CENTRAL BANKING AND MONETARY POLICY

★ Structure of Reserve Bank of India

- The RBI, as the central bank of the country is the centre of the ~~f~~ Indian financial and monetary system.
- It started functioning from April 1, 1935 on the terms of the Reserve Bank of India act, 1934.
- The Governor and all the Deputy Governors of the Bank are appointed by the central government.
- The Bank is managed by a Central Board of directors, four Local Boards of Directors, and a committee of the Central Board of Directors.
- The final control of the Bank vests in the Central Board which comprises the Governor, four Deputy Governors, and fifteen Directors nominated by the central government.

★ Objectives of RBI

- To maintain monetary stability so that the business and economic life can deliver welfare gains of a properly functioning mixed economy.

- To maintain financial stability and ensure sound financial institutions so that monetary stability can be safely pursued and economic units can conduct their business with confidence.

- To maintain stable payments system so that financial transactions can be safely and efficiently executed.

- To promote the development of financial infrastructure of markets and systems, and to enable it to operate efficiently i.e., to play a leading role in developing a sound financial system so that it can discharge its regulatory function efficiently.

- To ensure that credit allocation by the financial broadly reflects the national economic priorities and societal concerns.

- To regulate the overall volume of money and credit in the economy with a view to ensure a reasonable degree of price stability.

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★ Functions of RBI

★ Note Issuing Authority

- The RBI has, since its inception, the sole right or authority or monopoly of issuing currency notes other than one rupee notes and coins, and coins of smaller denominations.

- At present, the Bank issues notes in the following denominations : Rs 5, 10, 20, 50, 100, 500 and 2000

★ Government Banker

- The RBI is the banker to the Central and state governments.

- It provides to the governments all banking services such as acceptance of deposits, withdrawal of funds by cheques, making payments as well as receipts and collection of payments on behalf of the government, transfer of funds, and management of public debt.

★ Management of Public Debt

The Reserve Bank manages the public debt and issues new loans on behalf of the central and State Governments. It involves issue and retirement of rupee loans, interest payment on the loan and operational matters about debt certificates and their ~~regist~~ registration.

★ Banker's Bank

- The Bank controls the volume of reserves of commercial banks and thereby determines the deposits/credit creating ability of the banks.

- The Reserve Bank opens current accounts of banks with itself, enabling ~~those~~ these banks to maintain cash reserves as well as to carry out inter-bank transactions throug these accounts.

- Inter-bank accounts can also be settled by transfer of money through electronic fund transfer system, such as, the Real Time Gross Settlement (RTGS).

- The banks hold a part or all of their reserves with the RBI. Similarly, in times of need, the banks borrow funds from the RBI

★ Supervising Authority

- Issues licenses for the establishment of new banks.

- Issues licenses for the setting ups of bank branches.

- Prescribes minimum requirements regarding paid-up capital and reserves, transfer to reserve fund, and maintenance of cash reserves and other liquid ~~-~~ assets.

- Inspects the working of banks in India as well as abroad in respect of their organisational set-up, branch expansion, mobilisation of deposits, investments, and credit portfolio management, credit appraisal, region-wise performance, profit planning, manpower planning and training.

- Conducts investigations, from time to time, into complaints, irregularities, and frauds in respect of banks.

- Controls appointment, re-appointment, termination of appointment of the chairman and chief Execute officers of private sector banks.

- Approves of force amalgamations.

* Exchange Control (EC) Authority

- Administers the foreign exchange control.
- Chooses the exchange rate system and fix

or manage the exchange rate between the rupee and other currencies.

- Manages exchange reserves.

- Interacts or negotiates with the monetary authorities of the Sterling Area, Asian Clearing Union, and other countries, and with international financial institutions such as the IMF, World Bank, and Asian Development Bank.

* Formulating Prudential Norms

- RBI formulates various prudential norms to create and maintain a stable, efficient, and well-functioning financial system in India.

* Promoter of the Financial System.

- RBI has been rendering 'developmental' or 'promotional' services which have strengthened the country's banking and financial structure

- Helps in mobilising savings and directing credit flows to desired channels

- Provides concessional loans to various priority sectors.

- Establishes specific institutions like ~~NABARB~~ NABARD to develop agriculture sector.

★ ~~Regulating~~ Regulation and supervision of Payment system

- Takes steps towards integrating the payment system with the settlement systems for governments securities and foreign exchange.

- To ~~facilat~~ facilitate settlement of Government securities transactions, it created the Negotiated Dealing System, a screen-based trading platform.

- It created a Board for Regulation and Supervision of Payment and Settlement System (BPSS) as a Committee of the Central Board. A new department called the Department of Payment and Settlement Systems (DPSS) was constituted to assist the BPSS in performing its functions.

★ Regulator of Money and Credit

- The function of formulating and conducting monetary policy is of paramount importance for any Central Bank.

* Objectives of Monetary Policy in India.

- To accelerate economic development in an environment of reasonable price stability
- To develop appropriate institutional set-up to aid this process
- To help in achieving the financial market stability.
- RBI always tries to keep the money supply such that growth rate ~~is~~ and inflation are both under control.
- If money supply is increased, then both growth rate and inflation rises.
- ∴ Relative increase in growth rate and inflation tells the real increase/decrease in growth rate of real GDP.

* Framework for Monetary Policy in India.

- Money supply can't be the only control variable of monetary policy as it is not exogenous i.e., it is not fully under their control must have led them to adopt the approach as indicated.

- There are two major elements which are virtually outside our control, namely:

(a) the increase in monetary supply ~~corres~~ corresponding to inward remittances of foreign exchange.

(b) the requirement of credit for financing the purchase of food grains.

- Monetary policy instruments → Intermediate Targets → Output.

- The purchase of food grains depend upon monsoon and certain other factors, ∴ ~~this~~ the money required for this purpose cannot be exogenously determined.

- RBI regards money supply and the volume of bank credit as the two major intermediate variables.

- RBI controls certain other factors which are the instruments of monetary policy which ultimately lead to change in money supply and the change is transmitted to the whole economy. This is called the Monetary Transmission Mechanism.

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★ Monetary Policy Instruments

★ Open Market Operations

Sale/purchase of Government securities to/from the market with an objective to adjust the rupee liquidity conditions in the market on a ~~dur~~ durable basis.

Excess liquidity in the market tends to sale of securities thereby sucking out the rupee liquidity.

Illiquidity condition tends to buy securities from the market, thereby releasing liquidity into the market.

★ Bank Rate

It is the rate at which central bank allows finance to commercial banks.

When bank rate rises, it becomes difficult for the commercial banks to take loans from RBI, ∴ the amount of funds available with commercial banks fall, ∴ interest rate of the ~~to~~ banks rise and thus demand for loans fall and money supply falls.

★ Cash Reserve Ratio (CRR)

The CRR refers to the cash which banks have to maintain with the RBI as a certain percentage of their demand and time liabilities.

If CRR rises then banks have to keep more money with the RBI, ∴ funds available to lend out as loans will less and therefore aggregate money supply will fall.

★ Statutory Liquidity Ratio (SLR)

It is the percentage of total deposits banks have to invest in government bonds and other approved securities.

There are three objectives behind the use of SLR:

(a) to restrict expansion of bank credit
(b) to augment bank's investment in government securities
(c) to ensure solvency of banks.

Banks invest in these instruments because they are risk-free and can easily be liquidated.

It ensures solvency of banks which means it reduces the possibility of failure of the banks.

Banks first fulfill the CRR, then they fulfill the SLR, then they keep some money for short-term transaction purposes and the remaining amount is given out as loans.

* Direct credit Allocation and Credit

Controls the distribution or allocation of credit among different sectors, borrowers, and users through the fixation of specific and direct quantitative credit ceilings or credit targets.

Restricts drawing power of borrowers under cash credit limits

Certain prescribed credit-deposit ratio in respect of their rural and semi-urban branches ~~of~~ seperately

* Selective credit Controls

They are used to reduce the supply of credit in certain directions and to encourage it in desired directions.

This ~~to~~ is to prevent ~~RB~~ banks from lending ~~to~~ to those sectors where there is profit for the banks but a greater possibility of hoarding.

★ Credit Authorisation Scheme

Under this scheme Credit Monitory Arrangement (CMA) was introduced. As per this scheme, credit proposals for Rs 5 crore and above in the case of working capital, and Rs 2 crore and above in the case of term loans, had to be submitted to the RBI for post-sanction scrutiny.

★ Process of Credit Planning

Each bank is required to prepare realistic annual credit budget incorporating estimates of volume and growth of deposits and other resources, and of demand for credit.

★ Moral Suasion

It takes the form of writing letters and holding discussions between the RBI and the banks about the trends in the economy in general and in money, credit and finance in particular, and about the measures which ought to be taken from time to time in the light of national objectives.

Liquidity Adjustment Facility (LAF)

LAF enables liquidity management on a day to day basis

The operations of LAF are conducted by way of repurchase agreements (repos and reverse repos) with RBI being the counter-party to all the transactions.

Repo or ready forward contact is an instrument for borrowing funds by selling securities with an agreement to repurchase the said securities on a mutually agreed future date at an agreed price which includes interest for the funds borrowed.

The reverse of the repo transaction is called 'reverse repo' which is lending of funds against buying of securities with an agreement to resell the said securities on a mutually agreed future date at an agreed price which includes interest for the funds lent.

The interest rate in LAF is fixed by the RBI from time to time.

LAF is the only operating procedure of monetary ~~sy~~ policy in India through which money supply is controlled.

★ Transmission channels of Monetary Policy

- Interest rate channel

- If interest rate rises, cost of capital rise, demand for loans will decline, investment will fall, ∴ Money supply will go down.

- Exchange rate channel

- If interest rate increases, local currency will be appreciated ∴ export will decrease and therefore output will fall.

- Because if interest rate rises, returns on investment will increase ∴ domestic deposits become more attractive relative to deposits in foreign currency, ∴ there will be a rise in the volume of the local curreny deposits, this will lead to an appreciation of local currency.

- Bank deposit channel

If the bank deposit declines, then loans given by banks will decrease ∴ money supply will fall.

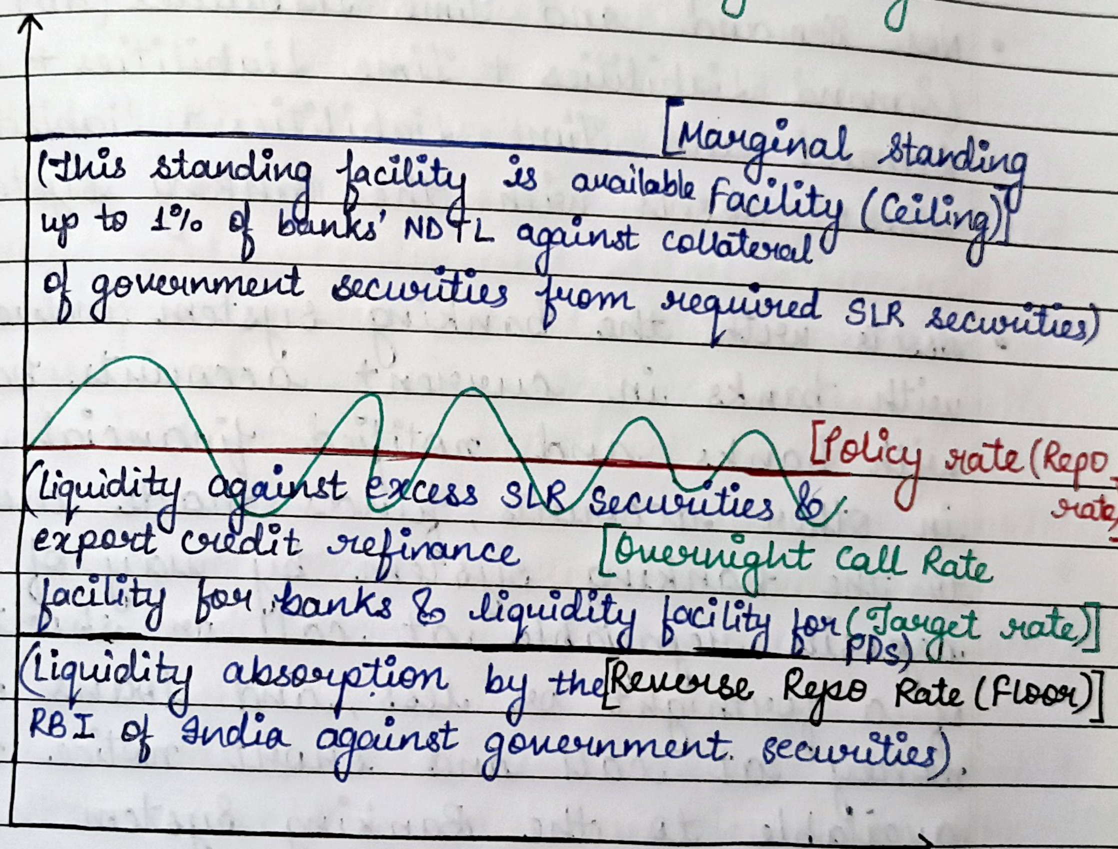
- Asset-price channel

If interest rate rises, bond price will fall, ∴ people will invest more in bonds i.e. demand for equity will go down as people will invest less in equity & then price of equity will go down & this will affect the investments & ~~investment~~ ~~so~~ output will also be affected.

- Because if price of equity will go down, then wealth and income will fall and thus consumption will go down which will lead to decrease in ~~of~~ output.

~~This is~~

* Operating Procedure of Monetary Policy



- The call money rate is always below the Marginal Standing Facility rate.

- Marginal Standing Facility rate is the rate at which banks can borrow from RBI after their quota for repo borrowing is over.

- Net Demand and Time Liability (NDTL) is basically the sum of demand and time liabilities including ODTL of scheduled commercial banks. NDTL is used by banks for computation of Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), and Liquidity Adjustment Facility (LAF).

- Net Demand and Time Liabilities (NDTL) = (Demand Liabilities + Time Liabilities + Other Demand and Time Liabilities + Liability to others) − Assets with the Banking system.

- Assets with the banking system includes balances with banks in current accounts, balances with banks and notified financial institutions in other accounts, funds made available to the banking system by way of loans or deposits repayable at call or short notice of a fortnight or less, and loans other than money at call and short notice made available to the Banking System.

- The liabilities which banks have to pay on demand are known as demand liabilities. Demand liabilities comprise all liabilities which are payable on demand that include current deposits, demand liabilities portion of savings ~~band~~ bank deposits, margins held against letters of credit/guarantees, balances in overdue fixed deposits, cash certificates and cumulative/recurring deposits, outstanding Telegraphic Transfers (TTs), Mail Transfer (MTs), Demand Drafts (DDs), unclaimed deposits, credit balances in the Cash Credit account and deposits held as security for advances which are payable on demand. Money at call and Short Notice from outside the Banking System should be shown against liability to others.

- Time liabilities are those which are payable otherwise than on-demand. It comprises fixed deposits, cash certificates, cumulative and recurring deposits, time liabilities portion of savings bank deposits, staff security deposits, margin held against letters of credit, if not payable on demand, deposits held as securities for advances that are not payable on demand and Gold deposits.

- Other Demands and Time Liabilities (ODTL) include all those miscellaneous liabilities which are not covered under demand liabilities and time liabilities. ODTL comprise interest accrued on deposits, bills payable, unpaid dividends, suspense account balances representing amounts due to other banks or the public, net credit balances in-branch adjustment account, any amounts ~~due~~ due to the "Banking System" which are not in the nature of deposits or borrowing.

- Call Money Rate is the rate at which one bank borrows from another bank in a call money market. It is the inter-bank lending rate.

- Whenever banks or any other entity borrow from RBI, it is an addition to the existing system or the current money supply. But some banks have deficit and some have surplus, so if one bank borrows from another then the total money supply in the system remains unchanged. ∴ the price stability and other indicators also remain unchanged.

- If call money rate is greater than the MSF rate, then instead of going to the call money market, banks will borrow from RBI and the total money supply will increase. which could lead to inflation and also fluctuation in other indicators.

- But if the corridor is maintained, then market will stabilize by itself and money supply and price stability will remain intact as the call money rate is decided by the market.

- This ~~the~~ is the operating procedure of the monetary policy which is followed for liquidity adjustments.

- The new ~~opr~~ operating procedure retained the essential features of the earlier LAF framework with the following key modifications:

(i) The weighted average overnight call money rate was explicitly recognised as the operating target of monetary policy.

(ii) The repo rate was made the only one independently varying policy rate.

(iii) A new Marginal Standing Facility (MSF) was instituted under which Scheduled Commercial Banks (SCBs) could borrow overnight at their discretion up to one percent of their respective net demand and time liabilities (NDTL) at 25 basis points above the repo rate.

(iv) The revised corridor was defined with a fixed ~~of~~ width of 50 basis points.

- The repo rate was placed in the middle of the corridor, with the reverse repo rate 25 basis points below it and the MSF rate 25 basis points above it.

★ Inflation Targeting and Central Bank Autonomy

- In this framework, a central bank estimates and makes public a projected, or "target", inflation rate and then attempts to steer actual inflation toward that target, using certain tools

- The central bank forecasts that future path of inflation and compares it with the target inflation rate.

- Some countries have chosen inflation ~~rate~~ targets with symmetrical ranges around a midpoint, while others have identified only a target rate or an upper limit to inflation

- Rather than focusing on achieving the target at all times, the approach has emphasized achieving the target over the medium term - typically over a two-to-three year horizon.

- when inflation achieves some target, other macroeconomic variables are also adjusted such that overall stability remains intact.

★ Conditions for Inflation Targeting

★ **Conduct of monetary policy with independence**
The central bank should be independent to

conduct the required monetary policies, be it expansionary or contractionary. If there is some government intervention in the process, then the degree of independence is a condition.

- Willingness and ability of the monetary authorities not to target other indicators, such as the level of employment, or the exchange rate, etc.

* Steps:

(i) Establish explicit quantitative targets for inflation for a specific number of periods ahead.

(ii) Indicate clearly and unambiguously to the public that ~~hitt~~ hitting the inflation target takes precedence over all other objectives of monetary policy.

(iii) Set up a model ~~or~~ or methodology for ~~inflatio~~ inflation forecasting that uses a number of indicators containing information about future inflation.

(iv) Devise a forward-looking operating procedure through which monetary policy instruments are adjusted (in line with the assessment of future inflation) to hit the chosen target

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★ Feedback Mechanism and Transmission (Quaterly Projection Model)

- Given the financial and macroeconomic conditions, the path of the policy rate is the Quaterly Projection Model (QPM).

- In India, largely, the policy rate is the repo rate.

- We are assuming the policy rate is endogenous and consistent with the inflation ~~target~~ ~~targetting~~ targetting.

- If repo rate is changed, it will affect other interest rates in the market which in turn will affect the aggregate demand.

★ **Output gap**: The desired output is the output that can be produced using the full capacity and availability of resources of an economy. The difference between the desired output and the actual output is the output gap.

- When aggregate demand is affected, output gap gets affected and ultimately inflation gets affected.

~~Anot~~

- Another path is:
Policy rate → Longer Term Interest Rates → Aggregate demand → Output gap → Inflation

* Exchange rate channel:
If policy rate is changed, exchange rate changes, which affects demand and supply in the foreign exchange market, ~~beco~~ ~~whi~~ which will affect the aggregate demand which will affect inflation.

* Shocks hitting Economy:

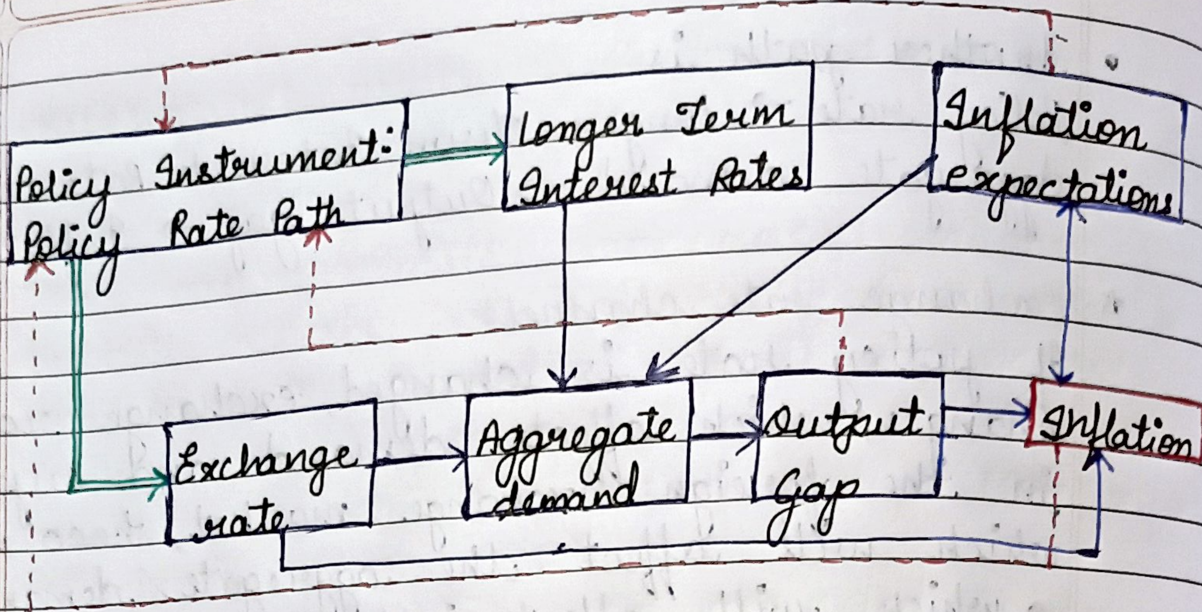
* Financial Shocks:
Change in foreign interest rates, portfolio shifts lead to change in exchange rate.

* Shocks to Aggregate Demand:
Change in credit conditions, Foreign Demand, Commodity prices, Fiscal policy lead to change in aggregate demand.

* Shocks to potential output

* Shocks to inflation: Indirect taxes, Energy Prices

- Govt. has to change the different variables if the above shocks are encountered by the economy.



- If inflation expectation is already high then it will directly affect the aggregate demand, and the central bank will be bound to change the policy rate which will in turn affect other channels.

- ∴ This is a feedback mechanism through which monetary policy or inflation targetting is operated.

- The ~~feedt~~ feedback mechanism is also used to study the relationship between different macroeconomic variables and interest rates.

★ International Evidences

- The first country to adopt inflation targetting was New Zealand, in December 1989.

- Central banks to have stopped inflation targetting once they started it are Finland, Spain, and the Slovak Republic - in each case after they adopted the euro as their domestic currency.

- European Central Bank and the US Federal ~~R~~ Reserve have ~~a~~ adopted many of the main elements of inflation targeting but do not officially call themselves inflation targeters.
- Armenia, the Czech Republic, Hungary and Poland adopted inflation targetting while they were making the transition from centrally planned to market economies.

* Inflation Targeting in India

- January 2014:
- RBI announced a disinflationary glide path for bringing down CPI inflation to 8% by January 2015 and to 6% by January 2016.
- Inflation fell in line with the glide path to 5.2% in January ~~2016~~ 2015 and 5.7% in January 2016.

- February 20, 2015:
- A Monetary Policy Framework Agreement (MPFA) was signed between the Government of India and the Reserve Bank.
- FIT was formally adopted in India with RBI tasked to bring inflation to 6% by January 2016 and target for 2016-17 and all

subsequent years shall be 4±2%.

- February 29, 2016
  - The finance minister announced in his Budget Speech for 2016-17 the Government's intention to amend the RBI ~~act~~ Act, 1934 to provide for a statutory and ~~in~~ institutionalized framework for a Monetary Policy Committee (MPC).
  - The RBI act 1934 was amended to provide statutory basis for a Monetary Policy Framework and a Monetary Policy Committee through the Finance Bill 2016.

- May 14, 2016
  - Amendment ~~of~~ to the RBI ~~a~~ Act was notified in the Gazette of India.
  - Statutory basis to the FIT framework.

- June 27, 2016
  - The amendment RBI Act came into force on June 27, 2016. Rules governing the procedure for selection of members of MPC and terms and conditions of their appointment and factors constituting failure to meet inflation target under the MPC Framework notified.
  - Sought to ensure independence and ~~ac~~ accountability, MPC vested with the responsibility of setting the policy rate.

- August 5, 2016
- Under section 45ZA of the RBI Act, 1934, the Central Government, in consultation with RBI, fixed the inflation target for the period from August 5, 2016 to March 31, 2021, as 4%, with upper tolerance level at 6% and lower ~~tolerance~~ tolerance level ~~an~~ at 2%.
- Fixation of an inflation target while giving due emphasis to the objective of growth and challenges of an increasingly complex economy is an important monetary policy reform with necessary statutory back-up.

- September 29, 2016
- Constitution of the MPC under section 45ZB of the RBI Act, 1934 notified.
- Government ~~constit~~ constituted the six member MPC for the first ~~meet~~ time. (a) the Governor of the Bank as Chairperson, ex-officio; (b) Deputy Governor of the Bank, in charge of Monetary Policy - Member, ex officio; (c) one officer of the Bank to be nominated by the Central Board - Member, ex officio; and (d) three external members - Professor Chetan Ghate, Professor Pami Dua and Professor Ravindra H. Dholakia.

- October 3-4, 2016
- The MPC held its first meeting.
- ~~Unio~~ Unanimous decision to reduce policy rate

by 25 bps, ~~ac~~ consistent with the ~~accomo~~ accomodative policy stance.

- October 5, 2020
  - Government constituted a new MPC on the expiry of the term of the first MPC ~~wi~~ with three external members: Dr. Shashank Bhide; Dr Ashima Goyal; and Prof. Jayanth R. Varma.
  - The 25th meeting of the MPC was held from October 7 to 9, 2020 and members voted unanimously to keep the policy rate ~~unch~~ unchanged at 4%, while deciding to continue with the accomodative stance as long as necessary.

- The Monetary Policy Committee: The MPC is empowered and responsible to set up the benchmark policy rate (repo rate) in such a way to keep the inflation ~~rate~~ within the specified target level. ~~the~~ Under the RBI Act, the Central Government, in consultation with the RBI, determines the inflation target in terms of the Consumer Price ~~G~~ Index (CPI), once in every 5 years. This ~~t~~ target would be ~~noted~~ notified in the Official Gazette.

- Determination and notification of Inflation Target: The Central Government of India has fixed the inflation target for the period beginning from August 5, 2016 and ending on March 31, 2021 as under:

- Inflation Target: 4%
- Upper tolerance level: 6%
- Lower tolerance level: 2%

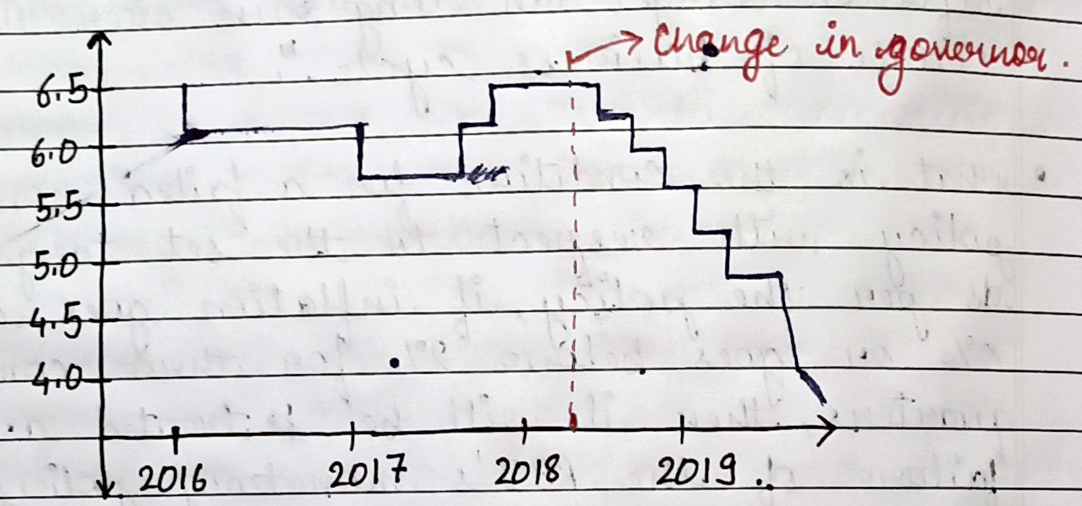
- "The key advantage of a range around a target is that it allows MPC to recognise the short run trade-offs between inflation and growth but enables it to pursue the inflation target in long run over the course of business cycle."

- What is the condition for a failed monetary policy with respect to the set target?
As per the policy, if inflation goes above 6% or goes below 2% for three consecutive quarters, then it will be treated as the failure of the RBI's monetary policy. In such a scenario, the RBI will initiate counteractive measures to meet the required target.

- What the RBI to do if the inflation target is not met?
~~The~~ The new notification also prescribes the procedure to be followed by the RBI if the target is missed. "Where RBI fails to meet the inflation target, it shall set out a report to the Central Government stating the reasons for failure to achieve

the inflation target, it shall set out a report to the Central Government stating the reasons for failure to achieve the inflation target: remedial actions proposed to be taken by RBI, and an estimate of the time-period within which the inflation target shall be achieved pursuant to timely implementation of proposed remedial actions"

★ Change in the Policy Rate.

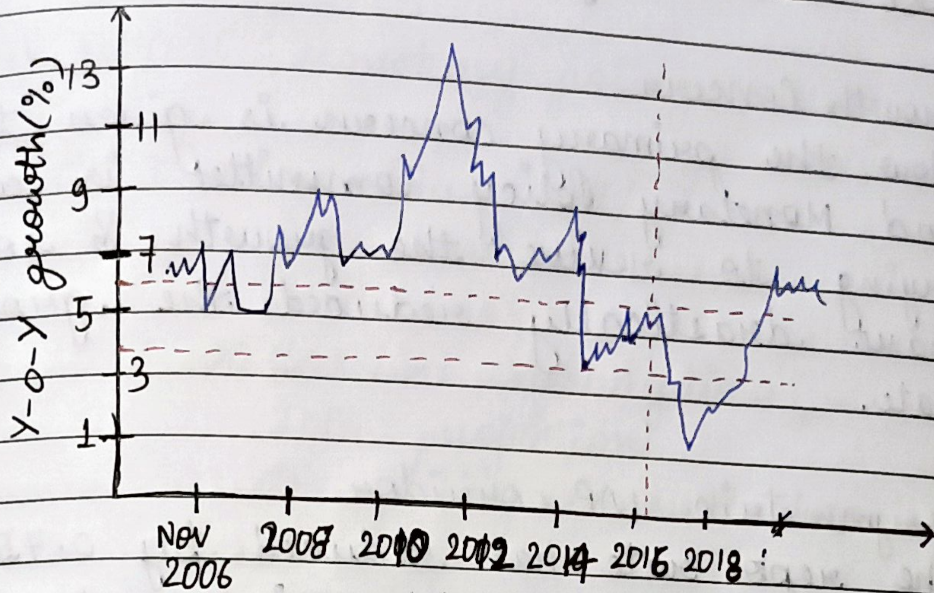


- From 2016-18, the policy rate has been almost stable.

- On 4th October 2016 & 2nd August 2017, policy rate was reduced by 25 bps. On 6th June & 1st August 2018, policy rate was increased by 25 bps.

- After change of governor, 10 meetings were held and in 7 of them, policy rate was reduced.

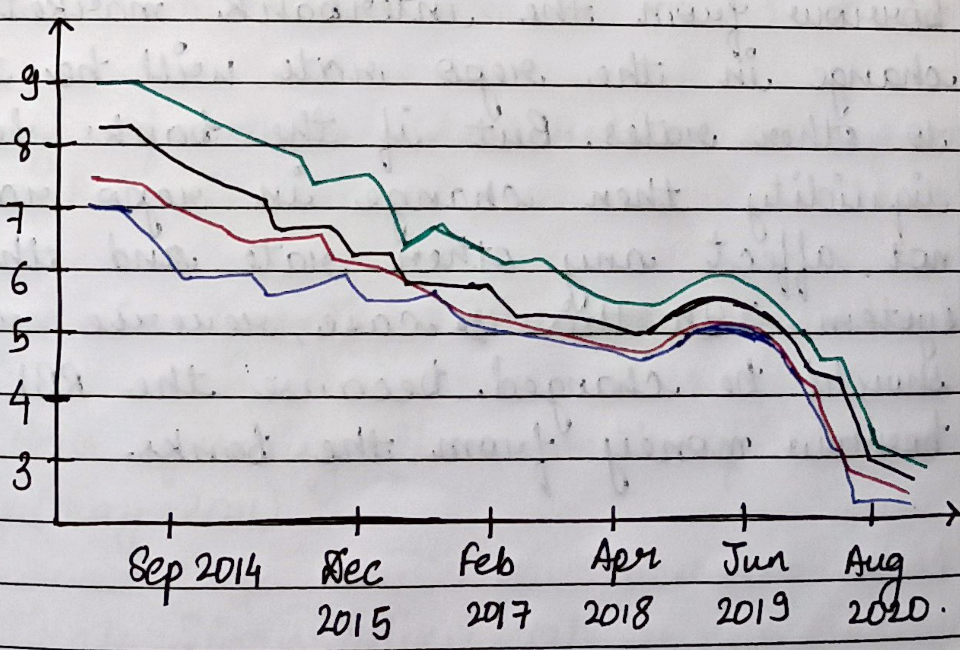
★ Trends in Inflation rate



- Inflation before 2016 (i.e. oct 2016 when inflation targetting was adopted) was higher than the inflation that ~~po~~ prevaled after 2016.

- Only 2 times after 2016, the inflation went ~~away~~ up from the ~~inflation~~ upper limit.

★ LAF corridor



* Post-Covid Changes

- Growth Concern

Now, the primary concern is given to growth and Monetary Policy Committee is also trying to revive the growth & so they have drastically reduced the growth rate.

- Asymmetric LAF corridor

The repo rate has reduced by 0.75% and 0.9% ∴ the LAF corridor is no longer symmetric. Now the reverse repo rate is 40 bps below repo rate & MSF rate is 25 bps above the repo rate.

- Reverse repo rate as the new effective policy rate.

When banks have lack of liquidity, and if the repo rate is high, banks will borrow from the interbank market ∴ the change in the repo rate will be transmitted to other rates. But if the banks have excess liquidity then change in repo rate will not affect any other rate and the whole system. ∴ In this case, reverse repo rate should be changed. because the RBI can borrow money from the banks.

* Monetary Policy Process of MPC.

→ T-45 to T-30 : Monetary policy surveys launched

→ T-25 to T-15 : New data CPI/IIP
SPF launched

→ T-14 to T-10 : Baseline assumptions
IDG projections
Pre-policy consultations.

→ T-9 to T-3 : MPS dry run meetings with the Top management.
Agend and draft resolution.

→ T-2 to T : MPC meetings
Resolution released
Governor's press statement
Press Conference

→ T+14 : MPC minutes released.

Survey of various stakeholders and participants of market is taken.

* Reforms in Operating Framework of MP.

* The New Operating Framework of Monetary Policy (May 2011)

• Repo rate - Single Policy rate.

- Weighted ~~a~~ average overnight call money rate (WACR) is the operating rate

- Corridor of +/- 100 bps around the Repo Rate

- 100 bps above the repo rate for the Marginal Standing Facility (MFS) and 100 bps below the repo rate. for the reverse repo rate.

- Full accomodation of liquidity demand at the fixed ~~re~~ repo rate, albeit with an indicative comfort zone of +/-1 % of net demand and time liabilities (NDTL) of the banking system.

- Transmission of the changes in Repo Rate through the WACR to the term structure of interest rates.

★ Revised Liquidity Management Framework (September 2014)

- Access to assured liquidity of about 1% of NDTL on an average.

- Bank-wise overnight fixed rate repos of 0.25% of NDTL, and the balance through 14 day variable ~~&~~ rate term repos.

- More frequent auctions of 14-day term repos during a fortnight (every Tuesday and Friday of a week).

- Introduction of variable rate fine-tuning repo/reverse repo auctions.

* Modified Liquidity Framework (April 2016)

- The corridor around the Repo rate narrowed from +/- 100 bps to +/- 50 bps.

- Commitment to progressively lower the ex-ante system level liquidity deficit to a position closer to neutrality in the medium run.

- Reducing the minimum daily maintenance of the CRR from 95% of the requirement to 90%.

* Liquidity Management Framework.

* The salient features of the extant framework operationalised on February 14, 2020 are:-

- The liquidity management corridor is retained and the weighted ~~average~~ average call rate (WACR) remains the operating target.

- The width of the corridor was ~~maintained~~ retained at 50 basis points (bps).

- A 14-day term repo/reverse repo operation at a variable rate and conducted to coincide with the Cash Reserve Ratio (CRR) maintenance cycle is the main liquidity management tool for managing frictional liquidity requirements; the daily fixed ~~repo~~ rate repo and four 14-day term repos conducted every fortnight earlier stand withdrawn.

- The main liquidity operation is supported by fine-tuning operations, overnight and/or longer tenor, to tide over any unanticipated liquidity changes during the reserve maintenance period; if required, the RBI will conduct variable rate repo/reverse repo operations of more than 14 days tenor.

- Liquidity management instruments include fixed and variable rate/reverse repo auctions, outright Open Market Operations (OMOs), forex swaps and other instruments.

- The daily minimum CRR maintenance requirement is retained at 90%.

- Standalone Primary Dealers (SPDs) are allowed to participate directly in all ~~overall~~ overnight liquidity management operations.

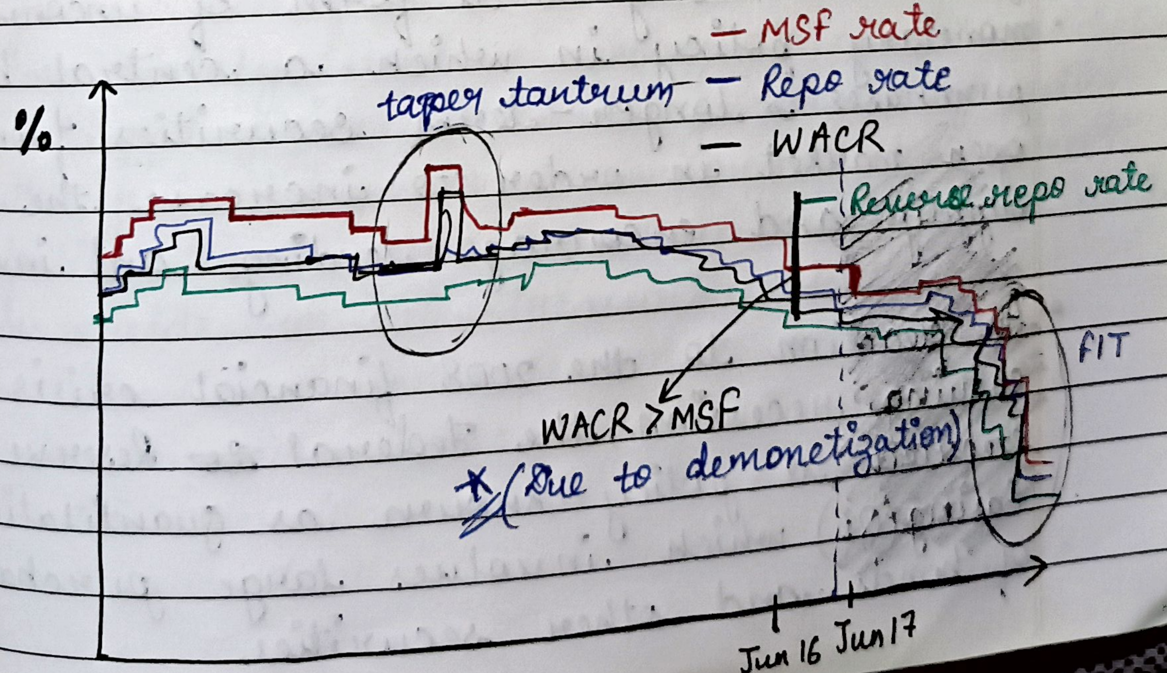
- Transparency in communication is enhanced through (a) dissemination of both flow and stock impact of liquidity operations; and

(b) publication of a quantitative assessment of durable liquidity conditions of the banking system with a fortnightly lag.

* **Primary Dealers**: A primary dealer (PD) is an RBI registered entity that is authorized in buying and selling government securities.

→ **Standalone primary dealers**: The standalone primary dealers are either subsidiaries of scheduled commercial banks, Indian subsidiaries of entities incorporated abroad or companies incorporated under companies act 1956 and are registered as Non-Banking Financial Company (NBFC).

→ **Bank Primary Dealers**: The bank primary dealers are the banks who wish to undertake PD business and do not have any subsidiaries doing PD business already.



- Taper Tantrum describes the 2013 surge in U.S. Treasury ~~yo~~ yields resulting from the Federal ~~Re~~ Reserve's (Fed) announcement of future taperings of its policy of quantitative easing. The Fed announced that it would be reducing the pace of its purchases of Treasury bonds, to reduce the amount of money it was feeding into the economy. The ensuing rise in bond yields in reaction to the announcement was referred to as a taper tantrum in financial media. ~~It refer~~

- Taper tantrum refers to the 2013 collective reactionary ~~public~~ panic that triggered a spike in U.S. Treasury yields, after investors learned that the Federal ~~Res~~ Reserve was slowly putting the brakes on its Quantitative Easing (QE) program.

★ Quantitative Easing:
Quantitative Easing is a form of unconventional monetary policy in which a central bank purchases ~~a~~ longer-term securities from open market in order to increase the money supply and encourage lending and investment.

- In reaction to the 2008 financial crisis and ensuing recession, the Federal ~~Re~~ Reserve executed a policy known as Quantitative Easing (QE) which involves large purchases of bonds and other securities.

- In 2013, Federal Reserve Chair Ben Bernanke announced that the Fed would, at some future date, reduce the volume of its bond purchases.

- In the period since the 2008 financial crisis the Fed had tripled the size of its balance sheet from around $1 trillion to around $3 trillion by purchasing almost $2 trillion in Treasury bonds and other financial assets to prop up the market. Investors had come to depend on ongoing massive Fed support for asset prices through its ongoing purchases

- This prospective policy of reducing the rate of Fed asset purchases represented a massive negative shock to investor expectation as the Fed had become one of the world's biggest buyers. As with any reduction in demand, with reduced Fed purchases (bond) prices will fall. Bond investors responded immediately to the prospect of future decline in bond prices by selling bonds, depressing the price by bond as a result. Of course, falling bond prices always mean higher yields so yields on U.S. Treasuries shot up.

- In the shaded region, i.e. after implementation of inflation targetting, the corridor has been maintained more or less.

★ Central Bank Autonomy

- Central Bank independence generally relates to three areas viz;
→ Personnel Matters
→ Financial Aspects
→ Conduct of Policy

- Personnel independence refers to the extent to which the government distances itself from appointment, term of office and dismissal of procedures of top central bank officials and the governing board. It also includes the extent and nature of representation of the government in the governing body of the central bank.

- Financial independence relates to the freedom of the central bank to decide the extent to which government expenditure is either directly or indirectly financed via central bank credits. Direct or automatic access of government to central bank credits would naturally imply that monetary policy is subordinated to fiscal policy.

- When there is some government deficit, then it is the responsibility of the ~~R~~ central banks to issue certain government bonds and raise the capital. to finance the deficit.

~~automatic financing of the monetary deficits~~

- automatic monetization of the financing ~~deficits~~: deficits: Central banks raises the capital via treasury bills.

- Since 1997, the automatic monetization of the financing deficits has ~~to~~ been abolished. ∴ Now, it is not the responsibility of the RBI (or central bank) to ~~x~~ raise money to recover the deficit.

- Finally, policy independence is related to the flexibility given to the central bank in the formulation and execution of monetary policy.

- i.e. the monetary policy operation: which instrument to be used and to what extent should be totally in the hands of the central bank.

* Why Autonomy?

* Time inconsistency theory

- Conservative central banker approach: Averse to inflation and concern about inflation. Central bank is very much concerned about the price stability and always trying to control inflation.

- Optimal contract approach

- Govt. is much concerned about the growth and growth rate. Even if price is high, growth rate should be high.

- ∴ it is important not only to control the inflation but also to keep the growth rate at a certain level.

- Central bank takes care of the inflation.

- There is a contract between the govt. and the Central Bank, that if the Governor is not able to ~~ful~~ fulfill the inflation target or not able to control the inflation satisfactorily then he could be dismissed by the govt. from the office.

- Between Central Bank and govt. Appointment on the basis of performance.

- Therefore, if there is autonomy, then there is no govt. intervention and the central bank would be able to maintain price stability.

* Theory of political business cycle.

- Business cycle mirrors the time table of the election cycle.

- This theory studies the interaction between economic policy ~~dec~~ decisions and political considerations.

- Incumbent govt (Newly elected govt.): Restrictive policy → Raises unemployment but controls inflation.

- Middle phase: Contractionary policy

- End phase: Expansionary policy → Increase money supply concerning growth & unemployment.
- Re-election (Same govt. ~~ret~~-elected): Restrictive policy.

∴ If autonomy is not given, then the political business cycle will affect the conduct of monetary policy by the Central bank.

* Theory of public choice

- If politics and economics is mixed: Then if there is a budget deficit, before automatic monetization of the deficit, public welfare should be taken into account.

- Central bank as an effective institutional constraint to control inflation and ~~in~~ increase output: ~~Red~~ Reduction of budget deficit by central bank to central govt.

- ∴ If some autonomy is given to the central bank, then it can decide whether financing the deficit of the govt. would be the right choice for the public welfare or not at the particular time or in the particular situation.

★ Limitations

★ Lacks democratic legimitacy!

★ May lead to frictions between the fiscal and the monetary authorities and the resulting costs of these frictions between monetary and fiscal policy may be somewhat costly for society, thus inhibiting the development process.

- There may be significant divergence in the preference pattern of independent central banks and the society at large.

★ Measures of autonomy (RBI)

- Indices of political and economic independence

- India has scored 0.25 for political autonomy of the central bank as against the average score of 0.56 for the group of emerging markets and scored 0.75 for economic autonomy of the central bank which is the same as the average score for that group.

- Less autonomy in terms of personal matter: The appointment of high positions of RBI is done by the government.

- Some degree of financial autonomy

- But more or less, ~~political~~ policy autonomy is given to the central bank so that it has been able to implement inflation targetting successfully from many years.

Money Markets

- Money market is a short-term market, and the conduct of monetary policy is directly related to the instruments of the money market.

★ Call Money Market

- Call Money market is that part of the national money market where the day-to-day surplus funds, mostly of the banks, are traded in.

- Mostly the call money market helps the banks to borrow the money without collateral from other banks to maintain the Cash Reserve Ratio (CRR) with RBI.

- Banks can also borrow the money for other short term requirements & with maturity period of 1 day or 1 fortnight.

- The loans made in this market are of a short-term nature, their maturity varying between one day to a fortnight.

- Banks borrow from other banks in order to meet a sudden demand for funds, large payments, large remittances, and to maintain cash or liquidity with the RBI.

• Major participants in the call money market:
(i) Scheduled Commericial Banks
(ii) Non-Scheduled Commercial Banks
(iii) Foreign Banks
(iv) State, District and Urban Co-operative Banks
(v) Discount and Finance House of India (DFHI)
(vi) Securities Trading Corporation of India (STCI).

• As on June 13, 2014 the standalone ~~&~~ and bank primary dealers, which are existing in India are as follows: ICICI Securities Primary Dealership Limited, Morgan Stanley India Pvt. Ltd., Nomura Fixed Income Securities Pvt. Ltd., SBI DFHI Ltd., STCI Primary Dealer Ltd., Goldman Sachs (India) Capital Markets Pvt. Ltd., Bank of America, Bank Of Baroda, Canara Bank, Citibank N.A., Corporation Bank, HDFC Bank Ltd., Hongkong and Shanghai Banking Corporation Ltd. (HSBC), JP Morgan Chase Bank N.A., Mumbai Branch, Kotak Mahindra Bank Ltd., Standard Chartered Bank, Axis Bank Ltd., IDBI Bank Limited and Deutsche Bank ~~AG~~ AG.

• Non-bank institutions (other than PDs) are not permitted in the call/notice money market.

• All the money market transactions should be reported on the electronic platform called the Negotiated Dealing System (NDS).

- **Participant : Scheduled Commercial Banks**

Borrowing: On a fortnightly average basis, borrowing outstanding should not exceed 100% of capital funds (i.e. sum of Tier I & Tier II capital) of latest audited balance sheet. However, banks are allowed to ~~borr~~ borrow a maximum of 125% of their capital funds on any day, during a fortnight.

Lending: On a fortnightly average basis, lending outstanding should not exceed 25% of their capital funds. However, banks are allowed to lend a maximum of 50% of their capital funds on any day, during a fortnight.

- **Participant : Co-operative Banks.**

Borrowing: Outstanding borrowings of State Co-operative banks/district central co-operative banks/urban co-operative banks in call/notice money market, on a daily basis should not exceed 2.0% of their aggregate deposits as at end March of the previous financial year.

Lending: No limit.

Co-operative banks are generally not the lenders as they dont have much surplus funds.

- Participant: PDs.

Borrowing: PDs are allowed ~~to~~ to borrow, on average in a reporting fortnight, up to 225% of their net owned funds (NOF) as at end-March of the previous financial year.

Lending: PDs are allowed to lend in call/notice money market, on average in a reporting fortnight, up to 25% of their NOF.

- The seasonal nature of the call money market would be reflected in two indicators:

(i) A decline in money at call and short notice should be greater in the slack season than in the busy season of a given year.

(ii) An increase in money ~~and~~ at call and short notice should be greater in the busy season than in the slack season.

- The need for call money borrowings is the highest around March every year which may be due to withdrawals of deposits in March to meet year-end tax payments and withdrawals of funds by financial institutions to meet their statutory obligations.

* Variations in Demand and Supply of Call Loans.

- The supply of call loans
Increase in deposits

- Demand for Call Loans

→ Seasonal demand.

~~RBI~~

→ RBI policy measure : Change in CRR or repo rate

→ Buoyancy of the stock market : If there is a boom in the stock market & more financial institutions begin investing in the stock market, then ~~their~~ there will be a hike in borrowings from the banks & ~~d~~ thus demand for call loans will rise.

→ Increase in the demand for loans for industrial and commercial purposes.

→ Liquidation of government securities : If the bank is able to get money from this source to fulfill its short term obligations, then the demand for call loans will fall.

→ Subscriptions to Government loans.

★ Call Rates

- The rate of interest paid on call loans is known as the call rate. The call rate is highly variable from day to day, and often from hour to hour. It is very sensitive to changes in demand for and supply of call loans.

- The call rate has been freely determined by the market forces since 1989 & it is also the intermediary target for ~~a~~ the monetary policy.

- Mostly the call rate in India is ~~a~~ defined as interbank call rate.

Reasonas for Call Rate Volatility

- Requirement for CRR needs create excess demand for liquidity in call money market.

- Over extended credit position of Banks: If the money lended has exceeded the money deposited with the bank then demand for call money will increase to fulfill the gap.

- Occasional market disruptions.

- Heavy withdrawal by Institutional Investors: Financial institutions that participate in the market, the deposit base of these entities is quite high with the banks. So if there is high demand in the stock market or any other demand, then they may withdraw their deposits with the bank, and this may lead to rise in demand of call money to fulfill this obligation.

- Liquidity crisis in the money market: Due to contractionary monetary policy, if interest rates are high then there will be liquidity crisis in the economy & the central bank will reduce the interest rates. Then the demand for loans will increase & subsequently demand for call money will rise to fulfill to increased loan demand.

- Sluggish demand in bank deposit with heavy pressure for non-food credit (industrial, housing loans, etc) in the banking sector creating asset liability mismatch. ∴ Less supply of funds to the bank & more demand of industrial & other loans will lead to increase in demand of call loans.

- Causality in foreign exchange market and call money market. : Foreign exchange leads to change in availability of funds with the banks which also affects the change in call money.

- Structural deficiencies in the Banking Sector.

★ Mumbai Inter-Bank Bid Rate (MIBID) and Mumbai Inter-Bank Offer Rate (MIBOR)

- It is the interest rate at which banks can borrow funds, in marketable size, from other banks in the Indian interbank market.

- It is calculated daily by the National Stock Exchange of India (NSE).

- It is calculated on the basis of data collected from the panel of 30 banks and primary dealers: The panel has a mix of public sector banks including SBI, CBI; private sector banks including Axis Bank Ltd, HDFC Bank Ltd; foreign ~~ba~~ banks including Citibank NA and Deutsche Bank; and primary dealers including ICICI Securities Ltd. and PNB Gilts Ltd.

* London Inter-Bank Offer Rate (LIBOR).

- It is an interest rate at which banks can borrow funds in marketable size from other banks in the London interbank market.

- It is the reference rate for foreign exchange and trade b/w countries. It is considered as reference by many countries across the globe.

- The LIBOR is fixed on a daily basis by the British Bankers' Association (BBA).

- LIBOR formally measures the cost of this inter-bank lending and setting out the average rate banks pay to ~~borro~~ borrow from one another.

- It is synonymous to MIBOR but it ~~is~~ also serves as a proxy to foreign or international interest rate, accepted by many countries.

★ Term Money Market and Repo Market

- In term money market where the tenor of the transactions is from 15 days to one year.

- Repo or ready forward contact is an instrument for borrowing funds by selling securities with an agreement to ~~repurchase~~ repurchase the said securities on a mutually agreed future date at an agreed price which includes interest for the funds borrowed.

- The reverse of the repo transaction is called "reverse repo" which is lending ~~fund~~ of funds against buying of securities with an agreement to resell the said securities on a mutually agreed future date at an agreed price which includes interest for the funds lent.

- There are two types of repo markets:
(i) Inside or part of the Liquidity Adjustment Facility (LAF): Normal repo operations.

(ii) Outside the LAF: Used for some specific purposes

- Example: Few years back, there was a liquidity crisis in the mutual funds sector, so a repo rate was fixed so that it can borrow money from repo operations from the central bank and other commercial banks.

* Collateralised Borrowing and Lending Obligation (CBLO).

- CBLO is another money market instrument operated by the Clearing Corporation of India Ltd. (CCIL), for the benefit of the entities who have either no access to the interbank call money market or have restricted access in terms of ceiling on call borrowing and lending transactions.

- Money can be borrowed from this market against some collateral.

- It was operationalised with effect from January 20, 2003.

- CBLO is a discounted instrument available in electronic book entry form for the maturity period ranging from 1 day to 90 days (up to 1 year as per RBI guidelines).

- In order to enable the market participants to borrow and lend funds, CCIL provides the Dealing System through Indian Financial Network (INFINET), a closed group to the members of the Negotiated Dealing System (NDS).

- It is an obligation by the borrower to return the money borrowed, at a specified future date.

- Provides authority to the lender to receive money lent, at a specified future date with an option/privelege to transfer the authority to another person for value received.

- It is underlying charge on securities held in custody (with CCIL) for the amount borrowed/lent.

★ Recent Changes

- ~~The~~ Regional Rural Banks are also allowed to participate in the ~~market~~ call money market.

- Improvement in transactional ease to increase ~~eff~~ operational efficiency of the call money market.

- Call Money market contributes largely to liquidity adjustment by the RBI.

* Treasury Bill Market

- A Particular type of Finance Bill or ~~Prom~~ Promissory note put out by the Govt. of the country to meet the needs of supplementary short-term Finance.

- Treasury bills are zero coupon securities and pay no interest. issued by the central bank of the country.

- Issued at discount and redeemed at par.

- Characteristics:

- High Liquidity Money Market Instrument: Highly liquid in comparison to other short term instruments in this segment.

- Absence of Risk of Default: Backed by the government.

- Ready availability

- Assured Yield

- Low transaction cost.

- Eligibility for Inclusion in SLR: Being highly liquid, it can be kept by banks as SLR.