

International Multidisciplinary Research Journal

Golden Research Thoughts

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QUANTITATIVE TECHNIQUES OF MONETARY POLICY OF RESERVE BANK OF INDIA

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ABSTRACT

In pursuing the objectives of monetary policy, a central bank has an array of policy instruments at its disposal through which it seeks to initiate changes in money supply and in the quantum, direction, and cost of credit. In view of the divergent financial structures and objectives, different countries use different policy instruments suited for their needs for attaining the policy objectives. "The central monetary authority has to devise a policy which will suit its country best. This, in turn, will depend largely upon the stages of development of country's financial institution as well as on the prevailing monetary and



banking traditions."(UNO1951:4) A central bank is the entity responsible for the monetary policy of a country. It is a bank that can lend money to other banks in times of need. Its primary responsibility is to maintain the stability of currency and money supply, and acting as a lender of last resort to the banking sector during times of financial crisis.

KEY WORDS: Monetary Policy, Bank Rate, Repo Rate etc.

INTRODUCTION :

In response to the changing economic environment and developments in financial structure; monetary policy instruments and practices have also been undergoing a constant process of evolution. It's has become customary to classify various tools into two categories namely, general or quantitative and selective or qualitative.

The instruments are known general because these affect the whole economy. The implementation of these instruments alters the aggregates supply of credit. These general instruments are the Bank Rate; Cash reserve requirements, and Open Market Operation and Statutory Liquid Ratio. All these instruments affect the total volume of credit by way of changes in loan able is resource of commercial banks which, in turn, affects the total money supply. In specific areas of general monetary policy in specific areas of the economy

This distinction between general and selective control is not watertight. Selection control also has some effect on the rest of the economy. Warren Smith, in a study for the Joint Economy Committee, United States of

America wrote: "Recent experience suggest that general credit control have different effect on different classes of borrowers. Instead of distinguishing between general and selective control on the basic of principal, it seem better to admit that each policy instrument – general as well as selective monetary as well as fiscal –has its own peculiar incidence on the economy Before the instruments of credit controls are explained in detail, we first explain the objectives of Monetary policy.

OBJECTIVES OF MONETARY POLICY

The objectives are to maintain price stability foreign exchange stability, maximization of growth and maximization of employees and therefore, ensure adequate flow of credit to the production sectors of the economy.

There are four main 'channel' through which the Central bank look sat:

- Quantum channel: money supply and credit (affect real output price level through changes in reserves, money, supply and credit aggregates).
- Interest rate channel.
- Exchange rate channel (linked to the currency) and through.
- Asset price

Since Monetary policy is the management of money and interest rates, it is useful to recall from analysis of money supply process that

$M = m \times MB$ where M is the money supply, MB is the monetary base, and m, the money multiplier and is determined as: $M = 1 + c$ and $R + e + c$.

These equations reveal that the central bank can manage the money supply and to, conduct monetary policy, in three ways:

- a) By changing the monetary base through open market operations.
- b) By changing the monetary base through discount lending.
- c) By changing the money multiplier by changing the required reserve ratio.

Thus the central bank has following tools of monetary policy: (1) Open market operation. (2) Discount rates (3) Change in reserve requirements and (4) Statutory Liquidity Ratio.

(i) Bank Rate or Discount Rate

Central bank credit to the commercial and other banks comes in the form of loans, discount and advances. Such borrowing is, usually regulated by the rate charge for such loan known as the 'Bank Rate' or 'Discount Rate'. The Bank of England was the first to develop the Bank Rate as an instrument of credit control and used it for the first time in 1839. Throughout the nineteenth century, it was mostly used in those countries, which had central banks. In a broad sense, the Bank Rate is defined as "the varying of the terms, and of the condition under which the market may have temporary access to central bank credit through secured advances". (Fousek1957:13)

The central bank can act the volume of discount loans by setting the discount rate. A higher discount rate makes discount borrowing less attractive to banks and will, therefore reduce the volume of discount loans. A lower discount rate makes discount borrowing more attractive to banks and will therefore increase the volume of discount loans.

(a) Influence of Change in the Bank Rate

The Bank Rate is one of the principal tools used in combating inflationary and recessionary tendencies. There are three principal channels through which change in the Bank Rate may influence: (i) The volume of reserves, (ii) The cost of credit and the (iii) Flow of total spending. These channels are the monetary base and monetary aggregates the level of interest rates security prices, the general expectations of bankers, and the public.

It is the influence of changes in the Bank Rate on the total volume of bank credit that attracts most the

attention of banker and economists” The Bank Rate may be compared as a barometer of the economic conditions in a country. A rise in the Bank Rate is like the danger signal of the red light, warning the business and tends to discourage commercial banks borrowing, while a reduction in the Bank Rate tends to increase the willingness of banks to borrow and would, thus, result in an expansion of monetary variable such as reserve, monetary base, and money supply.

The second and more important aspect is the influences of the Bank Rate on the whole structure of market rates of interest. There is a close relationship between the Bank Rate and short-term market rates of interests because the central bank and the money market are alternative media for adjusting cash and reserve position.

Another important channel is the affect on expectation through which changes in the Bank Rate may influence spending and the business activity. The Bank Rate changes are made; they are widely interpreted as a signal of the future course of monetary policy.

LIMITATION OF BANK RATE

The Bank Rate policy can be effective only when there is an well-organized money market and the timing of the Bank Rate is appropriate. The absence of condition for successful working of the Bank Rate restricts the importance of the Bank Rate as an instrument of monetary policy. Usually, in every situation, the Bank Rate policy may not always produce the desired results. In several cases, it has failed on account of its limitation. “In the inflationary environment, the factors affecting or determining interest rates are somewhat different than they are in stable price periods. This contributed to making interest rates misleading and confusing as guides or indicators of policy.” (Kelcher 1980:26). In view of these limitations, it is evident that effectiveness of the Bank Rates depends upon co-ordination with other policy instruments.

II. Open Market Operations

Open market operations are the other instruments which a central bank uses to control the volume of aggregate bank credit in an economy in order to implement its monetary policy. The term “open market” technically connotes a perfectly competitive market for securities, it implies that a central/bank buys or sells securities at a price that is attractive enough to convince some one voluntarily to enter into a deal. As an instrument of credit control, the open market operations were developed only after the First World War. Open market operations are the bread-and-butter instruments of the central bank.

The objectives of open market operations are: (a) to control the reserve base of the banking system; (b) to provide seasonal or other finance to the commercial banks; (c) to minimize fluctuations in money supply; (d) to maintain stability in the average prices of government securities and (e) to assist debt management and government borrowing. The last one indicates the fiscal aspect and other are of predominately monetary significance.

Open market operation are conducted by the central bank in the variety of assets, such as government securities, bills of exchanges, bankers’ acceptances and foreign exchange, gold and sometimes even in company shares. In practice, all countries usually deal in government securities because the degree of initiative by the central bank is greater than any other assets. Schultz (1987:17) on the evolution of techniques and instruments of monetary policy; in five industrially develop countries “indicates that recently more reliance has been placed on open market operations. “Open market has been particularly important in developed economies, while in less developed countries, they are rarely used” (Coats and Khatkhate 1979). The difficulty arises from the part of non-existence of the market. Developing countries try to develop the security; market with a view to making open market operation effective.

Open market transactions by the central bank may be perceived as impinging upon the economy through three separate channels. These channels include monetary variables, security yields, price and the expectation of public.

i. Bank Reserves, Monetary Base and Monetary Aggregates

The central bank may influence the volume of bank reserves by buying or selling securities and eligible

papers in the open market. An open market purchase by Central Bank always increase the total bank reserve by the amount of purchase and open market sales tend to reduce bank reserves by the amount of the sale. Open market operations expend or contract reserves of the commercial banks and by this: customers. Directly, open market purchases not only increase the reserves but also deposit. Indirectly, excess reserve makes deposit expansion possible. Thus open, market operation affect bank reserves, the monetary base and other monetary aggregates.

(ii) Level of Security Prices and Interest Rates

When the central bank purchases securities, it directly bids up the prices and, therefore, reduces the yield of the securities involved. Also, the increase in bank excess reserves will tend to induce the commercial banks to purchase securities. This causes further, price increase and downward yield pressure on securities will be seen. Excess reserves may cause the commercial banks to lower their interest rates. Consequently, reduction in the commercial banks loan rates tends to encourage borrowing and spending. A change in the pattern of interest rates also tends to influence the loan and investment policies of the banks and other financial institutions.

(iii) Expectations Effect

Like Bank Rate, open market operations also have expectations effect. If the public believes that an easier money and credit, situation lies ahead, the expectations effect are likely to be bullish for aggregate economic activity of otherwise. The expectation effect of open market policy is hard to quantify. However, it may be an important channel through which the central bank policy influences the economy.

III. Cash Reserve Requirement

Required reserve ratio is a bank regulation that sets the minimum reserves each bank must hold to customer deposits. It would normally be in a bank vault, or with a central bank or with both. The reserve ratio is sometimes used as a tool in the monetary policy, influencing the country's economy, borrowing, and interest rates. Reserve requirements affect the potential of the banking system to create transaction deposits. If the reserve requirement is 10%, for example, a bank that receives a Rs. 100 deposit may lend out Rs. 90 of that deposit. If the borrower then writes a check to someone who deposits the Rs. 90, the bank receiving that deposit can lend out Rs. 81. As the process continues, the banking system can expand the change in excess reserve of Rs. 90 into a maximum of Rs. 1,000 of money. In contrast, with a 20% reserve requirement, the banking system would be able to expand the initial Rs. 100 deposit into a maximum of Rs. 500. Thus, higher reserve requirements reduce money creation. Loan activity by banks plays a fundamental role in determining the money supply. Even if reserves were not a legal requirement, prudence would ensure that banks would hold a certain percentage of their assets in the form of cash reserves. It is common to think of commercial banks as passive receivers of deposits from their customers and for many purposes, this is still an accurate view.

Banking legislation in most of the countries includes a specific provision requiring the commercial banks to maintain liquid assets in the form of cash-reserves'. Initially, the reserve requirements were kept with the intention to fulfill a safety function but in the post-war years, it has been realized that the cash reserve requirements could be employed as a credit control measure. A number of countries have! therefore, given the powers to the central bank to change cash reserve requirements. The ratio between the liquid assets and deposits differs from country to country depending on their economic conditions.

CHANGES

Changes in cash reserve requirements can have a substantial market effect on monetary and credit conditions. A reduction in the cash reserve ratio - i.e. - increases the total amount of bank credit and money supply while an increase reduces the money multiplier: compressing the magnitude of bank credit, deposits, and money supply. Raising the cash reserve ratio has a double effect. First, previously excess reserves of banks are now transformed into required reserves. Second, it lowers the money multipliers and, thus, lowers the deposit expansion that banks can undertake on the basis of their remaining excess reserves. And, this sharp reduction in the supply of loan able funds raises the price that borrowers must pay to obtain spending is combated from two

directions. First, banks have not funds to lend and must now turn down requests of potential spenders secondly: the price charged for the funds: that do become available will be higher, further discouraging spenders.

A reduction in cash reserve ratio would also (i) transfer reserves of banks from required to excess reserve category, ii) increase the coefficient of demand deposits and (iii) lead to lowering of interest rates because of the increase potential supply of loan able funds. Cash reserve requirements may be effectively used when the Bank Rate policy or the open market operations fail. The advantages for the use of changes in the cash reserve ratio in relation to open market operations and discount policy are as follows:

(i) Speed of Reactions :

Changes in cash reserve requirements have diffused effect more widely than the open market operations and; therefore these may affect economic conditions considerably. These changes instantaneously affect the reserve positions of all the commercial banks. Its success does not depend on the connection between the Bank Rate and other rates of interest in the money market. Therefore, changes in monetary aggregates and interest rates and credit conditions take place more quickly. This may be in contrast to open government security dealers maintain accounts. Several weeks, may elapse before the banks feel the impact of open market operations. Likewise, a change in the Bank Rate may not exert quick impact upon those banks, which are not currently borrowing or contemplating to borrow at the discount window.

Thus, if the economy warrants immediate action, changes in the cash reserve ratio may be useful as compared with other monetary policy instruments.

(IV) Statutory Liquidity Ratio

Besides the CRR, banks are required to invest a portion of their deposits in government securities as a part of their statutory liquidity ratio (SLR) requirements.

The government securities (also known as gilt-edged securities or gilts) are bonds issued by the Central government to meet its revenue requirements. Although the bonds are long-term in nature, they are liquid as they can be traded in the secondary market. Since 1991, as the economy has recovered and sector reforms increased the CRR has fallen from 15 per cent in March 1991 to 3.5 per cent in December 2015. The SLR has also fallen from 38.5 per cent to 5 per cent over the same period. At present both are very low. "SLR reduction is not so relevant in the present context for two reasons:

First, as part of the reforms process, the government has begun borrowing at market-related rates. Therefore, banks get better interest rates compared to earlier for their statutory investments in government securities. Second, banks are still the main source of funds for the government. This means that despite a lower SLR requirement, banks' investment in government securities will go up as government borrowing rises. As a result, bank investment in gilts continues to be high despite the RBI bringing down the minimum SLR. Therefore, for the purpose of determining the interest rates, it is not the SLR requirement that is important but the size of the government's borrowing programmers'. As government borrowing increases, interest rates, too, rise. Besides, gilts also provide another tool for the RBI to manage interest rates. The RBI conducts open market operations (OMO) by offering to buy or sell gilts. If it feels interest rates are too high, it may bring them down by offering to buy securities at a lower yield than what is available in the market.

(V) Repo and Reverse Repo

Open market purchases and sales have permanent affects on the monetary base, but sometimes the central bank will want to change the monetary base only temporarily. At these times, it engages in two other types of transactions.

(a) Repurchase Agreement (Repo) - The central bank purchases government securities with an agreement that the seller will buy them back (repurchase them) at a specified price on a specified date, usually within two weeks. A repo is therefore like a temporary open market purchases, temporarily increasing the monetary base.

(b) Reverse Repo -When central bank sells government securities with an agreement that the buyer will sell them back at a specified price on a specified date again usually within two weeks. A reverse repo is therefore like

a temporary open market sale, temporarily decreasing the monetary base.

CONCLUSION

The ultimate objective of monetary policy is to achieve domestic price and exchange rate stability. Monetary policy formulation converts these objectives or ultimate targets of monetary policy into intermediate and operational targets. The monetary policy instruments are what monetary policy uses as means to an end. These should be flexible and effective to achieve their targets efficiently. Flexibility means that the instruments could be changed as and when needed. Central bank has to have freedom to act quickly, independently and within the predetermined monetary policy parameters. Effectiveness means that instruments should transmit policy effects to the various sectors of the economy quickly and effectively so as to achieve the central banks' operational target.

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