel working together in explaining a negative impact of monetary tightening in the context of India.

## **Research and Policy Implications**

Our results have several important research and policy implications. First, monetary policy operations have an impact on banks, but it varies from big banks to small banks. The effectiveness of the bank lending channel could be regularized by structural effects. Second, capital regulation should be more stringent in the backdrop of Basel III. A stronger capital regulation would definitely make the bank lending channel a more streamlined mechanism for transmitting monetary policy.

**In view of this backdrop, the following challenges are also expected to emerge:**

- ↳ How to contribute to post-crisis business cycle fluctuations and inflation dynamics in India?
- ↳ What is the role of monetary policy in regard to bank lending?
- ↳ What would be the post-crisis monetary policy stance by the central bank in India?
- ↳ Would monetary policy be successful in anchoring inflationary pressure in recent times?

## **Limitations of the Study and Scope for Further Research**

Every research has some limitation, and the present paper is no exception. The present paper reviews the monetary policy of RBI for price stability and its impact on the Indian economy. It can be extended to other economic parameters at the global level. The real spending and output have been studied for the time period from 2008-09 to 2012-13. The time-period is another probable area that can be increased for conducting an in-depth analysis. In future studies, the effect of variable cash reserve ratio (CRR) and short term interest rates can be examined with reference to corporate growth.

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