

NIBM WORKING PAPER SERIES

**RBI's Post-Covid Monetary and Liquidity Measures:
Impact on Money, Bond and Credit Markets**

Jiji T Mathew

Working Paper
(WP19/2022)



NATIONAL INSTITUTE OF BANK MANAGEMENT
Pune, Maharashtra, 411048
INDIA
June 2022

The views expressed herein are those of the authors and do not necessarily reflect the views of the National Institute of Bank Management.

NIBM working papers are circulated for discussion and comment purposes. They have not been peer-reviewed and may be subject to the review for Journal or Book Publication.

© 2022 by Jiji T Mathew

Citation Guideline:

Mathew, Jiji T (2022), "RBI's Post-Covid Monetary and Liquidity Measures: Impact on Money, Bond and Credit Markets". NIBM Working Paper Series, WP19/June.

https://www.nibmindia.org/static/working_paper/NIBM_WP19_JM.pdf

RBI's Post-Covid Monetary and Liquidity Measures: Impact on Money, Bond and Credit Markets

Jiji T Mathew

NIBM Working Paper No. 19

June 2022

ABSTRACT

This paper focuses on RBI's post-covid monetary policy and liquidity measures and its effects on money, bond, deposit and credit markets in terms of interest rate transmission. The first objective of this study is to discuss and assess the various conventional and unconventional policy measures introduced by RBI since February 2019 till end March 2022. The second objective is to examine the effect of RBI's policy measures on interest rate transmission in the money, bond and the deposit and credit markets. The extraordinary monetary policy responses of the RBI during Covid times were intended to restore and maintain macroeconomic and financial stability. The study found fast and full monetary policy transmission from policy rates to the interest rate in different segments of these markets. There was a visible drop in the liquidity premium in both the government securities and the corporate debt market. Following the RBI's policy rate cuts and injection of large amount of potential liquidity of \$17.2 trillion between February 2020 and end September 2021, financial conditions eased considerably, markets started unfreezing and normalcy returned to various segments of financial market. Credit spreads or risk premium narrowed appreciably in corporate bond market across maturities, issuers and ratings. Short-term Money market rates went lower and even dropped below the reverse repo rate during the most of the post pandemic period, which paved for steep fall in interest rates in deposit and credit market. Hence, RBI's post covid monetary policy measures were very successful in creating initial conditions for durable credit offtake.

Jiji T Mathew (Corresponding Author)

National Institute of Bank Management

jiji@nibmindia.org

RBI's Post-Covid Monetary and Liquidity Measures: Impact on Money, Bond and Credit Markets

I. Introduction and the background

Monetary Policy is an important function undertaken by central banks' to influence the level and pace of economic activity of the country in coordination with the fiscal policy. The effectiveness of monetary policy in achieving the inflation and growth objectives depends on its success in transmitting the interest rate signals from short-term policy rates to long term interest rates in debt market and credit market. Commercial banks play a crucial role in this process, both as a dominant participant in the Inter-bank market and acting as main counterparties of the central bank.

Monetary Policy involves two main parts-formulation and implementation. In India, which presently belongs to a flexible inflation Targeting framework, monetary policy is formulated by a 6- member Monetary Policy Committee (MPC). This MPC normally meets 6 times in a year to set the policy interest rates (repo rate) along with the monetary policy stance through a voting process. MPC also gives its consensus forecasts on inflation and economic growth outlook for the 3 months to 1- year horizon, with the balance of risks to these forecasts. Monetary Policy Statement on the resolution adopted by the MPC is released by the RBI on the concluding day of the meeting.

The implementation of the monetary policy of RBI is carried out by the Financial Market Operations Department (FMOD) of RBI under the guidance of its Internal Financial market committee (IFMC), which meets on a daily basis in the morning. FMOD operates or implements monetary policy by means of Liquidity Management, which is also called the operating procedures of monetary policy. The Liquidity Management Framework, which was last revised on 6th February, 2020, specifies the instruments for short-term and long term liquidity management (RBI, 2020a). Liquidity management involves use of tools to manage and modulate the supply and demand for market liquidity so as to align the overnight-interbank money market rates to policy rate and the monetary policy stance. Short-term money market rates play an important role as it is the immediate and the first stage of interest rate transmission from the policy rate.

Since, February 2020, RBI undertook pre-emptive monetary and financial policy measures to stimulate the economy and directly address the stress in financial conditions caused by COVID-19, which included a 115bps policy rate cut, CRR cut and a colossal injection of potential market liquidity aggregating to about Rs. 17.2 trillion. Financially markets have strongly recovered and fast interest rate transmission to money, bond and credit markets have occurred due to these timely policy responses, creating conditions for strong revival of economic activity in the near future.

At the same time, the economic policy stimulus measures of the government in response to the Covid-19 pandemic and the big expansion in public expenditure incorporated in three Union Budget from FY 2020-21 to FY 2022-23 led to higher estimated fiscal deficit, market borrowing and public debt for both Centre and States. This situation warranted sound fiscal policy-monetary policy coordination in terms of low interest rates, ample market liquidity and smooth completion of market borrowing programme to make this unprecedented fiscal stimulus effective.

In response to the pandemic, a large and unprecedented fiscal and monetary support was provided by governments and central banks in the world to maintain macroeconomic and financial stability, apart from protecting lives and livelihoods. As per the estimates of IMF, US\$16.9 trillion or 16.4 per cent of global GDP had been pledged as fiscal support, with US \$ 14.5 trillion provided by advanced economies (AEs) and US \$ 2.4 trillion provided by emerging market economies (EMEs), between March 2020 and up to October 2021. The total monetary support amounted to US\$19.0 trillion or 18.4 per cent of global GDP, US \$ 16.1 trillion by AEs and US\$ 2.9 trillion by EMEs (Patra, 2022)

This paper focuses on RBI's post-covid monetary policy and liquidity measures and its effects on money, bond, deposit and credit markets in terms of interest rate transmission, risk premium and the liquidity premium. The paper is broadly organized into four sections. Section 2 discusses and assesses the various conventional and unconventional policy measures introduced by RBI since February 2019 till end March 2022. Section 3 attempts to examine the effect of RBI's policy measures on interest rate transmission in the money, bond and the deposit and credit markets. Section 4 makes summary and concluding remarks.

II. RBI's Post –Pandemic Monetary Policy and Liquidity Measures

1. Monetary Policy Measures

In response to deepening of Covid-19 pandemic, RBI, in its two unscheduled MPC meetings on 27th March and 22nd May 2020, cut policy repo rate by 75bps and 40bps respectively. This aggressive policy rate cut of 115bps during the post pandemic period was preceded by a 135bps rate cut during the pre-pandemic period. Hence the current monetary easing cycle, which started in February 2019, witnessed a total repo rate reduction of 250 bps from 6.5% to 4%. MPC also shifted gears to accommodative monetary policy stance¹ from 6th June, 2019, till 10th February, 2022 (RBI, 2019a, 2019b, 2019c, 2019d, 2019e, 2020c and 2020f)

In a related decision, RBI cut reverse repo rate by 90bps, 25bps and 40bps respectively on 27th March, 17th April, and 22nd May, 2020. Therefore, in the current monetary easing cycle, the cumulative reduction in reverse repo rate was 290bps, i.e., 135bps before the pandemic and 155 bps post pandemic. Hence the width of the LAF (Liquidity adjustment Facility) was changed from 50bps to 90bps with Marginal standing facility rate 25bps above the policy repo rate and the fixed reverse rate 65bps below the policy repo rate. Effectively, RBI moved temporarily away from symmetric to asymmetric LAF corridor (RBI, 2020c, 2020e and 2020f).

The purpose of this measure was to discourage banks to passively deposit funds with the Reserve Bank and to encourage them to use these funds for on-lending to productive sectors of the economy. As a consequence of this measure and due to the RBI injected huge surplus liquidity in the system, weighted average overnight call money rates and other money market rates started moving down closer to the fixed reverse repo

¹ RBI's MPC in its April, 2022 meeting initiated a shift in policy stance from accommodative stance to a stance of withdrawal of accommodation, while at the same time RBI normalized the width of LAF corridor to 50bps by replacing the interest rate on fixed rate reverse repo with a new instrument called the Standing deposit facility rate of as the floor rate. Later, in an unscheduled policy meeting in May 2022, MPC in a surprise move, hiked the policy repo rate by 40bps to 4.40%, while RBI raised CRR by 50bps to absorb excess liquidity. MSF rate and SDF rate automatically stands raised by 40bps to 4.65% and 4.15% respectively.

rate. This measure facilitated better and faster transmission of interest rates from policy rates to money, bond, deposit and credit market, so as to enable spending by households and business via borrowing and thereby stimulating aggregate demand and GDP.

2. RBI's Liquidity Management and Regulatory Measures

RBI had employed various conventional and unconventional measures during the current monetary easing cycle and particularly in the pandemic period. These extraordinary liquidity and regulatory measures were intended to directly address the stress in financial conditions caused by Covid-19, with the following broad objectives: (a) expanding liquidity in the system sizably to ensure normal functioning of the financial markets and institutions in the midst of COVID-related dislocations; (b) strengthening monetary transmission so that bank credit flows on easier terms are sustained to those who have been affected by the pandemic; (c) easing financial stress caused by COVID-19 disruptions by relaxing repayment pressures and improving access to working capital (d) improving the functioning of markets in view of the high volatility experienced with the onset and spread of the pandemic. (RBI, 2020d).

In its February, 2020 policy statement, RBI announced a short-term regulatory measure to incentivize credit to specific sectors. Under this dispensation, scheduled commercial banks were allowed to deduct the equivalent of incremental credit disbursed by them as retail loans for automobiles, residential housing and loans to micro, small and medium enterprises (MSMEs), between February 1st and July 31, 2020 from their net demand and time liabilities (NDTL) for maintenance of cash reserve ratio (RBI, 2019a). This would have enhanced the net interest margin of such loans and incentivized banks to improve credit delivery, which could raise aggregate demand by stimulating consumption and investment spending by households and MSMEs.

CRR was cut steeply by RBI in its March, 2020, Policy statement by 100bps to 3% as a one-time dispensation for 1 year, which infused 1.37 trillion liquidity. It has been decided in February Monetary Policy, 2021, to gradually restore the CRR in two phases in a non-disruptive manner to 3.5 per cent effective from March 27, 2021 and 4.0 per cent effective from May 22, 2021. Apart from improving availability of liquidity, CRR cut reduces the cost of funds for the banks and lead to lower lending rates and encourages greater credit delivery. As a one-time dispensation, RBI also reduced the requirement of minimum daily CRR balance maintenance from 90 per cent to 80 per cent effective from the first day of the reporting fortnight beginning March 28, 2020. This concession was available up to June, 26, 2020 and was aimed to ease the hardships faced by banks in terms of social distancing of staff and consequent strains on reporting requirements. (RBI, 2020d)

As a temporary measure, RBI increased the concession or waiver for Banks from Minimum SLR maintenance for MSF borrowing from 2% to 3% of the NDTL. This dispensation was available till December 31, 2021, after which it was to be restored to the original level of 2%. Consequently, banks will be able to dip up to 2 per cent of net demand and time liabilities (NDTL) instead of 3 per cent for overnight borrowing under the MSF from January 1, 2022 (RBI, 2020d). These two measures relating to CRR and MSF were injecting a total potential liquidity of Rs 2.74 trillion into the banking system.

To ensure orderly market conditions and congenial financing costs in the bond market, RBI had increased the limits under Held to Maturity (HTM) category from 19.5 per cent to 22 per cent of net demand and time liabilities (NDTL) in respect of statutory

liquidity ratio (SLR) eligible securities acquired on or after September 1, 2020, up to March 31, 2022. This dispensation of enhancement in HTM limit was made available up to March 31, 2023. Further, in its April, 2022, policy statement, RBI had enhanced the limit for inclusion of SLR eligible securities in the HTM category to 23 per cent of NDTL. RBI allowed the banks to include securities acquired between April 1, 2022 and March 31, 2023 under the enhanced limit of 23 per cent. This will increase the banking system's demand for SLR securities and facilitates successful and non-disruptive conduct of market borrowing programme for the government for FY 2022-23. This move will also enable banks to better manage their investment portfolio in FY 2022-23 (RBI, 2020l, 2020m)

All commercial banks, cooperative Banks, All India Financial Institutions were permitted to grant a moratorium of 6 months (up to August, 31, 2020) on payments of instalments in respect to all term loans outstanding as on March 1, 2020. Similarly, all such lending institutions were permitted to allow a deferment of interest payments by 6 months with respect to working capital facilities sanctioned in the form of cash credits/overdrafts outstanding as on March 1, 2020. RBI also permitted banks to ease their working capital financing by recalculating drawing power or reassessing the working capital cycle of the borrowers. In its May, 2020 monetary policy, RBI allowed all banks to convert the accumulated interest on working capital facilities over the deferment period into a funded interest term loan which should be repayable by end of March 31, 2021(RBI, 2020d).

These concessions gave the borrowers a temporarily protection from the economic impact of covid wave and related lockdowns. On the other hand, lending institutions were not subjected to asset classification downgrade, while allowing these concessions. The rescheduling of payments with respect to moratorium, deferment and easing of working capital financing would not fall into default category for the purposes of Supervisory reporting and reporting to credit information companies (CICs) by the lending institutions. (RBI, 2020d).

RBI had deferred the implementation of the last tranche of 0.625 per cent of the Capital Conservation Buffer (CCB) of 2.5% from March 31, 2020 to October 1, 2021. Similarly, RBI also deferred the implementation of Net Stable Funding Ratio (NSFR) October 1, 2021. This was expected to alleviate the continuing stress on account of COVID-19 and in order to aid in the credit recovery process (RBI 2020d)

In December 2020, the Regional Rural Banks (RRBs) were permitted to access the liquidity windows of the Reserve Bank as well as the call/notice money market in order to facilitate more efficient liquidity management by the RRBs at competitive rates (RBI, 2020n). In June, 2021, RBI decided to permit RRBs to issue Certificates of Deposit (CDs) to eligible investors. This measure would provide greater flexibility fir RRBs in raising short term funds by RRBs (RBI, 2020o)

3. Unconventional Liquidity Measures

3.1. Long Term Repo Operations

LTROs are term repo operations conducted by RBI with Banks for a tenure of 1-3 years. It is a long-term lending facility of RBI to banks against the collateral of government securities at the current policy repo rate. From February 15, 2020, RBI started to conduct LTRO up to a total amount of 1, 00, 000 crore. The purpose of LTROs was to improve the speed and magnitude of monetary policy transmission from short term policy rates to

long-term interest rates in bond, deposit and credit market. LTROs were intended to inject long term systemic liquidity, which could increase the demand for long term bonds and increase the supply of bank loans with long tenures so that term premium and interest rates will fall. RBI also gave the option to banks to repay the funds availed under LTRO before maturity (RBI, 2020b).

3.2. Forward Guidance

RBI's MPC also employed the unconventional tool of Forward guidance to influence the market expectations about future liquidity and policy rates. The long term commitment by the central bank to maintain an accommodative stance is essentially intended to bring down long term real interest rates, by means of both low future nominal policy rates and creating high inflationary expectations for the future.

In order to maintain the financial and macroeconomic stability in the midst of pandemic, MPC tweaked its forward guidance in its monetary policy on March 27, 2020, policy, by stating that it would, "continue with the accommodative stance as long as it is necessary to revive growth and mitigate the impact of coronavirus on the economy, while ensuring that inflation remains within the target". This communication strategy continued two more times till the August, 2020 policy.

In its monetary policy on October 9, 2020, MPC changed its communication strategy from state based to time based forward guidance by saying that it would "continue with the accommodative stance as long as necessary – at least during the current financial year and into the next financial year – to revive growth on a durable basis and mitigate the impact of COVID-19 on the economy, while ensuring that inflation remains within the target going forward". This guidance was adopted in two more policy meetings till February, 2021 policy (RBI, 2020c and 2020n)

With the outbreak of the second Covid wave in the country, MPC in its monetary policy in April, 2021, shifted back to the state based and ultra-accommodative forward guidance. This time, it "decided to continue with the accommodative stance as long as necessary to sustain growth on a durable basis and continue to mitigate the impact of COVID-19 on the economy, while ensuring that inflation remains within the target going forward". This strategy continued longer and for next five policy meetings until the monetary policy of February, 2022.

The domestic and global inflationary situation dramatically worsened since March, 2022, due to elevated global commodity prices in the aftermath of escalation of Ukraine-Russian conflict and economic sanctions. In view of the considerable upside risk to inflation trajectory and the possibility of CPI inflation remaining persistently above the upper tolerance level of 6%, MPC changed its monetary policy stance in its April, 2022 policy from accommodative to withdrawal of accommodation. In this policy, MPC also started its exit from extra loose monetary policy and adopted a less dovish forward guidance by deciding in "to remain accommodative while focusing on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth". This guidance continued in its off-cycle monetary policy on May, 4th 2022, and expected to remain in future till such time comes when the extra loose surplus liquidity is sucked out from the system (RBI, 2022a and 2022c).

3.3. Targeted Long Term Repo Operations (TLTRO)

Targeted Long Term Repo Operations (TLTROs) are long term repo operations conducted by RBI with banks for tenure of up to 3 years for a total amount of Rs 1 trillion, with the end use restrictions to facilitate credit flow to targeted sectors of the economy. In other words, it is a targeted long-term lending facility offered to banks against the collateral of government securities at a flexible rate linked to the policy repo rate. RBI did the first such TLTRO transaction on March 27, 2020.

Liquidity availed under the scheme by banks were to be deployed in investment grade corporate bonds, commercial paper, and non-convertible debentures over and above the outstanding level of their investments in these bonds within the specified time period. In this regard, banks were required to acquire up to fifty per cent of their incremental holdings of eligible instruments from primary market issuances and the remaining fifty per cent from the secondary market, including from mutual funds and non-banking finance companies (RBI, 2020d).

The purpose of TLTROs was to reduce the credit spreads and liquidity premium in specific segments of money and bond markets such as Commercial paper, corporate bonds and non-convertible debentures. TLTROs were also intended to indirectly inject long-term liquidity to specific sectors such as agriculture, MSMEs, MFIs, and NBFCs etc. This measure also fostered targeted and better distribution of liquidity and incentivized more primary issuances of corporate bonds and commercial papers by targeted institutions.

3.4. Targeted Long Term Repo Operations (TLTRO 2.0)

The second version of the Targeted Long term Operations termed as TLTRO 2.0 was announced by RBI Governor in his statement on April 17, 2020. These are repo operations conducted by RBI with banks against the collateral of government securities for tenure of up to 3 years for a total amount of up to Rs 0.5 trillion, with the end use restrictions. This facility was provided at a flexible rate linked to the policy repo rate, to sectors and entities experiencing liquidity constraints or hindrances to market access such as small and mid-sized corporates including NBFC and MFIs. Funds availed by banks should be invested in investment grade bonds, commercial paper, and non-convertible debentures of NBFCs, with at least 50 per cent of the total amount availed going to small and mid-sized NBFCs and MFIs. Investments made under this facility would be allowed to be classified under Held till Maturity (HTM). The funds availed were to be deployed within 30 working days from the date of the operation (RBI 2020e).

3.5. Special liquidity Facility for NBFCs and Housing Finance Companies

The Government of India has approved a scheme on July 2020 to improve the liquidity position of NBFCs/HFCs through a Special Purpose Vehicle (SPV). The purpose of the special liquidity facility was to avoid any potential systemic risks to the financial sector. The modus operandi of this scheme was that the SPV would purchase short-term papers/ instruments such as CPs and CDs from eligible NBFCs/HFCs, who should utilize the proceeds under this scheme solely for the purpose of extinguishing existing liabilities. The instruments should be with a residual maturity of not more than three months and rated as investment grade. The facility was made available for three months up to September 30, 2020 and the SPV would recover all dues by December 31, 2020 (RBI, 2020h).

3.6. On tap TLTRO

On tap TLTRO is a long-term lending facility of up to Rs 1 trillion offered by RBI to banks at a floating rate linked to the policy repo rate, for a term of up to 3 years. Funds borrowed by banks under this facility need to be deployed in corporate bonds, commercial paper and non-convertible debentures issued by the entities in specific sectors such as Agriculture, Agri-Infrastructure, MSMEs, Secured Retail; Drugs, Pharmaceuticals and Healthcare, including 26 stressed sectors identified by Kamath Committee for ELGS 2.0 (Emergency Credit Line Guarantee scheme). Liquidity availed under the scheme can also be used to extend loans and advances to these sectors. Banks were allowed to lend funds mobilized under the TLTRO on Tap scheme to NBFCs for incremental lending to the specified stressed sectors. Banks were also encouraged to synergize the two schemes by availing funds from RBI under on tap TLTRO and seek guarantee under ECLGS 2.0 to provide credit support to stressed sectors (RBI, 2020k, 2020m).

Investments made by banks under this facility will be classified as HTM even above the 25 per cent of total investment permitted to be included in the HTM portfolio. This measure was intended to ensure revival of activity in specific stressed sectors that have both backward and forward linkages and have multiplier effects on growth. This was also intended to bring down interest rate and the credit spreads in the corporate bond loan market.

3.7. Refinancing Facility to All India Financial Institutions (AIFs)

RBI provided special refinance facilities for a total amount of Rs. 75,000 crore to AIF to enable them to meet credit needs of Agriculture and rural sector; small industries, housing finance companies; and foreign trade sector respectively. Under this facility, Rs. 25,000 crore were allotted to NABARD for refinancing regional rural banks (RRBs), cooperative banks and micro finance institutions (MFIs); Rs. 15,000 crore to SIDBI for on-lending/refinancing; and Rs. 10,000 crore to NHB for supporting housing finance companies (HFCs) (RBI, 2020e).

RBI introduced an additional special liquidity facility (ASLF) of Rs. 5,000 crore to NABARD for a period of one year at the RBI's policy repo rate for refinancing NBFC-MFIs and other smaller NBFCs of asset size of Rs. 500 crore and less to support agriculture and allied activities and the rural non-farm sector. RBI announced an additional standing liquidity facility (ASLF) of Rs. 5,000 crore to NHB –for supporting HFCs. The facility was provided for a period of one year and will be charged at the RBI's repo rate. RBI also announced a line of credit of Rs. 15,000 crore to the EXIM Bank for a period of 90 days from the date of availment with rollover up to a maximum period of one year so as to enable it to avail a US dollar swap facility to meet its foreign exchange requirements (RBI, 2020g, and 2020j).

RBI in its April, 2021 policy statement, 2021, announced a liquidity support of Rs. 50,000 crore for fresh lending during 2021-22 to AIFs: Rs. 25,000 crore to NABARD; Rs. 10,000 crore to NHB; and Rs. 15,000 crore to SIDBI. In its June, 2021 policy statement, RBI decided to provide a further special liquidity facility of Rs. 16,000 crore to SIDBI, for on-lending / refinancing to MSMEs. The facility was available at the prevailing policy repo rate for a period of up to one year. The purpose of this measure was to meet MSMEs' short- and medium-term credit needs to kick start the investment cycle with additional focus on

smaller MSMEs and businesses including those in credit deficient and aspirational districts (RBI, 2021b and 2021c).

RBI in its June, 2021 policy statement, decided to provide a further special liquidity facility of Rs. 16,000 crore to SIDBI, for on-lending/refinancing to MSMEs. The facility was available at the prevailing policy repo rate for a period of up to one year. The purpose of this measure was to meet MSMEs' short- and medium-term credit needs to kick start the investment cycle with additional focus on smaller MSMEs and businesses including those in credit deficient and aspirational districts (RBI, 2021d).

3.8. Special Liquidity Facility for Mutual funds (SLF-MF)

RBI announced in a press release on 27th April, 2020, a Special Liquidity Facility for Mutual Funds (SLF-MF). Under SLF-MF, RBI decided to conduct repo operations with banks for a tenure of 90 days at the fixed repo rate. This lending is on tap and open ended and up to Rs 50000 crores. Funds availed under the SLF-MF should be used by banks exclusively for meeting the liquidity requirements of MFs such as extending loans to them, undertaking outright purchase of and/or conducting repos against the collateral of investment grade corporate bonds, commercial papers (CPs), debentures and certificates of Deposit (CDs) held by MFs. Liquidity availed under the facility is eligible to be classified as HTM. This measure was intended to ease liquidity pressures on debt mutual funds facing redemption pressures and to avoid possible contagion effects.

3.9. Operation Twist/ Special Open Market Operations

In November, 2020, RBI reintroduced its instrument called special open market operations, or popularly called Operation Twist (RBI, 2020n). This was intended to flatten the sovereign yield curve or to reduce the term premium in the G-sec market. Special OMOs were used by RBI to distribute liquidity more evenly across the yield curve to facilitate monetary transmission and had the added advantage of being liquidity neutral (Patra M D, 2022). This involves purchase of long term government securities and simultaneous sale of short-term government securities for an identical amount. This will immediately lead to fall in long term interest rates and simultaneous rise in short term rates as this transaction involves a rise in demand for long term bonds and an equivalent fall in the demand for short-term bonds. This will facilitate better interest transmission from shorter end to longer end of the market and enhances demand for long term funds in both bond and credit markets. Ultimately, the demand for credit is inversely related to long-term interest rates rather than short-term interest rates.

RBI introduced a variant of Operations Twist in the form of an innovative asymmetrical special OMO on March 10, 2021 to reinforce the compression of term premium as well as to inject liquidity. These were clear signals that the RBI will support the market with adequate liquidity through various instruments in its toolkit.

3.10. Open Market Operations (OMOs) in State Government Securities

To improve liquidity and facilitate efficient pricing, RBI announced in its October, 2020 monetary policy statement, the introduction of open market purchase operations (OMOs) in State Development Loans (SDLs) as a special case (RBI, 2020m). The OMOs would be conducted for a basket of SDLs comprising securities issued by states. The first

such OMO purchase was undertaken for an amount of Rs. 10000 crores on October 20, 2020.

3.11. Secondary Market Government Security Acquisition Programme (GSAP)

From April through September, 2021, RBI announced the Indian version of quantitative easing by launching Secondary Market Government Security Acquisition Programme (GSAP). Under this scheme, the RBI committed upfront to a specific amount of open market purchases of government securities in the secondary market (RBI, 2021a). Accordingly, RBI announced and conducted a G-SAP of Rs. 1 lakh crore for Q1 & Rs. 1.2 lakh crore for Q2 of 2021-22. The purpose was to enable a stable and orderly evolution of the yield curve amidst comfortable liquidity conditions. This was also aimed at facilitating better pricing of various financial instruments across maturities and issuers in public and private sector, which relies on G-sec market as a pricing benchmark.

3.12. Special Long term Repo Operations for small Finance Banks (SFB)

In its unscheduled statement on Monetary Policy on May, 5, 2021, RBI introduced a special three-year long-term repo operations (SLTRO) of Rs. 10,000 crore at repo rate for the SFBs (RBI, 2021c). Funds borrowed under this facility need to be deployed for fresh lending of up to Rs. 10 lakh per borrower in SME and unorganized sector. This was to provide further support to small business units, micro and small industries, and other unorganized sector entities adversely affected during the current wave of the pandemic. This facility was available till Dec, 2021.

3.13. On Tap Term Liquidity Facility (OTTLF)

RBI, in its June 2021 policy statement, opened an on-tap liquidity window of Rs. 50,000 crore with tenors of up to three years at the repo rate. The facility is aimed to boost provision of immediate liquidity for ramping up COVID-related healthcare infrastructure and services in the country.

Under the scheme, banks can provide fresh lending support to a wide range of entities including vaccine manufacturers; importers/suppliers of vaccine and priority medical devices; hospitals/dispensaries; pathology labs and diagnostic centers; manufacturers and suppliers of oxygen and ventilators; importers of vaccines and COVID-related drugs; COVID-related logistics firms and also patients for treatment (RBI, 2021d).

Credit delivered by banks under this scheme is eligible for priority sector lending (PSL) classification. Banks are permitted to deliver these loans to borrowers directly or through intermediary financial entities regulated by the RBI. Banks availing this scheme will be eligible to park their surplus liquidity up to the size of the COVID loan book with the RBI under the reverse repo window at a rate which is 25 bps lower than the repo rate. This facility was extended up to March 31, 2022.

3.13.1. On-Tap Liquidity Window for Contact-Intensive Sectors

In its June, 2021 policy statement, RBI opened a separate liquidity window of Rs. 15,000 crore for Banks at the repo rate with tenors of up to three years. Funds borrowed under the scheme can be on lend to certain contact-intensive sectors such as hotels and restaurants; tourism - travel agents, tour operators and adventure/heritage facilities; aviation ancillary services - ground handling and supply chain; and other

services that include private bus operators, car repair services, rent-a-car service providers, event/conference organizers, spa clinics, and beauty salons (RBI, 2021d).

Banks were eligible to park their surplus liquidity up to the size of the COVID loan book created out of funds availed under this scheme with the Reserve Bank under the reverse repo window at a rate which is 25 bps lower than the repo rate. This facility was extended up to March 31, 2022.

4. Impact of RBI's Liquidity Measures on overall System Liquidity, Liquidity surplus and Weighted Average call money rate.

4.1. Impact on system Liquidity

Since, February 2020, RBI through its various conventional and unconventional liquidity measures, had injected a colossal amount of potential liquidity of Rs. 17.2 trillion till September 2021. This monetary stimulus adds to roughly 8.7% of the GDP. The inter-year distribution of the liquidity infusion amounts to Rs. 7.2 trillion, Rs. 6.4 trillion and Rs. 3.6 trillion respectively for FY 2019-20, 2020-21 and 2021-22 respectively as per the details given in Table 1a. The Indian banking and financial system had availed Rs. 11.9 trillion of this fresh liquidity of which Rs. 5 trillion is withdrawn due to either expiry of the scheme or repayments.

This unprecedented infusion of liquidity during the post pandemic period has served its monetary policy purposes. This led faster and fuller transmission of interest rates from short term policy rates to money market, bond market, and deposit and credit market. Financial conditions eased considerably in all segments of financial markets as reflected in substantial fall in liquidity premium and risk premium in debt and credit market.

During the first Covid wave between February 6 2020 and March 31, 2021, the announced liquidity infusion by RBI was Rs 13.7 trillion and actual utilization by the financial system was Rs 8.9 Trillion. However, during the period between April and June, 2021, which coincided with the second Covid wave, Rs 3.6 trillion of fresh liquidity injection was announced, but amount availed by the banking system were only Rs. 0.98 trillion (See Table 1b and 1c). The reason for this may be that already market was flooded with excess liquidity from the previous year so that banks were parking these funds with the reverse repo facility of RBI. Also due to risk aversion and economic slowdown, both supply and demand for credit remained low and so the banks were not keen to avail the new liquidity facilities.

4.2. RBI's Daily Net Liquidity Injections and Movements of Weighted Average Call Money Rate around the LAF Corridor.

RBI's daily Net Liquidity Injections are arrived at by subtracting total amounts of absorption of liquidity through various instruments such as Reverse repo, standing deposit facility and OMO sale of Government securities from total amounts of liquidity injections through various instruments such Repo, LTRO, MSF, Standing lending Facility, TLTRO, SLTRO etc. A negative net injection of liquidity represents surplus liquidity and vice versa.

Chart 1 shows that there was a progressive increase in liquidity surplus starting from February 2019, when the current monetary easing cycle started. Post pandemic period from February 2020 to March 2022, which marks the era of ultra-loose or ultra-accommodative monetary policy, witnessed significant daily absorption of liquidity in the range of Rs 6.5 to 8.5 trillion. This also helped in bringing down the weighted average call money rate (WACR) to below the reverse repo rate of 3.35% (but close to the reverse repo rate), which became the effective policy rate of RBI. Hence, the transmission of interest rates from money market rates to lending rates were higher and faster, which encourages better credit delivery.

Chart 2 reveals that WACR was more or less closer to the policy repo rate during the pre-pandemic, while it went lower and moved towards the reverse repo rate and even dropped below the reverse repo rate during the most of the post pandemic period from February 2020-February 2022. This was made possible by the ultra-accommodative monetary policy of RBI in terms of liquidity, policy rates and objectives. Hence, maintenance of excessive surplus liquidity, lower reverse repo rate and greater focus on economic growth relative to price stability led to this significant fall in the money market rates.

III. Impact of RBI's Post Pandemic Measures

1 Monetary Transmission to Money Market

The steep reduction in the repo rate by 115 bps, cut in the reverse repo rate by 155bps, widening the LAF corridor from 50bps to 90bps and provision of ample surplus liquidity through various conventional measures had salutary impact on the money market in term of interest rate transmission and credit spreads as indicated in Table 2. The WACR, which is the operating target of RBI's monetary policy, fell by 225bps from 5.34% to 3.09% during the period from March 26th 2020 to June 8th 2021. The spread of WACR spread over the repo rate also came down by 110bps. It was during this time period that most of the ultra-accommodative monetary and liquidity measures were announced by RBI.

Market repo and Tri-party repo rates increased during these period as stimulus measures paved the way for better distribution of excess liquidity and friction less arbitrage between these collateralized markets and uncollateralized interbank call money market. The 3-month CD rates and 3-month T-bill rates came crashing down by 453 and 165 bps respectively, while their spreads over the policy repo rate fell by 338 and 50 bps respectively.

The FBIL Certificate of Deposit (CD) Curve in Chart 3 is constructed with the discount yield / rates associated with key maturity tenor buckets of 14 days, 1 month, 2 months, 3 months, 6 months, 9 months and 12 months. This Chart shows the impact of RBI's monetary policy measures on the CD market. CD curve started drifting down from higher levels of 8.3% for 1 year tenor in January, 2019 to 6.2% in first half of March, 2020, with the commencement of RBI's current monetary easing cycle February, 2019. As the pandemic related negative news and events started emerging in end March, 2020, CD rates jumped upwards as reflected in the upward shift in the March 26th, 2020 CD curve. Yields of 1 year tenor hardened abruptly to 7.83%. However, with the adoption of ultra-accommodative monetary policy, CD rates fell sharply by June and then further down by end September, 2021. Since, then, CD curve slightly moved up by end March 2022, due to

various factors such as liquidity rebalancing by RBI through variable rate reverse repo auctions, rise in domestic inflation and higher government borrowing announced in the union budget.

FBIL has developed the FBIL-T BILL, as a new benchmark for the money market based on treasury bills traded in the market. It is announced for seven tenors of 14 days, 1 month, 2 months, 3 months, 6 months, 9 months and 12 months. Chart 4 provides T-bill curves corresponding to various dates and trace the impact of monetary policy on the Treasury bill market. As on January 1st 2019, before the monetary easing cycle, T-bill curve was higher with yields at 6.93% for the one- year tenor. However, with the start of the monetary easing cycle in February 2020, T-bill curve shifted downwards with 1 year tenor falling sharply to 5.13%. As the monetary policy became ultra-accommodative with onset of pandemic, T-bill yield curve shifted down considerably to lower levels and the yield for 1 year tenor even dropped to 3.45% by June, 2020.

However, with the rise in inflation and inflationary expectations and due to higher fiscal deficit and market borrowing by both the state and central governments, T-bill curve started shifting upwards from September, 2021, through March, 2022. Escalation of geopolitical tensions following the Russian-Ukraine conflict in late February, 2022 and the imposition of sanctions led to steep rise in global commodity prices and consequent monetary tightening by major central banks. The end result was the rise in sovereign yields across the world, including India.

2 Monetary Transmission to Bond Markets

Table 3 analyses the effect of RBI's post covid monetary and liquidity measures on interest rates and credit spreads in the government securities, commercial paper and the corporate bond market, during the period from March 26, 2020 to June 8, 2021. The yields on 10 -year benchmark security fell by only 20 bps from 6.22% to 6.02%. The sovereign yields couldn't fall as expected due to various factors that occurred during April-June, 2021, such as rising domestic and global inflation owing to supply chain disruptions and pent up demand, spike in US treasury yields and large borrowing programme of the government during pandemic years.

Commercial paper and corporate bond market, which became largely dysfunctional in the midst of covid pandemic was brought back to life following the extraordinary monetary stimulus of RBI from March 27, 2020. The unfreezing of these private markets and easing of financial conditions were reflected in steep fall in their yields and credit spreads. 3-month commercial paper yield dropped by 324bps to 3.5% and respective credit spread narrowed by 159 bps over the corresponding risk free rate. AAA rated corporate bonds of 1-year, 3-year and 5-year maturities fell sharply by 380bps, 358bps, and 232bps respectively. Further, the Credit spreads of these securities have narrowed noticeably by 245bps, 282 bps and 160bps respectively for 1, 3, and 5 year maturities.

Both AA rated and BBB -minus rated corporate bonds of three year maturities witnessed significant dip in their yields by 350 and 270 Bps respectively. Interestingly, the credit spreads of these bonds also fell by 274 bps and 194 bps respectively for AA and BBB-minus rated ones.

Chart 5 shows that the market interest rates/YTM on Indian benchmark 10-year G-sec peaked at around 7.67% on 4th February, 2019 and then started falling after the announcement of the monetary policy on 7th February, when the current monetary easing cycle started. A pre-pandemic repo rate cut of 135bps was accompanied by a 172bps drop in the 10-year yield to bottom out around 5.95% by end of January, 2020. There was no further interest rate transmission to 10-year sovereign benchmark even after 115bps and 155 bps cut respectively in repo and reverse repo during post covid phase. Since then, yields moved in a narrow range of 6 to 6.2% till September end, 2021 and then started slowly inching up because of headwinds from rising inflation, concerns about record high fiscal deficits and government borrowing and monetary policy normalization in systemically important central banks such as Fed reserve.

Chart 6 shows that India's Sovereign Yield curve was subject to noticeably sudden downward from pre-covid higher level as on March 26, 2020 to lower level by June 2020, in response to 115bps cut in repo rate and 155bps in reverse repo rate, supported by a deluge of extra ordinary liquidity (Chart). Later, in 2021, there was a gradual rise in yields across maturities from their post-pandemic lows as indicated by the upward shift yield curve as recorded on end September, 2021. This interest rate reversal can be attributed to various reasons such as rising inflation, hardening of US sovereign yields, high state and central government fiscal deficit financed by record high market borrowing and liquidity rebalancing by the RBI.

The Chart 7 clearly shows that there was abrupt spike in both AAA and AA rated corporate bond yields across maturities in March and April, 2020, as the market froze and turned adverse due to pandemic related economic uncertainties. RBI's timely policy actions in terms of policy rate cuts with focus on both infusion and distribution of liquidity through various schemes such as TLTRO, Special Liquidity scheme for NBFCs etc. helped to ease financial conditions in various segments of the credit market. This is indicated by the sharp fall in corporate bond yields across maturities, especially after April, 2020.

3 Monetary Transmission to deposit and Credit Market

Monetary policy was very effective in current interest rate easing cycle in transmitting interest rate signals from short-term policy rates to long term interest rates in the bond market, deposit market and the credit market. Table 4 clearly shows that in current easing cycle, in response to the repo rate cut of 250bps, the Median Term deposit rate (MTDR) on fresh deposits and the weighted average Domestic term deposit rate (WADTDR) had fallen by 208 bps and 189 bps respectively. Most of the interest rate transmission occurred during post pandemic period as RBI moved from accommodative to ultra- accommodative monetary policy with larger and faster cut in the policy rates and injection of liquidity. For instance, in response to 115bps cut in repo rate and 155 bps reverse repo rate during the pandemic, the MTDR and WADTDR dropped by 150bps and 143 bps respectively.

1 year Median MCLR witnessed a fall of 155bps in the current easing cycle, of which the 95 bps fall happened during the Covid period. During the current easing cycle, monetary policy transmission appears to be stronger in the case of weighted average lending rate (WALR) for fresh rupee loans as it fell by 213 bps compared to a dip of 143 bps for WALR for outstanding loans. The post pandemic fall of WALR for fresh loans and

WALR for outstanding loans were 140 bps and 124bps respectively, which were stronger compared to the fall of these interest rates during the pre-covid easing cycle.

The Pandemic has impacted the growth in monetary and credit aggregates in different ways as shown in Chart 8. Reserve money increased sharply during the pandemic mainly due to large infusion of liquidity by the central bank through conventional and unconventional means. From the liability side of the RBI, both the currency in circulation (CIC) and reserve balances held by banks with the RBI rose. During crisis times and lockdown, people would have preferred to hold more currency for undertaking essential spending on medicine and food. For instance, CIC even rose to 23.2% in August 2020. Job uncertainty and loss of livelihood during pandemic would have forced people to convert their deposits into cash more frequently.

Overall growth in bank deposits was relatively subdued during the pandemic. The increase in risk aversion among the banks and the lack of demand for credit by households and businesses contributed to low credit growth. Broad money, M3, slightly picked up during this time mainly because of rise in CIC, albeit low credit and deposit growth.

IV. Summary and concluding remarks

This paper made a detailed discussion and assessment of the extra loose monetary policy and liquidity measures undertaken by the Reserve Bank of India in response to the Covid -19 pandemic. The main objective of these extraordinary policy responses of the RBI was to restore and maintain macroeconomic and financial stability. This paper also analyzed the impact of these conventional and unconventional monetary policies on money, bond, deposit and credit markets. The study found significant monetary policy transmission from policy rates to the interest rate in different segments of these markets. There was a visible drop in the liquidity premium in both the government securities and the corporate debt market. Following the infusion of unprecedented liquidity of \$17.2 trillion between February 2020 and end September 2021, there was considerable easing of financial conditions and normalcy returned to various segments of financial market. Credit spreads or risk premium narrowed appreciably in corporate bond market across maturities, issuers and ratings.

Post pandemic period from February 2020 to March 2022, witnessed significant daily absorption of liquidity in the range of Rs 6.5 to 8.5 trillion. Money market rates and the WACR, which were closer to the policy repo rate during the pre-pandemic, went lower and even dropped below the reverse repo rate during the most of the post pandemic period. Both the CD curve and T-bill curve exhibited sudden and sharp downward shift in line with policy interest rate cut and in response to ultra-accommodative monetary policy.

Pandemic and related policy responses did impact macro economy in term economic growth and inflation. The Indian economy exhibited a deep slowdown during the pandemic year of 2020-21 with Real GDP growth shrinking by 6.6% after 4% growth in 2019-20. In 2021-22, real GDP grew 8.7% as per the provisional estimates of National Statistical Office (NSO) and all the 4 segments- Consumption spending, gross capital formation, government expenditure have exceeded their respective pre-pandemic levels. Indian exports and imports of goods and services staged a big recovery in FY 2021-22 by growing 27% and 25.5 % respectively compared to pre-pandemic year of 2019-20 after suffering big negative growth rates during the pandemic.

Price stability defined in term of low and stable CPI inflation at the target of 4% suffered a negative blow during the pandemic. Average CPI inflation in 2020-21 rose to 6.2 % from 4.8% in 2019-20 and dipped to 5.5% in 2021-22. However, the negative supply shocks emanating from elevated fuel, food and industrial input prices consequent on Russia-Ukraine conflict is causing significant headwinds and uncertainty to the inflation trajectory in India and world.

Foreign Exchange markets in India and abroad, which suffered huge volatility and capital outflows during the beginning of the pandemic in March and April, 2020, stabilized thereafter in response to the large fiscal and monetary stimulus unleashed by systemically important global central banks such as US FED and ECB. Foreign exchange reserves rose from \$476 billion in end March 2020 to peak at \$642 billion in the beginning of September 2021, on the back of strong foreign capital inflows. However, from September 2021 onwards rupee came under strong depreciation pressure due to foreign capital outflows following the monetary policy normalization by global central banks. The Indian rupee fell and forex reserves started dwindling and reached \$593 billion as on 13th may, 2022.

One distinguishing feature of ultra-accommodative post-pandemic monetary policy in India and abroad was its contrasting impact on financial markets and macroeconomic performance. The stock market performance in India during the pandemic period, 2020-22 was very impressive in terms of rising market capitalization (\$3.4 trillion in end March, 2022) as compared to dismal macroeconomic performance in terms of economic growth and inflation. Interest rates in bond market and credit market had fallen in tune with the aggressive policy rates cuts, but the credit growth failed to respond sufficiently to fuel durable economic revival. Though the experience of US in this regard is slightly better, its financial system and economy is also subject to similar problems. Ray and Pal (2022), in their study argues that the prolonged use of easy money policy, quantitative easing and the regime of negative real Interest rates have led to a liquidity-driven boom in the US asset markets. They found that the GDP growth rates and returns from financial markets has increased significantly, while the most tradable assets, including equities, bonds, real estate, commodities, and cryptocurrencies, have shown explosive growth during this period for the US economy.

Most of the central banks started normalizing monetary policy, albeit with different speeds. However, premature tightening of monetary policy without convincing signs of durable post-pandemic recovery could jeopardize and impede the nascent economic recovery. Hence, the global economy could face a prolonged period of low growth and higher inflation. (Pal and Ray, 2022b).

With no sign of an early end to Russian-Ukraine conflict and due to possibility of more aggressive interest rate hikes by RBI, Indian economy is staring at stagflation during the FY 2022-23.

References

- Patra, Michael Debabrata. 2022. "RBI's Pandemic Response: Stepping out of Oblivion", Keynote Address at the C D Deshmukh Memorial Lecture organised by the Council for Social Development, Hyderabad on January 28., (RBI Bulletin, February, 2022)
<https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/CSD2801202209A991A8387945F99701372F78FAE5F3.PDF>
- Patra, Michael Debabrata. 2021. "Monetary Policy: Trial by Pandemic"- Address at the Financial Markets Summit of the Confederation of Indian Industry, Mumbai on September 16
- Parthapratim Pal and Ray, Partha (2022). "Pandemic and the Monetary Policy in the Global North How Far Has the Main Street Been Influenced, Economic & Political Weekly (EPW) may 14th, 2022 Vol LVII No 20.
- Ray, Partha and Parthapratim Pal (2022): "Festival of Death: Global Stock Markets during the pandemic," Mousumi Dutta, Zakir Husain, and Anup Kumar Sinha (eds), The Impact of COVID-19 on India and the Global Order: A Multidisciplinary Approach, New Delhi: Springer, pp 189-210.
- RBI.(2019a). *Sixth Bi-monthly Monetary Policy Statement, 2018-19, Resolution of the Monetary Policy Committee (MPC)*, RBI, 7th February.
- RBI. (2019b) First Bi-monthly Monetary Policy Statement, 2019-20, Resolution of the Monetary Policy Committee (MPC), RBI, 4th April.
- RBI.(2019c) Second Bi-monthly Monetary Policy Statement, 2019-20, Resolution of the Monetary Policy Committee (MPC), RBI, 6th June.
- RBI. (2019d). Third Bi-monthly Monetary Policy Statement, 2019-20, Resolution of the Monetary Policy Committee (MPC), RBI, 7th August.
- RBI. (2019e). Third Bi-monthly Monetary Policy Statement, 2019-20, Resolution of the Monetary Policy Committee (MPC), RBI, 4th October.
- RBI. (2020a), Liquidity facilities under revised Liquidity Management Framework, Press Release, February, 06, 2020.
<https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/PR1900EC7E5351A39741EEB4FE8B9203BEA6DB.PDF>
- RBI. (2020b). Statement on Developmental and Regulatory Policies, 6th February.
- RBI. (2020c). Seventh Bi-monthly Monetary Policy Statement, 2019-20, Resolution of the Monetary Policy Committee (MPC), 27th March.
- RBI. (2020d). Governor's Statement, 27th March.
- RBI. (2020e). Governor's Statement, April 17, 2020.
- RBI. (2020f), Monetary Policy Statement, 2020-21, Resolution of the Monetary Policy Committee (MPC), RBI, May, 22, 2020.
- RBI. (2020g), Statement on Developmental and Regulatory Policies, May, 22, 2020.
- RBI. (2020h). Special Liquidity Scheme for NBFCs/HFCs, RBI/2020-21/01, DoR (NBFC) (PD), CC.No.113/03.10.001/2020-21, 1st July.
- <https://rbidocs.rbi.org.in/rdocs/notification/PDFs/NT013D1A96E8D0D94579A656351B41E6FB5B.PDF>
- RBI. (2020i), Monetary Policy Statement, 2020-21, Resolution of the Monetary Policy Committee (MPC), RBI, August 6, 2020.
- RBI. (2020j), Statement on Developmental and Regulatory Policies, 6th August.

RBI. (2020k). Report of the Expert Committee on Resolution Framework for Covid-19 Related Stress, September.

RBI. (2020l). SLR holdings in HTM category, RBI/2020-21/29, DoR.No.BP.BC.9/21.04.141/2020-21, 1st September.

<https://rbidocs.rbi.org.in/rdocs/notification/PDFs/NT2942A112EB3B464759A3DB159991C79A49.PDF>

RBI. (2020m), Statement on Developmental and Regulatory Policies, October 9, 2020.

RBI. (2020n), Governor's Statement, 9th October.

RBI. (2020o), Statement on Developmental and Regulatory Policies, December 4, 2020.

RBI. (2021a), Statement on Developmental and Regulatory Policies, February 5, 2021.

RBI. (2021a), Governor's Statement, 7th April.

RBI. (2021b), Statement on Developmental and Regulatory Policies, 7th April.

RBI. (2021c), Governor's Statement, 5th May.

RBI. (2021d), Statement on Developmental and Regulatory Policies, 4th June.

RBI. (2021e), *RBI Bulletin*, June.

RBI. (2021f), *Monetary Policy Report*, October.

RBI. (2021e), Statement on Developmental and Regulatory Policies, 6th August.

RBI. (2021e), Statement on Developmental and Regulatory Policies, 8th October.

RBI. (2021c), Statement on Developmental and Regulatory Policies, December 4, 2020.

RBI. (2022a), Monetary Policy Statement, 2022-23, Resolution of the Monetary Policy Committee (MPC), RBI, 8th April.

RBI. (2022b), Statement on Developmental and Regulatory Policies, 8th April.

RBI. (2022c), Monetary Policy Statement, 2022-23, Resolution of the Monetary Policy Committee (MPC), RBI, 4th May.

Table 1a. Various Liquidity Measures of RBI from Feb 2020- September 2021				
	<i>Announced Amount (Rs. Crore)</i>			
	<i>2019-20</i>	<i>2020-21</i>	<i>2021-22</i>	<i>2019-22</i>
LTRO	2,00,000			2,00,000
Variable Rate Repo	1,75,000	50,000		2,25,000
Standing Lending Facility for PDs	7200			7,200
CRR cut	1,37,000			1,37,000
MSF Dip by 1%in SLR	1,37,00			1,37,000
TLTRO	25000	75,000		1,00,000
TLTRO (2)		50,000		50,000
Net OMO Purchases including G-SAP	40,000	1,10,000	2,20,000	3,70,000
Special Liquidity Facility for Mutual Funds		50,000		50,000
Refinance to NABARD, SIDBI, NHB & EXIM Bank		75,000	66,000	1,41,000
Special Liquidity Scheme for NBFCs		30,000		30,000
56 -day Term Repo		1,00,000		1,00,000
On Tap TLTROs		1,00,000		1,00,000
SLTRO for Small Finance Banks			10,000	10,000
Term Liquidity Facility to Ease Access to Emergency Health Services			50,000	50,000
On Tap Liquidity Window for Contact Intensive Sectors			15,000	15,000
Total	7,21,000	6,40,000	3,61,000	17,22,200
As a % of Nominal GDP				8.70%
<i>Source: RBI's Monetary Policy Report, October 2021</i>				

Table 1b: Monetary and Liquidity Measures since February 6, 2020 to March 31, 2021)		
	<i>Announcement (Rs. Crore)</i>	<i>Amount Availed (Rs. Crore)</i>
Long Term Repo Operations (LTRO)	2,00,000	1,25,117
Variable rate repo	2,25,000	90,017
SLF for PDs	7,200	6000
CRR cut	1,37,000	1,37,000
MSF (dip by 1% in SLR)	1,37,000	Nil
TLTRO	1,00,000	1,00,050
TLTRO (2.0)	50,000	12,850
Net OMO purchases	1,50,000	3,56,265
Special liquidity facility for mutual funds	50,000	2,460
Refinance to NABARD, SIDBI, NHB and EXIM bank	75,000	48,514
Special liquidity scheme for NBFCs	30,000	7,126
56-day term repo	1,00,000	1000
On Tap TLTRO	1,00,000	5000
Total	13,71,200	8,91,369
As proportion of GDP* (Per cent)	6.9	4.50%
<i>Source: RBI Bulletin, June 2021</i>		

Table 1.c: Monetary and Liquidity Measures during 2021-22, up to June 07)		
<i>Measures</i>	<i>Announcement (Rs. Crore)</i>	<i>Amount Availed (Rs. Crore)</i>
G-SAP + Regular OMOs via NDS -OM	2,20,000	97,955
Liquidity Facility to AIFIs	66000	Nil
Special Long term Repo Operations (SLTRO) for Small Finance Banks (SFBs)	10000	400
Term Liquidity Facility to Ease Access to Emergency Health Services	50,000	Nil
On-Tap Liquidity Window for Contact Intensive Sectors	15000	Nil
Total	3,61,000	98,355
As proportion of GDP* (Per cent)	1.80%	0.50%
<i>Source: RBI Bulletin, June 2021</i>		

Table 2: Impact of RBI's Post Pandemic measures: Monetary Transmission to Money Market						
<i>Money Market - Rates and Spread over Policy Rate</i>						
	<i>Interest Rates (in Percent)</i>			<i>Spread (in bps) over Policy Rate</i>		
<i>Instrument</i>	<i>As on March 26, 2020</i>	<i>As on June 8, 2021</i>	<i>Variation (in Bps)</i>	<i>As on March 26, 2020</i>	<i>As on June 8, 2021</i>	<i>Variation (in BPS)</i>
1	2	3	(4 = 3-2)	5	6	(7 = 6-5)
WACR	5.34	3.09	-225	19	-91	-110
Tri-party Repo	1.04	3.18	214	-411	-82	329
Market Repo	1.47	3.3	183	-368	-70	298
3-month CD	7.95	3.42	-453	280	-58	-338
3-month T-bill	5.04	3.39	-165	-11	-61	-50
Policy rate	5.15	4	-115	-	-	-
Reverse repo rate	4.9	3.35	-155	-25	-65	-40
<i>Sources: RBI, FBIL</i>						

Table 3: Impact of RBI's Post Pandemic Measures: Monetary Transmission to Bond Markets						
<i>Bond Markets - Rates and Spread</i>						
	<i>Interest Rates (percent)</i>			<i>Spread (bps) (over corresponding risk-free rate)</i>		
<i>Instrument</i>	<i>As on March 26, 2020</i>	<i>As on June 7, 2021</i>	<i>Variation (in Bps)</i>	<i>As on March 26, 2020</i>	<i>As on June 7, 2021</i>	<i>Variation</i>
1	2	3	(4 = 3-2)	5	6	(7 = 6-5)
CP (3-month)#	6.74	3.5	-324	170	11	-159
Corporate Bonds						
(i) AAA (1-yr)	7.76	3.96	-380	246	1	-245
(ii) AAA (3-yr)	8.47	4.89	-358	276	-6	-282
(iii) AAA (5-yr)	7.84	5.52	-232	141	-19	-160
(iv) AA (3-yr)	9.15	5.65	-350	344	70	-274
(iv) BBB-minus (3-yr)	12.29	9.59	-270	658	464	-194
10-yr G-sec	6.22	6.02	-20	-	-	-
<i>Sources: RBI, CCIL, FIMMDA; CMIE and Reuters. #: It is CP-NBFC rate.</i>						

Table 4: Monetary Policy Transmission from Repo rate to Deposit and lending rates						
		<i>Term Deposit Rates</i>		<i>Lending Rates</i>		
<i>Period</i>	<i>Repo Rate</i>	<i>Median TDR (Fresh Deposits)</i>	<i>WADTDR</i>	<i>1-Year Median MCLR</i>	<i>WALR of Outstanding Rupee Loans</i>	<i>WALR- Fresh Rupee Loans</i>
Feb 2019-Sep 2019 (Pre-External Benchmark Period)	-110	-9	-8	-30	0	-43
Oct 2019-March, 2022 (External Benchmark Period)	-140	-180	-181	-128	-143	-170
March 2020-March 2022 (Covid Period)	-115	-150	-143	-95	-124	-140
Feb 2019-March 2022 (Current Easing Cycle)	-250	-208	-189	-155	-143	-213
April 2021-March 2022	0	0	-26	-5	-29	-10
WALR: Weighted Average Lending Rate; WADTDR: Weighted Average Domestic Term Deposit Rate; MCLR: Marginal Cost of Funds based lending Rate; TDR: Term Deposit rate						
<i>Source</i> : RBI's Monetary Policy Report, April, 2022						

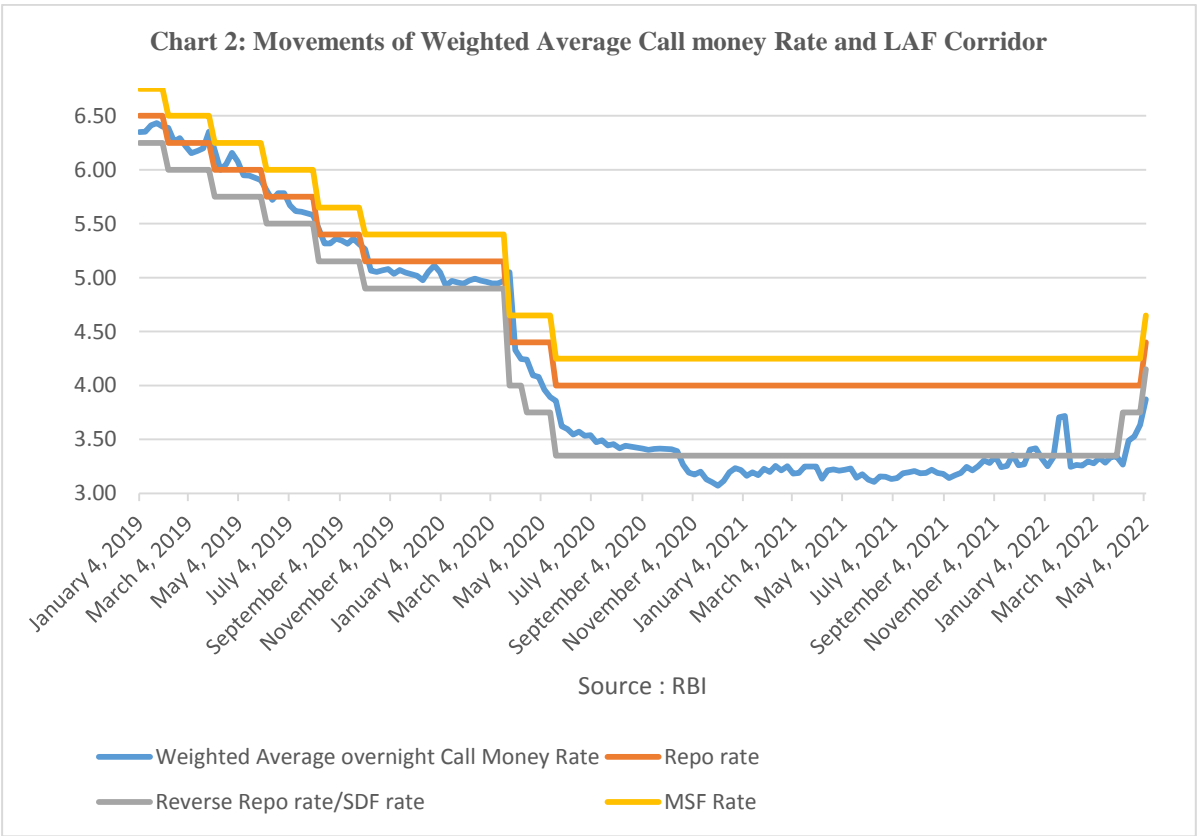
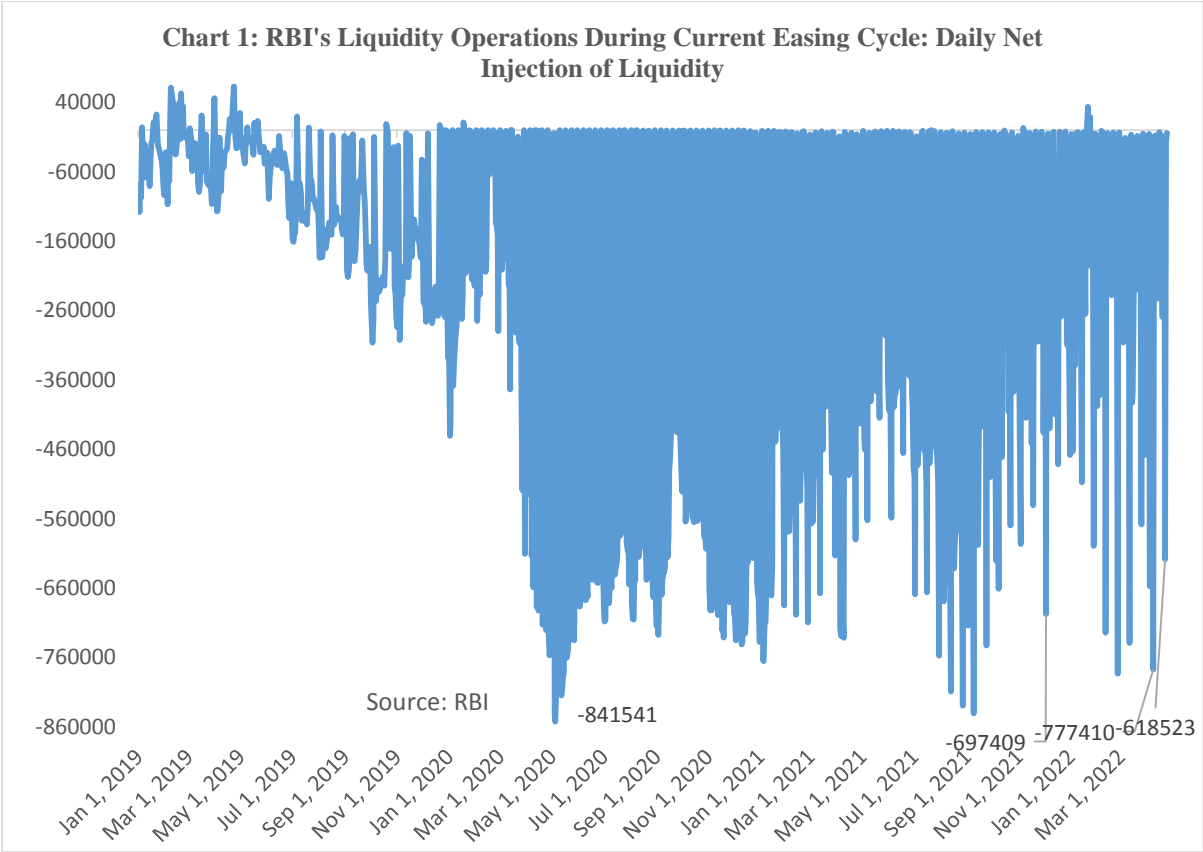
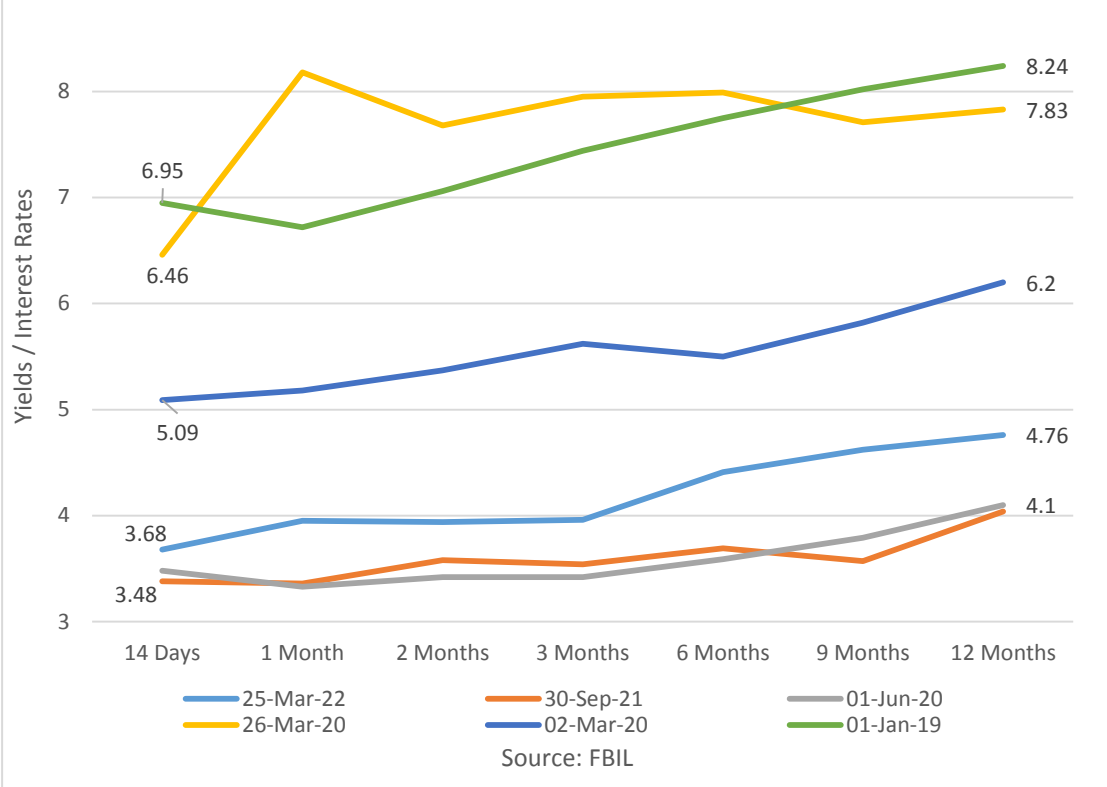


Chart 3: FBIL-Certificate of Deposits (FBIL-CD) Yield Curve



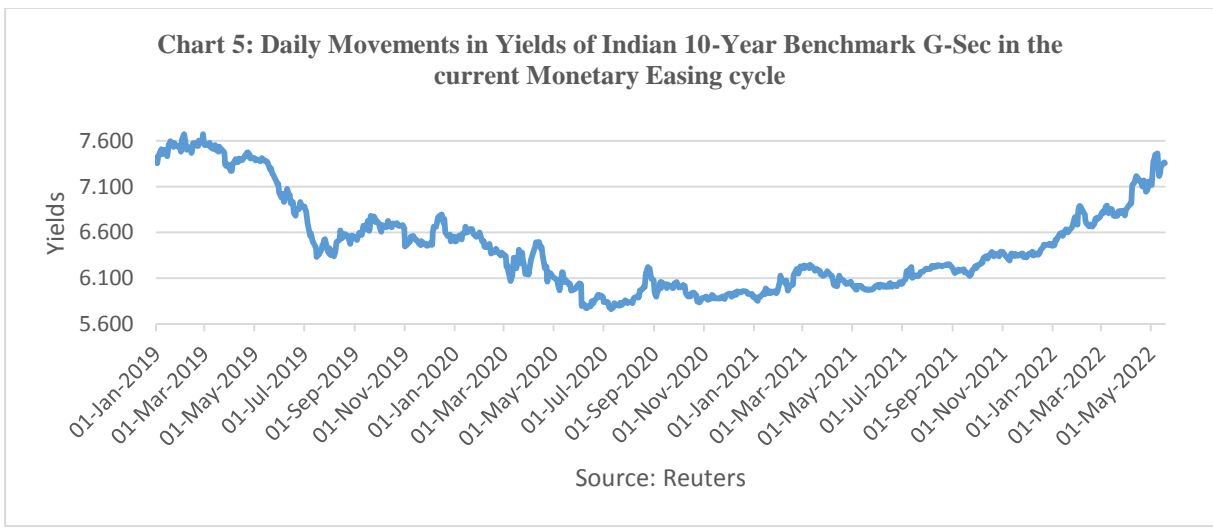
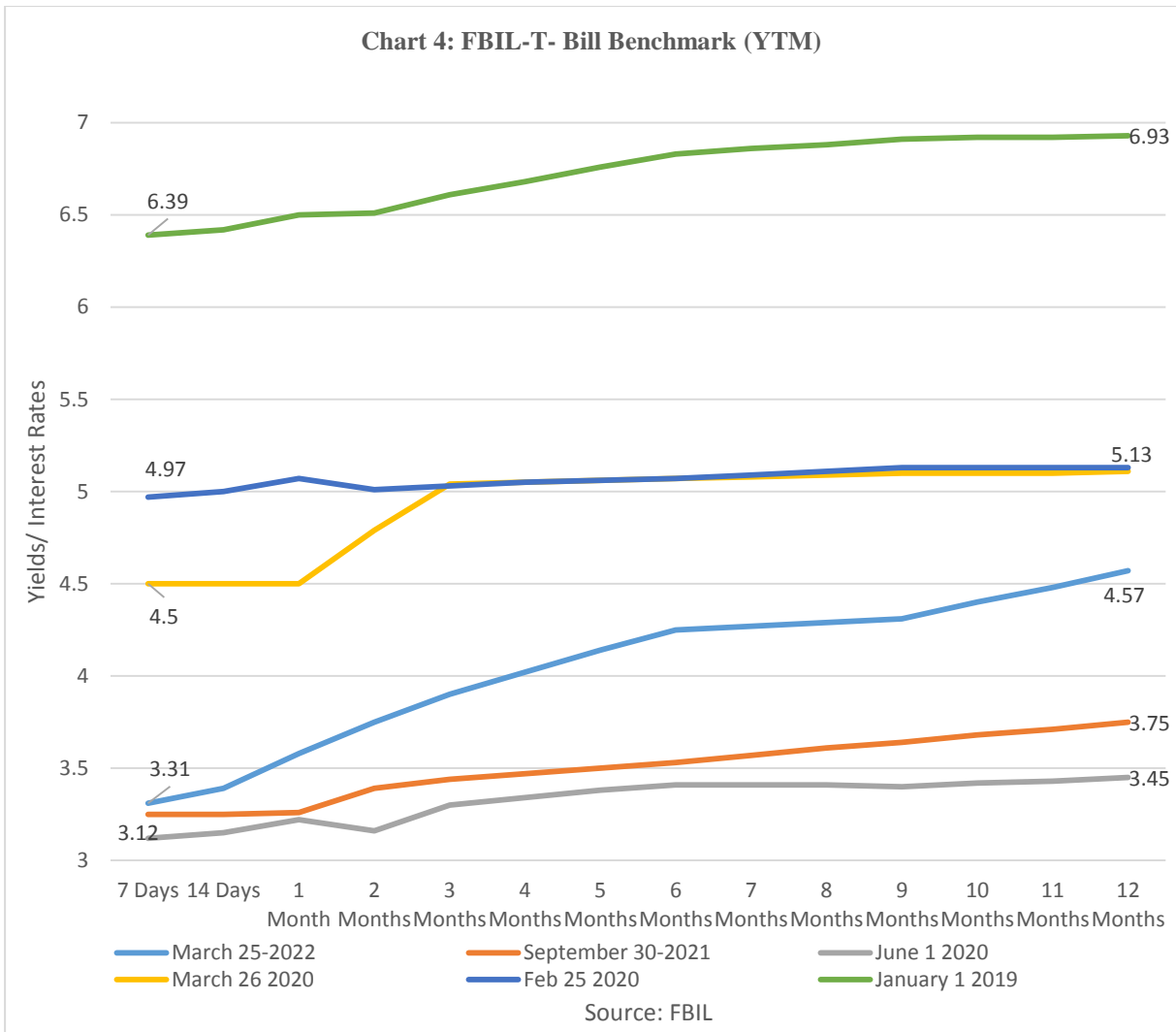


Chart 6: Downward shift in the Indian Sovereign Yield curve in response to Monetary Stimulus

