

Economic Environment and Business Strategy
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Structure and Formulation of Monetary Policies: Insights

Hello everyone, welcome to this session on monetary policy formulation and structure. In this session, we will explore how central banks shape the macroeconomic environment and, in turn, influence our business decisions. Monetary policy is one of the most powerful tools for stabilizing an economy. It governs the supply of money and credit and influences interest rates, ultimately affecting economic growth, inflation, and employment. For businesses, understanding how monetary policy is designed and implemented is critical because it affects borrowing costs, investment planning, consumer demand, and exchange rate risk. In today's lecture, we will focus on the structure and formulation of monetary policy, drawing insights from both India and the United States.

This comparative perspective will help us appreciate, first, the institutional framework and how the Reserve Bank of India and the Federal Reserve in the US are structured to formulate monetary policy. Second, it will cover the decision-making process, the role of monetary policy committees and open market operations committees in an inflation-targeting framework, and policy communication. By the end of this session, you will understand not only how central banks in India and the US formulate monetary policy, but also why these policies are crucial for business strategy and informed economic decision-making. So, let's begin by examining the implications of understanding the institutional structures of monetary policy for businesses and markets.

To begin with, a key point is that when an expansionary monetary policy is implemented, there is more money in the economy, and the interest rate typically declines. At the same time, there is an inflationary risk. On the other hand, if there is a contractionary monetary policy, the money supply in the economy declines or is reduced; then there will be an increase in the interest rate, and at the same time, there will be a low level of inflation. Right? So, there is always a trade-off: if the interest rate declines, then inflation will increase because of the changes in the money supply. Right, so that is the trade-off. Keeping that point in mind, what we can see is that it has implications for businesses.

The first and foremost factor is credit availability. For example, a rate cut—what I mean by rate cut is an expansionary monetary policy. So, if there is a rate cut, even an interest rate cut, for instance, then cheaper loans will be available to businesses, which means the

capital they obtain will be at a lower cost. The interest rate is very low, resulting in more financial transactions and an increase in credit flow. The credit channel will be strengthened, and the financial flow with the companies will improve.

On the other hand, you know that if the interest rate increases, the cost of borrowing for firms rises, which in turn raises the cost of production. This is because credit is restricted, and market liquidity is a factor. So, imagine an expansionary monetary policy; you know that it injects liquidity via open market operations or a decline in the repo rate. That means there will be more liquidity in the banking system, with more money available, and as a result, more money in the public's hands. Also, for a business, the implication is that it is not only for themselves; first, if liquidity increases, they can keep credit at the same time.

If liquidity in the banking system and among the public increases, it means there is more money and more purchasing power among the public. Therefore, companies can expect these operations to increase aggregate demand. There will be more demand for goods and services from the public. Conversely, you can see a contractionary monetary policy. Suppose the central bank is following a contractionary monetary policy; that means businesses need to be prepared.

That means they know aggregate demand is going to decline, so they need to strategize their investment in expanding production facilities. They need to manage strategically. First, overall, for business planning, I would list out these aspects: one, investment decisions are helpful because they are sensitive to borrowing costs and credit conditions, and similarly, pricing and production strategies. Suppose there is an increase in the money supply; then, the interest rate will decline, but at the same time, there is a high probability of an increase in the rate of inflation. Therefore, when inflation occurs, the value of money declines, and accordingly, the firm's pricing strategy must also adjust in line with the expected rate of inflation.

That has implications not only for the prices of goods and services in final output but also for input costs. Other aspects include currency and interest rate volatility, which affect hedging strategies in financial markets. Similarly, expansion plans depend on long-term credit and stable monetary conditions. In short, regarding the last point, what I meant is that it pertains to firms and to the extent to which they need to expand their production capacity. That, in turn, depends on the availability of long-term credit and the stability of key economic indicators, including the inflation rate, interest rate, and foreign exchange rate.

It all depends on whether monetary conditions and policies are stable. I will summarize these points in a table. I will consider the policy stance: expansionary, neutral, or contractionary. What are the implications for credit and liquidity, and what are the

business responses? For instance, under an expansionary monetary policy, loans will be more easily obtainable. The cost of borrowing declines, resulting in high liquidity.

In this case, the business firms can expand the size of their operations. That means higher investment and hiring, because they can see that the cost of production has declined. At the same time, there is more liquidity in the market, and aggregate demand increases. So, these are the key insights.

Monetary policy directly shapes our credit conditions and market liquidity. Therefore, the business strategies that firms must adapt to are the policy shifts. In this case, firms need to monitor central bank signals because that is essential for proper and robust financial planning. Let's now move on to understanding how monetary policies are structured and formulated in India. You are already aware that the RBI, or the Reserve Bank of India, is the central bank of India.

Let's have a quick overview of the historical aspects. The RBI was established in 1935 and is headquartered in Mumbai. Its central board is governed by the RBI governor, appointed by the central government. The RBI also has several regional offices; in total, there are 22 regional offices across India. The functions of the RBI include the issuance of currency, except for the one-rupee note and coins of smaller denominations, which are issued by the government. The RBI issues all other major currencies. The RBI also serves as a banker to both the central and state governments, handling all banking business for all ministries and departments of the government.

All their cash transactions are mostly handled through the central bank, which also receives and makes payments on behalf of the governments. Furthermore, the central bank provides short-term loans and advances to governments, and another important function of the Reserve Bank of India is to control the exchange rate. The RBI takes steps to ensure the external value of the rupee through the exchange rate control system. We follow a managed floating system, which allows for a flexible exchange rate to some extent. However, in cases where the rupee is under threat, the RBI intervenes in the market with its foreign exchange reserves. The fourth function is that of the bankers' bank, the apex bank of the country, and the supervisor.

The regulator and supervisor of the financial system, primarily the banking system, prescribes the broad parameters of banking operations within which the country's banking and financial system functions. The more important question is why the central bank is doing this: because the financial market is the backbone of any economy, enabling the channeling of surplus funds to the most productive users. This means it helps channel funds from households to firms, especially. In this context, most of the public prefers to deposit their money with the banking system rather than directly getting involved in the financial market, for instance, the secondary market.

In this case, the Reserve Bank of India's objective is to maintain public confidence in the system, protect depositors' interests, and provide cost-effective banking services to the people, while acting as a banker's bank and supervisor, as well as the custodian of the banks' cash reserves. You already know that the cash reserve ratio, which is the required reserve ratio of total demand and time deposits, requires a certain fraction to be kept with the central bank as a reserve. The second role is to act as the lender of last resort in cases where a bank is in a deep financial struggle or crisis; at that time, the central bank would act as the lender of last resort. It also acts as a central clearing, settlement, and transfer bank; for example, if you are making a financial transaction to another person through your bank and that person has an account in another bank, not in your bank, at that time, the central bank acts as the clearing house and makes all the settlements and transfers easier.

Regarding the RBI, one of its main functions is to formulate and implement monetary policy. In this capacity, it serves as the country's central bank. It also acts as the controller of credit and the money supply. In a previous session, we discussed how the central bank uses monetary policy tools to influence liquidity within the banking system. For example, we have seen that open market operations and discount loans create reserves within the banking system, which ultimately affect the money supply.

It formulates and implements monetary policy, which means maintaining price stability and ensuring an adequate flow of credit to productive sectors. This brief overview, which we discussed in a previous section, covers what monetary aggregates are and how the money supply is defined in India. So, mainly, you can see M3 money, which is the broad money supply, defined as M1 plus time deposits with the banking system, according to the RBI in the Indian context. So, we have already seen several monetary policy instruments. Let's have a quick overview of this.

Some of them you have already discussed, and I will list a few here. One is that the RBI uses several direct and indirect instruments to implement monetary policy. One of the most prominent rates is the repo rate, the interest rate at which the RBI provides liquidity under the Liquidity Adjustment Facility against collateral of government securities and other approved securities. The reverse repo rate is the interest rate at which the RBI absorbs liquidity from banks in exchange for collateral of eligible government securities under the LAF. The cash reserve ratio, which we have already defined, is another key tool. Moving to the statutory liquidity ratio, in one of the sessions, I have clearly defined that, in addition to the required cash reserve ratio, banks must also maintain SLR, which amounts to approximately 19 percent of total deposits.

Then, we thoroughly discussed open market operations and the bank rate, which is the long-term interest rate at which banks lend to each other. The long-term lending rate at which the central bank lends to commercial banks includes related terms, such as the

standing deposit facility rate. I suggest visiting the RBI website, where you can find a detailed description of this facility and its operation. Similarly, regarding the marginal standing facility, please visit the RBI website for more details. These are a little bit indirect instruments being used by the RBI.

Let's now move on to the Monetary Policy Committee. How? Who implements monetary policy in India? It's the RBI, but within RBI, who? The RBI Act provides for a six-member Monetary Policy Committee to determine the policy rate required to achieve the inflation target. The first six-member MPC was established in 2016. The members are already listed here, and the MPC is required to meet at least four times a year. Each member of the MPC has one vote; in the event of a tie, the governor has a casting vote.

Importantly, each member of the MPC writes a statement explaining the reason for voting in favor of or against the proposed resolution. On the RBI website, you will find the statement from each MPC member after each monetary policy announcement. In 2016, we amended it to provide a statutory basis for implementing flexible inflation targeting. The central government, in consultation with the RBI, determines the inflation targets in terms of the consumer price index once every five years.

In August 2016, we announced that the inflation target is 4% plus or minus; that is, the upper and lower tolerance limits, meaning the maximum is 6% and the minimum is 2%. The RBI's mandate is to keep inflation between 2% and 6%. In 2021, we retained the same inflation target. If the RBI fails to maintain the inflation target, the central government has specified certain factors that constitute failure to achieve it. Specifically, if the average inflation exceeds the upper tolerance level of the inflation target for any three consecutive quarters, the central government has noted that the RBI couldn't meet the inflation target.

Similarly, the average inflation is below the lower tolerance level for any three consecutive quarters. I have detailed the monetary policy process here. Could you please go through this? How do they meet, and how do they make decisions? Finally, there will be the MPC's resolution. The bank publishes, after each MPC meeting, the resolution adopted by the committee. Then the RBI governor also gives a media briefing about it.

These are the key rates; please click on this link on the RBA website to view the rates being followed. I'm also providing some of the repo rate, along with related text, here that you can review. To give you a flavor, I'm showing some rates and ratios, including the bank rate, policy repo rate, reverse repo rate, SLR, CRR, etc. Having discussed this, let's now move on to how monetary policy is structured and formulated in the U.S., which is one of the world's largest economies. Let us examine how they formulate monetary policy. In the U.S., there is not a single central bank; rather, there is a central banking system. The reserve was set up by a central bank much earlier than in India. The

resistance to establishing a central bank stemmed from a fear of centralized power, as it would mean entrusting everything to a single agency. There was widespread concern about monetary matters among the public, the banking system, and other stakeholders; however, nationwide panic was occurring on a regular basis, and there was no lender of last resort for the banking system.

For instance, the panic of 1907 was so severe that the public was convinced a central bank was needed. Accordingly, the Federal Reserve Act of 1913 was enacted. It established an elaborate system of checks and balances, and its key spirit was to be a decentralized central bank, not a heavily centralized one. Keeping this in mind, the writers of the Federal Reserve Act sought to diffuse power along regional lines, between the private sector and the government, and among bankers, businesspeople, and the public. Accordingly, the initial diffusion of power has resulted in the following way.

There is a Board of Governors of the Federal Reserve System, and instead of one central bank, there are multiple Federal Reserve Banks. There are 12 Federal Reserve Banks in the U.S. The major monetary policy authority is the Federal Open Market Committee, similar to the Monetary Policy Committee in India. In the U.S., it is the Federal Open Market Committee. You can see from this map where the Fed is located; it is spread across all 12 regional Fed banks located throughout the country.

Here, you can see that the Federal Reserve System's Board of Governors is located, and this is a brief overview of the structure and responsibilities of the policy tools within the Federal Reserve System. These are the Federal Reserve System and its structure, as shown at the top. You can see 12 Federal Reserve Banks: each FRB elects 6 directors. There are more than 2,000 member commercial banks, and members also include those from the general public. You can see 12 member bankers; there is a Federal Advisory Committee.

The policy tools they follow include the reserve requirement, discount rate, and open market operations. Open market operations are the main tool, directed by the Open Market Committee, which uses them to influence liquidity within the banking system. In short, Federal Reserve Banks are quasi-public institutions owned by private commercial banks in the district that are members of the Federal Reserve System. There are Class A directors, who represent professional bankers, and Class B directors. It also has representation from the public, as well as prominent leaders from industry, labor, agriculture, and the consumer sector. There are Class C directors appointed by the Board of Governors, who represent the public.

As I already mentioned, all national banks are required to be members of the Federal Reserve System. I have listed the functions of the Federal Reserve Banks, drawing from the Federal Reserve System's official website. The directors establish the discount rate,

and five of the 12 bank presidents have a vote in the Federal Open Market Operations Committee. The FOMC meets eight times a year, which has significant implications globally.

You are aware that stock indices worldwide fluctuate. They move in accordance with the meetings of the FOMC. Sometimes, when they raise or lower the rate, it has implications for the stock market and debt market. So, this is about the policy tools. These are all already listed on their website.

Please follow this link. The main tool the FOMC uses to control the money supply and liquidity in the economy is the Fed Funds Rate. The Fed Funds Rate is a short-term overnight rate, the interest rate banks charge each other to lend Federal Reserve funds overnight. So that means the Fed Funds Rate is not actually the rate at which the central bank lends. Instead, it is the rate at which one bank borrows from another. That means one bank lends and another bank borrows to meet its Federal Reserve requirement.

These are short-term interest rates, and changes in them also affect other interest rates because banks base the prime rate on the federal funds rate. For instance, banks charge their best customers the prime rate, which is just three percentage points above the FFR. So, longer-term interest rates are indirectly influenced. Please refer to the term and risk structure of interest rates. You are familiar with the relationship between short-term and long-term interest rates, and you can also see that the prime customer interest rate, based on one instrument, is related to another based on the risk structure as well. So, the important thing is why the Fed funds rate? The reason is that large commercial banks are required to maintain 10% of their total deposits with the central bank, while small banks are required to maintain 3%. Additionally, banks that have deposited less than 16.3 million do not need to maintain any reserves. In this case, some banks will always face a deficit in meeting the reserve requirement; therefore, they will borrow from other banks that have surplus funds. An important thing to remember is that this FFR is not the rate that the central bank or the Federal FOMC can directly determine. They cannot say to one bank that this is the rate at which you should lend, and they cannot say to another bank that this is the rate at which you should borrow. What the Fed does here is entirely different; using monetary policy tools, it influences the Fed funds rate, the rate at which commercial banks transact with each other.

It cannot determine the Fed funds rate. Let's say someone says that the Fed determines the Fed funds rate; that's a wrong statement. It can only influence it using the tools. And here, unlike in India, US banks receive interest on the reserves they keep with the central bank. For example, if they maintain reserves on a specific date, they earn interest income from the central bank based on both the required reserves and the excess reserves. So, this is for the required reserve, and for the excess reserve, they receive interest income

from the central bank. However, in India, you may recall that until now, there has been no central bank that pays interest income to commercial banks for the reserves they hold.

In the discount policy, I have already discussed this. This is referred to as the primary credit rate. That means member banks can get loans from the U.S. central bank, the Federal Reserve Banks. This is just to provide you with the different interest rates at various points in time.

You can view the primary credit rate, secondary credit rate, and other relevant rates. What I have shown here is that there are two things: first, member banks receive interest income on the reserves they keep with the central bank, whether required or excess; that is one. Second, each member bank is entitled to receive discount loans from the Federal Reserve System. Using these two tools, the Federal Reserve System influences the fed funds rate.

Here are some key terms. One is the Fed funds rate. The Fed funds rate is the interbank loan rate, the actual rate at which one bank lends to another. So, there is no single Fed funds rate. Maybe banks A and B have the same rate. Then the transaction between bank C and bank D may have a slight difference, such as 0.5, 0.01, or 0.4. Something like that slight difference will be there because the transaction between one bank and another is purely between those banks. Nobody outside can say that at this rate you need to lend, but there will be a slight difference; however, the central bank can influence that rate. Then comes the target Fed funds rate, which is set by the FOMC. They aim to target this as the expected Fed funds rate, and to achieve that, the central bank, the FOMC, utilizes its monetary policy tools. Then the effective Fed funds rate, which is the mean value of the observed Fed funds rate, is calculated.

Suppose there are 2000 banks transacting with each other; then you can see that there are only one-to-one transactions. There are, as you can see, so many actual fed fund rates; the variation may be very small, perhaps 0.001, but what we get is that the effective fed fund rate we see on the medium on the website is the mean value of the observed fed fund rates. They influence the central bank, which in turn influences the upper and lower bounds of the fed fund rate.

One is using the lower bound. They say that this is the lower bound of the FFR, which is based on the interest rate on reserves. Because the Fed Fund rate will never go below the interest rate on reserves, no one will lend to another bank below that rate. Instead of lending in the Fed Funds market, it is better to deposit the money with the central bank, as they will earn interest on reserves. Therefore, the lower bound of the Fed Fund rate will always be the interest rate on reserves. And it will never go above the upper bound of the FFR; it is determined by the discount rate.

The FFR will never exceed the discount rate because borrowing from the Fed serves as a substitute. Suppose the fed funds rate is above the discount rate; then no one will borrow in the fed funds market; they can directly borrow from the central bank. This means that the lower bound and the upper bound are influenced by the central bank through the use of the interest rate on reserves and the discount rate, respectively. The relative advantage of different monetary policy tools lies in the fact that open market operations are the dominant policy tool of the Fed, as it has complete control over the volume of transactions.

These operations are flexible and precise; however, the discount rate is less widely used because it is no longer binding for most banks and can lead to liquidity problems. What we have covered here primarily concerns the structure and formulation of monetary policies, illustrated through examples from the US and India. In the next session, we will continue this discussion, focusing primarily on monetary policy strategies and tactics. Thank you for watching this session. Thank you.