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SPEECH

NBFC Regulation - Looking Ahead
M. Rajeshwar Rao

NBFC Regulation - Looking Ahead*

M. Rajeshwar Rao

Dr. Charan Singh, Shri Deepak Sood, Shri Ramesh Iyer, Shri Vineet Agarwal, Shri S. Ramann, Shri Sunil Kanoria, Shri Raman Agarwal, Ladies and Gentlemen,

I thank the Associated Chambers of Commerce and Industry of India (ASSOCHAM) for this very kind invitation to address the 'National E-Summit on Non-Banking Finance Companies'- with the theme "Stability and Sustainability of Financial Sector".

At this juncture, Non-Banking Financial Companies (NBFC) sector is passing through a critical phase. Recent failures of certain large NBFCs, severe liquidity strain confronting the sector and the consequent financial stability concerns have brought NBFC regulations back into focus. I thought that the time is opportune to talk a little bit on the innovative transformations taking place in the NBFC sector and the regulatory response from the Reserve Bank. It would be contextual to take stock of the direction in which regulatory focus has moved and what could be the future shape of NBFC regulations. This is intended as an analysis to evoke discussion and debate on the subject.

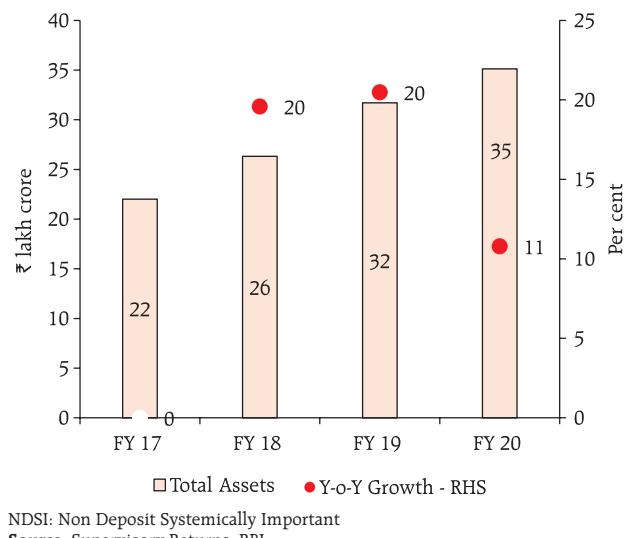
Growth of NBFC Sector and the Need for Prudence

NBFCs have come a long way in terms of their scale and diversity of operations. They now play a critical role in financial intermediation and promoting inclusive growth by providing last-mile access of financial services to meet the diversified financial needs of less-banked customers. Over the

years, the segment has grown rapidly, with a few of the large NBFCs becoming comparable in size to some of the private sector banks. The sector has also seen advent of many non-traditional players leveraging technology to adopt tech-based innovative business models.

Between March 31, 2009 and March 31, 2019, the total assets² of NBFCs grew at a compounded annual growth rate (CAGR) of 18.6 per cent, while the balance sheets of scheduled commercial banks (SCBs) grew at a CAGR of 10.7 per cent. Consequently, the aggregate balance sheet size of NBFCs increased from 9.3 per cent to 18.6 per cent of the aggregate balance sheet size of SCBs during the corresponding period. In absolute terms, the asset size of NBFC sector [including Housing Finance Companies (HFCs)], as on March 31, 2020, is ₹51.47 lakh crore³. As at end-March 2020, NBFCs have been the largest net borrowers of funds from the financial system⁴, of which, more

**Chart 1: Size and Growth of NBFC Sector
(Deposit taking and NDSI)**



* Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India. Speech delivered at the 'National E-Summit on Non-Banking Finance Companies' organized by ASSOCHAM on November 6, 2020. The inputs provided by Shri Manoranjan Mishra, Shri Chandan Kumar and Shri Pradeep Kumar are gratefully acknowledged.

² Report on Trend and Progress of Banking in India, RBI (2010 & 2019).

³ Asset size of NBFCs (deposit taking, NDSI, non NDSI) – ₹37,38,162 crore.
Asset size of Housing Finance Companies (HFCs) – ₹14.09 lakh crore.

⁴ Financial Stability Report, RBI, July 2020.

than half of the funds were from SCBs, followed by Asset Management Companies-Mutual Funds (AMC-MFs) and Insurance Companies. As the financial intermediation has shifted, so has interconnectedness. Many NBFCs now rely on banking system for funds and emergency liquidity needs. Therefore, it is not enough to understand and confront the vulnerabilities of the banking sector alone. The need of the hour is to understand vulnerabilities in the NBFC sector and how shocks are transmitted to or from the sector.

There is an increasingly complex web of interlinkages of the sector with the banking sector, capital market and other financial sector entities, on both sides of the balance sheet. As such NBFCs, like other financial intermediaries, are increasingly exposed to counterparty, funding, market and asset concentration risks, even before the COVID-19 pandemic impacted financial markets and our lives.

The Pandemic Effect

In the aftermath of liquidity stress post Infrastructure Leasing and Financial Services Limited (IL&FS) and Dewan Housing Finance Corporation Ltd. (DHFL) events, the market funding conditions turned difficult for NBFCs. While NBFCs with better governance standards and better operating practices did well, others bore the brunt of the market forces. Smaller NBFCs and Microfinance Institutions (MFIs), who were contributing significantly to the last mile credit delivery, also got impacted as their funding sources got further squeezed. The Reserve Bank acted in a swift and proactive manner to improve access to funding and liquidity by its monetary policy and liquidity measures and resultantly, the cost of funds for NBFCs and HFCs has reduced substantially for all rating categories (Chart-2).

It is important to recognise that challenges faced by some of the NBFCs were reflective of inherent fragilities. As financial markets started differentiating

Chart 2: Funding Cost: 3-Month Commercial Paper (CP) Weighted Average Yield



Source: RBI Staff Calculations.

between strong/well managed NBFCs and those having perceptible weaknesses, market discipline started to play out - entities with asset-liability mismatches or asset quality concerns faced constraints on market access. the Reserve Bank, in response, took several calibrated steps to channel credit flow into the NBFC sector and improve the sector's long-term resilience.

As the sector was slowly inching towards normalcy (as can be seen from Table-1 below), the outbreak of COVID-19 and disruptions in economic activity due to lockdowns led to building up of huge stress in the financial system. While the entire financial system was affected, the impact was significantly greater on NBFCs due to their underlying business models, thereby straining their profitability.

**Table 1: Profitability of NBFC Sector
(Deposit Taking and NDSI)**

(Amount in ₹ crore)

Profitability Parameters	March 2017	March 2018	March 2019	March 2020
Net profit (₹ crore)	31,923	42,434	17,460	41,257
Annualised RoA (%)	1.5	1.6	0.6	1.2
Annualised RoE (%)	6.3	6.8	2.4	5.1

Note: Return on Assets (RoA), Return on equity (RoE).

Source: Supervisory Returns, RBI.

The Regulatory Approach

The regulatory approach of the Reserve Bank has adapted to the increase in complexity of the entities within the NBFC sector as well as the growing significance of NBFCs within the financial sector. The core principles of NBFCs regulation, however, have remained intact, i.e., a) protection of depositors (in case of deposit-accepting companies) and customers; and, b) preserving financial stability. The varying emphasis on these objectives at different points in time has led the Reserve Bank to deploy different policy tools as appropriate. We must recognise that NBFC regulation has undergone certain fundamental changes in recent years.

Let me outline five of these most significant changes in brief

- (i) First and foremost, in line with the Reserve Banks emphasis on ownership-neutral regulations, Government owned NBFCs have been brought under the purview of prudential regulation since May 2018. Considering that Government owned NBFCs account for more than one-third of the sector, predominantly in infrastructure financing, this is a significant change.
- (ii) Second, considering the recent turmoil some NBFCs had to face because of liquidity stress, the criticality of sound liquidity risk management by NBFCs has been reinforced with the introduction of the liquidity risk management framework for NBFCs with asset size above ₹100 crore. All NBFCs, irrespective of size are encouraged to follow the framework. The guidelines emphasise the 'Principles of Sound Liquidity Risk Management and Supervision' published by the Basel Committee on Banking Supervision. The framework expects the Boards of NBFCs to take an active role in the management of

liquidity risk and deploy internal monitoring tools suitable to their business profile. More importantly, the regulations have devised a simplified and tailored Liquidity Coverage Ratio (LCR) meant for large NBFCs. It would prepare large NBFCs to effectively meet cash outflows even under severe liquidity stress scenarios over a 30-day horizon. No doubt, maintaining adequate high-quality liquid assets would have repercussion on the overall yields of NBFCs, but the regulation is commensurate with the need to mitigate risks associated with maturity/liquidity transformation the NBFCs engage in.

- (iii) The third important development is in connection with FinTech based product delivery. It is now well recognised that non-banking financial sector would be a fertile ground for technology-based experimentation in financial products and services. Regulations have sought to create a conducive environment in this regard. For example, the timely introduction of guidelines for peer-to-peer (P2P) lending platforms has ensured orderly growth of the segment anchored in high standards of prudence. Those have made lending platforms a neutral meeting place for lenders and borrowers and keeping them insulated from handling of funds involved in the underlying transactions. Regulations have brought down risks while creating the right environment for legitimate expansion of business opportunities. The ecosystem created under the Account Aggregator (AA) framework is yet another example of proactive regulation in the technology-intense activities. The AA framework has ushered in the required framework for safe, secure and consent-based sharing of information on financial

assets of a customer. The critical regulatory aspect to be noted here is that the Account Aggregator does not store or view the data passing through it, thereby leaving no scope for any perverse incentive to abuse/ misuse the financial data. Let me also emphasise that the Reserve Bank has been flexible in allowing registered NBFCs to be completely app-based in financial intermediation.

- (iv) The Reserve Bank revised the regulatory framework under the principles of proportionality for Core Investment Companies (CICs) with transparency and disclosures being the focus of the revised regulations. The learnings from failure of a large NBFC - a Core Investment Company prompted this regulatory renovation. Large aggregate leverage at the group level aided by complex, multi-layered ownership structures were found to be nurturing the seeds of financial instability and vulnerability. Further, the aggregate risk view was missing at the holding company level. The revised regulatory framework tries to plug regulatory gaps in critical areas in respect of CICs.
- (v) Taking over the regulation of Housing Finance Companies (HFCs) is yet another significant move. Changes in the regulatory framework of HFCs have been issued after wide public consultations. The idea is to treat HFCs as a category of NBFC and bring about harmonisation of regulations while allowing HFCs to maintain their unique characteristics and allow them to transit to the revised regulations over a period of time, that is in a gradual manner, to make it least disruptive for the rest of the financial sector.

With the growth in size and interconnectedness, NBFCs have increasingly become systemically

significant and the prudential regulations for NBFC sector have evolved to give greater focus to the theme of financial stability. However, let's not forget that regulation-light structure of NBFCs has enabled the flexibility enjoyed by them. This flexibility is the primary advantage of NBFCs over banks, enabling them to serve the last mile of financial intermediation. Therefore, it is imperative to strike a balance between regulating the NBFCs more tightly and the need to provide them the required flexibility. This will remain the cornerstone while we imagine the future of regulation for NBFCs.

The Future

Principle of Proportionality

There is a view that any regulatory framework would ideally be designed according to the principle of proportionality. By extension, the spill-over of risks from a systematically important NBFC capable of transmitting perceptible impact on financial stability, must be dealt with in a proportionate manner. So, NBFCs with significant externalities and which contribute substantially to systemic risks must be identified and subjected to a higher degree of regulation. One can also argue that the design of prudential regulatory framework for such NBFCs can be comparable with banks so that beyond a point of criticality to systemic risks, such NBFC should have incentives either to convert into a commercial bank or scale down their network externalities within the financial system. This would make the financial sector sound and resilient while allowing a majority of NBFCs to continue under the regulation-light structure.

Within the proportionality paradigm, one must deal with entities which neither belong to the critical ones in terms of systemic risk nor are they too small in their scale and complexity. These NBFCs currently enjoy great degree of regulatory arbitrage vis-à-vis banks. As a group, these entities can contribute to build-up of systemic risks because of the regulatory

arbitrage enjoyed by them; hence there is a need to recalibrate the regulations.

While dealing with proportionality principle, let me also touch upon the regulation of microfinance sector as well. We all are aware of the circumstances under which the regulatory framework for NBFC-MFIs was framed. Much water has flown under the bridge since then. Several large MFIs have converted into Small Finance Banks. The share of NBFC-MFIs in the overall microfinance sector has come down to a little over 30 per cent. Today we are in a situation, where the regulatory rigour is applicable only to a small part of the microfinance sector. There is a need to re-prioritise the regulatory tools in the microfinance sector so that our regulations are activity-based rather than entity-based. After all, the core of microfinance regulation lies in customer/consumer protection.

We need to strike the right balance between the degree of regulation and the need for flexibility – a critical issue I alluded to a while ago. We could perhaps consider a graded regulatory framework for NBFCs calibrated in relation to their contribution to systemic significance.

Regulating the FinTech

Let me shift focus to another contemporary area of interest. Although significant regulatory steps have been taken already in the FinTech, the dynamic nature of the FinTech focused NBFCs keeps throwing up new challenges. The NBFC sector has been in the forefront in adopting innovative fintech-led delivery of products and services, which are transforming the way one can imagine access to and interaction with these services. The advance technological solutions such as Big Data Analytics and Artificial Intelligence are being adopted by a large number of players to extend credit in an efficient manner over digital platforms. The Reserve Bank has been on the forefront of creating an enabling environment for growth of digital technology for new financial products and services. In fact, in the non-

banking space, the Reserve Bank has been ahead of the curve and has come out with regulations for new products and services when the industry itself was at nascent stage. Peer to peer lending, Account Aggregator, and credit intermediation over "only digital platform" are case in point where the regulations have helped the industry to grow in a systematic and robust manner. While making regulation for the future in FinTech area, orderly growth and customer protection and data security will remain the guiding principles for the Reserve Bank.

Ensuring Transparency and Good Governance

Ensuring good corporate governance in NBFCs is at the core of any regulatory change. This is not an easy objective to meet, as good governance is essentially an aspirational achievement for an entity and it can seldom be founded only on regulatory prescriptions. Good governance would be a natural outcome if promoters/owners and senior management are fundamentally 'fit and proper'. It is extremely critical that appropriate filtering mechanisms are in place to allow only the genuine and able promoters to start the business of NBFCs. After all, by issuing Certificate of Registration to new NBFCs, we provide them with the regulatory mandate to access public funds multiple times their net worth. Besides, it is necessary that NBFCs do not become conduits in money laundering and terrorist financing in any manner. While the current mechanism within the Reserve Bank focuses on the above objective for companies seeking registration, there is a need to extend similar rigour of due diligence whenever there is a change in ownership/ control in an existing NBFC.

Consumer Protection and Fair Conduct

A consumer of financial services provided by any regulated entity, whether a bank or NBFC, nurtures similar expectation of fair treatment and avenues for grievance redressal. Extension of the scheme of ombudsman to the NBFC sector is certainly a move

in this direction. A transparent and self-disciplining mechanism has to be imagined for the future where the changing business models and newer credit delivery mechanisms do not deviate from the objective of fair treatment of the customer.

Conclusion

The Global Financial Crisis was primarily attributed to feather-touch regulatory approach, ignoring of the liquidity risks by financial intermediaries and unabated financial innovation. Abundant liquidity, light touch regulation and financial innovation has also aided the growth of the NBFCs. The financial system today is significantly different from what it was at the outset of the financial crisis more than a decade ago. Regulatory reforms implemented in response to that crisis in India and globally, changes in technology and, more importantly, the growth of NBFCs have contributed to this dynamic landscape. The NBFC sector has become extremely diverse. The business model, customer profile and nature of financial products vary substantially depending on the category of the NBFC. The uniqueness of this sector

lies in the inherent diversity of activities carried out by different NBFCs and thus, there can be no 'one-size-fits-all' prescription in the regulatory approach for NBFCs. Perhaps a calibrated and graded regulatory framework, proportionate to the systemic significance of entities concerned is the way forward.

While on the one hand technological innovation and FinTech based delivery of financial services and products further the objective of improving access of financial products to the members of public, on the other, they push the regulator to recalibrate regulatory interventions to achieve the objective of consumer protection and financial stability. The regulatory challenges in marrying these diverse and sometimes conflicting objectives are many, but clarity of purpose would help us make the right policy choices.

As I conclude, I pray that all of you and your family members stay safe in this long-drawn battle against the pandemic. Let me also wish you a happy and safe Deepawali.

Thank You.

ARTICLES

State of the Economy

An Economic Activity Index for India

Preliminary Estimates of Household Financial Savings - Q1:2020-21

Revisiting the Determinants of the Term Premium in India

India's Gilt Market

LIBOR: The Rise and the Fall

FinTech: The Force of Creative Disruption

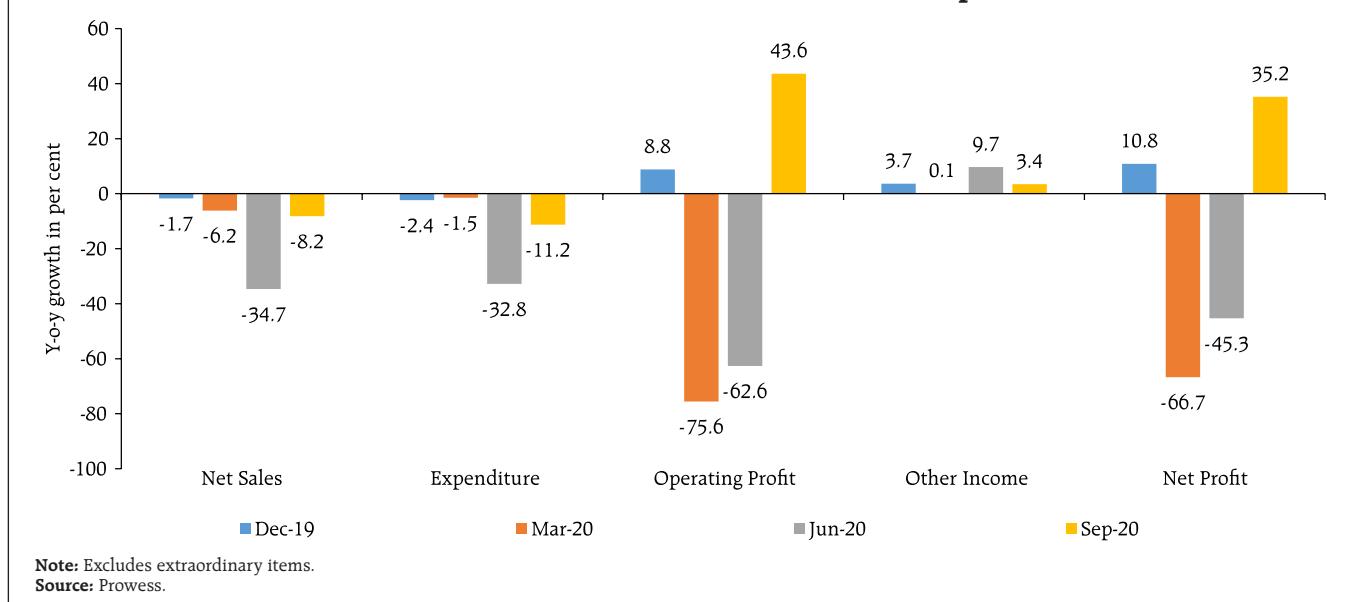
State of the Economy*

At a time when global economic activity is besieged by the outbreak of the second wave of COVID-19, incoming data for the month of October 2020 have brightened the near-term outlook for the Indian economy and stirred up consumer and business confidence. There are, however, formidable downside risks that confront the path of recovery.

Since the assessment of the performance of the Indian economy in the first half of 2020-21 that was presented in the Monetary Policy Report of October 2020, several developments point to a window of respite opening up and an unshackling of economic activity from the grip of COVID-19 as the festival season sets in. After the unprecedented decline of 23.9 per cent in gross domestic product (GDP) in Q1:2020-21, 'nowcasting'¹ assessment

presented in an article later in this Bulletin suggests that the pace of contraction of GDP eased to 8.6 per cent in Q2:2020-21. The estimates of the National Statistical Office (NSO) that are expected at the end of November 2020 will formally bear out the extent of improvement that occurred in the quarter gone by. For 887 non-financial listed companies that have declared results so far (constituting around four-fifth of the market capitalisation of all listed non-financial companies), sales remained in contraction in Q2, although at a moderated pace relative to Q1. Expenses of these companies, however, fell faster than sales in the quarter ending September 2020, resulting in a sharp rise in operating profits after two consecutive quarters of contraction. With other income increasing moderately, net profits rose strongly, mirroring the behaviour of operating profits, which suggests that gross value added by the corporate sector in Q2 may surprise on the upside (Chart 1).

Chart 1: Performance of Listed Non-Financial Companies



* This article has been prepared by Asish Thomas George, Krishna Mohan Kushawaha, Shashi Kant, Saptarshi Ghosal, Kunal Priyadarshi, Abhinandan Borad, Jitendra Sokal, Sonam Choudhry, Manu Sharma, Barkha Gupta, Avnish Kumar, Rishabh Kumar, Rigzen Yangdol, Madhuresh Kumar, S M Lokare and Michael Debabrata Patra. Views expressed in this article are those of the authors and do not necessarily represent the views of the Reserve Bank of India.

¹ Nowcasting is the prediction of the present or the very near future of the state of the economy (RBI, 2020).

Table 1: Select Ratios of Manufacturing Companies

(Per cent)

End of Period	Debt to equity ratio	Debt to asset ratio	Cash to total assets
H2:2018-19	35.9	19.2	2.4
H1:2019-20	32.6	17.7	2.7
H2:2019-20	45.7	22.4	3.2
H1:2020-21	40.5	21.5	4.1

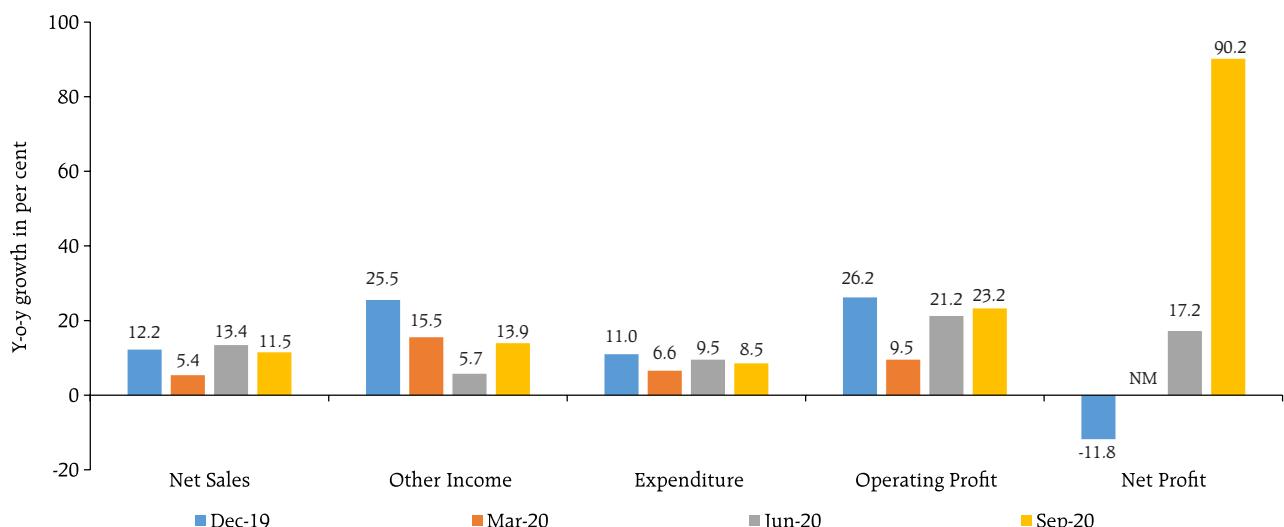
Source: Capitaline.

Unaudited balance sheets of 423 early reporting listed private manufacturing companies suggest that leverage (as measured by debt to equity ratio and the debt to asset ratio) marginally declined in H1:2020-21 relative to the previous months (Table 1).

Evidently these companies reduced their assets during H1:2020-21 to mobilise funds. Investment in fixed assets (capex) remained muted during the pandemic. Funds mobilised by these companies in the form of equity and liquidation of assets were mainly used to reduce liabilities and increase cash holdings, the latter case indicative of precautionary saving in uncertain times. Investment by these companies remained subdued.

Earnings results of 225 listed banking and financial sector companies in India (representing around four-fifth of all the listed banking and financial sector companies in terms of market capitalisation) reflected a modest pickup in interest income (Chart 2). On the other hand, income flows like profit/ loss from sale of assets and investments registered a healthy increase. Total expenditure moderated on account of lower growth in interest expenses, leading to a robust rise in operating profits. Furthermore, provisioning on loans and advances grew only marginally, resulting in a sharp jump in net profits. According to CARE Ratings, the ratio of gross non-performing assets (NPAs) to total assets improved to 7.7 per cent in September 2020 from 8.2 per cent in the preceding quarter.

This article, the first in the series, tracks a host of indicators of various facets of the economy that have become available for the month of October, 2020 with a view to sustaining an ongoing assessment of this cusp on which the Indian economy is poised in Q3. It is envisaged that hereafter, a monthly review of

Chart 2: Performance of Listed Financial Companies

the state of the economy will become a regular feature in the Bulletin. By doing so, a hallowed tradition that began with the first issue of the Bulletin in January 1947, but interrupted during the period 1995 to date, will be revived.

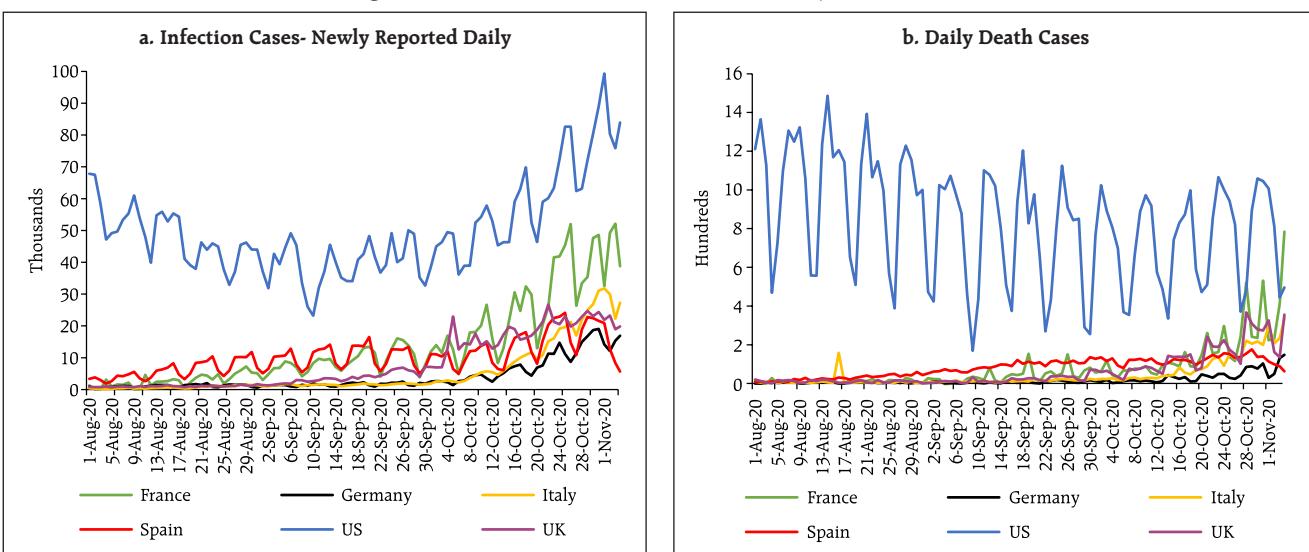
Set against this backdrop, this article sifts through various indicators to gauge the state of the economy in the month of October 2020. Rest of the article is divided into five sections. The next Section encapsulates the evolving global economic and financial market developments. Section III analyses the incoming data on high frequency indicators through various sectors of the real economy. Section IV examines the evolving financial market conditions in the wake of recent liquidity management measures of the Reserve Bank. The last Section sums up the discussion.

II. The Global Setting

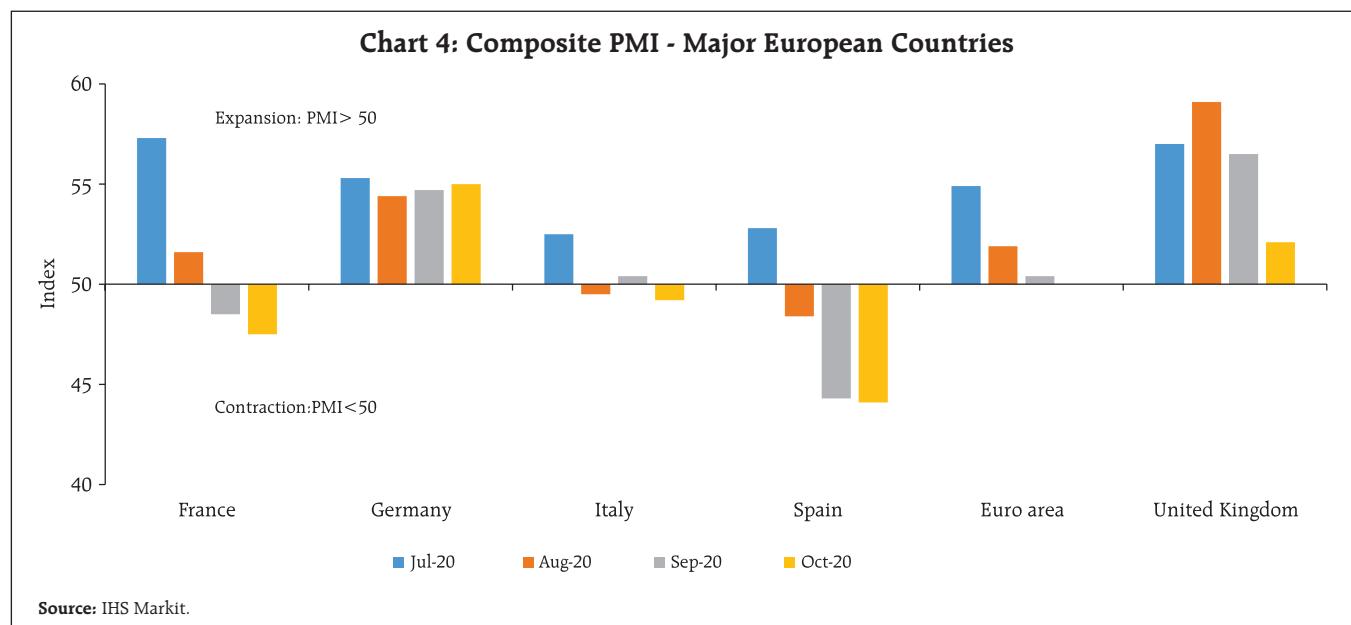
Global economic activity is besieged by the outbreak of the second wave of COVID-19 that is enforcing re-clamping of lockdowns across Europe and a resurgence of infections in the US (Chart 3). Consequently, the hesitant emergence of the global

composite purchasing managers' index (PMI) into expansion from July 2020 is at risk. This is already evident in the September and October composite PMI for major European economies, which have edged down from the levels registered in July, with some countries even falling back in contraction, primarily on account of the weakening services sector activity (Chart 4). While the global composite PMI increased to 53.3 in October from 52.5 a month ago, struggling consumer-facing industries amidst re-imposed restrictions remain major challenge for full-paced recovery. This could adversely impact the rejuvenation of global trading activity that was underway in Q3 of 2020 - the UNCTAD estimated the decline in world trade to have eased to (-) 5 per cent in Q3 from (-) 19 per cent in Q2 on year-on-year (y-o-y) basis. Consequently, the upward revision of the projection of world merchandise trade volume for 2020 by the World Trade Organisation (WTO) from (-) 12.9 per cent made in April to (-) 9.2 per cent in October is confronted with headwinds. Already, crude oil prices have started losing steam since mid-September on fears of the second wave; at US\$ 40.5 per barrel in

Chart 3: Resurgence of COVID-19 Infections in Major Advanced Economies



Source: World Health Organisation.



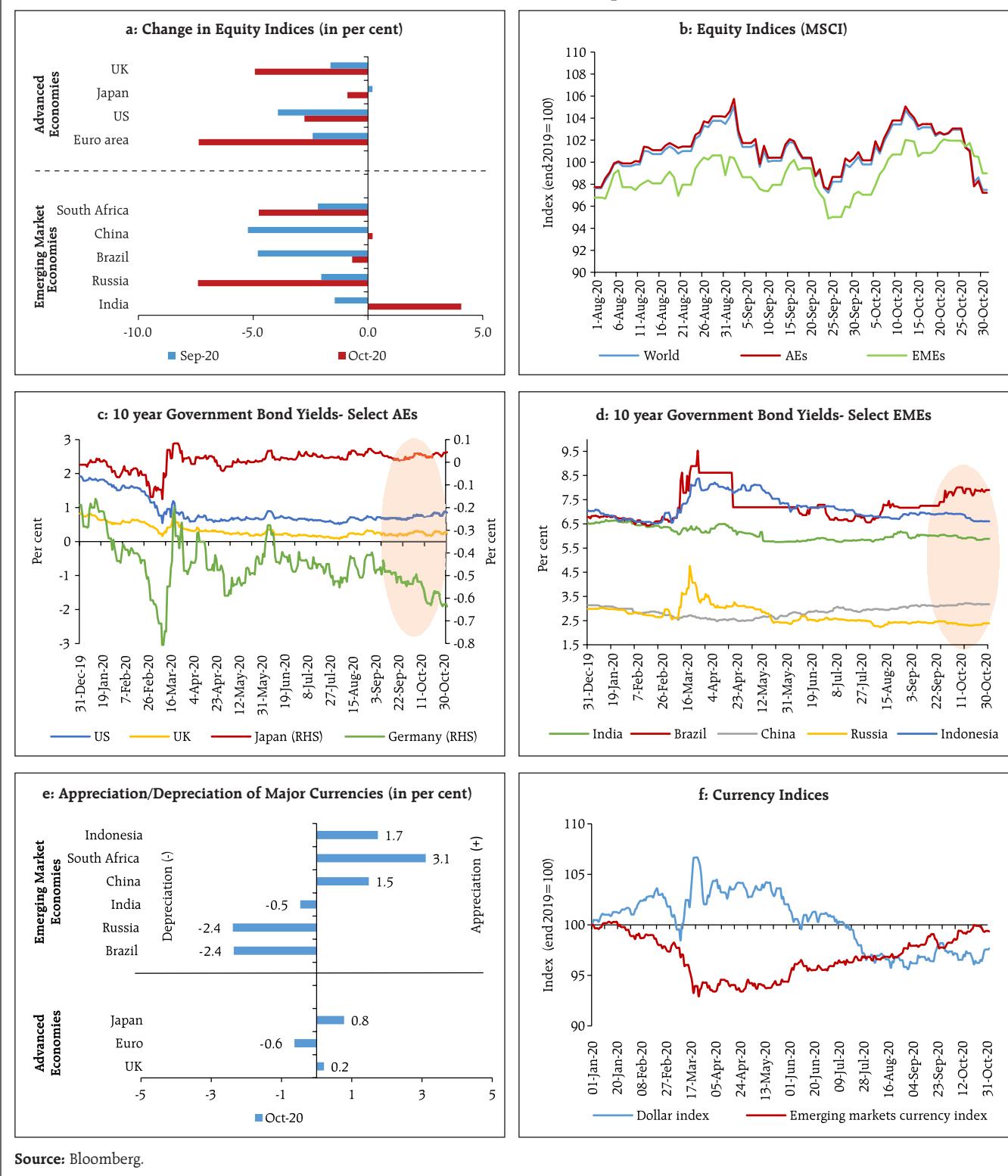
October, they traded 0.6 per cent below their level a month ago. While base metal prices edged up for the sixth consecutive month on the back of re-stocking by China, gold prices remained elevated on safe haven demand as risk aversion pervaded global financial markets, although eased marginally in October on strong dollar. These developments accentuate the significant downside risks to the recent upward revisions to global output forecasts cited by the International Monetary Fund (IMF) in its October 2020 World Economic Outlook (Table 2).

Global equity markets have tumbled, forced into correction by the COVID resurgence and uncertainty surrounding prospects of policy support (Chart 5a and 5b). Global bond markets traded mixed, reflecting country-specific idiosyncratic factors (Chart 5c and 5d). In the currency markets, the US dollar though strengthened marginally by 0.2 per cent in October, on cumulative year-to-date basis it depreciated by 2.4 per cent up to the month under review. For the emerging market (EM) currencies – the Morgan Stanley Capital International Emerging Markets (MSCI-EM) has depreciated by 0.6 per cent on year-to-date basis, notwithstanding an appreciation

Table 2: GDP Growth Projections for 2020 – Select AEs and EMEs

Country	April WEO	June WEO update	October WEO
World	-3.0	-4.9	-4.4
Advanced Economies			
US	-5.9	-8.0	-4.3
UK	-6.5	-10.2	-9.8
Euro area	-7.5	-10.2	-8.3
Japan	-5.2	-5.8	-5.3
Emerging Market Economies			
China	1.2	1.0	1.9
Brazil	-5.3	-9.1	-5.8
Russia	-5.5	-6.6	-4.1
South Africa	-5.8	-8.0	-8.0
India	1.9	-4.5	-10.3

Source: International Monetary Fund.

Chart 5: Financial Market Developments

Source: Bloomberg.

of 1.3 per cent witnessed in October (Chart 5e and 5f). The IMF's October Global Financial Stability

Report pointed out that financial vulnerabilities from stretched valuations in equity markets, growing

corporate debt, and visceral fragilities in banks and the nonbank financial sector are rising, putting medium-term macro-financial stability and growth at risk. The IMF's Fiscal Monitor warned that sovereign debt is at historically high levels at which a debt crisis might be inevitable without prompt and decisive policy action for many low-income countries and some emerging market economies.

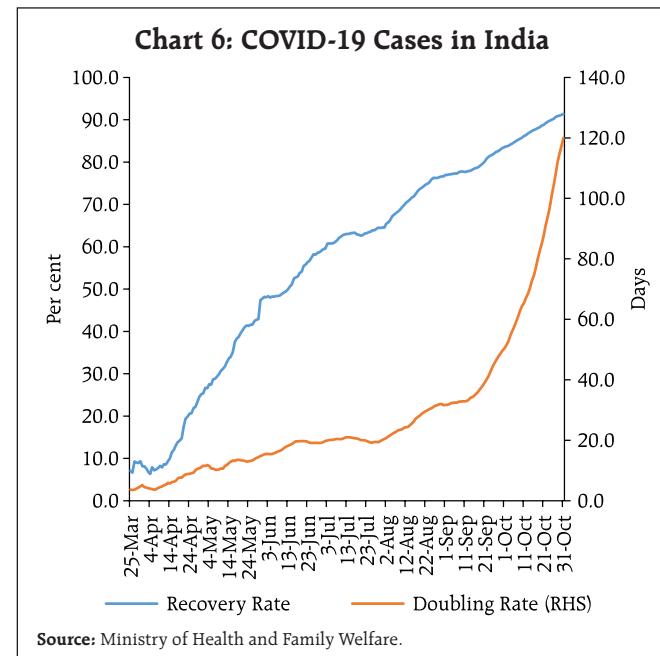
III. Domestic Developments

Contrary to global developments, there are growing signs of the receding of the health crisis in India and this has provided confidence and courage to people to emerge out of containment and engage in economic activity within norms of social distancing, masks and sanitisation. Since mid-September, India is bending the COVID curve. There has been a sequential decline in the new cases that has been sustained through October. New cases in terms of seven-day averages or the case trajectory has dropped from 93,180 on September 18 to 46,062 on October 31. The recovery rate² has crossed 90 per cent. Daily recoveries in October are more than new cases. The doubling rate³ has increased to around 120 days from 3.7 days when the lockdown was imposed on March 25. The slanting down of the curve has encouraged authorities to progressively unlock the economy (Chart 6).

La Niña conditions prevailing over the Pacific Ocean have imparted an early nip in the air and with it a rising optimism as festivities begin. There is a growing confidence that even if there is a second wave, the precipitous plunges of Q1:2020-21 may not recur because the brunt of the impact on contact-dependent industries and services has happened, and they are quickly adapting to a virtual normal.

² The recovery rate is defined as the number of patients who have undergone recovery as percentage of total infections.

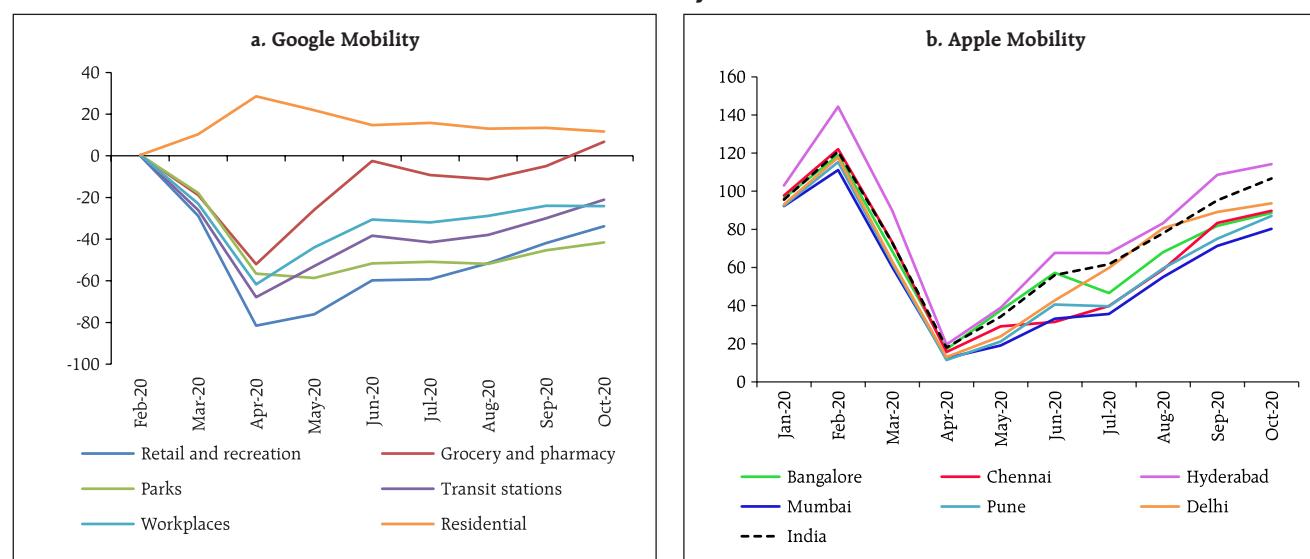
³ The doubling rate is defined as $\ln 2 / \ln (1+r)$, where r is the average of last seven days of growth in cumulative cases.



Moreover, extraordinary policy measures have put a floor under the economy. A trade-off between lives lost and livelihoods cannot be allowed any longer by allowing the virus to spread. The key is to ignite new sources of optimism and dispel contagious pessimism.

In the time of COVID-19 and social distancing, signs of movement have become scarce and sought after, including looking for them from outer space. The Google mobility index⁴, which charts people's movements through satellite imaging by geography and across different categories of activity, indicates that in October, movement has increased around groceries, pharmacies and residential places above pre-COVID levels but remained lower at workplaces, areas of recreation and around retail shops. These signs are corroborated by the Apple mobility index, which has moved past its baseline set on January 13, 2020, led by the southern cities (Chart 7). Movement of goods also increased in October, as reflected in an increase y-o-y of 21.4 per cent in the issuance of e-way bills – intra-state by 23.3 per cent and inter-state by 18.8 per cent.

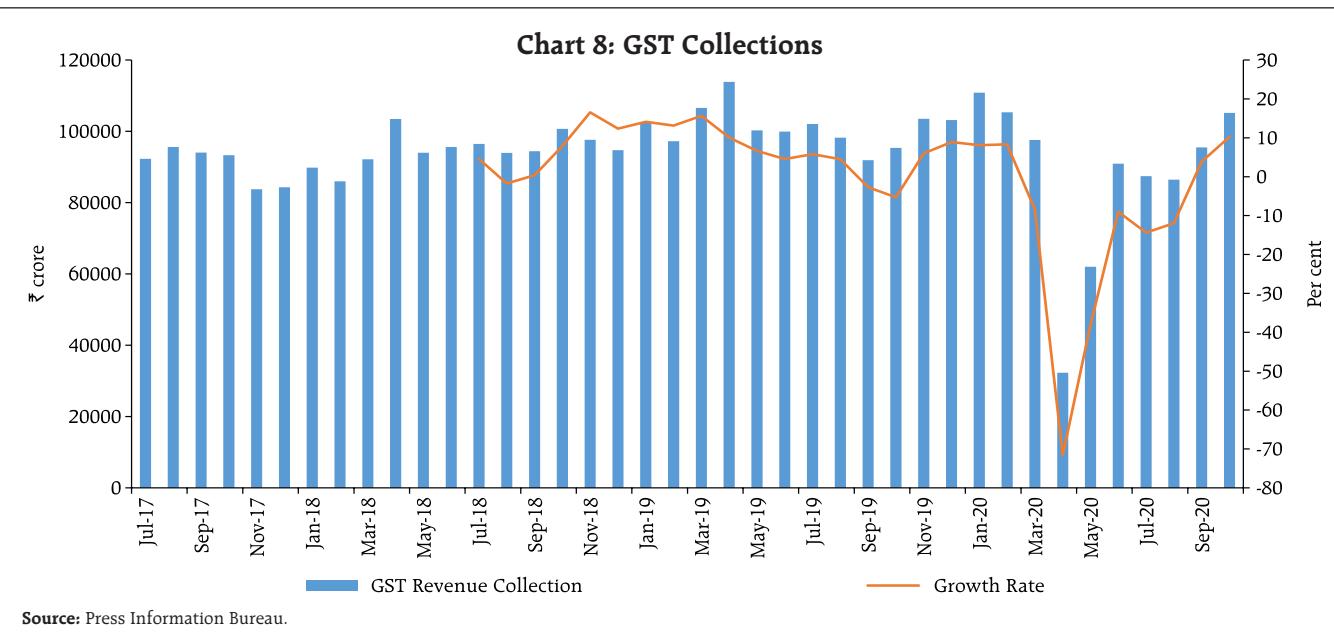
⁴ The google mobility index provides percentage change in visits to different categories of places across geographies compared to the baseline.

Chart 7: Mobility Indicators

Aggregate Demand

Indicators of aggregate demand are still arriving, but there are indications of a pick-up as the festival season gathers intensity. In October, electricity consumption increased by 11.5 per cent on a y-o-y basis for the second successive month after remaining in contraction over the year so far. The consumption of petrol and diesel also emerged out of contraction and posted growth rates of 4 per cent and 6.6 per cent,

respectively. Sales of consumer durables have surged across categories such as smartphones, consumer electronics and automobiles. E-commerce platforms recorded an acceleration of 50 per cent in sales. Mirroring these indicators of the revival in domestic spending, collections under the goods and services tax (GST) broke through the ₹1 lakh crore mark in October for the first time in the financial year, a 10.2 per cent increase y-o-y (Chart 8). The optimism

Chart 8: GST Collections

is also exuded in the September 2020 round of the Reserve Bank's consumer confidence survey (CCS) where households are more confident for the year ahead, with expectations of improvement in general economic situation, employment conditions and income scenario during the coming year.

This positive sentiment is also boosted by a brightening employment scenario. According to the Centre for Monitoring the Indian Economy (CMIE), the unemployment rate has receded almost continuously from a high of 23.5 per cent in April 2020 to 7 per cent in October, with 7.2 persons in every 100 remaining unemployed in urban areas, down from 25 in every 100 unemployed in April. In the rural sector, employment demanded by households under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) expanded by 91.3 per cent in October, indicating that people are quickly restoring lost livelihood.

Daily movements of sea-bound vessels at 13 major ports point towards a contraction in export growth after a rebound that commenced in September, and this is corroborated by information on processing of

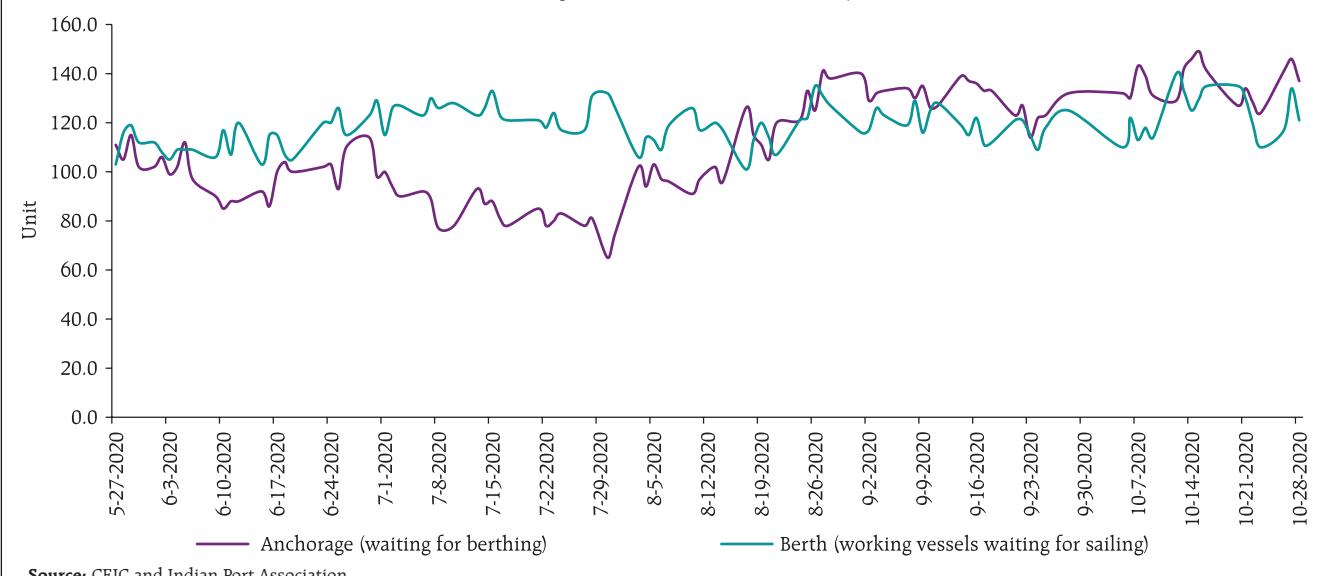
export documents at customs frontiers and authorised dealer banks (Chart 9). Meanwhile, import demand is posting a shallower contraction on the basis of document processing.

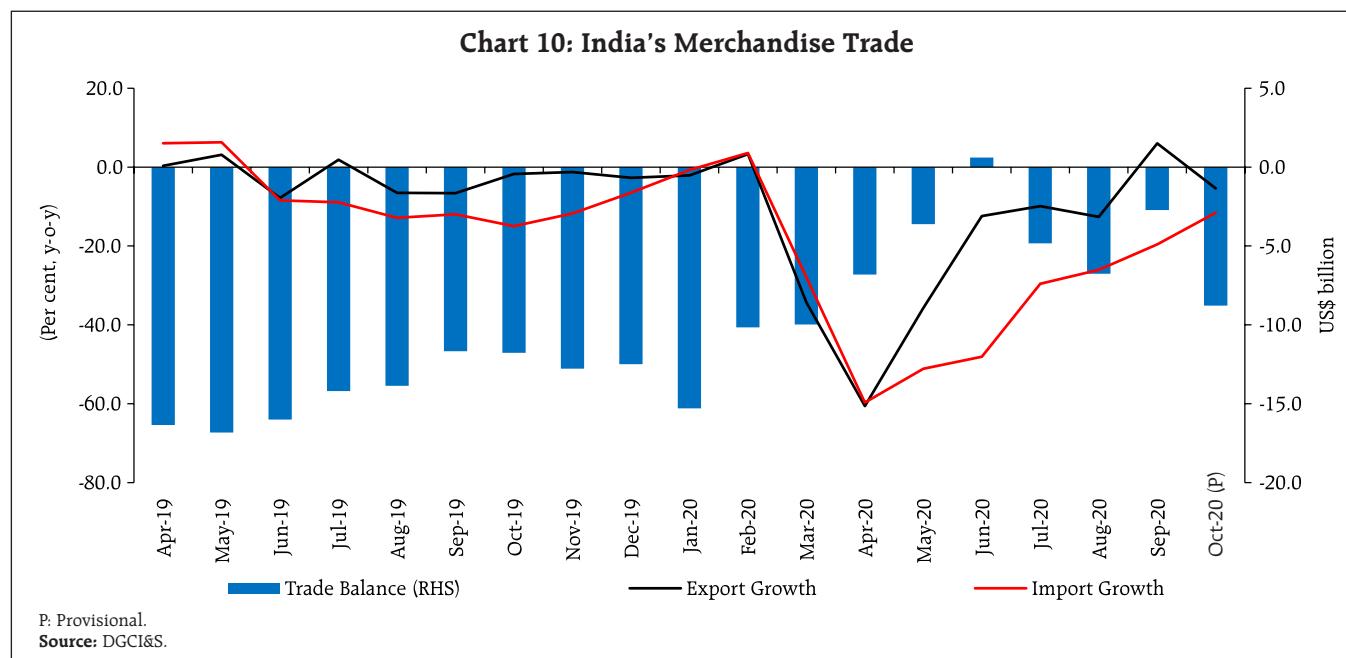
Preliminary data on India's merchandise trade for October 2020 released by the Ministry of Commerce and Industry reveal that exports at US \$ 24.8 billion declined by 5.4 per cent y-o-y, against an acceleration of 6.0 per cent in the previous month. While oil exports registered a contraction of 53.3 per cent, non-oil exports accelerated by 1.8 per cent, led by agricultural commodities and drugs and pharmaceuticals. The decline in imports continued for the eighth consecutive month, although with improving demand conditions, the pace of contraction eased to 11.6 per cent in October from 19.6 per cent a month ago. Consequently, the trade deficit widened to US \$ 8.8 billion in October 2020, the highest in the current financial year (Chart 10).

Aggregate Supply

Aggregate supply conditions have posted a marked improvement in the agricultural and manufacturing sectors, while contact-intensive services are still lagging, indicative of a multi-speed recovery.

Chart 9: Daily Vessel Position at Major Ports



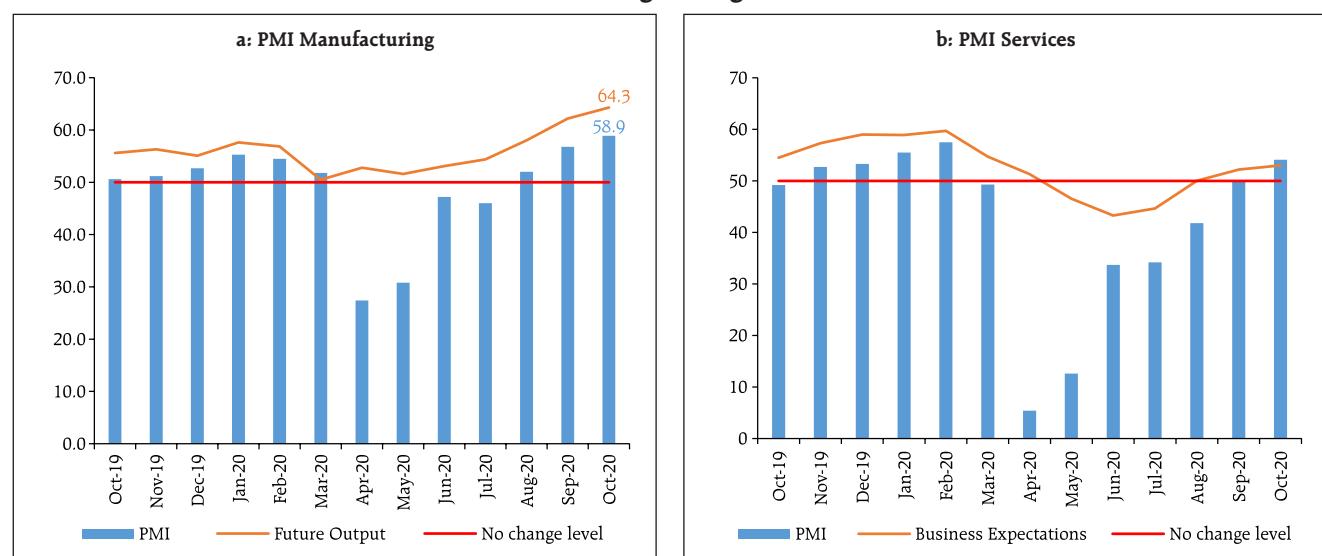


In the agriculture sector, the exceptionally delayed withdrawal of the south west monsoon has created congenial soil and reservoir conditions for the forthcoming *rabi* sowing season. As on November 6, 2020, overall *rabi* acreage stood at 100.9 lakh hectares, 18.8 per cent higher as compared to the previous year. Meanwhile, by the end of October, *kharif* rice procurement was 24.6 per cent higher than a year ago, taking stocks to a level of 2.6 times above the buffer norms. The record wheat procurement resulted in stocks 2.1 times the buffer norms. Overall subsidised foodgrains distribution under the National Food Security Act was 63.3 per cent higher than a year ago by the end of October due to free distribution under *Pradhan Mantri Garib Kalyan Yojana*.

Turning to industrial activity, India's manufacturing PMI surged in a broad-based acceleration to its highest level in a decade at 58.9 in October, driven mainly by new orders and output amidst restocking of inventories (Chart 11). The future output index rose to 64.3, its highest in the past 50 months. Manufacturing firms responding to the Reserve Bank's industrial outlook survey (IOS)

expect that the upturn exhibited in Q2:2020-21 would strengthen in Q3 with improvements in production, capacity utilisation and order books. There are expectations of a recovery in external demand conditions and job landscape, with optimism on the part of availability of finance.

In services where activity had virtually collapsed under the impact of the pandemic, several indicators are rapidly turning around with new business models and work ethics. The services PMI for October at 54.1 emerged out of the contraction zone for the first time since the outbreak of COVID-19, driven by an increase in new work intakes. Among specific categories of services, construction activity is picking up as evident in rising steel consumption, although information on cement production will conclusively endorse this improvement. Trading activity is above pre-COVID levels as reflected in GST collections and rising e-way bill volumes. Transportation has been boosted by a 15.4 per cent jump in railway freight traffic across various categories of commodities, and passenger traffic is following in its wake, *albeit*, with lagged responses as lockdowns ease. Car manufacturing

Chart 11: Purchasing Managers' Index (PMI)

Source: IHS Markit.

majors are reporting double digit growth in response to festival demand and restocking as well as shift in preferences towards owned vehicles over public transportation. The ebullience is not, however, shared by dealerships. According to the Federation of Automobile Dealers Associations (FADA), sales of two-wheelers and passenger vehicles declined by 27 per cent and 9 per cent, respectively, in October 2020. The decline was sharper in the case of commercial vehicles and three-wheelers, which registered a contraction of 30 per cent and 65 per cent, respectively.

Inflation

The official release of the consumer price index (CPI) for October by the NSO is slated for November 12, 2020. Information on retail prices on a daily basis from the Ministry of Consumer Affairs, Food and Public Distribution (Department of Consumer Affairs) indicates that food price pressures that have persisted since the beginning of the financial year continued unabated in October across the board, barring prices of cereals, tomato and sugar. In particular, inflation sensitive prices of onions and potatoes have ruled at unrelentingly high levels during the month (Table 3).

In the non-food category, excise duties and state

taxes on petroleum products have kept retail inflation in this group elevated, with second round effects evident in prices of other goods and services. Some moderation in pump prices of petrol and diesel was observed in October tracking international prices⁵. Increase in the cost of doing business due to additional sanitisation-related expenditures, social distancing norms and labour shortages have also played a role in keeping core inflation firm.

Cost-push pressures are likely to have been somewhat mitigated by the progressive easing of lockdowns, removal of restrictions on inter-state movements of goods and migration of labour back to cities. In the manufacturing PMI for October, input prices moved up, but remained lower than historical standards. Consequently, output prices recorded only moderate increases, pointing to still weak pricing power. Taking these factors into account, a poll of

⁵ The domestic petroleum product prices for the month of October, based on an average of the Indian Oil Corporation Limited (IOCL) prices in the four major metros, saw some moderation with petrol prices registering a decline of ₹ 0.48 per litre (0.6 per cent) from the previous month to ₹ 83.88 per litre and diesel prices declining by ₹ 1.81 per litre (2.4 per cent) from the previous month to ₹ 74.34 per litre.

⁶ Median CPI inflation projections for October 2020, based on a Bloomberg survey of 32 professional forecasters as on November 9, 2020.

Table 3: DCA Essential Commodity Prices

S. no	Commodities	Weight in CPI	₹ per Kg.				Month-over-month (per cent)			
			Sep-19	Oct-19	Sep-20	Oct-20	Sep-19	Oct-19	Sep-20	Oct-20
1	Rice	4.4	32.4	33.1	34.7	34.9	1.1	2.3	0.6	0.4
2	Wheat & Atta	2.6	27.7	28.8	29.5	29.2	0.2	3.8	-0.5	-1.2
3	Gram Dal	0.3	65.6	66.3	68.7	72.5	-0.5	1.0	3.5	5.6
4	Tur/Arahar Dal	0.8	85.9	86.6	94.9	104.6	1.0	0.7	2.0	10.2
5	Urad Dal	0.3	74.8	78.4	99.0	104.0	-0.2	4.9	0.3	5.0
6	Moong Dal	0.3	83.4	84.6	101.8	102.6	1.3	1.4	-1.7	0.8
7	Masoor Dal	0.3	62.8	63.3	77.8	78.4	0.2	0.7	0.6	0.8
8	Groundnut Oil	0.3	131.3	134.0	150.5	153.0	0.8	2.0	0.8	1.7
9	Mustard Oil	1.3	109.7	111.2	126.5	128.6	0.9	1.4	1.6	1.7
10	Vanashpati	0.1	79.6	80.0	93.3	94.9	0.4	0.5	2.1	1.7
11	Refined Oil (sunflower, soyabean and palm oil)	1.3	89.8	89.9	105.3	107.2	1.1	0.1	3.1	1.8
12	Potato	1.0	18.9	20.6	36.7	39.5	-0.7	8.8	10.4	7.7
13	Onion	0.6	38.3	47.0	31.6	50.2	54.3	22.8	39.5	59.0
14	Tomato	0.6	31.2	38.6	51.8	45.4	-19.4	23.7	13.3	-12.4
15	Sugar	1.1	39.2	39.4	40.4	40.2	1.2	0.6	0.4	-0.4
16	Gur	0.1	45.2	46.2	49.5	49.3	1.4	2.2	0.4	-0.2
17	Milk	6.4	44.5	44.9	46.8	46.9	2.2	0.9	-0.4	0.1
18	Tea Loose	1.0	213.6	215.3	228.3	231.2	0.6	0.8	1.9	1.3
19	Salt	0.2	15.5	15.4	16.5	16.5	0.5	-0.3	1.0	0.0
20	Weighted average price (1 to 19)	22.9	55.8	57.0	62.2	63.5	1.4	2.1	1.8	2.1

Source: Department of Consumer Affairs, GoI and RBI staff estimates.

professional forecasters⁶ pointed to a likely persistence of elevated inflationary pressures in October, with a median CPI inflation projection of 7.3 per cent.

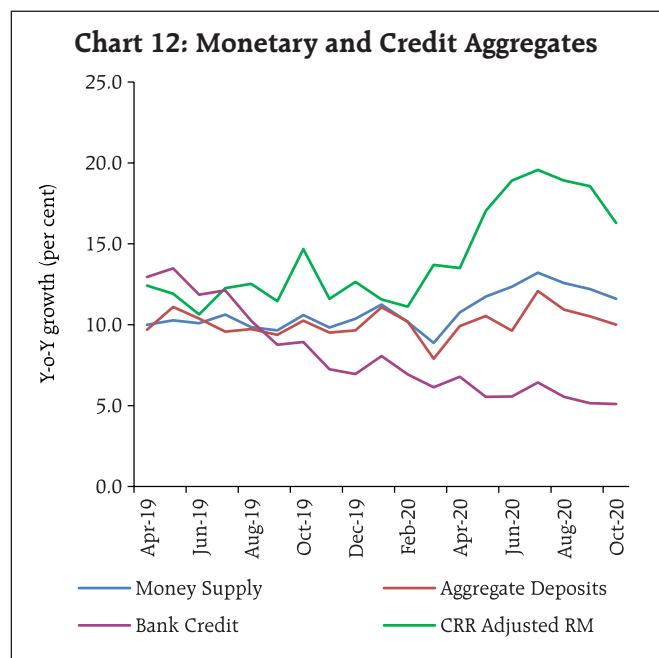
IV. Financial Conditions

System liquidity expanded further in October 2020 as average daily net absorptions under the liquidity adjustment facility (LAF) increased to ₹4,46,802 crore, despite a sizeable build-up in Government of India (GoI) cash balances. Currency in circulation (CiC), which was somewhat muted in September, picked up in October with the onset of the festival season and drained some liquidity from the system. In terms of liquidity management, liquidity was injected through three open market operation (OMO) purchases, while transient liquidity movements were managed through LAF operations.

Monetary and credit conditions moderated through 2020-21, with upward pressures on inflation in spite of muted demand conditions.

Reserve money adjusted for the first round impact of changes in the cash reserve ratio (CRR) increased by 16.3 per cent on y-o-y basis as on October 30, 2020 (14.7 per cent a year ago), mainly driven by a high growth in CiC on the components side and net foreign assets (NFA) on the sources side. This was instrumental in supporting money supply (M3) growth at 11.6 per cent as on October 23, 2020 (10.6 per cent a year ago). Bank credit to commercial sector remained subdued at 5.1 per cent as on October 23, 2020 as against 8.9 per cent a year ago; however, aggregate deposits registered a robust growth of 10.0 per cent (Chart 12). Reflecting the impact of targeted long-term repo operations (TLTROs), scheduled commercial banks' investments in commercial paper, bonds/debentures and shares of corporate bodies during the year 2020-21 increased by ₹15,561 crore as against a decline of ₹24,495 crore during the same period last year.

In consonance with the accommodative stance



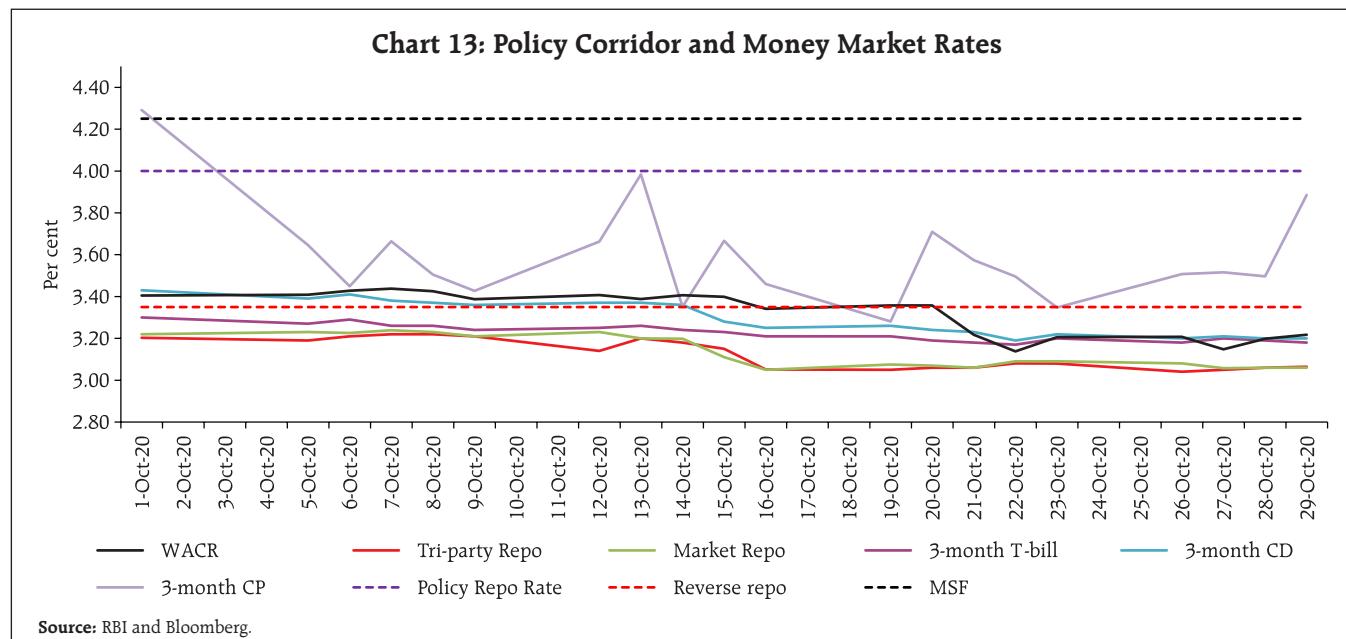
of monetary policy, the Reserve Bank announced On Tap TLTROs with tenors of up to three years for a total amount of up to ₹1,00,000 crore at a floating rate linked to the policy repo rate. Liquidity availed by banks under the scheme are to be deployed in corporate bonds, commercial paper and non-convertible debentures issued by the entities in agriculture, agri-infrastructure, secured retail, micro, small and medium enterprises (MSMEs), and drugs, pharmaceuticals and healthcare, over and above the outstanding level of their investments in such instruments as on September 30, 2020. Funds availed under the scheme can also be used to extend bank loans and advances to these sectors. The measure is aimed at addressing sector-specific liquidity constraints to aid recovery by improving funding conditions for sectors which have multiplier effects on growth. The Reserve Bank decided to conduct OMOs in State Development Loans (SDLs), as a special case during the current financial year, with a view to improving liquidity and facilitate efficient pricing of SDLs. The first such OMO in SDL for ₹10,000 crore was conducted on October

22, 2020. Thus, durable liquidity amounting to ₹66,305 crore⁷ has been injected through outright OMOs in October. Moreover, banks can now hold fresh acquisitions of SLR securities (since September 1) under the held to maturity (HTM) category up to an overall limit of 22 per cent (increased from 19.5 per cent) of Net Demand and Time Liabilities (NDTL) till March 31, 2022.

These abundant liquidity conditions permeated money markets during October 2020. In the overnight uncollateralised segment, the call money rate traded around the lower bound of the LAF corridor and even dipped below the reverse repo rate in the last week of the month. In the collateralised segments – market repo and tri-party repo – rates trailed below the call rate by 18 basis points and 20 basis points, respectively. In the near-term segments, i.e., certificates of deposit and 91-day treasury bills, rates remained at sub-reverse repo levels (averaging 3.30 per cent and 3.23 per cent, respectively) while discount rates on commercial paper were barely 25 basis points above the LAF reverse repo rate (Chart 13). The expansion of liquidity also resulted in softening of corporate bond yields as well as risk premia as reflected in moderation of corporate bond spread over the risk-free rate of corresponding maturity across the rating spectrum (Table 4).

The transmission of policy repo rate changes to deposit and lending rates of scheduled commercial banks has improved reflecting combined impact of liquidity surplus, the accommodative monetary policy stance, the introduction of external benchmark-based pricing of loans, weak credit demand conditions and lagged impact of policy rate cuts. From March to October 2020, the 1-year median marginal cost of funds-based lending rate (MCLR) has declined by 90 basis points (bps), while reduction in median term

⁷ This amount includes OMO purchase conducted on October 29 with settlement on November 2, 2020.



deposit rate has been of the order of 137 bps.

In the bond markets, the benchmark 10-year yield in the government securities segment traded with a soft bias relative to the preceding month, with sentiment lifted by an increase in the size of OMOs by the Reserve Bank and the conduct of OMOs in SDLs for the first time. In the corporate bond segment, spreads on 5-year AAA bonds narrowed to 22 bps, 28 bps lower than a month ago. At the lowest end of the rating spectrum, i.e., BBB- too, spreads shrank marginally. Resource mobilisation through

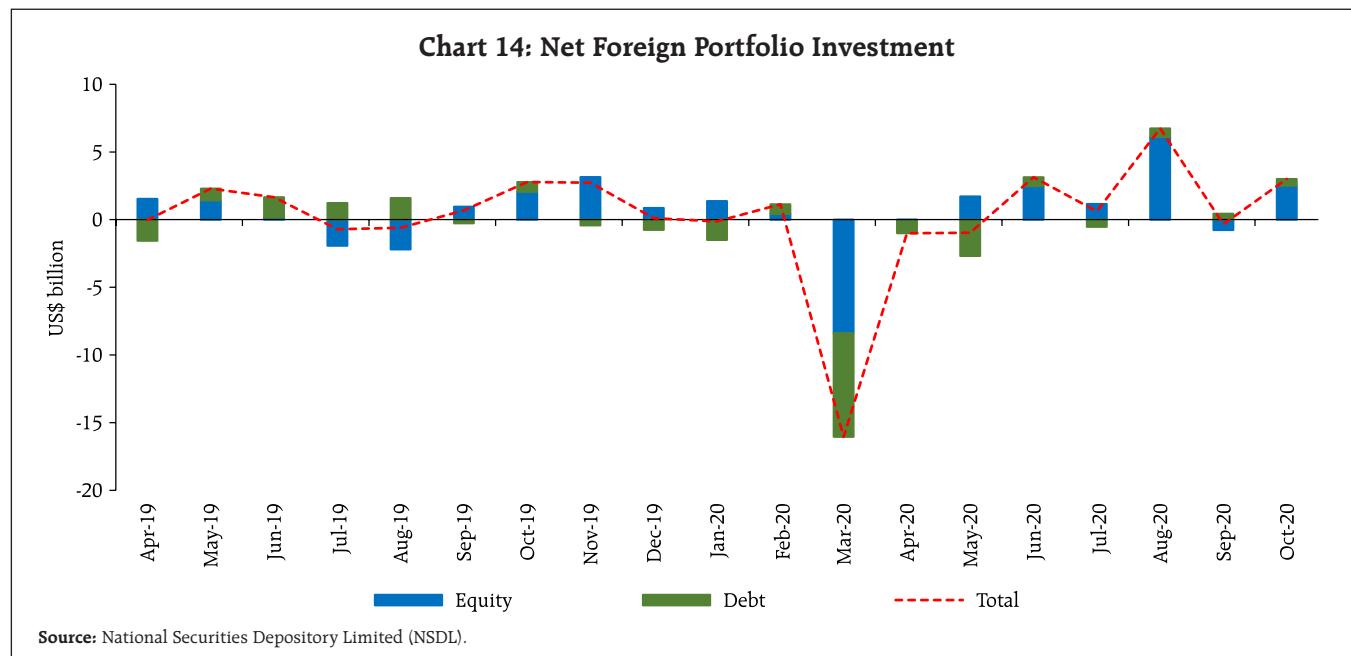
private placement of corporate bonds moderated to ₹62,331 crore during October 2020 from ₹64,389 crore during September 2020. Foreign portfolio investors brought in flows of US \$ 0.4 billion into debt markets (government securities and corporate bonds taken together) during the month (Chart 14). There were also inflows of US \$ 0.1 billion through the voluntary retention route (VRR).

Irrational exuberance in domestic equity markets extended into October 2020, driven by monetary and fiscal policy measures undertaken in the context

Table 4: Financial Markets - Rates and Spread

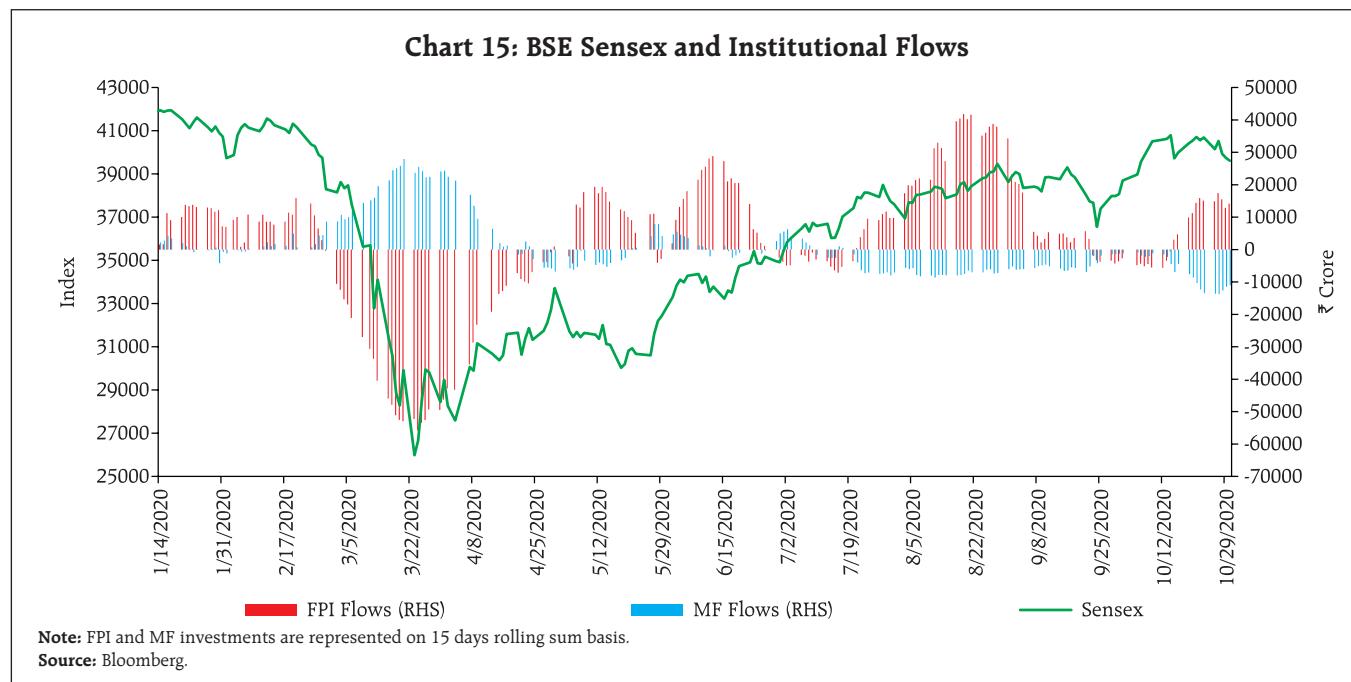
Instrument	Interest Rates (per cent)			Spread in bps (over corresponding risk-free rate)		
	As on September 30, 2020	As on October 29, 2020	Variation (in bps)	As on September 30, 2020	As on October 29, 2020	Variation (in bps)
(1)	(2)	(3)	(4 = 3-2)	(5)	(6)	(7 = 6-5)
CP (3-month)	4.32	3.89	-43	105	69	-36
<i>Corporate Bonds</i>						
(i) AAA (1-yr)	4.35	4.00	-35	47	36	-11
(ii) AAA (3-yr)	5.35	4.90	-45	43	28	-15
(iii) AAA (5-yr)	6.10	5.60	-50	50	22	-28
(iv) AA (3-yr)	6.13	5.84	-29	121	122	1
(v) BBB-minus (3-yr)	10.10	9.79	-31	518	517	-1
10-yr G-sec	6.01	5.89	-12	-	-	-

Sources: CCIL; F-TRAC; FIMMDA; and Bloomberg.



of the pandemic as well as better than expected corporate earnings in Q2:2020-21. Banking, finance and information technology (IT) stocks powered the surge. The benchmark index (SENSEX) crossed a seven-month high in the first week of October, and rallied further in ensuing days, recouping 52 per cent

of the losses suffered on March 23 (Chart 15). Foreign portfolio investors turned net buyers during October as against net sales a month ago, bringing in US \$ 2.5 billion to the equity segment. In contrast, mutual funds were net sellers during the month on account of redemption pressures.



In the foreign exchange market, the Indian rupee (INR) depreciated modestly against the US dollar in line with other emerging market currencies, although it ended the month 1.9 per cent above its level at the end of March 2020. Improvement in underlying fundamentals such as a sharp narrowing of the trade deficit and recovery in portfolio flows buoyed market sentiment. In terms of the 36-currency trade-weighted real effective exchange rate, the INR depreciated by 0.2 per cent in October from its level a month ago. India's foreign exchange reserves rose to US \$ 560.7 billion, equivalent of 16.4 months of imports and fully covering India's outstanding external debt at the end of June 2020 (Chart 16).

In the payment space, digital transactions on the unified payment interface (UPI) picked up both in volume and value. In October, total transactions crossed the 2 billion mark and amounted to ₹3.9 lakh crore in terms of value. Immediate payment service (IMPS) retail transactions also rose by 14 per cent in volume and by 10.4 per cent in value over September 2020. In the National Electronics Funds Transfer (NEFT) system, there was an increase of 11.9 per cent in volume and 3.2 per cent in value. Turning to large

Table 5: Payment Transactions in 2020-21

(in ₹ crore)

	RTGS	NEFT	UPI	IMPS
Apr-20	64,43,653	13,06,406	1,51,141	1,21,141
May-20	70,41,869	14,81,750	2,18,392	1,69,402
Jun-20	86,51,978	19,06,586	2,61,835	2,06,951
Jul-20	83,35,279	19,63,113	2,90,538	2,25,775
Aug-20	72,92,380	19,30,552	2,98,308	2,35,137
Sep-20	94,89,066	21,65,515	3,29,032	2,48,662
Oct-20	84,96,046	22,35,389	3,86,107	2,74,645

Source: National Payments Corporation of India (NPCI).

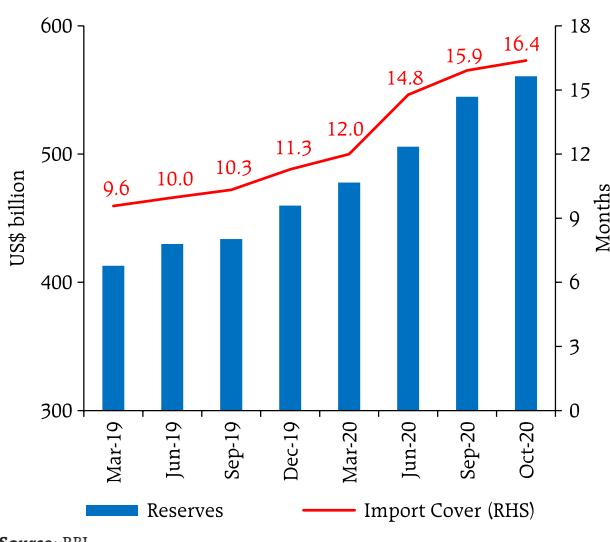
value payments, there was an increase of 6.2 per cent in volume terms in the real time gross settlements (RTGS) but a contraction of 10.5 per cent in value (Table 5).

V. Conclusion

Incoming data for the month of October 2020 have brightened prospects and stirred up consumer and business confidence. With the momentum of September having been sustained, there is optimism that the revival of economic activity is stronger than the mere satiation of pent-up demand released by unlocks and the rebuilding of inventories. If this upturn is sustained in the ensuing two months, there is a strong likelihood that the Indian economy will break out of contraction of the six months gone by and return to positive growth in Q3:2020-21, ahead by a quarter of the forecast provided in the resolution of the monetary policy committee on October 9, 2020.

In this context, however, it is prudent to recognise the formidable downside risks confronting the prospects of the recovery. The foremost is the unrelenting pressure of inflation, with no signs of waning in spite of supply management measures such as the imposition of stock limits on onion traders, imports of potatoes and onions (without fumigation) and a temporary reduction in import duties on pulses. There is a grave risk of generalisation of price pressures, unanchoring of inflation expectations feeding into a loss of credibility in policy interventions

Chart 16: Foreign Exchange Reserves and Import Cover



and the eventual corrosion of the nascent growth impulses that are making their appearance. The second major risk to the economy stems from the global economy now at risk from the second wave of COVID-19. Should external demand collapse again as commodity prices seem to foretell, the recent recovery in exports could become stillborn. Lurking

around the corner is the third major risk – stress intensifying among households and corporations that has been delayed but not mitigated, and could spill over into the financial sector. If the green shoots manage to survive these risks and take root, the key question is what will be the drivers of the recovery? We live in challenging times.

An Economic Activity Index for India*

An Economic Activity Index for India constructed from twenty-seven monthly indicators using a dynamic factor model suggests that the economy rebounded sharply from May/June 2020 with the reopening of the economy, with industry normalising faster than contact-intensive service sectors. The index tracks GDP dynamics closely and nowcasts GDP growth at (-)8.6 per cent in Q2:2020-21.

Introduction

The health emergency created by COVID-19 led to a sudden stop in economic activity all over the world. Supply disruptions due to containment measures were magnified by large-scale demand destruction from employment and income losses, weakening of consumer and business confidence, heightened uncertainties, contraction in global trade and tourism and behavioural changes like voluntary social distancing. In India, with more than 83 lakh infections including 1.2 lakh recorded deaths due to COVID-19 as on November 4, 2020, the economy took a severe hit with GDP for Q1:2020-21 declining by 23.9 per cent year-on-year (y-o-y).

In a period of heightened volatility, it becomes difficult to ascertain the current and future outlook of the economy posing difficult challenges for forward-looking policy. Conflicting signals emerging from diverse indicators may point to different directions for the underlying state of the economy. The fact that official GDP estimates are available with a lag of almost two months does not help either. In a fast-changing environment, time is of essence and delays

in the availability of official statistics pose constraints on optimal policy decisions. In this background, high-frequency indicators of economic activity, which are available with shorter lags offer an alternative for real-time tracking of the economy to aid forward-looking policy.

Accordingly, central banks and international organisations rely on a host of continuously flowing information from leading and concurrent activity indicators to gauge the underlying state of the economy on a real-time basis. Recent developments in econometric modelling and computational power have supported state-of-the-art, real-time and continuously updating frameworks that synthesise information available in a variety of economic indicators to predict the current dynamics of GDP. These models use sophisticated econometric methods, machine learning tools and artificial intelligence to glean information out of diverse indicators to identify consistent economic patterns. Many central banks have developed "nowcasting" models, which are used to predict the present, the very near future and the very recent past almost on a real time basis using regular high-frequency data releases on activity indicators (Giannone, Reichlin and Small (2008)).

In this article, an attempt is made to construct an Economic Activity Index (EAI) for India and use the index to nowcast the real GDP for Q2:2020-21, which is the main motivation of this study, besides evaluating the underlying nowcasting model in real time to validate its robustness so that it can be regularly updated for informing policy decisions.¹ Further, sectoral indices are constructed by using indicators representing industry, services, global and miscellaneous activities to identify sectoral

* This article has been prepared by Pankaj Kumar, Monetary Policy Department, Reserve Bank of India. Views expressed in this article are those of the author and do not necessarily represent the views of the Reserve Bank of India.

¹ Many of the included indicators in the model to construct EAI are used by the National Statistical Office (NSO) in compiling the advance estimates of quarterly Gross Value Added (GVA). The Press Note on GDP released by the NSO for Q1:2020-21 on August 31, 2020 lists out the indicators used in compiling GVA.

developments in the aftermath of COVID disruptions. The remainder of this article is organised as follows. Section II contains a brief literature review. Section III explains the data and methodology used in the article. Section IV presents the main findings and Section V concludes.

II. Literature Review

The literature on exploiting many economic variables to analyse fluctuations in aggregate economic activity dates back to the seminal work on measurement of business cycles (Burns and Mitchell, 1946). The business cycle itself is the co-movement among many economic variables and pervasiveness of fluctuations across sectors, which occur with a rough synchronism (Zarnowitz, 1991).

In this vein, the introduction of more formal and mathematically precise models to explain business cycles is also regarded as a seminal contribution. For this purpose, an "unobserved single index" or "dynamic factor" is estimated, which is affected by two stochastic components – one, the unobserved single index driving the co-movement across indicators and two, the idiosyncratic component and measurement errors. The unobserved single index is interpreted as the state of the economy based on four series: industrial production; real personal income less transfer payments; real manufacturing and trade sales; and employee-hours in non-agricultural establishments (Stock and Watson, 1989).

The use of dynamic factor models to nowcast low frequency variables like GDP have recently become popular (Giannone, Reichlin and Small, 2008). Central banks are also increasingly relying on nowcasting models for near-term projections of key variables. The nowcasting model of the Federal Reserve Bank of New York builds on these contributions and shows that additions and updatings of high-frequency data relevant to a quarter contribute to an improvement in nowcasting performance (Bok *et al.*, 2017). On the other

hand, the nowcasting model of the Federal Reserve Bank of Atlanta called GDPNow uses a bridge equation approach to map monthly source data into GDP sub-components, mimicking the methods used by the US Bureau of Economic Analysis to estimate real GDP growth (Higgins, 2014). The Bank of England's GDP nowcast represents the Monetary Policy Committee's estimate of economic growth in the current quarter prior to the release of the official data (Anesti *et al.*, 2017). Overall, central banks' nowcasts are informed by a suite of statistical models, superimposed by careful inference and judgement, reflecting all available high-frequency data on economic activity, surveys and financial markets.

Although still in its infancy, the nowcasting literature has expanded to incorporate the emerging market economies' (EMEs) case. This presents unique challenges in terms of lack of information on key macroeconomic variables (for example, employment and income) in the form of data gaps and missing values, small sample size and excessive volatility. Dynamic factor models have been employed to nowcast real GDP growth for Brazil, Russia, India, China, and Mexico (BRIC+M) and found to be reliable (Dahlhaus *et al.*, 2017). Another notable contribution with a focus on India finds that predictions improve when additional variables from more timely international data sources are included (Bragoli and Fosten, 2017). A bridge equation approach by using the information in monthly indicators for predicting the current quarter GDP has been employed in the Indian case (Bhattacharya *et al.*, 2011).

III. Data and Methodology

The study uses twenty-seven monthly indicators representing industry, services, global and miscellaneous activities to gauge the underlying state of the economy (Table 1).² The sample ranges

² These indicators, mostly representing hard economic activities rather than soft survey data or financial indicators, are chosen from more than 60 potential indicators.

Table 1: High-Frequency Indicators

Industry	Services	Global	Miscellaneous
IIP	Domestic air passenger traffic	US Industrial Production	Gross taxes
Automobile sales (Total)	Domestic air cargo traffic	Baltic Dry Index	Job Speak Index
Non-oil exports	Port cargo traffic	US Purchasing Managers' Index - Mfg.	Non-food credit
Non-oil-non-gold imports	Railway freight	OECD Composite Leading Indicator	Broad Money (M3)
Purchasing Managers' Index - Mfg.	Foreign tourist arrivals	US payrolls	Consumer Price Index – non-food
Power supply	Purchasing Managers' Index - Serv.		Crude prices (average of Brent, Dubai and WTI)
Tractor sales	Fuel consumption		
	Cement production		
	Steel consumption		

from April 2004 to September 2020. These indicators, directly or indirectly, cover a wide spectrum of domestic activities. They are released in a staggered manner throughout a month (Annex Table A(iii)).

Dynamic Factor Model

The recent advances in time-series econometrics have offered automated platforms to distil information from a plethora of indicators. Essentially, it involves solving a signal extraction problem of separating the pervasive co-movement in fluctuations (the signal) from idiosyncratic and measurement errors (the noise). The dynamic factor model provides a suitable approach to capture common fluctuations across macroeconomic indicators in a few common factors (Bok *et al.* 2017). The general specification of a dynamic factor model is as follows:

$$y_{it} = \lambda_{i,1}f_{1,t} + \dots + \lambda_{i,r}f_{r,t} + e_{i,t}, \quad i = 1, \dots, n \quad (1)$$

, where y_i is the indicator, f_j is the latent common factor and λ_{ij} is the factor loading of factor f_j on indicator y_i .³ The idiosyncratic component of

the indicator is captured by the e_{it} term. Thus, the observed movements in any indicator comprise of two unobserved components – a common component driven by common factors, and an idiosyncratic component specific to each indicator. The dynamic factor model is described in a state-space form where (1) is the observation equation and the autoregressive processes underlying the common factors and idiosyncratic errors represent transition equations. The model is estimated using the Kalman filter and the expectation-maximisation (EM) algorithm (Bok *et al.* 2017). All indicators are expressed as standardised y-o-y percentage changes.

The model described above is considered particularly suitable for monitoring macroeconomic conditions in real time as it provides flexibility to incorporate data with mixed frequency, missing values and non-synchronous releases. The Kalman filter algorithm uses the predicted (or expected) value of the indicator to estimate the dynamic factor and other model parameters, which are recursively updated if the actual value of the indicator turns out to be different from the predicted value. Thus, the Kalman filter provides a convenient framework for handling irregularities in the data (Bok *et al.* 2017; Banbura *et al.* 2013).

Single common factors are estimated by first taking all twenty-seven indicators together and then separately for the subset of indicators representing industry, services, global and miscellaneous activities. The estimated single common factor f_t is then used to nowcast the current quarter GDP growth using a bivariate regression accounting for serial correlation in errors.⁴ The model specification is given below.

³ Annex Chart A(i) presents the common factor and indicators together. Annex Chart A(ii) presents factor loadings, which suggest that domestic industry and services have a larger weight than global and miscellaneous indicators in the index.

⁴ The monthly dynamic factor obtained from twenty-seven monthly high-frequency indicators is converted quarterly by simple averaging. The quarterly series is then used in the regression model to map to the quarterly target variable GDP.

$$GDPGr_t = \beta_0 + \beta_1 f_t + u_t, \quad (2)$$

$$u_t = \rho u_{t-1} + \varepsilon_t \quad (3)$$

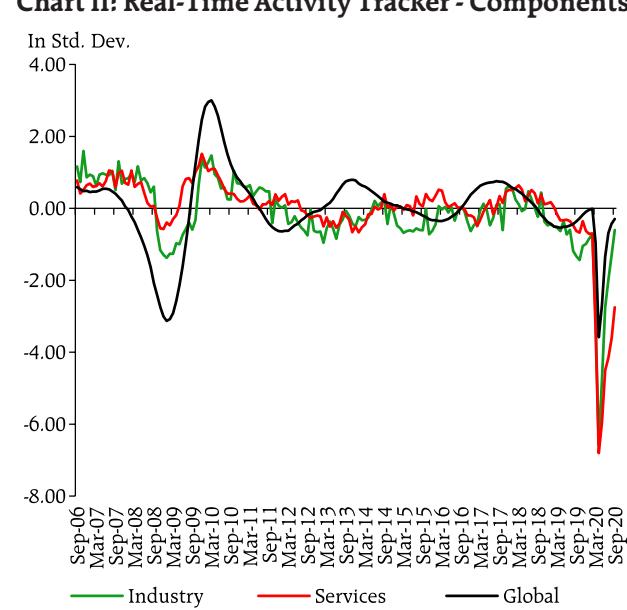
The model specification implies that the conditional forecast (or nowcast) of GDP growth is driven by both the contemporaneous dynamic factor f_t and past error.

IV. Nowcasting Results

The dynamic common factor, which is termed the overall index of economic activity, is presented in Chart I. It is observed that the index captures major economic events such as the global financial crisis (GFC), the subsequent recovery and the recent deceleration starting from 2018-19. Further, it suggests that the collapse in activity in the wake of COVID-19 was much sharper than during the GFC. Focusing on the recent months, it is seen that after plunging to -6.4 in April in the wake of the lockdown, the index gradually recovered to -2.1 in September 2020. The rebound was sharper in May and June as the economy reopened after the lockdown, but turned out to be somewhat slower in July-September.

To underline sectoral variations, separate indices are constructed for industry, services and global

Chart II: Real-Time Activity Tracker - Components



activities (Chart II). Focusing on the recent months (Chart III), it is observed that while the decline in both industry and service activities was synchronous and of equal magnitude in the wake of the lockdown, the recovery has been more rapid for industry and much slower for services. Thus, the analysis suggests a two-speed recovery with contact-intensive service sectors (e.g., retail trade, transport, hotels and restaurants,

Chart I: Real-Time Activity Tracker - Total

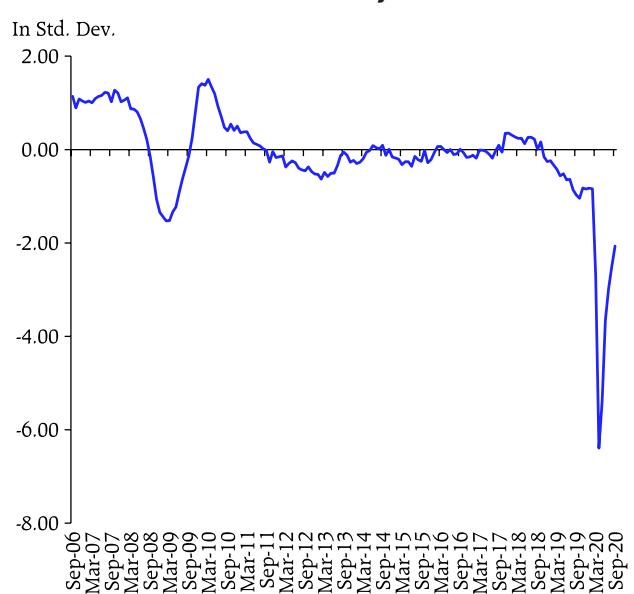
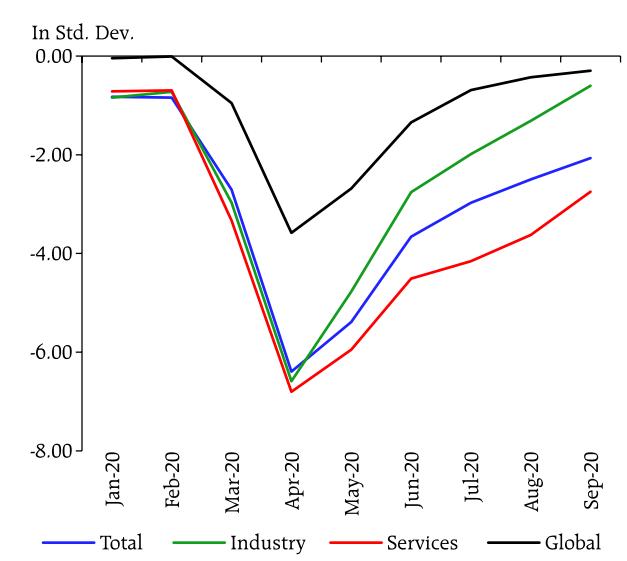


Chart III: Real-Time Activity Tracker - Recent Months



and recreation) showing sluggish recovery in the face of continuing health risks.⁵ Further, in contrast to the domestic industry and service indices, the global index declined to a lesser extent and seems to have recovered better, despite some tapering in July-September.

The overall index of economic activity is used to nowcast GDP growth using a bivariate regression model described in equations 2 and 3 in Section III (Table 2). Model 1 is the preferred specification with a reasonably high adjusted R-squared and no evidence of residual autocorrelation. The coefficient on activity index is statistically significant, suggesting that the index significantly explains GDP dynamics. Using the estimated coefficients and current quarter index of activity, GDP growth nowcast for Q2:2020-21 is (-)8.6 per cent y-o-y (Chart IV).⁶ The 90 per cent confidence

Chart IV: GDP Nowcast Using the Activity Tracker



Table 2: Regression Estimates

Dependent Variable (Y-o-Y)	GDP		GDP-Non-Agri.	GDP-Industry	GDP-Services
	(1)	(2)	(3)	(4)	(5)
Activity Index - Total	5.568 (0.174)	4.410 (0.259)	6.081 (0.133)		
Activity Index - Industry				6.952 (0.321)	
Activity Index - Services					5.418 (0.181)
AR (1)	0.641 (0.104)		0.751 (0.089)	0.600 (0.109)	0.612 (0.128)
Constant	6.597 (0.603)	6.767 (0.241)	7.086 (0.982)	6.171 (0.935)	7.715 (0.509)
Adjusted R-squared	0.855	0.820	0.862	0.726	0.873
DW Stat	1.913	1.155	1.679	2.160	2.055
Q-statistics (12 lags, p-value)	0.954	0.011	0.233	0.000	0.448

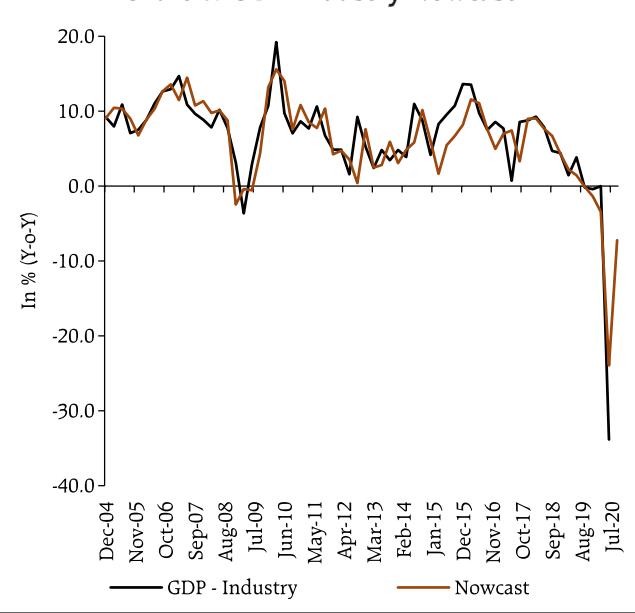
Note: Figures in parentheses are standard errors.

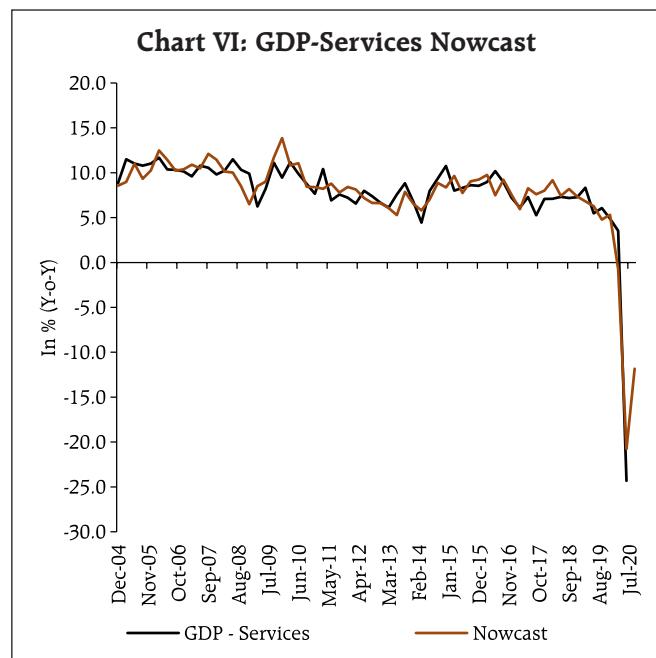
⁵ Strong complementarities between industry and services, as observed, for example, in people buying luggage and cars for transport, and clothing and footwear if they need to go out more often, might reduce the differential eventually. Also, some service sectors like IT, online purchases and entertainment are likely to benefit by substituting away demand from traditional service sectors relying on physical contacts.

⁶ The growth nowcast based on high-frequency data for Q2:2020-21 available up to end-October is somewhat higher than (-)9.8 per cent using the early-October data vintage. Some high-frequency indicators like the Index of Industrial Production for August and cement production, rail freight, port cargo, air cargo, non-oil-non-gold imports, fuel and steel consumption, and power supply for the month of September present a relatively better picture of the economy.

interval for the nowcast is (-)4.8 – (-)12.3 per cent. Further, Models 3, 4 and 5 provide estimates for non-agriculture, industry and services GDP separately and suggest a higher in-sample fit for the services sector; for industry, the Q-stat suggests remaining higher order residual autocorrelation. Nonetheless, the individual activity indices for industry and services significantly explain movements in sectoral GDPs (Chart V and VI).

Chart V: GDP-Industry Nowcast





V. Conclusion

Sharp fluctuations in economic conditions on account of COVID-19 have put a premium on swift intelligence. This entails sifting through a vast amount of continuously flowing data to identify the current state of the economy. The dynamic factor model has become a popular tool to measure the underlying state of the economy from a host of high-frequency activity indicators. Accordingly, the economic activity index

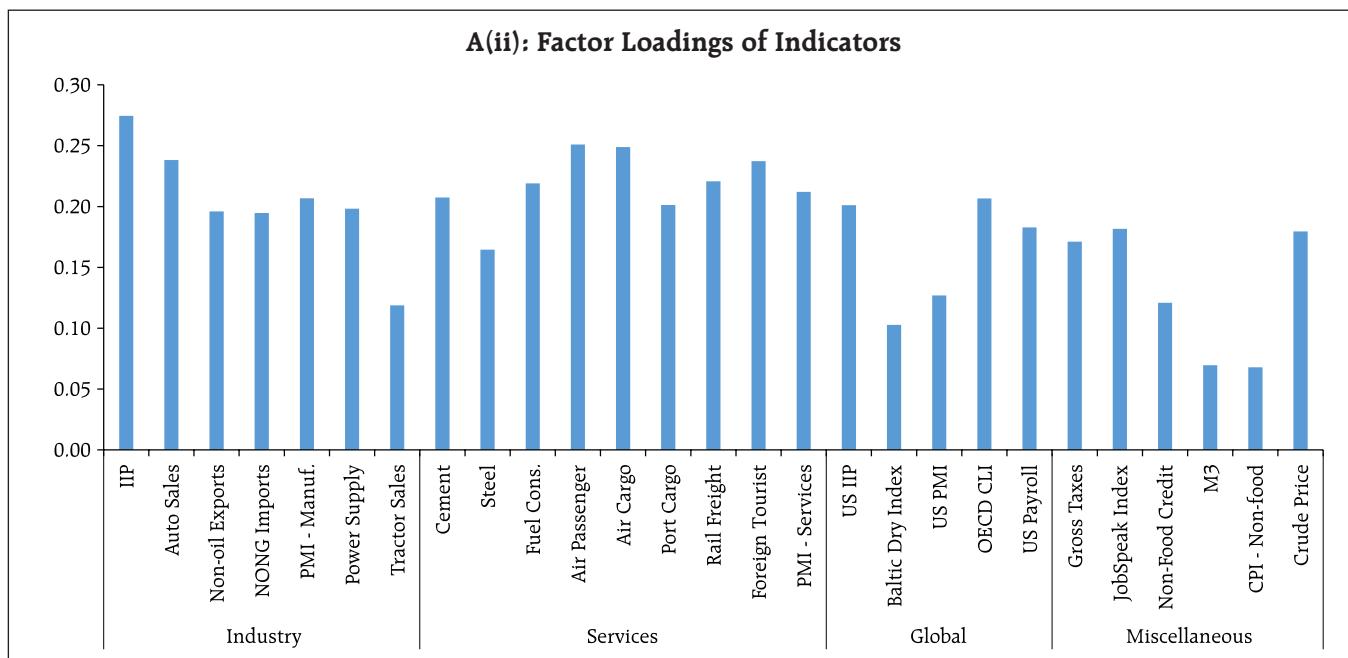
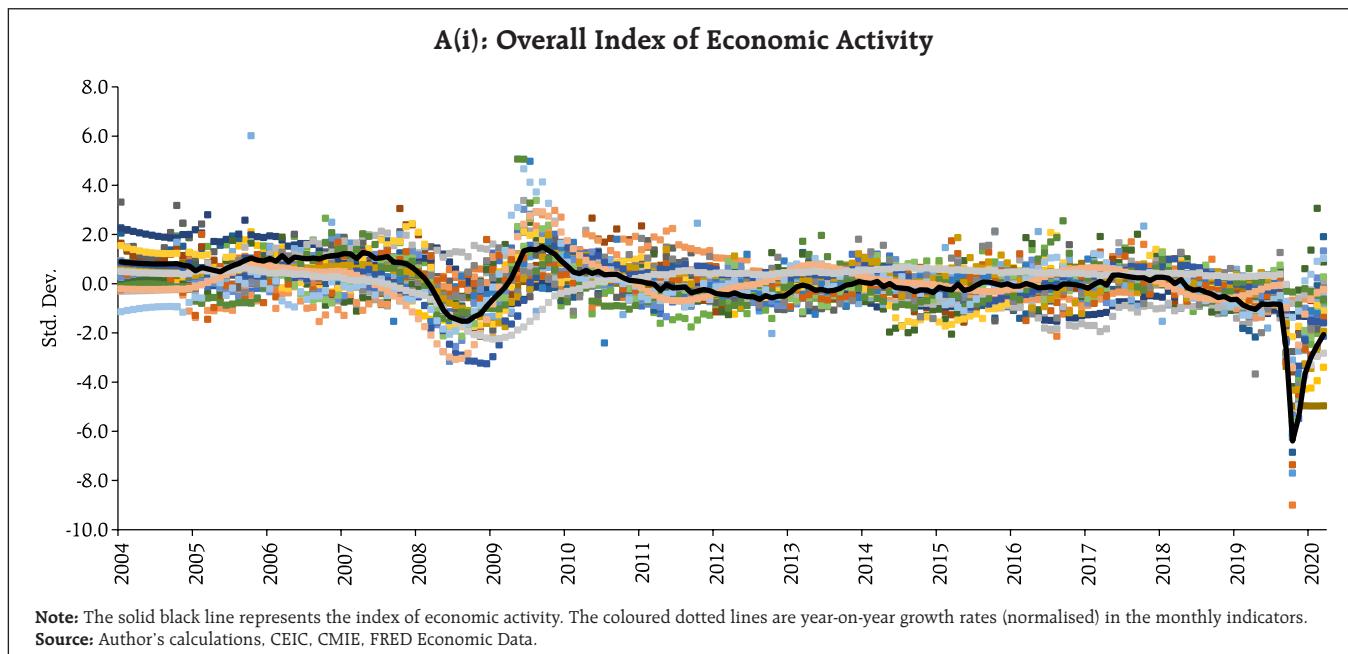
constructed here is an efficient predictor of advance quarterly GDP estimates of the NSO. The recent dynamics of the index suggests that a gradual recovery in economic activity is underway since the April 2020 trough, with some moderation during July-September 2020. Sectoral indices declined synchronously in March and April, but have diverged in the recovery phase, with industry normalising faster than contact-intensive service sectors due to continuing health risks. The index tracks GDP dynamics reasonably well in the sample and offers itself for consideration in the policy matrix of coincident information in India. Following policy implications emerge from the analysis:

- India has entered a technical recession in the first half of 2020-21 for the first time in its history with Q2:2020-21 likely to record the second successive quarter of GDP contraction.
- The contraction is ebbing with gradual normalisation in activities and expected to be short-lived.
- The economic activity index can be used to gauge directional movements in GDP growth well ahead of official releases.

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Annex – Charts and Tables



A(iii). Publication Lags in the Release of Indicators

Indicator	Publication Lag (Approximate)
Index of Industrial Production	6 weeks
Auto Sales	less than 2 weeks
Non-oil Exports	2 weeks
Non-oil-non-gold Imports	2 weeks
PMI - Manufacturing	1 day
Power Supply	less than 1 week
Tractor Sales	less than 2 weeks
Cement Production	1 month
Steel Consumption	7 weeks
Fuel Consumption	less than 2 weeks
Air Passenger	3-4 weeks
Air Cargo	3-4 weeks
Port Cargo	1 week
Rail Freight	1 week
Foreign Tourist	2-3 weeks
PMI - Services	less than 1 week
US IIP	1.5 month
Baltic Dry Index	Daily (no lag)
US PMI	1 day
OECD Composite Leading Indicator	more than 1 month
US Payroll	2 days
Gross Taxes	1 month
JobSpeak Index	less than 2 weeks
Non-Food Credit	2 weeks
Broad Money (M3)	2 weeks
CPI - Non-food	less than 2 weeks
Crude Price	Daily (no lag)

Preliminary Estimates of Household Financial Savings - Q1:2020-21*

The preliminary estimates of household financial savings show a significant increase in Q1:2020-21, which is in line with the increase in household savings observed in other major economies post-COVID-19. The significant increase in household financial savings in India is counter-seasonal and possibly reflects the impact of COVID-19-led reduction in discretionary spending and the associated forced saving as well as a surge in precautionary saving on concerns relating to income flows in the near-term. The estimated increase in financial savings is consistent with other available official statistics, in particular the decline in private final consumption expenditure and the surplus position in the external current account.

Introduction

Quarterly data on household financial assets and liabilities (including household financial savings) for the recent three years (2017-18 to 2019-20) were published in the Reserve Bank of India Bulletin, June 2020. Taking into account the large statistical break in the key macroeconomic data resulting from the impact of COVID-19 during Q1:2020-21, which is already evident from the early official estimates of GDP and its key components, this article aims to provide preliminary estimates of household financial savings for Q1:2020-21. During this quarter, India's GDP contracted by 23.9 per cent year-on-year (y-o-y) and private consumption declined by 26.7 per cent (y-o-y), suggesting possible corresponding large shifts in household savings. The exact magnitude of

macroeconomic effects of COVID-19 will take time to unravel fully, as final data are available only with a considerable time lag. While the key determinants of household financial savings, in particular, income (GDP) and interest rate, changed significantly during Q1:2020-21, there were also reportedly shifts in the consumption pattern of non-essential items, precautionary savings and recourse to borrowings/leverage by households for consumption smoothing. The current information gap on a key macroeconomic variable, viz., household financial savings is the major motivation behind this article.

The rest of the article is divided into five sections. Section II discusses the preliminary estimates of the household financial savings at the aggregate level. Section III examines the COVID-19 led increase in household savings in the global context. Section IV shows the domination of banking sector instruments in household financial assets and liabilities. Section V encapsulates major movements on both the asset and liabilities side of households' balance sheet. Section VI sets out concluding observations. A tabular presentation of the instrument-wise flow of household financial assets and liabilities are given in the Annex.

II. Preliminary Estimates: the Headline Numbers

Preliminary estimates presented in this article show a jump in household financial savings to 21.4 per cent of GDP in Q1:2020-21, up from 7.9 per cent in Q1 and 10.0 per cent in Q4 of 2019-20 (Table 1).

It is likely that the propensity of households to save may have risen markedly during the pandemic on two counts. First, the households would have been forced to save more, being unable to consume up to their normal levels. The household consumption basket would have comprised a limited number of items relative to the pre-COVID period. Second, they may have raised their precautionary savings due to uncertainty about their future incomes, in large part

* Prepared by Sanjay Kumar Hansda, Anupam Prakash and Anand Prakash Ekka, National Accounts Analysis Division, Department of Economic & Policy Research, Reserve Bank of India. The authors are thankful to Dr. Mridul Kumar Saggar, for insightful discussions on the draft. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

Table 1: Household Financial Savings

(₹ lakh crore)

	2018-19					2019-20					2020-21
	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual	Q1*
Financial Savings (A-B)	2.76 (6.1)	2.29 (4.9)	2.13 (4.4)	6.56 (13.2)	13.73 (7.2)	3.86 (7.9)	4.31 (8.8)	3.31 (6.4)	5.32 (10.0)	16.81 (8.3)	8.16 (21.4)
A. Flow of Financial Assets	3.58 (7.9)	4.82 (10.4)	3.52 (7.3)	9.31 (18.8)	21.23 (11.1)	3.90 (7.9)	5.70 (11.6)	5.47 (10.6)	7.13 (13.4)	22.19 (10.9)	8.27 (21.7)
B. Flow of Financial Liabilities	0.83 (1.8)	2.53 (5.5)	1.38 (2.9)	2.75 (5.6)	7.50 (3.9)	0.03 (0.1)	1.39 (2.8)	2.16 (4.2)	1.80 (4.2)	5.38 (2.6)	0.11 (0.3)

Note: Data in parenthesis are as per cent to GDP.

*: Estimate is based on the assumption of unchanged household share in deposits as in Q4:2019-20.

Source: Authors' calculations.

flowing from cautious responses to reports of actual and potential job losses.

The preliminary estimates of household financial savings for 2019-20 at 7.7 per cent of GDP (7.6 per cent of GNDI) were published in the Reserve Bank of India Annual Report 2019-20, which now stand revised to 8.3 per cent of GDP¹. This article has also updated the series from 2018-19. The data revision is primarily caused by updated information on household share in bank credit, bank deposits and subscription of insurance policies by households.

III. COVID-19 Push to Household Savings Globally

Globally, owing to the COVID-19 induced lockdown, there has been a tendency on the part of households to increase precautionary savings/forced savings. The forced savings component was generated as the lockdown measures imposed to contain the virus prohibited households from consuming a large share of their normal expenditure basket. Furthermore, the uncertainty regarding future income, and in particular, the risk of future unemployment, caused by the sudden outbreak of the pandemic led to the rise in precautionary savings (Ercolani, 2020). The sudden increase in household

savings got manifested in official data the world over. For instance, in the USA, the personal saving rate² rose by 20.7 percentage points (to 33.6 per cent of disposable income) in April 2020 from 12.9 per cent in March 2020³, and in the UK, household savings ratio⁴ has increased to 29.1 per cent of disposable income in Q2:2020 from 9.6 per cent in Q1:2020⁵. In the Indian context, it is reportedly observed that while forced savings could be going up in the formal sector on income continuity, a large chunk of labour employed in the informal sector could have increased precautionary savings despite stagnant/reduced income by lowering consumption⁶.

IV. Banking Instruments Dominate Household Financial Assets/Liabilities

The household financial savings in India are significantly affected by their deposits with and borrowing from the banking sector. Bank deposits and bank loans constitute dominant shares of around 56

² "Income left over after people spend money and pay taxes is personal saving. The personal saving rate is the percentage of their disposable income that people save", Bureau of Economic Analysis, USA.

³ Bureau of Economic Analysis, U.S. Department of Commerce (<https://www.bea.gov/data/income-saving/personal-saving-rate>).

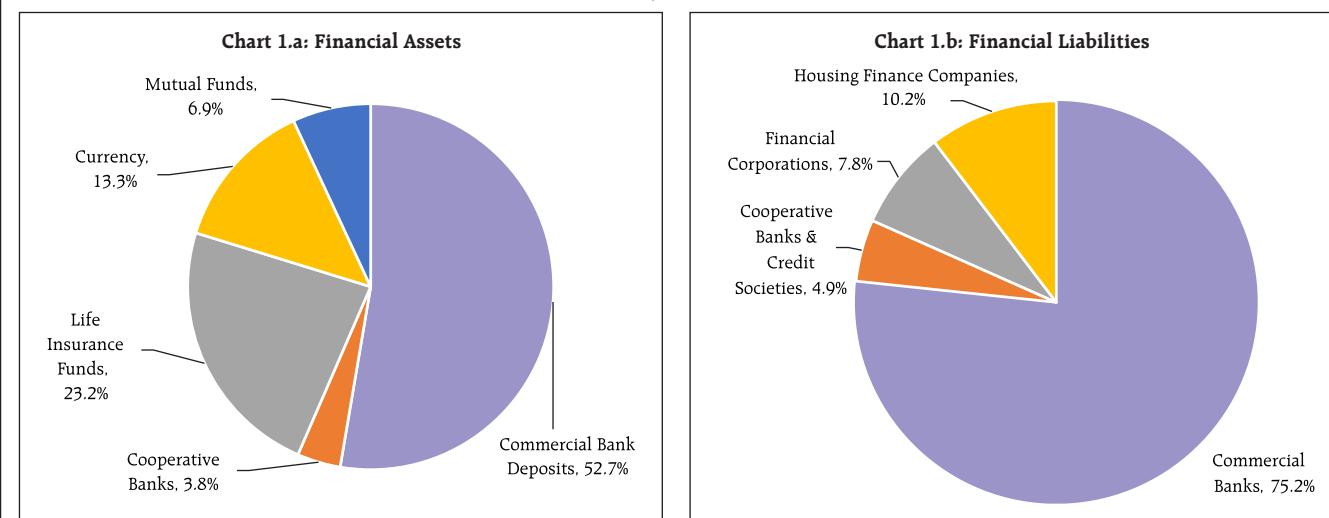
⁴ The savings ratio is the per cent of disposable income saved (household saving divided by household disposable income).

⁵ Office of National Statistics, United Kingdom (<https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/dgd8/ukea>).

⁶ The Indian Express, "Sections of Households See Rise in Savings After Lockdown", July 09, 2020, <https://indianexpress.com/article/business/sections-of-households-see-rise-in-savings-after-lockdown-6496812/>.

¹ The National Statistical Office (NSO)'s statistics on household financial savings released in January 2020 stands at 6.5 per cent of GDP for 2018-19. The estimates on household financial savings for 2019-20 and 2020-21 will be released by NSO on January 29, 2021 and January 31, 2022, respectively.

**Chart 1: Composition of Household Financial Assets and Liabilities - Outstanding Position
(As on June 2020)**



Note: Chart has been prepared based on select financial instruments for which data are available.

per cent and 80 per cent of household financial assets and liabilities, respectively⁷ (Chart 1.a and 1.b).

As per the latest data, aggregate bank deposits in India have touched nearly ₹ 138.7 lakh crore in June 2020, an increase of ₹ 3.0 lakh crore since end-March 2020, while advances are subdued at just over ₹ 102.5 lakh crore, down by ₹ 1.2 lakh crore from end-March 2020. This has widened the gap between credit extended and deposits mobilised during the April-June quarter of 2020.

Deposits with banks have picked up by 11 per cent on a y-o-y basis as of June 2020 versus the 7.9 per cent growth registered in 2019-20 and 10 per cent as at end-June 2019. This is despite the weighted average domestic term deposit rates by scheduled commercial banks falling further by around 40 bps over the last three months beyond March 2020. In contrast, credit growth moderated on a y-o-y basis to 6.2 per cent in June 2020 from 12 per cent in June 2019. The divergence between deposit and credit growth

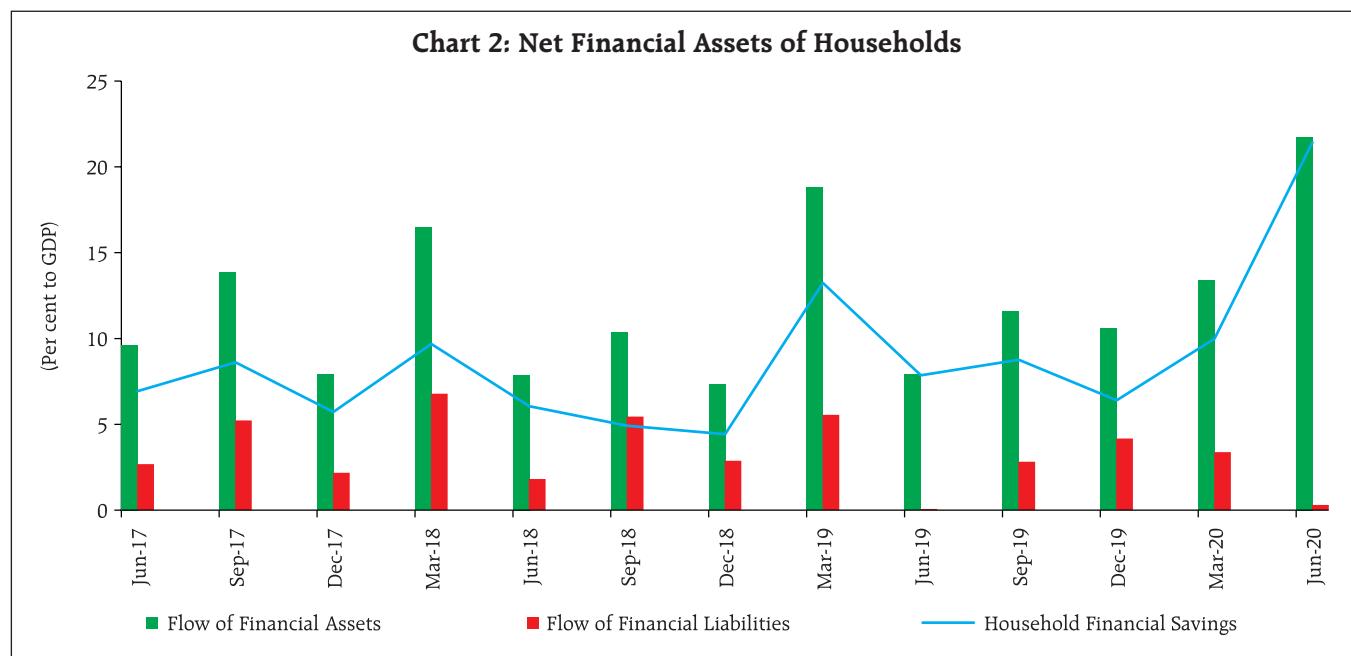
in Q1:2020-21 has contributed to the increase in net financial savings of households.

V. Preliminary Estimates: An In-Depth Exploration

Reflecting the trend in credit and deposit growth, the household financial savings are estimated to have increased sharply in Q1:2020-21 (Chart 2). With the assumption of unchanged share of households in total deposit in Q1:2020-21, the household financial savings work out to 21.4 per cent of GDP in Q1:2020-21. The sharp increase is counter-seasonal and needs to be seen, keeping in view the COVID-19-led reduction in discretionary spending or forced savings by households employed in the formal sector and surge in precautionary savings despite stagnant/reduced income of households working in the informal sector. A significant reduction in nominal GDP has also contributed to the rise in household financial savings-GDP ratio. Furthermore, household financial savings have increased in absolute terms as well (both real and nominal).

Household financial savings generally peak in Q4 of the financial year owing to seasonal factors, which

⁷ The official data regarding household share in deposits are available up to 2019-20 in the Basic Statistical Return published by RBI.



are then followed by moderation in Q1 (Prakash, *et al.*, 2020). Accordingly, variations have been observed in the quarterly estimates of household financial savings in the past as well. The recent high of 13.2 per cent of GDP was observed in Q4:2018-19 (Table 1).

The main observations and reasons behind the significant increase in household financial savings in Q1:2020-21 are set out below:

- The significant increase in household financial assets and moderation in household financial liabilities led to an increase in household financial savings in Q1:2020-21.
- The increase in household financial assets was led by significant increase in the households' holdings of mutual funds, insurance products and currency. The household savings in mutual funds has increased to 1.7 per cent of GDP in Q1:2020-21 from (-) 0.9 per cent in Q4:2019-20 and 0.2 per cent in Q1:2019-20. Household savings in insurance products is estimated to have increased to 3.3

per cent from 0.7 per cent and 2.3 per cent, respectively, over the same period. Similarly, currency holding by households increased to 5.4 per cent from 3.0 per cent in Q4:2019-20 and 1.3 per cent in Q1:2019-20 (Chart 3a and Annex I).

- The increased flows to mutual funds seem to have been driven by low returns on bank deposits and the stock markets touching new peaks after initial volatility in March 2020 following the COVID-19.
- The rise in subscription to insurance products reflects the pandemic-led increased awareness of life insurance amongst the households. In these times of emergency, life insurance has become a necessity and not just a matter of benefit (Maji, 2020).
- On the other hand, the increase in currency holding on the part of households reflects flight to safety or 'dash to cash' behaviour under extreme uncertainty brought upon by the pandemic (RBI, 2020).

Chart 3.a: Aquisition of Financial Assets by Households

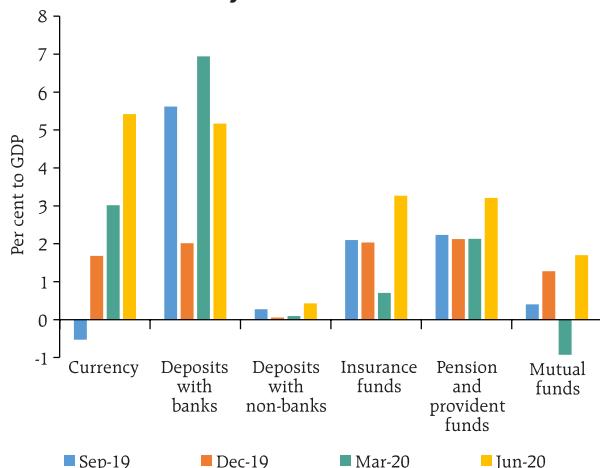
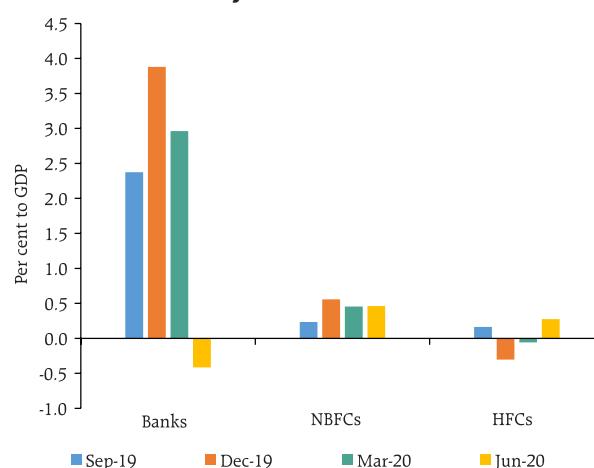


Chart 3.b: Incurrence of Financial Liabilities by Households



NBFCs : Non-banking financial companies; HFCs : Housing Finance Companies.

- While savings in the form of bank deposits generally turn negative in the first quarter of a financial year, they are estimated to remain in positive territory at 5.2 per cent of GDP in Q1:2020-21. This is also corroborated by the coincidental severe contraction in private consumption by 26.7 per cent in Q1:2020-21. Additionally, during lockdown, when income of the poor was likely to be impacted more, the balance in their *Jan-Dhan* deposit accounts rose by around ₹ 400 per account cumulatively in the April-June quarter possibly due to increased money transfers under the *Pradhan Mantri Garib Kalyan Scheme* to help beneficiaries deal with the difficulties caused by the pandemic⁸. It appears that part of the transfers has been saved by the poor households despite stagnant/reduced income.
- Financial liabilities of households are estimated to have moderated due to contraction in loans from banks. Banks

are flush with funds due to huge increase in deposits and liquidity infusion into the system by the Reserve Bank; however, they seem to be cautious in extending loans in an uncertain environment of low demand, fearing increase in impaired loans (Chart 3.b). Loans extended by NBFCs, which are the next major source of household borrowing, also remained muted, reflecting the subdued demand for real estate and passenger vehicles.

VI. Concluding Observations

The unprecedented increase in household financial savings in Q1:2020-21 is not unique to India. This spike in household financial savings needs to be seen in the context of COVID-19, which has imparted both demand and supply shocks to the economies affected. Going forward, as the COVID curve flattens and the lockdown gets withdrawn, some of the consumption, particularly, the discretionary component will begin to pick up. High deposits with banks, falling demand for credit and the reluctance of banks to lend have contributed to the elevated savings.

⁸ The Indian Express, ibid.

On the external front also, the Indian economy, which has traditionally seen a deficit in current account of the balance of payments, witnessed a surplus in Q1:2020-21. As current account balance is usually the mirror image of the savings-investment gap, the surplus in the former suggests domestic savings exceeding the investment during Q1. This also corroborates the subdued domestic demand conditions in the economy, which get mirrored in increased savings of the household sector.

The trend of higher than usual household financial savings can persist for some time till the pandemic recedes and consumption levels get normalised. It may also be added that the household financial savings data in this article are preliminary and will get revised in future releases⁹. The true assessment of the financial savings glut will only be known some years down the line. Meanwhile, a much larger pool of financial surplus can be tapped for intermediation in an innovative way. The unprecedented increase in household financial savings in Q1:2020-21 is expected to taper off in course of time, especially as the COVID curve begins to flatten allowing households to spend and economic activities to revive in the coming quarters.

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⁹ As a caveat, it may be added that the preliminary estimates of household financial savings for Q1:2020-21 could be subject to larger than usual revisions, both on the sides of assets and liabilities as for now the pre-pandemic ratios have been applied in the estimation of household shares.

Annex I
Financial Assets and Liabilities of Households : Gross Flows

(Per cent to GDP)

Item	2018-19					2019-20					2020-21
	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual	Q1
	Financial Assets										
Financial Assets	7.9	10.4	7.3	18.8	11.1	7.9	11.6	10.6	13.4	10.9	21.7
<i>Of which:</i>											
1. Total Deposits (a)+(b)	-1.2	6.5	0.5	10.2	4.0	0.2	5.9	2.1	7.0	3.8	5.6
(a) Bank Deposits	-1.4	6.3	0.3	10.2	3.8	-0.2	5.6	2.0	6.9	3.6	5.2
i. Commercial Bank Deposits	-1.4	6.2	0.2	9.9	3.7	-0.3	5.5	1.2	6.9	3.3	5.1
ii. Cooperative Banks	-0.1	0.1	...	0.3	0.1	0.1	0.1	0.8	0.1	0.3	...
(b) Non-Bank Deposits	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.1	0.1	0.2	0.4
2. Life Insurance Funds	1.5	2.1	1.1	3.1	1.9	2.3	2.1	2.0	0.7	1.8	3.3
3. Provident and Pension Funds (including PPF)	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	3.2
4. Currency	2.5	-0.7	2.1	1.9	1.5	1.3	-0.5	1.7	3.0	1.4	5.4
5. Investments, of which	1.7	-0.8	0.5	0.3	0.4	0.6	0.5	1.3	-0.8	0.4	2.2
i. Mutual Funds	1.5	-1.0	0.4	0.2	0.3	0.2	0.4	1.3	-0.9	0.2	1.7
6. Small Savings (excluding PPF)	1.1	1.1	1.1	1.0	1.1	1.4	1.4	1.3	1.3	1.3	2.0
Financial Liabilities											
Financial Liabilities	1.8	5.5	2.9	5.6	3.9	0.1	2.8	4.2	3.4	2.6	0.3
Loans (Borrowings) from											
A. Financial Corporations (i+ii)	1.8	5.5	2.9	5.6	3.9	0.1	2.8	4.2	3.4	2.6	0.3
(i) Banking Sector	1.0	3.7	2.9	4.7	3.1	-0.3	2.4	3.9	3.0	2.2	-0.4
<i>of which:</i>											
Commercial banks	0.9	3.7	2.9	4.5	3.0	-1.1	2.3	3.4	2.9	1.9	-0.5
(ii) Other Financial Institutions	0.8	1.8	-0.1	0.9	0.9	0.4	0.4	0.3	0.4	0.4	0.7
(a) Non-Banking Financial Companies	0.2	1.1	-0.1	0.6	0.5	...	0.2	0.6	0.5	0.3	0.5
(b) Housing Finance Companies	0.5	0.6	...	0.3	0.3	0.3	0.2	-0.3	-0.1	...	0.3
(c) Insurance Companies	0.1	0.1	0.1
B. Non-Financial Corporations (Private Corporate Business)
C. General Government

... : Negligible.

Source : Authors' calculations.

*Revisiting the Determinants of the Term Premium in India**

The underlying relationships that drive term premia are complex and constantly shifting. Empirical analysis over the period from January 2006 through September 2020 suggests that global uncertainty and liquidity are the main drivers of the term premium in India.

In the wake of the outbreak of COVID-19, superimposed as it were on an economy ensnared in the inertial dynamics of an eight-quarter slowing phase of the underlying economic cycle, and the extraordinary monetary and fiscal policy response, there has been a surge of interest in the behavior of the term premium in the government securities (g-sec) market in India. Stirring this debate are somewhat polar views. At one end, it is argued that the weighted average cost of borrowings by the Central Government during the first half of 2020-21 at 5.82 per cent is the lowest in the last 16 years. The weighted average maturity of the outstanding stock of securities of the centre has also been the highest so far (Das, 2020). At the other end, it is held that India has one of the steepest yield curves in the world. Excessively high long term rates are inflicting damage to the economy by not allowing the easing of policy rates to be transmitted to longer term rates, thereby exacerbating the collapse of investments in the economy (Varma, 2020).

Empirical investigations into the factors determining term premia in India have proliferated (Rathi and Pradhan, 2017; Akram and Das, 2019), including in the Reserve Bank of India (RBI) (Dua, Raje and Sahoo, 2003; Kapur, John and Mitra, 2018; Dilip, 2019), as much from the point of view of their

central role in influencing the cost of borrowing by the government as in setting the price of issuances of corporate bonds and other financial instruments employed by the private sector to access finance from markets. These findings are, however, relevant in peacetime rather than in the backwash of black swan events like COVID-19. Do catastrophes influence term premia and their underlying determinants? Are term premia influenced by the effects of exceptional policy measures that tend to be taken in these overwhelming times or, do they remain impervious and continue to emit the signals that they typically do when all is well? This is the principal motivation of this article, which hopes to fill a residuary gap in the empirical literature on what causes term premia to behave as they do in highly uncertain times.

The rest of the article is organised into three sections. The next section sifts through the stylised facts on recent movements in term premia over space and time, and in relation to factors that influence the g-sec market in India. Section III offers a methodological framework for examining the recent behaviour of term premia and their proximate determinants, and the results therefrom. Section IV concludes the article with some policy perspectives.

II. Some Stylised Facts

The yield on a long maturity bond is typically the sum of (i) the future short-term interest rate and (ii) the term premium. The first term is the expected return from rolling over a series of short-term bonds with a total maturity equal to that of the long-term bond. In addition, there is the extra return that the investors demand to compensate them for taking additional risks for holding the bond until the maturity or for a longer horizon, as embodied in the second term alluded to earlier (Cohen et al., 2018). The difference between yields on a long-term bond and a short-term bond or the term premium is also regarded

* This article is prepared by Michael Debabrata Patra, Harendra Behera Joice John, Reserve Bank of India. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

as the slope of the yield curve¹ - a positive term spread corresponds to an upward sloping yield curve and a negative spread describes an inverted yield curve.

Monetary policy yields an important influence on the term premium. In the context of contractionary monetary policy, a rise in the policy rate leads to an increase in short-term interest rates, but longer-term interest rates respond incompletely and with a lag. Hence, the term premium, which is the spread between long-term and short-term interest rates, gets compressed. Conversely, easy monetary policy would lead a rise in the term spread (Estrella, 2005; Estrella and Mishkin, 1997). This phenomenon is observable in India today, as in the rest of the world. The term premium is, however, influenced by a number of other factors as well, such as changes in risk perceptions (De Backer *et al.*, 2019) and expectations – if market participants anticipate an economic boom and higher rates of return on investment, the yield on long-term bonds should rise relative to short-term yields and widen the term premium. The converse would hold in the face of recessionary expectations and flights to safety (Modigliani and Sutch, 1966; Vayanos and Vila, 2009; D'Amico and King, 2013; Bonis *et al.*, 2017). A fall in inflation and easing of inflation expectations can lead to a decline in term premium as agents believe that monetary policy will not need to act in a contractionary manner (Hördahl and Tristani, 2014; Camba-Mendez and Werner, 2017; De Backer *et al.*, 2019). Rise in economic policy uncertainty increases risk and could lead to a rise in the term premium (Leippold and Matthys, 2015).

Apart from these factors, the microstructure of the bond market also impacts yields and the term premium. Liquidity in any segment of the bond market impacts its price and thereby the yield (Amihud and Mendelson, 1991, Fleming, 2003, Goldreich *et al.*,

2005; Rathi and Pradhan, 2017). The drying up of liquidity in the longer term segment, for instance, would indicate depressed demand, lower prices and correspondingly higher yields. If yields in other segments remain unaffected, a change in the term premium would occur. Changes in potential output, and the fiscal stance also affect long-term bond yields, leaving short-term yields largely unaffected (Poghosyan, 2014).

In India, factors such as turnover in the g-sec market, inflation risk, foreign investment in domestic bonds and policy uncertainty have been found to influence the term premium (Dilip, 2019). Among other potential drivers of long-term government bond yields, monetary policy action is found to be one of the most important determinants, while the government debt ratio does not have any discernible adverse effect (Akram and Das, 2019). While the impact of monetary policy is found to be strong across the term structure of interest rates, the forward premium, inflation and high powered money lose their statistical significance towards the longer end of the spectrum (Dua and Raje, 2014). Policies on liquidity provision to the banking system as reflected in the net liquidity adjustment facility (LAF) at the RBI can also impact yields at different maturities (Dua, Raje and Sahoo, 2003; Singh, 2011). The size of the government's market borrowing programme, foreign portfolio investments in the domestic bond market and foreign bond yields are also found to move domestic government bond yields (Kapur, John and Mitra 2018).

Financial commentators in mature g-sec markets typically focus on the difference between the 10 year and 2 year bond yields in view of the large amounts of liquidity at both points in the yield curve. In the academic literature, the preference is for the difference between the 10 year yield and a money market rate such as the three-month treasury bill rate because of the latter's strong predictive power with regard to the monetary policy stance (Bauer and

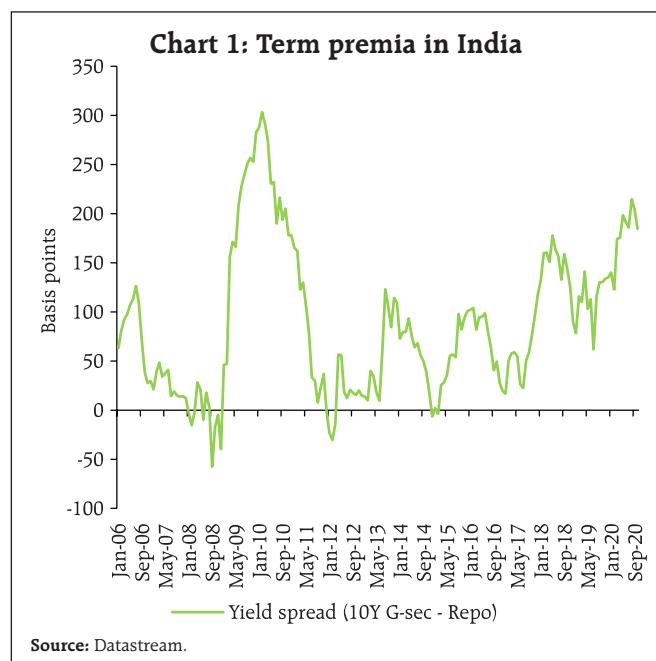
¹ For a discussion on various term spreads based on difference between interest rates, see Bauer and Mertens (2018).

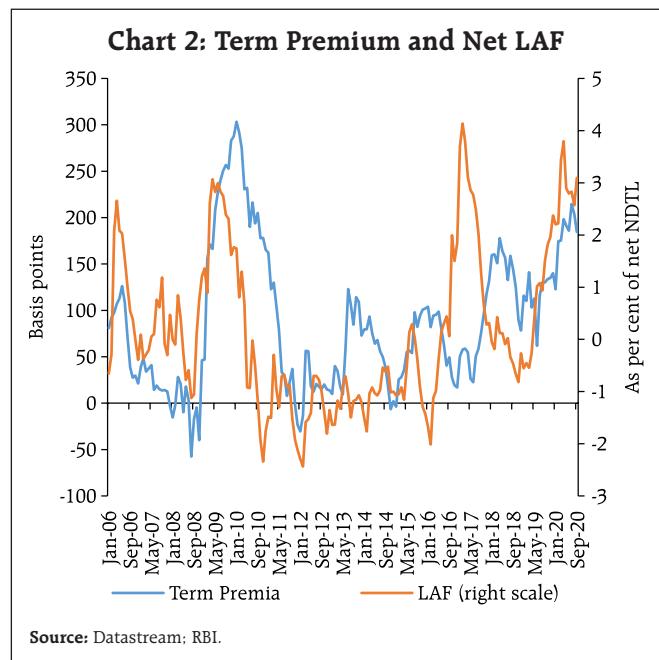
Mertens, 2018). We choose the difference between the 10 year yield and the overnight policy rate as our measure of the term spread, since these are the most liquid points on the yield curve in India and the monetary policy stance is completely captured in the policy rate. It is observed that the term spread peaked in February 2010 in the aftermath of the global financial crisis, with expectations of exit from monetary policy stimulus running high, the expanded volume of market borrowings by the Government of India (GoI) and rising inflation expectations (Chart 1). The term spread eased thereafter, however, and slipped into negative territory by January 2012 on account of sizable open market operations in the form of purchases of g-secs by the Reserve Bank that infused durable liquidity into the system and cooled yields substantially. Moreover, the ceiling for investment in g-secs by foreign portfolio investors was raised by the Reserve Bank, and this had a salutary effect even as inflation expectations moderated somewhat and lifted market sentiment.

Between this point and July 2017, the yield spread moved in a narrow range but firmed up from there to peak at 178 basis points in May 2018 on market

concerns about the pace of tightening of monetary policy in the US, the unrelenting firming up of international crude prices and higher than expected inflation readings in India. From July 2019 right up to August 2020, the term premium moved up almost uni-directionally by 150 basis points to 215 basis points. During this period, the Reserve Bank reduced its policy rate by a cumulative 250 basis points and since the 10 year yield responds with a lag, this had the effect of widening the spread immediately. Fears of excess supply of paper due to deviations from budgetary targets on account of an expansionary fiscal stance, first in the context of the slowdown in economic activity and then to fight the pandemic, and elevated inflation prints due to supply disruptions brought on by COVID-19 led to the rise in the term premium. The term spread has begun easing from early October 2020 on various measures taken by the Reserve Bank to maintain comfortable liquidity conditions, and assuaging forward guidance that the Reserve Bank stands ready to undertake measures as necessary to assure market participants of access to liquidity and easy financing conditions in keeping with the monetary policy stance (Das, 2020).

Underlying this historical time profile of the term premium are degrees of separation or co-movement, as the case may be, with various underlying indicators identified from the literature. The closest association of the term premium is with liquidity conditions represented by the net position under the RBI's liquidity adjustment facility (LAF) (Chart 2). With realised inflation, the term premium's correlation is moderate (0.3); surprisingly, the correlation with inflation expectations of professional forecasters turns out to be perverse in sign and statistically insignificant, suggesting that the bond market is backward looking in its own inflation view, and adapts to inflation prints that are received with a lag of about a month (Chart 3a). The association between the term premium and economic activity proxied by the

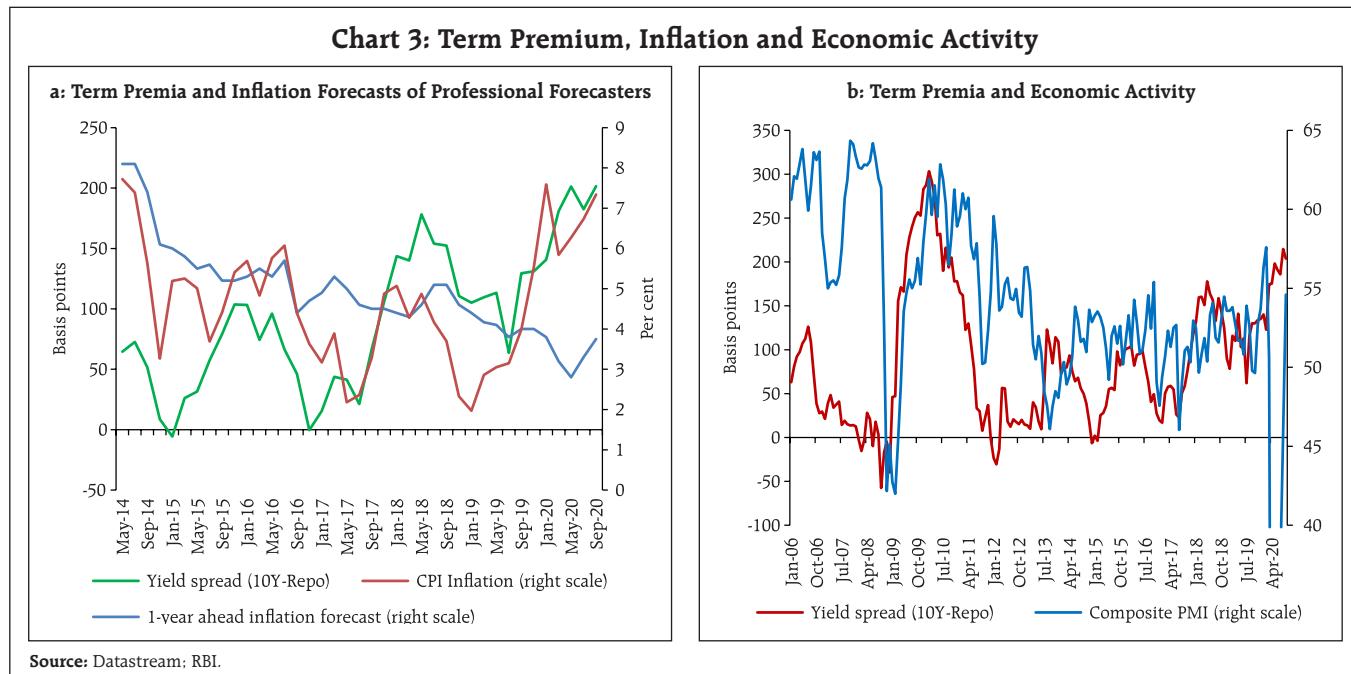




composite purchasing managers' index (PMI) is weak (0.1) and statistically insignificant overall; the correlation, however, turns out to be negative and

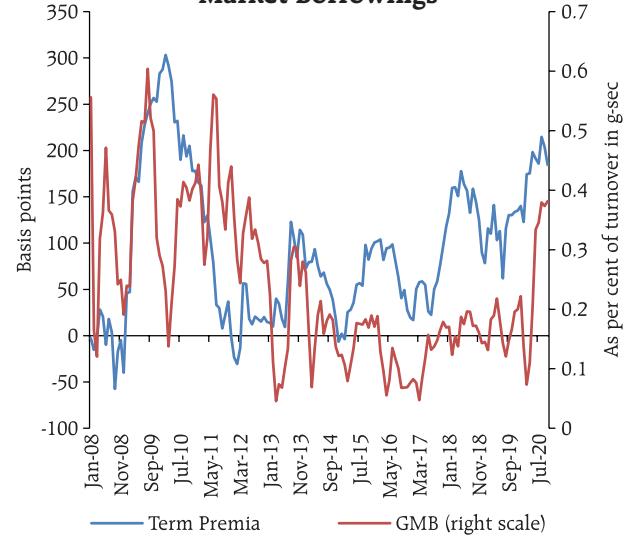
significant since 2012 (Chart 3b). With the supply of paper to the market, represented by the three-month moving average of market borrowings of the Central Government as a ratio of g-sec turnover, the correlation of the term premium is around 0.3, i.e., the same as with realised inflation (Chart 4).

At a global level, the term premium in India exhibits an insignificant correlation with economic policy uncertainty represented by the popular index of global economic policy uncertainty or GEPU (Baker, et al., 2016)², if the period under consideration is taken from 2006 (Chart 5). From 2012, however, the correlation becomes significant and turns out to be the highest among all the variables taken so far (0.56). This indicates a growing sensitivity of India's bond market term premium to global spillovers. Cross-country comparison of the recent behavior of yield curves across different advanced and emerging market economies suggest that with the steepening



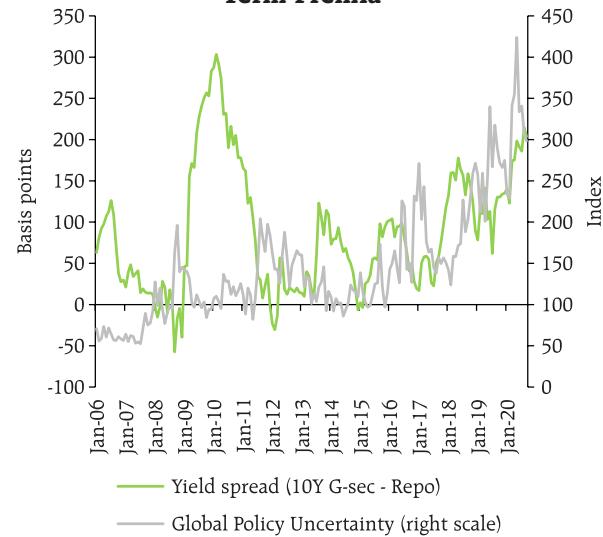
² The GEPU Index is a GDP-weighted average of national EPU indices for 21 countries, each reflecting the relative frequency of own-country newspaper articles that contain a trio of terms pertaining to the economy (E), policy (P) and uncertainty (U).

Chart 4: Term Premium and Central Government Market Borrowings



Source: Datastream; RBI.

Chart 5: Global Economic Policy Uncertainty and Term Premia



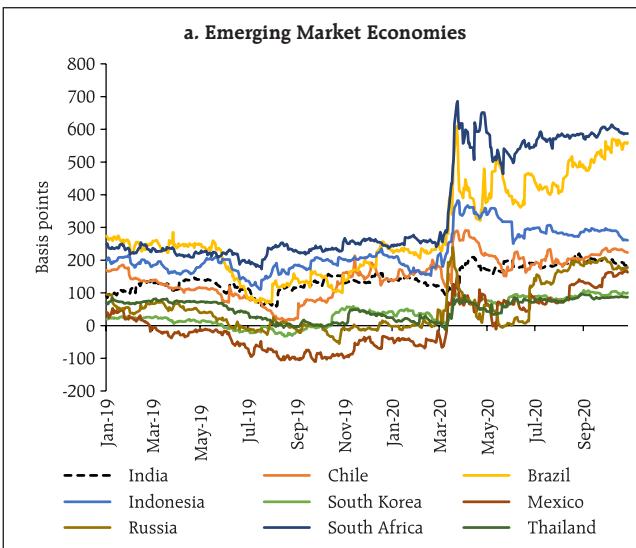
Source: Datastream; www.policyuncertainty.com.

of the yield curve in the aftermath of the COVID-19 pandemic, the term premium has widened sizably across all countries, both emerging and advanced (Chart 6a and 6b). Even though the increase was notable in the case of India, it was found to be lower than several other emerging market economies.

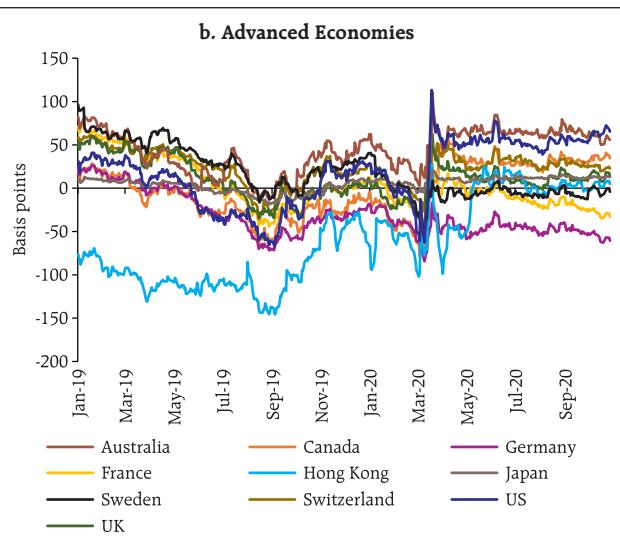
III. Methodology and Empirical Results

Two methodological approaches are adopted to empirically investigate the determinants of the term premium in India, based on the stylised facts and the pointers available in the literature. First, an auto regressive distributed lag (ARDL) model is estimated, due to the presence of variables of different orders of

Chart 6: Movement in Term-premium



Source: Datastream.



integration, but without losing the intrinsic properties of these variables through over-differencing. Second, a restricted vector autoregression (VAR) model is used as a robustness check and to produce a historical decomposition of the term premium.

The variables that have been considered are: (i) the term premium defined as the difference between 10-year G-sec yield and the policy repo rate (Term_prem); (ii) domestic economic activity represented by the composite PMI; (iii) deviation of CPI inflation (y-o-y) from its target (INFL_gap); (iv) ratio of market borrowings of the GoI to turnover in the g-sec market (GMB); (v) the net liquidity position under the LAF as a ratio of the banking system's net demand and time liabilities (LAF); and the global policy uncertainty index (GEPU), all for the period January 2006 through September 2020.

The variables used in the ARDL model are found to be stationary in levels except the inflation gap or INF_gap (inflation minus target), which is stationary in first difference. The bounds test confirms the presence of a cointegrating relationship between the term premium, economic activity, inflation gap and liquidity conditions (Table 1). The government's market borrowing does not have statistically significant effects in the long run but in the short-run, it affects the term premium, along with changes in global uncertainty, the inflation gap and economic activity (Table 2).

The stability of the parameter estimates is validated by cumulative sum of squares (CUSUM)

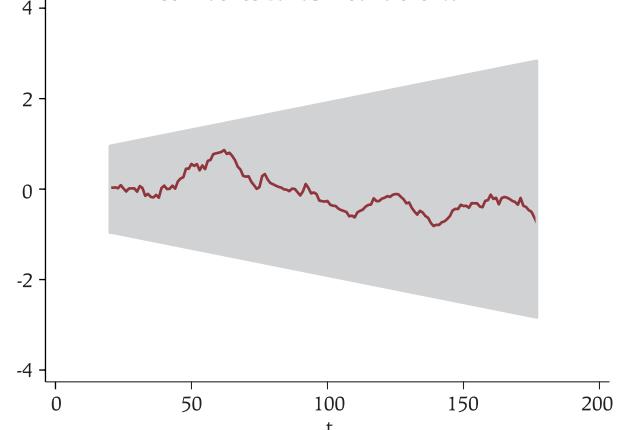
Table 1: ARDL Bounds Tests for Cointegration

Function	F-Statistics		
Term_prem=f(PMI, INFL_gap, LAF)	6.64*		
Critical Bounds	10%	5%	1%
Lower Bounds	2.72	3.23	4.36
Upper Bounds	3.79	4.40	5.70

*: significant at 1% level.

Chart 7: Stability Tests

Recursive CUSUM Plot of Change in Term Premia with 95% Confidence Bands Around the Null



Note: Cumulative sum test for parameter stability Test Statistic = 0.560 [5% critical value = 0.948]. Hence, we fail to reject the null hypothesis of no structural break at 5% level.

Source: Authors' Computation.

with a reasonable level of confidence (Chart 7). Other diagnostic tests indicate absence of serial correlation and heteroscedasticity (Table 2). The error correction

Table 2: ARDL Results: Long-run and Short-run Estimates

	Coefficient	P-value
Long-run estimates		
PMI	-0.159*	0.011
INFL_gap	0.185*	0.017
LAF	0.352*	0.025
Short-run estimates		
Δ Term_prem(-1)	-0.131**	0.089
$\Sigma \Delta$ PMI (0 to -3)	0.028*	0.014
$\Sigma \Delta$ INFL_gap (0 to -1)	0.075*	0.012
$\Sigma \Delta$ GMB (0 to -1)	0.113**	0.080
Δ GEPU (-3)	0.001***	0.118
ecm(-1)	-0.083*	0.000
Constant	0.819*	0.000

Diagnostics:

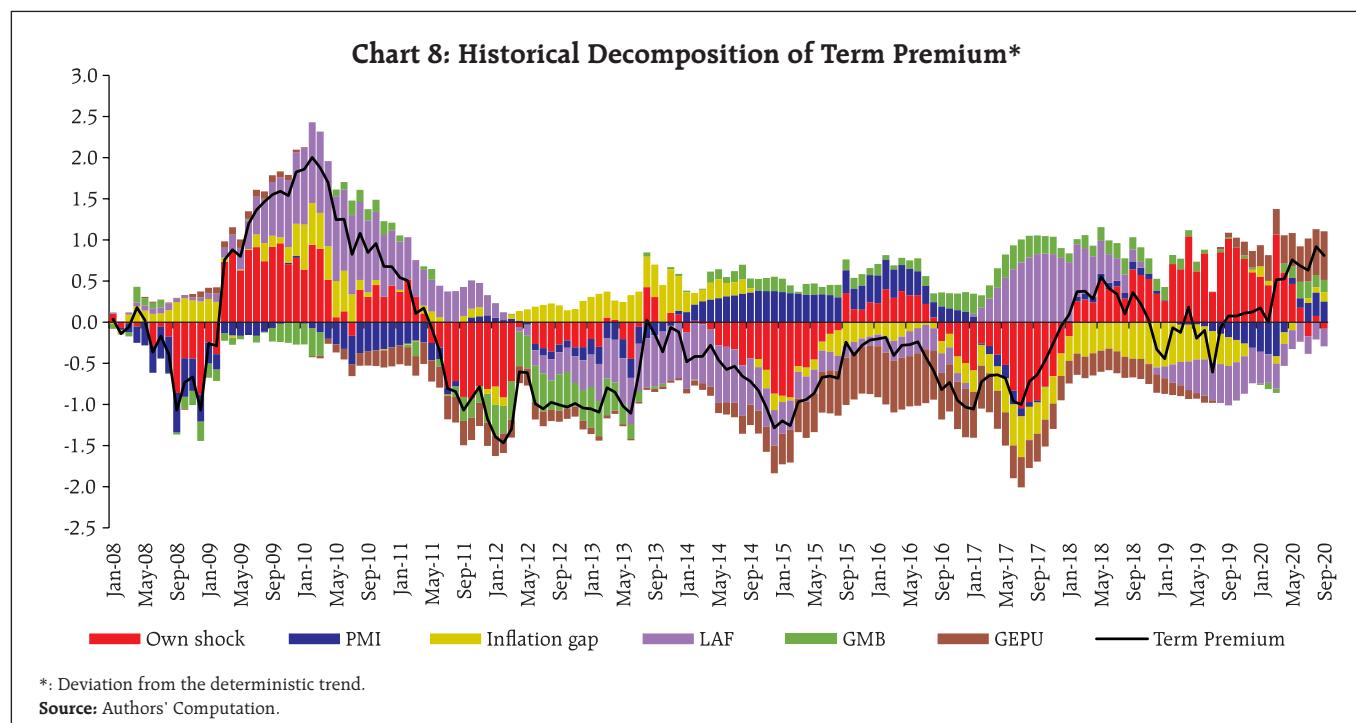
Breusch-Godfrey LM test for autocorrelation p-value	0.211	
LM test for autoregressive conditional heteroskedasticity (ARCH) p-value	0.963	
Portmanteau test for white noise p-value	0.616	

***, **, *: Significant at 15%, 10% and 5% level, respectively.

term (ecm) is also found to be statistically significant with the expected negative sign; however, the small size of the coefficient on the ecm term indicates that any disequilibrium created in the g-sec market takes long time to dissipate.

A restricted VAR³, comprising all the variables used in the ARDL model, is estimated as a robustness check. The results are found to be broadly similar – the sign and magnitude of coefficients in ARDL model are comparable to the direction and size of impulse responses from the VAR. The historical decomposition (Chart 8) of term spread from its' long term average estimated from the VAR shows that between July 2019 and March 2020, the most recent episode of hardening of the term premium, apart from hysteretic inertia in the g-sec market's dynamics, global uncertainty was

the main driving force, accounting for 90 per cent of the total variation in the term premium. This was followed by the government's market borrowing (20 per cent). On the other hand, liquidity had a cooling effect, pulling down the term premium and partly offsetting the upside factors (-109 per cent). The slowing down of economic activity in the PMI and the narrowing of the inflation in that period also contributed to lowering the premium (-33 per cent and - 30 per cent, respectively). From April to September 2020, global uncertainty remained the dominant factor (66 per cent), followed by hysteresis (25 per cent), market borrowing (22 per cent) and pick-up in economic activity (19 per cent). Liquidity continued to exercise a calming effect (-32 per cent). Inflation had no contribution to the term premium's variation in the period of COVID-19.



³ A linear restriction of parameters in VAR is imposed to restrict the impact of GEPU on term premium in India only and being determined by its own two period lags. The order of the variables is strictly endogenous to seemingly endogenous and the lags are selected using AIC criteria. . The regression diagnostics were found to be satisfactory – a) Lagrange-multiplier test: No autocorrelation of errors; b) Eigenvalue stability condition: All the eigenvalues lie inside the unit circle; VAR satisfies stability condition. The historical decomposition is based on generalised impulse responses and represents the contribution of each variables in explaining the movement of term premium over its deterministic trend.

IV. Conclusion

Bond markets evince extreme views. What one stands for depends on where one sits. The underlying relationships that drive term premia are complex and constantly shifting. This is reflected in the burgeoning literature and in day-to-day market movements. Fundamentals and idiosyncratic factors intertwine and the test for the discerning policy maker is to extract signals from noise. This assumes relevance for modern-day monetary policy seeking quick and complete transmission to the longer end to revive the economy while skirting inflation scares. With interest rates at or the near zero lower bound in several advanced economies, whether real or nominal, monetary policy that seeks to compress the term premium and influence the long-term interest rates more directly takes a step into the unknown. Will the provision of extraordinary amounts of liquidity allay high uncertainty? Or will it kindle inflation with no material effects on real activity? Only time will tell.

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*India's Gilt Market**

A country's financial development hinges around the existence of deep and liquid government securities market. Spurred by reforms undertaken over the years, the gilt market in India has gained depth, liquidity and vibrancy while exhibiting resilience through periods of instability and crises, including the recent pandemic. Going forward, increasing the liquidity across tenors in the sovereign yield curve, widening the investor base and developing the derivatives market can be the focus areas to augment the assiduously built market ecosystem for government securities.

Introduction

A country's financial development hinges around the existence of deep and liquid government securities market. Besides providing flexibility to the public debt manager to manage borrowing obligations and the maturity profile of public debt while minimising rollover risks, this market also determines risk-free interest rates, leading to price discovery in other segments of the market spectrum such as markets for money market instruments and corporate bonds. It also plays a critical role in facilitating the conduct of monetary policy through indirect instruments such as repos and open market operations (OMOs).

Spurred by reforms undertaken over the years, the gilt market in India has gained depth, liquidity and vibrancy while exhibiting resilience through periods of instability and crises, including the recent pandemic. India's gilt market has emerged as the third largest government bond market in Asia (Rajaram and Ghose, 2019).

This article examines the development of the government securities market in India, especially in the context of policy initiatives underpinning its evolution. Section II discusses the developments in the government securities market over time, while Section III discusses these developments over space in a comparison with emerging markets (EM) peers. Section IV discusses the factors constraining the further development of the market. Section V concludes with an evaluation of potential policy solutions to carry forward the modernisation of the government securities market consistent with an economy progressively engaged in global integration.

II: Market Micro-Structure

The development of an efficient government securities market involves (a) the establishment of a legal architecture and regulatory framework to support issuance and trading of government securities; (b) building a potential investor base; and (c) development of market infrastructure for derivative segments that price and trade various risks (IMF and World Bank, 2001).

II.1. The Legal Framework

A robust legal and regulatory framework for debt management facilitates discipline, transparency, and accountability for securities issuance; and for fostering market development with sound enforceable supervisory practices (IMF and World Bank, 2001).

The RBI Act, 1934, invests the Reserve Bank with the responsibility of management of public debt of the Government of India and (by agreement) of State Governments. The Public Debt Act, 1944 and the Government Securities Act, 2006 provide the legal framework for the issuance and servicing of government securities, depository services related to government securities and overall management of public debt. In 2006, the RBI Act was amended to give explicit regulatory powers to the Reserve Bank over government securities, derivatives, and money

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market instruments. Furthermore, the Payment and Settlement Systems (PSS) Act, 2007 empowers the Reserve Bank to regulate and supervise payment and settlement systems of the country, thereby providing a legal basis for multilateral netting, settlement finality and guaranteed settlement, all of which are critical for efficiency of the gilt market.

Within this overarching statutory framework, the Reserve Bank has been issuing regulations to regulate and develop the government securities market. To strengthen the debt issuance framework through better management and distribution of auction risk, guidelines for "When, as and if issued" (or 'When Issued' (WI)) trading in government securities were issued (2006). In the same year directions to allow short sale¹ in government securities were issued to facilitate expression of two-way views on interest rates and improve price discovery. Liquidity in government securities market is complemented by deep and liquid repo markets. The repo market also facilitates undertaking short position as the delivery obligation of the short position is met by borrowing securities through the repo market. To augment the repo market, its participant base that included only SGL account² holders, was expanded to include non-SGL account holders (2003). Re-repo of government securities was permitted (2015) and tri-party repo was introduced (2017). A comprehensive set of Directions on the repo markets was issued in July 2018.

An active derivatives market facilitates capital market activity by providing instruments to hedge risks while also contributing to price discovery in the underlying. Guidelines for over the counter (OTC) rupee interest rate derivatives and interest rate futures were issued in 1999 and 2003, respectively. The regulatory framework has evolved over the years to address various aspects of the interest rate derivative markets

covering *inter alia*, eligible institutions, permissible instruments, exposure limits and reporting. Comprehensive Directions covering both OTC and exchange traded derivatives were issued in 2019. To promote transparency, fair access and dissemination of traded information and to ensure integrity and safety in trading, the electronic trading platforms (ETPs) on which transactions in instruments regulated by the Reserve Bank can be contracted were brought under the regulatory purview with the issuance of the Electronic Trading Platform (Reserve Bank) Directions, 2018. To strengthen the regulatory framework to prevent abusive market practices, directions for prevention of market abuse were introduced in 2019, in line with best global practices. With a view to improving the governance of the benchmark processes in markets regulated by the Reserve Bank, especially after the LIBOR scam³, the Financial Benchmark Administrators (Reserve Bank) Directions were issued in 2019 in accordance with the best practices recommended in the International organisation of Securities Commissions (IOSCO) report on Principles for Financial Benchmarks (2013) and the Report of the Committee on Financial Benchmarks set up by the Reserve Bank (2014).

The legal and regulatory framework for the government securities markets has thus evolved over the years to facilitate efficient management of public debt and foster the development of secondary markets.

II.2. The Supply Side

Issuances of government securities are made in different maturity buckets, enabling the formation of a yield curve from the short to the very long run of up to 40 years. Consequently, the share of securities with residual maturity of 20 years and above in the

¹ Short sale means sale of security one does not own.

² SGL account: Subsidiary General Ledger Account is the account for government securities maintained with the Reserve Bank by eligible entities.

³ LIBOR scam was a scheme in which bankers at several major financial institutions colluded with one-another to manipulate the London Interbank Offered Rate (LIBOR)

Table 1 - Maturity Profile of Dated Government Securities

Maturity (years)	March 31, 2012			September 30, 2020		
	No. of securities	Total outstanding (₹ Cr.)	Share in total outstanding (per cent)	No. of securities	Total outstanding (₹ Cr.)	Share in total outstanding (per cent)
0-5	39	7,82,017	30	34	19,39,139	29
5-7	12	4,22,251	16	10	8,74,072	13
7-10	14	4,77,846	18	13	11,25,350	17
10-15	11	3,61,451	14	16	13,52,702	20
15-20	6	2,09,367	8	4	2,27,151	3
20-25	7	2,37,307	9	6	5,06,002	8
25-30	3	1,03,000	4	3	2,77,798	4
>30				5	3,54,468	5
Total	92	25,93,328		91	66,56,682	

Note: Excludes special securities. Source: CCIL, RBI, RBI staff calculation.

outstanding stock has increased from 13 per cent at end-March 2012 to 17 per cent at end-September 2020 (Table 1). In conjunction, issue sizes have been enlarged through reissuances in consecutive auctions to create liquidity-enhancing homogenous stocks of securities with common coupon and maturity dates. The rollover risk of large issuance sizes is managed through active consolidation using buyback/switches to supplement passive consolidation by way of reissuances. The number of securities has, consequently, remained largely unchanged over the last decade even as the stock of government debt has more than doubled.

Transparency in public debt supply was enhanced through the introduction of issuance calendars for auctions in government securities since April 2002. In recent years, detailed half-yearly borrowing calendars are announced, setting out weekly schedules of issuances, including the tenor and amount of securities to be issued. Dated government securities are primarily issued as fixed-coupon bonds. Product diversity has, however, sought to be brought about through instruments such as inflation-linked bonds, capital-indexed bonds, floating-rate bonds and bonds with embedded options. Treasury Bills (T-Bills) and Cash Management Bills (CMBs) are issued as

discounted instruments. Regulatory provision for issuance of Separate Trading of Registered Interest and Principal of Securities has also been made to facilitate the development of a zero-coupon yield curve. Niche products targeted at retail investors include sovereign gold bonds (a government security denominated in gold) and savings bonds.

Primary issuances of dated government securities are supported by a set of 21 Primary Dealers (PDs) who underwrite these auctions with prescribed targets on bidding commitments / success ratio (in respect of T-Bills/CMBs). During 2019-20, PDs individually achieved the stipulated minimum success ratio of 40 per cent, with an average of over 60 per cent. In addition, PDs may also be invited by the Reserve Bank to collectively bid to underwrite up to 100 per cent of the notified auction amounts of State Development Loans (SDLs)⁴.

II.3. The Demand Side

A heterogeneous investor base with different time horizons and risk preferences plays a key role in increasing the resilience of debt markets by ensuring active trading and liquidity across tenors. Over the past decade, the investor base for government securities

⁴ SDLs are dated securities issued by State Governments.

Table 2: Government Securities Holding (Per cent Share in Outstanding Stock)

Quarter ended	Commercial Banks	Insurance Companies	Corporates	FPIs	Provident Funds	RBI	State Governments	Other Financial Institutions	Others
Mar 2010	47.25	22.16	2.99	0.59	6.76	11.76	-	4.24	4.24
Mar 2020	40.41	25.09	0.81	2.44	4.72	15.13	2.05	4.24	5.12

Source: DBIE

has expanded. Banks remain the largest investors in government securities. However, their share in total holdings has declined while those of insurance companies and non-resident investors have increased (Table 2).

Foreign Portfolio Investors (FPIs) have been permitted to invest in government securities subject to an upper limit of 6 per cent of the outstanding stock. With the introduction of the Fully Accessible Route (FAR), non-residents, including FPIs, can invest without any macro-prudential limits in certain specified securities⁵. FPIs can also invest in any government security through the Voluntary Retention Route (VRR)⁶, with several exemptions from macro-prudential limits, but subject to a minimum retention period.

As is the case globally, retail investment in government securities in India is primarily routed through collective investment schemes like insurance, pension and mutual funds. Small savings schemes with associated tax benefits and fixed deposits with public sector banks also compete with government securities for retail interest. Nonetheless, several steps have been taken to encourage direct retail investment in government debt:

⁵ As of October 31, 2020, 10 dated securities are eligible for investment under FAR. Additionally, all new issuances of Government securities of 5-year, 10-year and 30-year tenors from the financial year 2020-21 shall be eligible for investment under the FAR as 'specified securities'

⁶ VRR is a separate route for FPI investments introduced on March 01, 2019 to encourage long-term investments in government and corporate debt. In addition to offering exemptions from several macro-prudential controls, the scheme allows FPIs to undertake repo and derivative transactions freely

- (i) As retail investors may not have the expertise to appropriately price government securities, a non-competitive bidding facility in primary auctions was introduced for them with securities issued at the weighted average price discovered in auctions;
- (ii) A separate limit of 5 per cent of notified amount is set aside for retail investment in all primary issuances;
- (iii) Retail investors can use alternate aggregator/facilitator channels such as banks, PDS and stock exchanges;
- (iv) Sovereign gold bonds have been launched for the retail investors and secondary market trading in the same has been enabled through exchanges;
- (v) A separate odd-lot segment with a minimum market lot size of ₹ 10,000 against a standard lot size of ₹ 5 crore has been created in Negotiated Dealing System Order Matching (NDS-OM) since 2007;
- (vi) Constituents' Subsidiary General Ledger (CSGL) account holders like Securities and Exchange Board of India (SEBI)-regulated depositories have been permitted to undertake value free transfer (VFT) of government securities directly on the Reserve Bank's Core Banking Solution (e-Kuber) portal in respect of trades on exchanges between demat holders of different depositories. A facility of direct file upload on e-Kuber is being developed for the benefit of the CSGL account holders.

II.4. Market Infrastructure

A sound, robust and safe market infrastructure increases the resilience of the government securities market against external shocks and contributes to continuous price discovery, thereby enhancing market liquidity (BIS, 1999). The Reserve Bank has been engaged in developing the trading infrastructure for government securities, including reporting and timely dissemination of traded information both in outright and repo markets. The Negotiated Dealing System (NDS) introduced by the Reserve Bank in February 2002, has evolved over the years into a robust market infrastructure.

Auction of dated government securities was operationalised in the NDS (Public Debt Office-NDS) in April 2005 with a view to enhancing operational efficiency by enabling online bidding. The NDS-Auction platform catered to primary auctions until October 2012 when e-Kuber, a technology-based solution, which fosters market-based price discovery took over. This is seamlessly integrated with the depository of government securities held at the Reserve Bank's Public Debt Office, the payment systems and the secondary market trading infrastructure, including the NDS-OM and Clearing Corporation of India Ltd. (CCIL) (see below), to ensure linkages between the primary and secondary markets. This infrastructure also incorporates an interface with stock exchanges through which bids can be collected and placed with the Reserve Bank.

Around 80 per cent of secondary market transactions in government securities are conducted on the NDS-OM which is an anonymous order matching platform for trading in government securities⁷. Complementing the trading infrastructure is a mechanism for settlement of transactions on a delivery-versus-payment (DvP)-III⁸ basis and

through a central counterparty which eliminates counterparty risks and, through multilateral netting, reduces liquidity requirements. The CCIL, set up in 2001, is authorised as a payment system under the PSS Act, 2007⁹ to act as the central counterparty for government securities transactions. The CCIL has been assessed as compliant with international standards set out under the Principles for Financial Markets Infrastructure (PFMI)¹⁰. Repo transactions in government securities are conducted primarily over two platforms - Clearcorp Repo Order Matching System (CROMS) and Triparty Repo Dealing System (TREPS). These platforms, including the NDS-OM, are operated by Clearcorp Dealing Systems (India) Ltd., a CCIL subsidiary and are governed under the Electronic Trading Platforms (Reserve Bank) Directions, 2018. Repo trades are also settled by the CCIL under the DvP-III process along with outright transactions to secure liquidity and netting efficiency in settlements. The infrastructure arrangements incorporate near real-time dissemination of trade information. Complementing the market infrastructure is a trade repository to which all OTC derivative transactions in related interest rate derivatives (as also foreign exchange and credit derivatives) are reported, thus providing a 360 degree view of all transactions in government securities and related markets, enabling effective market oversight and surveillance.

During the past decade, average daily turnover in the outright segment increased at a Compounded

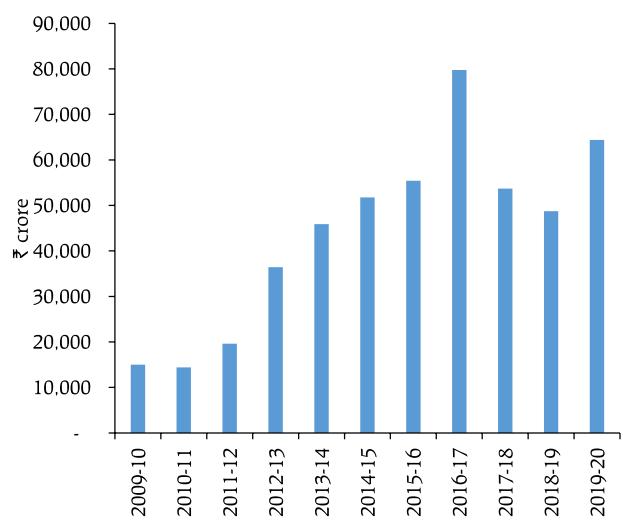
⁸ Delivery versus Payment – III (DvP-III) is a settlement method wherein both the securities and the funds legs are settled on a net basis and only the final net position of all transactions undertaken by a participant is settled.

⁹ CCIL has been certified as an authorized Payment System under the PSS Act for undertaking clearing and settlement of transactions in government securities, money market instruments, foreign exchange and Rupee derivatives.

¹⁰ PFMI are international standards for financial market infrastructures issued by the Committee on Payments and Market Infrastructures and the International Organisation of Securities Commissions. https://www.bis.org/cpmi/info_pfmi.htm

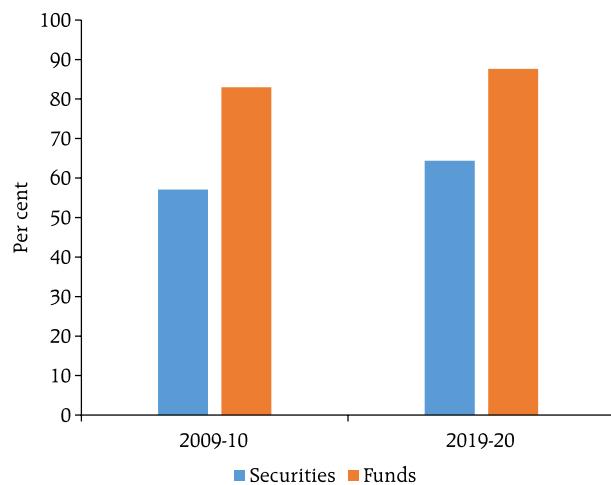
⁷ The remaining transactions take place over-the-counter (OTC) and are reported on NDS-OM.

**Chart 1: Average Daily Trading Volume
(Government Securities and T-Bills)**



Source: CCIL

Chart 2: Netting Factor



Note: Netting factor measures the benefit arising due to multilateral netting. Higher the netting factor, higher the efficiency achieved on account of multilateral netting.

Source: CCIL

Annual Growth Rate (CAGR) of 16 per cent from ₹15,000 crore in 2009-10 to ₹64,000 crore in 2019-20 (Chart 1). The netting benefits accruing to participants increased commensurately, as can be observed by an improvement in netting factor, which measures efficiency achieved on account of multilateral netting (Chart 2). Increased market liquidity and improvement in market infrastructure has also made it easier to execute large trades (Table 3).

The repo market witnessed substantial growth, with average daily volume increasing from around ₹ 75,000 crore in 2009-10 to around ₹ 2 lakh crore in 2019-20 (Chart 3). Simultaneously, the derivatives

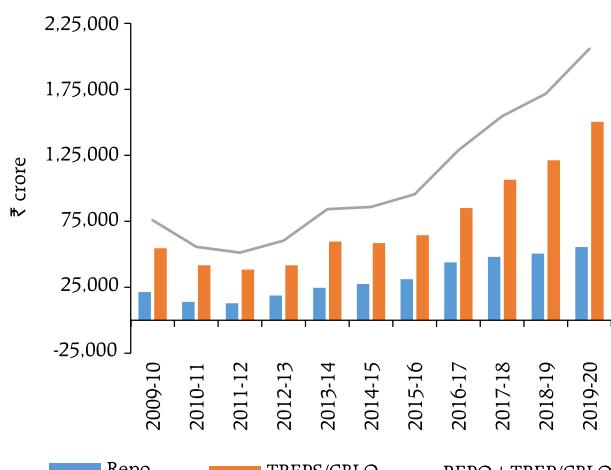
Table 3 - Deal Size Analysis for Outright Trades

Financial Year	Deal Size (percent of total deals)				
	Below ₹ 5 crore	₹5 crore	₹5-10 crore	₹10-20 crore	Above ₹20 crore
2009-10	5.7	65.1	18.0	3.3	7.8
2019-20	3.4	52.9	21.1	7.8	14.9

Source: CCIL

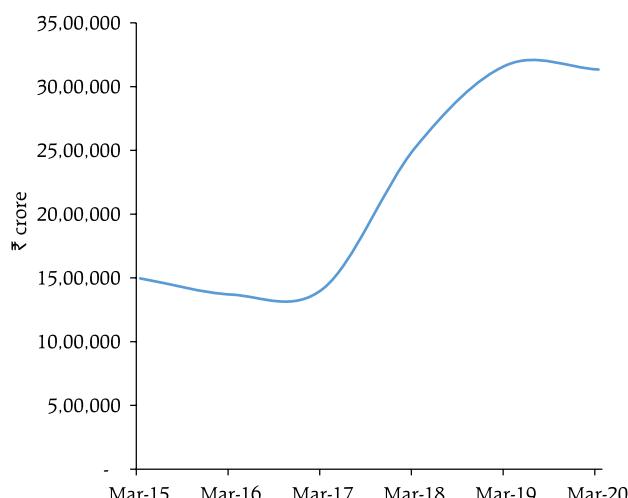
markets (interest rate swaps or IRS; interest rate futures or IRF) have also developed. In particular, liquidity in the Overnight Index Swap (OIS) market witnessed a significant increase in recent years (Chart 4).

Chart 3: Average Daily Volume in Market Repo and TREPS/ CBLO



Source: CCIL

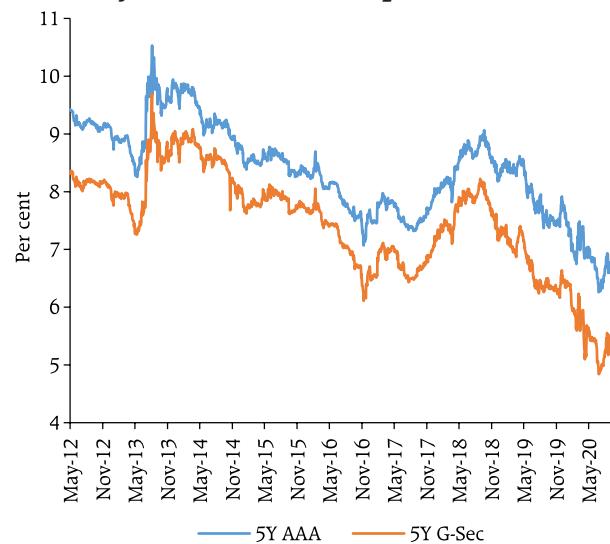
Chart 4: Interbank MIBOR OIS Outstanding Volume



Source: CCIL

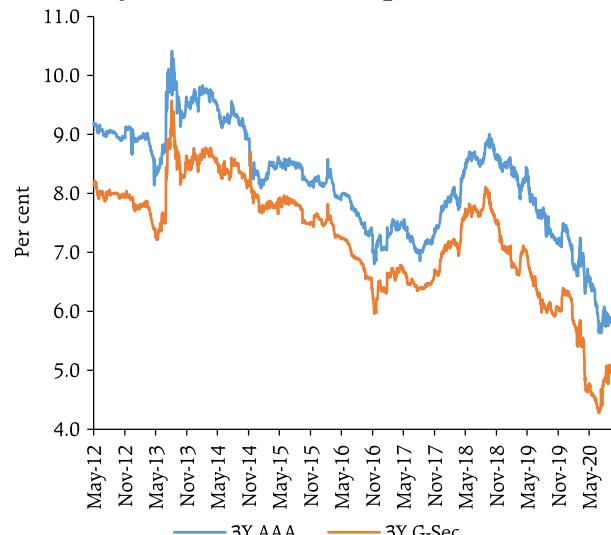
The government securities market has also provided a robust backbone for the development of the corporate bond market. Stable credit spreads (difference between government securities and corporate bond yields) over long periods of time testify to the relatively smooth transmission of impulses from the government securities segment to the corporate bond market (Charts 5 and 6).

Chart 6: Movement in 5 Year Government Security and 5 Year AAA Corporate Bond Yield



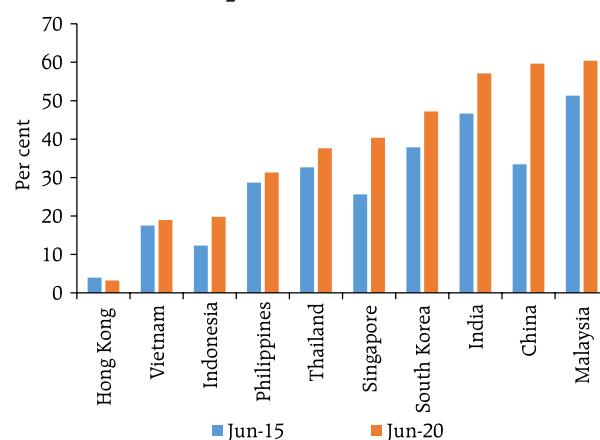
Source: Bloomberg

Chart 5: Movement in 3 Year Government Security and 3 Year AAA Corporate Bond Yield



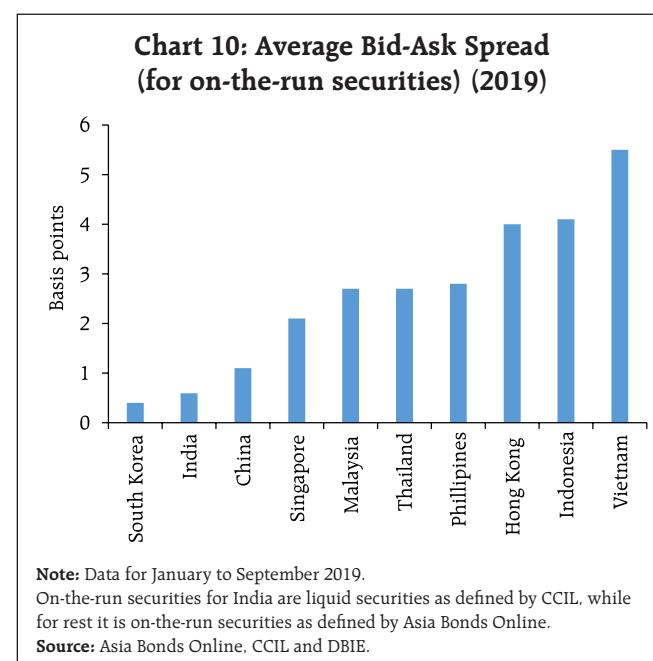
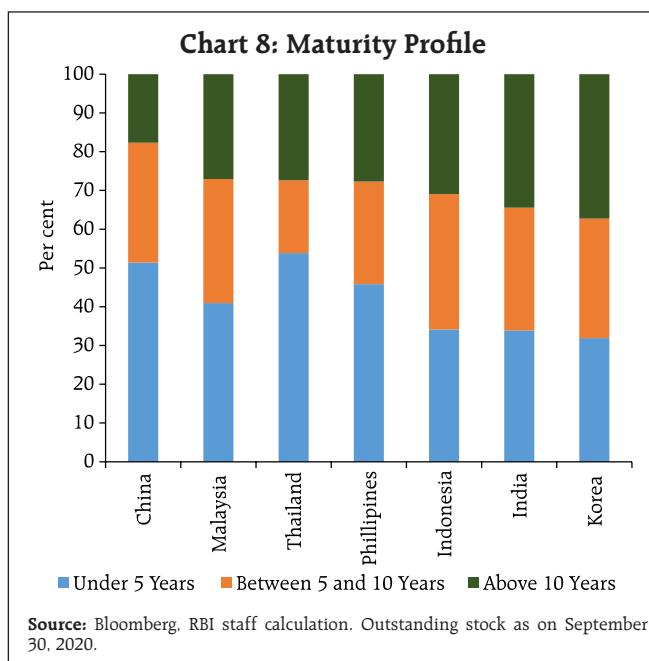
Source: Bloomberg

Chart 7: Size of Government Bond Market (as per cent of GDP)



Note: Local currency (LCY) Government bond market for India includes Central Government securities, SDLs and T-bills. For other economies, it includes bonds issued by central government, local governments, central bank bonds, and state-owned enterprises.

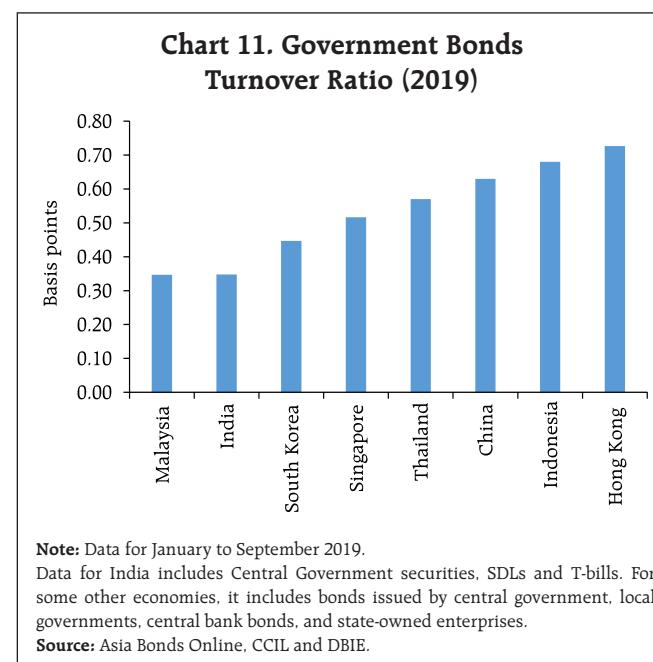
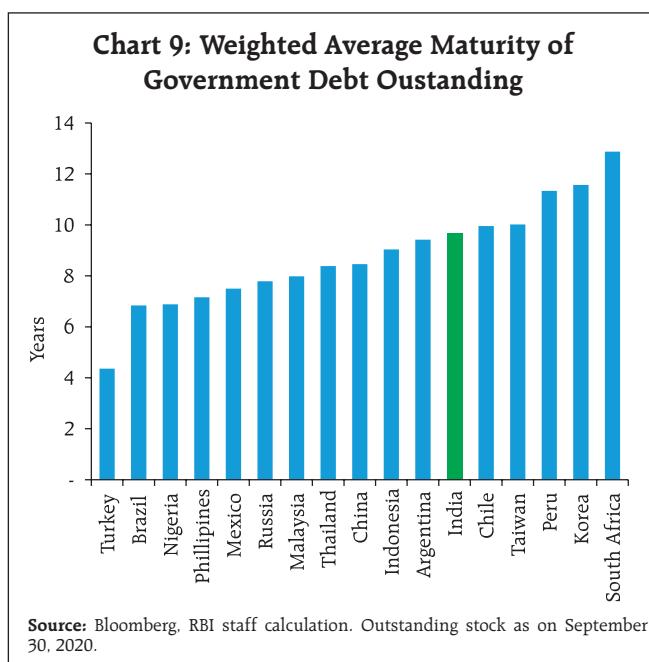
Source: DBIE, MOSPI, Asia Bonds Online

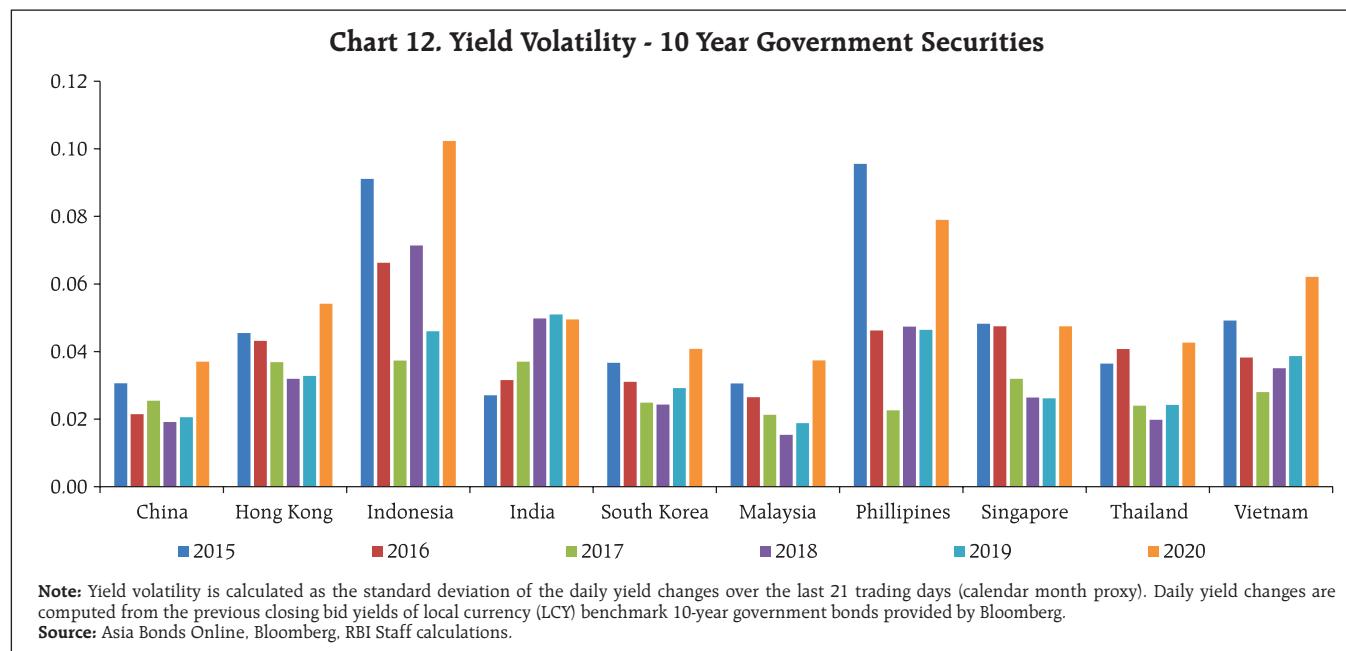


10 years) tenors (Chart 8), allowing investors the flexibility to invest as per their time horizons. Even relative to the wider emerging market (EM) universe, the average maturity of outstanding government debt is relatively high, indicating a lower rollover risk (Chart 9).

A liquid market is generally characterised by small bid/ask spreads which do not materially increase for large transactions (Gerber, 1997).

The average bid-ask spread for Indian government securities is among the lowest amongst Asian EM peers (Chart 10). In fact, the market liquidity compares well even with developed economies in terms of impact cost and bid-ask spread (BIS, 2019). However, the turnover ratio – the ratio of turnover to outstanding stock of bonds – is lower in the Indian case, indicating relatively lower volume in the secondary market (Chart 11).





Yield volatility is generally defined as standard deviation of daily yield changes over the previous 21 trading days (a proxy for calendar month). High yield volatility suggests less predictability of the daily movements in bond yields, while low volatility implies that yields are relatively stable at around the average yields and thus may be an indicator of more liquid market (Kawai, 2019). In recent years, yield volatility for Indian government securities has generally remained higher than for bonds in China and Malaysia due to supply concerns and volatility in crude oil prices. However, the volatility has been lower than that of bonds issued in Indonesia, Philippines and Vietnam (Chart 12).

Non-resident investment in Indian government securities is low relative to Asian EM peers (Chart 13), partly in reflection of the calibrated approach to opening up of domestic debt markets for foreign investment adopted in India. The relatively lower foreign presence in debt markets has, however, made Indian markets less vulnerable to external shocks

such as yield movements in the US Treasury notes (Chart 14).

The yield curve for India stretches up to 40 years, a feature not observed in most emerging market

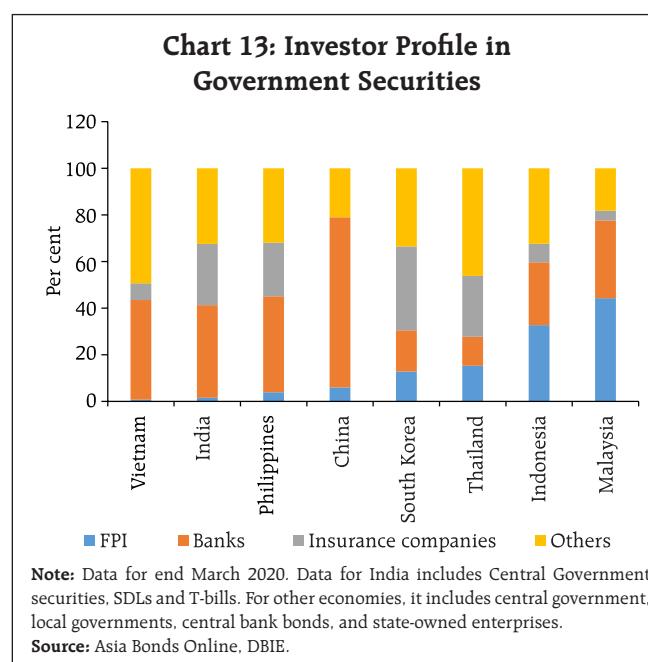
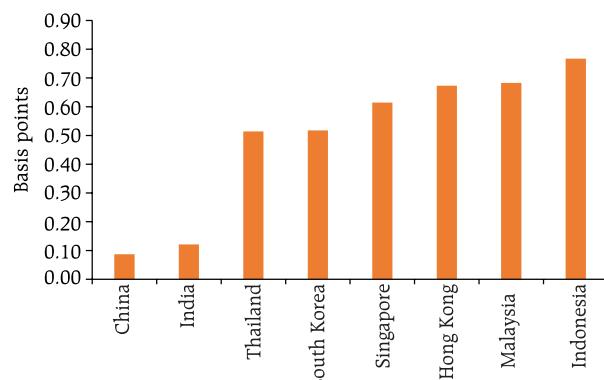


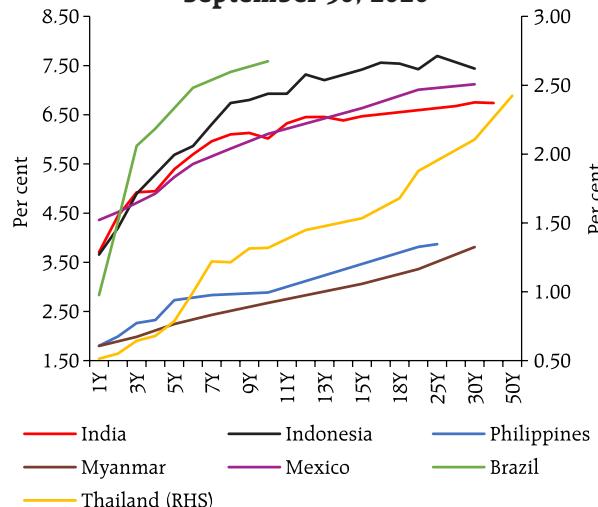
Chart 14: Movement in 10 Year Government Securities' Yields vis-a-vis Movement in US Treasury Yields.



Note: The analysis looks at sensitivity of Government securities yields to movement in US Treasury yields. Five time-periods between 2012 and 2019 were considered when the 10-year US treasury yields moved at least 35 bps in 2-week period, and then response in similar maturity Asian bonds was observed.

Source: Bloomberg, RBI staff calculation.

Chart 16: Sovereign Yield Curve as on September 30, 2020



Note: Data for local currency yield curves.

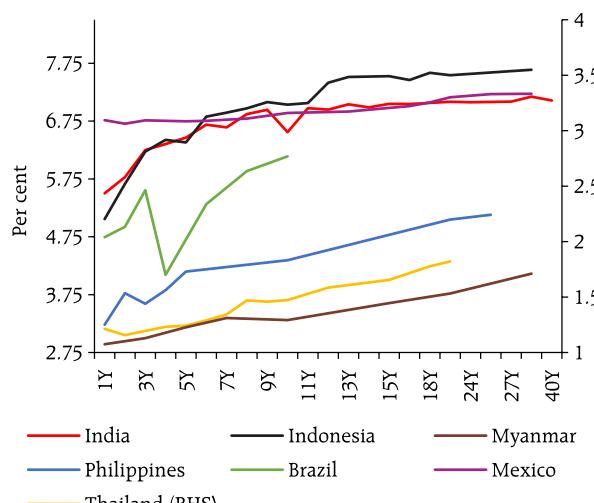
Source: Bloomberg, Data for Local currency yield curves.

economies (EMEs) (Chart 15). The Indian yield curve is also among the flattest, reflecting the lower term premium across the term structure. At the same time, the Indian yield curve displays kinks at select tenors, reflecting the liquidity premium commanded by select securities / tenors. Such kinks are also observed in the yield curves of some other EMs (Chart 16).

IV. Some Idiosyncratic Features

Secondary market liquidity in government securities is concentrated in a few securities and a few tenors. The share of the top 5 securities in the secondary market turnover remains high at about 75 per cent in 2019-20 (Chart 17). The bulk of the trading remains concentrated in securities with tenors between 7 and

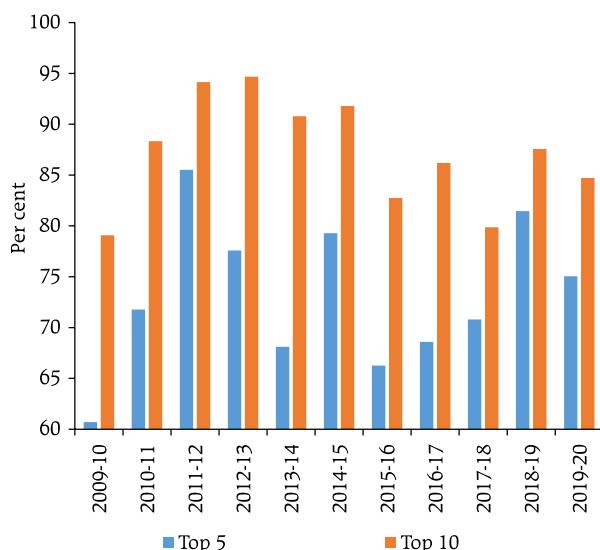
Chart 15: Sovereign Yield Curve as on December 31, 2019



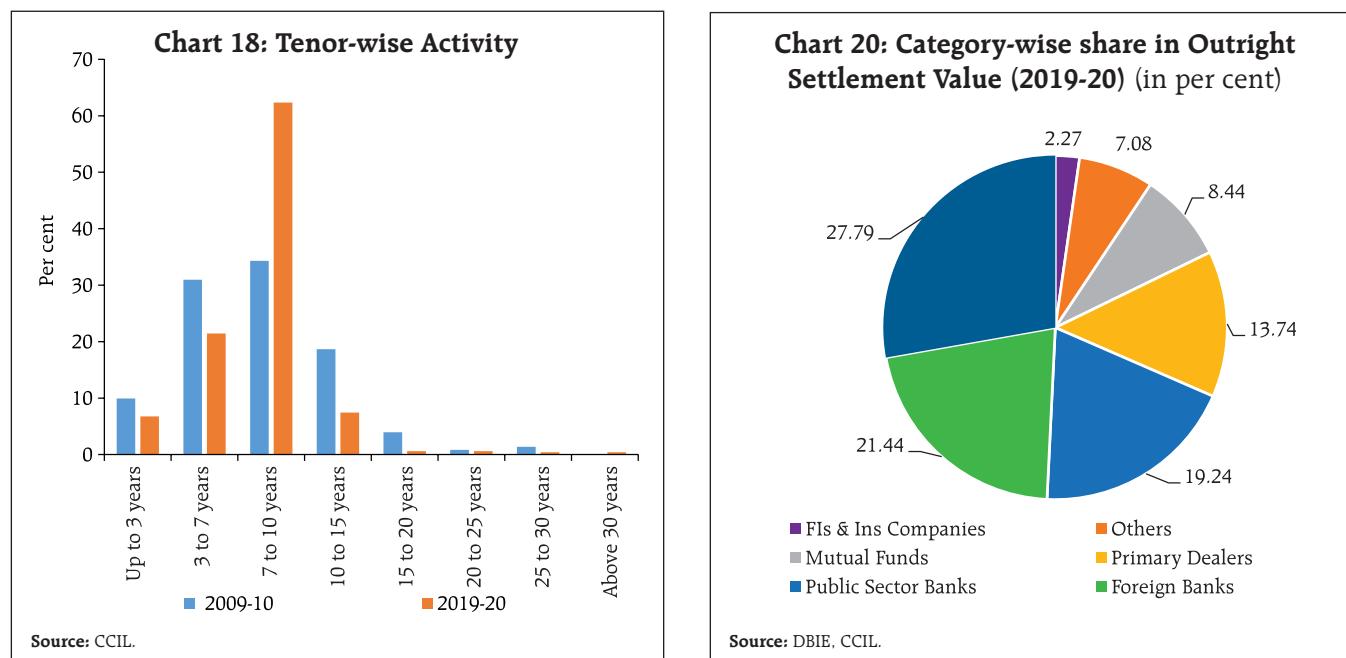
Note: Data for local currency yield curves.

Source: Bloomberg, Data for Local currency yield curves.

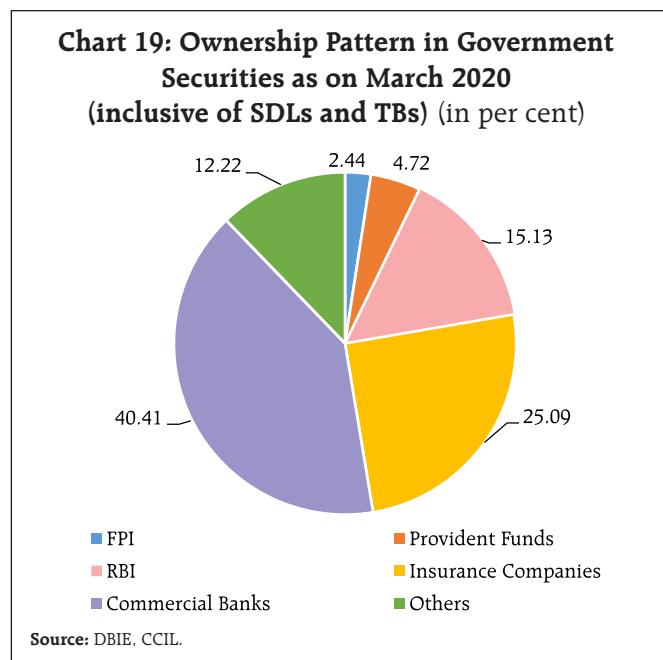
Chart 17: Market share of Top N securities



Source: CCIL.



10 years (Chart 18). A wider distribution of secondary market liquidity across tenors could further increase the reliability of sovereign yield curve as a benchmark for risk-free rates and, consequently, improve the pricing of non-sovereign debt. This, however, also reflects specific aspects of the market microstructure in India.



Insurance and provident funds are 'buy and hold' investors due to their cash flow patterns and related investment strategies, preferring longer dated securities in line with their liability commitments. The share of such entities in daily trading volumes is significantly lower relative to their share in holdings of government securities (Charts 19 and 20 and Table 4).

Table 4: Maturity Bucket-wise Holdings for Dated Government of India securities

(Per cent)

Category	Up to 5 year	5 to 10 year	10 to 15 year	15 to 25 year	Above 25 year
Commercial Banks	54.2	52.1	43.2	11.6	3.1
Insurance	7.6	10.6	31.5	65.2	90.4
Mutual Funds	2.5	3.7	2.2	0.3	0.5
Co-op Banks	0.3	1.3	0.8	0.3	0.2
RBI	28.2	23.2	11.6	6.2	0.0
Provident Funds	2.0	2.3	4.4	10.8	3.9
State Governments	2.2	3.9	3.2	0.0	0.0
Others	3.0	2.9	3.1	5.6	1.8
Total	100.0	100.0	100.0	100.0	100.0

Note: Data as on June 30, 2020.

Source: RBI staff calculations.

A large number of participants in the government securities markets are 'long only' players, with regulatory constraints or trading strategies that constrain them from assuming short positions in bear markets. For instance, while the Reserve Bank has allowed all entities to take short positions, entities outside its jurisdiction such as mutual funds are restricted by their respective regulators. Even among banks, some prefer to hold long positions as a trading strategy. Thus, liquidity tends to dry off in bearish markets and in times of uncertainty, with participants unwilling or unable to express their views on prices.

IRD market segments have developed over the last few years. However, the only major liquid product is the Mumbai Interbank Offered Rate (MIBOR) based OIS (Table 5). Participation in the IRD markets is also limited to foreign banks, private sector banks and PDS, which together account for most of the trading volumes. Banks, insurance companies and pension funds hold significant amounts of government securities, but with insurance companies and pension funds not required to mark their investments to market and banks permitted to hold a large part of their government securities in the 'Held to Maturity' (HTM) category, such participants are not incentivised to hedge. Additionally, prescriptions of asymmetric accounting treatment of hedges – mark-to-market depreciations have to be accounted for but appreciations are ignored in the case of cash positions while both appreciation and depreciation have to be

accounted for in the case of derivative positions¹¹ – is also one of the reasons why banks have been averse to hedging.

V. The Way Forward

In 2020-21, the primary market issuance strategy has been fine-tuned to issue securities in six "key" tenors viz., 2-year, 5-year, 10-year, 14-year, 30-year and 40-year with each security being issued/reissued once in a fortnight. This strategy will help the early build-up of sufficient float for trading in the secondary market and provide certainty about the exact tenor of security issuances.

Globally, illiquid securities are generally traded bilaterally. The Reserve Bank has recently authorised the Request For Quote (RFQ) mode of dealing on NDS-OM to provide participants with dedicated infrastructure to enable simultaneous and direct obtaining of quotes from multiple counterparties.

While the investment regime for non-residents has been evolving to facilitate FPI investments within calibrated macro-prudential controls, further efforts are necessary to enable non-residents to tap Indian gilts. International settlement of government securities through International Central Securities Depositories (ICSDs) can enable non-residents that desire to invest in government securities but are not keen to have a domestic registration for the purpose. Recent regulatory changes facilitating ease of access for non-residents to domestic hedging markets can also further this endeavour. Similarly, efforts are ongoing to expand the retail investor base through technology-driven solutions tailored to enable direct access to NDS-OM- an 'NDS-OM–Exchange Connect' to link exchanges to NDS-OM has also

Traded Volume of IRS Trades
(In ₹ Billion)

Year	MIBOR	MIFOR	INBMK
2013-14	22,967	798	4
2014-15	20,292	1,198	3
2015-16	21,329	993	3
2016-17	19,235	1,254	-
2017-18	33,808	1,112	-
2018-19	58,617	1,709	-
2019-20	39,181	2,886	
2020-21 (till Aug-20)	6,745	668	

¹¹ The accounting treatment is applicable in case hedge effectiveness is not established. A hedge is deemed to be "effective" if at inception and throughout the life of the hedge, changes in the mark-to-market value of the hedged items with reference to the marked to market value at the time of the hedging are "almost fully offset" by the changes in the marked to market value of the hedging instrument and the actual results are within a range of 80 per cent to 125 per cent

been developed and shared with exchanges. Work is underway with the Government on the introduction of a gilt Exchange Traded Fund (ETF). A clearing member structure has been developed, which will enable registered brokers/depository participants to participate in NDS-OM by becoming indirect members and trading through clearing members of NDS-OM.

Currently, participants are permitted to hold short position up to three months. This precludes expression of interest rate views over a longer time horizon or across an interest rate cycle. Increasing the horizon for short position as also tweaking of related regulatory norms may help in developing liquidity in the markets, especially in bearish conditions.

The market for 'special repo'¹² currently facilitates borrowing of securities. Investors like insurance companies and mutual funds, who hold large quantum of government securities, have regulatory limitations in terms of lending securities through the repo market. A separate Securities Lending and Borrowing Mechanism (SLBM) to enable wider participation could augment secondary market liquidity.

Deliverable bond forwards could facilitate the hedging of long-term interest rate and reinvestment risk by market participants like insurance companies, provident funds and corporates including Non-Banking Financial Companies (NBFCs). Bond forwards could provide a complete hedge solution for large institutional participants as compared to OIS swaps, which essentially hedge the unfunded costs.

Globally, the use of bond forwards for hedging long-term liabilities is not uncommon.

Going forward, increasing the liquidity across tenors in the sovereign yield curve, widening the investor base and developing the derivatives market can be the focus areas. This will augment the assiduously built market ecosystem for government securities and will act as a catalyst for the markets to further evolve and serve the interests of a growing economy which is becoming increasingly integrated with the global economy.

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¹² In case of special repos both the borrower and the lender are aware of the specific security against which the repo deal is sought to be concluded. Apart from a special repo segment, CROMS platform also has a general collateral repo segment called Basket Repo.

LIBOR: The Rise and the Fall*

The publication of the most widely used financial benchmark, the London Interbank Offered Rate (LIBOR), is expected to cease after end-2021. Issues around the transition from LIBOR to alternative benchmarks pose challenges as well as opportunities and stakeholders need to be aware and prepared.

Introduction

2012 was a landmark year in the world of financial benchmarks. The most widely used financial benchmark, the LIBOR, was found to have been manipulated by individuals at various financial institutions. The event created shock waves in the financial system – the credibility of a financial reference used to price and determine payoffs for trillions of dollars of loans/bonds/derivatives came under a cloud. The crux of the problem lay in the fact that LIBOR prices a market – the market for unsecured wholesale term lending for banks – in which dwindling volumes rendered efficient pricing difficult (Bailey, 2017)¹. Structural changes in the financial markets, especially since the global financial crisis, meant that transaction-based submissions leading to LIBOR formation tapered off and what is left are estimates.

In affirmative action, in 2017, the Financial Conduct Authority (FCA), UK, announced that it would not use its legal power to mandate banks to poll LIBOR beyond end-2021. The search for alternative reference rates has begun by shifting away from a benchmark that has been almost universally used in financial contracts globally for nearly five decades is a formidable challenge worldwide and in India even as the end date is fast approaching.

Against this backdrop, this article looks at the evolution of LIBOR, the events leading to the decision to replace it, the search for alternative benchmarks and the issues involved in transition. Section II of the article traces the origin of LIBOR and the efforts at reforming it over the years. Section III delves into the search for alternate benchmarks and the issues around the transition to alternate benchmarks. Section IV examines how the transition affects the Indian jurisdiction. Section V concludes with policy perspectives.

II. The Origin

The use of LIBOR interest rates can be traced to the rise of the Eurodollar market (US dollar denominated deposits held outside of the US) in branches of banks outside the US in the 1960s. The origin of the term 'LIBOR' has been credited to a Greek banker called Minos Zombanakis, who was running the London branch of Manufacturer's Hanover, now part of JPMorgan.² In 1969, he organised an \$80 million syndicated loan for the Shah of Iran, referenced to what he called a London interbank offered rate. These rates were initially computed for three currencies – the US dollar, the British pound and the Japanese yen. Over time, more currencies / maturities got added and, at its peak, LIBOR rates were announced for ten currencies in 15 maturity terms ranging from overnight to one year. At present, 35 LIBOR rates are posted each day for seven maturities each for five major currencies, viz., the Swiss franc, the Euro, the Pound sterling, the Japanese yen, and the US dollar.

LIBOR rates are computed as a 'trimmed mean' of polled rates elicited from major banks based on responses to the question: '*At what rate could you borrow funds were you to do so by asking for and then*

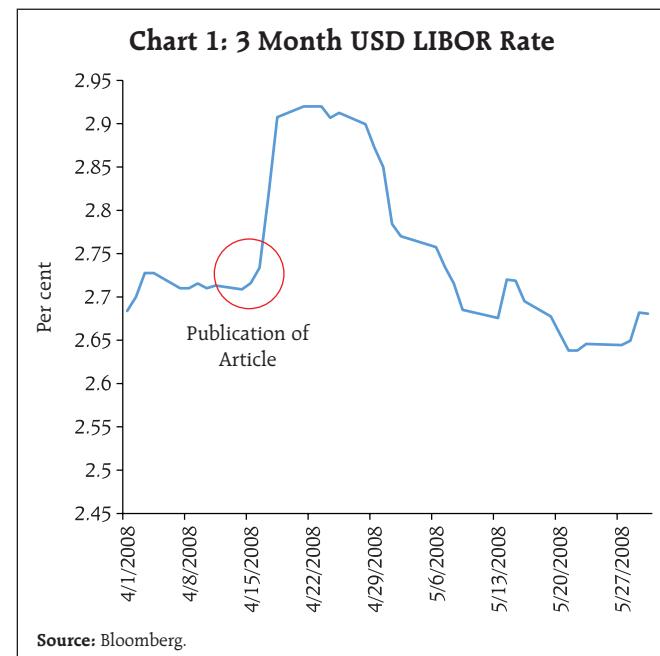
* This article is prepared by Vasudev Hemachandran of the Financial Markets Regulation Department. The author is grateful to Manoj Kumar for valuable guidance. The views expressed in this article are those of the author and do not represent the views of the Reserve Bank of India.

¹ <https://www.fca.org.uk/news/speeches/the-future-of-libor>

² https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr667.pdf

accepting interbank offers in a reasonable market size just prior to 11 a.m.'? The subjective nature of the question, especially related to timing and size – 'reasonable market size' and 'just before 11 a.m.' – leave LIBOR vulnerable to manipulation. Concerns about LIBOR and its governance process are, however, not new. As the use of LIBOR grew during the 1970s and 1980s, polling banks started accepting Euordollar deposits at interest rates linked to LIBOR, leading to adverse incentives to report lower rates. In view of these concerns, the British Bankers' Association took over the governance process of LIBOR in 1986. Over time, the evolution of the repo market led to a decline in the volumes of unsecured interbank transactions. As these transactions dwindled, LIBOR rates became increasingly un-verifiable and increasingly reliant on expert judgement of banks. Conflicts of interest were inherent – the polling banks have 'significant' presence in related markets, but they also hold large derivative and loan contracts that are priced by using LIBOR rates.

Discrepancies were first observed during 2007-08 when the polled rates were found to be not reflecting the actual rates at which banks lent to each other. The possibility that banks were reporting LIBOR quotes significantly lower than those implied by prevailing credit default swap (CDS) spreads was highlighted in a Wall Street Journal article and in various research papers in 2008 (Mollenkamo, 2008; Abrates-Metz et. al., 2008). This brought attention to the fact that there were incentives for banks to manipulate LIBOR rates as instruments through which banks signal their perceived credit-worthiness, especially in periods of stress or through which trading positions could be influenced. Post this publication, there was an immediate spike in the 3-month USD LIBOR rate (Chart 1). This triggered off investigations into the LIBOR fixation process. By 2012, manipulations in LIBOR fixations were established and banks were levied with fines totalling about \$ 9 billion for misconduct.



In response to these developments, the UK commissioned a review of the structure and governance of LIBOR. The Wheatley Review (as the review undertaken in 2011-12 under Mr. Martin Wheatley, the former Chief Executive Officer of the Financial Conduct Authority (FCA), came to be called) concluded that LIBOR should be retained as a benchmark but that it should be comprehensively reformed. It made wide-ranging recommendations about improvements in the benchmark governance process for LIBOR. It also recommended that publication of LIBOR in certain currencies and maturities in which the volumes of trades were particularly low should be discontinued. Several reforms to the governance process were undertaken in the wake of the recommendations. In particular, the responsibility of benchmark administration was moved to the Intercontinental Exchange (ICE), an oversight committee to independently challenge the benchmark processes was put in place and governance reforms were carried out in the submitting banks.

Notwithstanding the reforms, the key deficiency of the LIBOR process – that of insufficient transactions on which submissions were based – persisted. In

2017, this was highlighted by Andrew Bailey, then Chief Executive of the FCA, with an example of a currency–tenor combination for which benchmark reference rates were published daily by banks who, between them, executed just fifteen transactions of potentially qualifying size in that currency and tenor in the whole of 2016. Against this backdrop, the FCA concluded that the journey to transaction-based benchmarks would not be completed if the markets continue to rely on LIBOR. The FCA thus announced that it would not compel panel banks to submit LIBOR beyond 2021.

III. In Search of an Alternative Benchmark

LIBOR serves as a reference rate at which financial instruments can contract upon to establish the terms of agreement and also as a benchmark rate that reflects a relative performance measure for investment returns (Hou and Skeie, 2014). LIBOR is used almost ubiquitously in global financial markets for a wide array of financial instruments in different kinds of loan and derivative products, thereby enabling non-rival consumption properties akin to a public good in terms of reducing complexity, increased standardisation, enhanced liquidity and lower transaction costs. Beyond the pricing of financial instruments, LIBOR is also extensively used for valuation and accounting purposes.

An Alternative Reference Rate (ARR) – one which retains the desirable features of LIBOR while ensuring

that it is based on transactions in liquid markets – has to satisfy several key attributes; (a) it should provide a robust and accurate representation of interest rates in core money markets that is not susceptible to manipulation; (b) it should offer reference rates for financial contracts that extend beyond the money market; and (c) serve as a benchmark for term lending and funding (BIS, 2019).³

Jurisdictions where LIBOR is the domestic interbank interest rate benchmark have identified alternative benchmarks linked to actual transactions in liquid markets. In practice, this has resulted in ARR based on shorter-tenor contracts – essentially overnight repo markets, which are the most liquid - and secured rather than unsecured transactions. Additionally, the ARR have moved beyond pure interbank markets to include non-bank wholesale participants such as money market and investment funds and insurance companies in a bid to garner a wider participant base (Table 1).

In addition, several jurisdictions where LIBOR forms one component of the local interest rate benchmarks have also identified or are identifying new benchmarks. For example, in Singapore, the existing benchmark – the Singapore Dollar Swap Offer Rate (SOR) – uses LIBOR as one of its components. The jurisdiction has identified the Singapore Dollar Overnight Rate Average (SORA) - a transaction-based benchmark with no term component – as its ARR and

Table 1: Overview of ARR in Certain Markets

	USA	UK	EU	Switzerland	Japan
ARR	Secured Overnight Financing Rate (SOFR)	Sterling Overnight Interbank Average Rate (SONIA)	Euro Short Term Rate (ESTR)	Swiss Average Rate Overnight (SARON)	Tokyo Overnight Average Rate (TONAR ⁴)
Secured	Yes	No	No	Yes	No
Tenor	Overnight	Overnight	Overnight	Overnight	Overnight
Counterparties	Banks and non-banks	Banks and non-banks	Banks and non-banks	Banks only	Banks and non-banks

Source: BIS.

³ https://www.bis.org/publ/qtrpdf/r_qt1903e.pdf

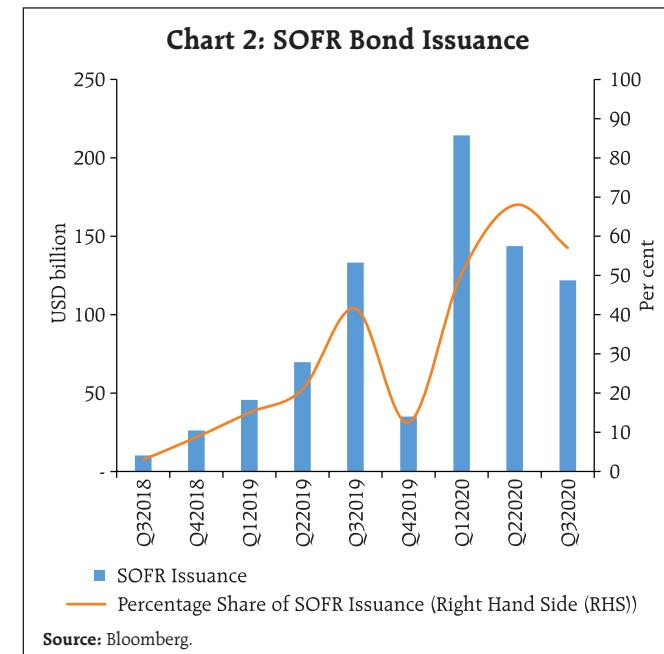
⁴ Also known as TONA

a few SORA based transactions have already been contracted. In Thailand, the Thai Baht Interest Rate Fixing (THBFIX) relies on LIBOR. The Thai Overnight Repurchase Rate (THOR) has been identified as the ARR for the jurisdiction.

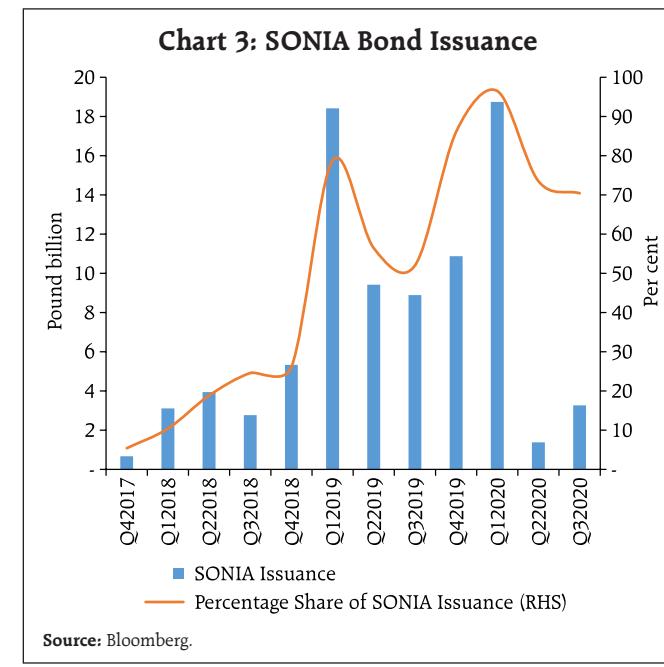
The LIBOR is a combination of interbank rates comprising credit risk premia, term premia and liquidity premia. As against this, ARRs are overnight benchmark rates, which lack a term structure and a credit risk component. For the transition from LIBOR to ARR to succeed, term rates will need to emerge to enable ARRs to serve as reference rates for new financial contracts. Also, the development of liquid financial markets linked to the new rates will be critical. Both these aspects present significant challenges.

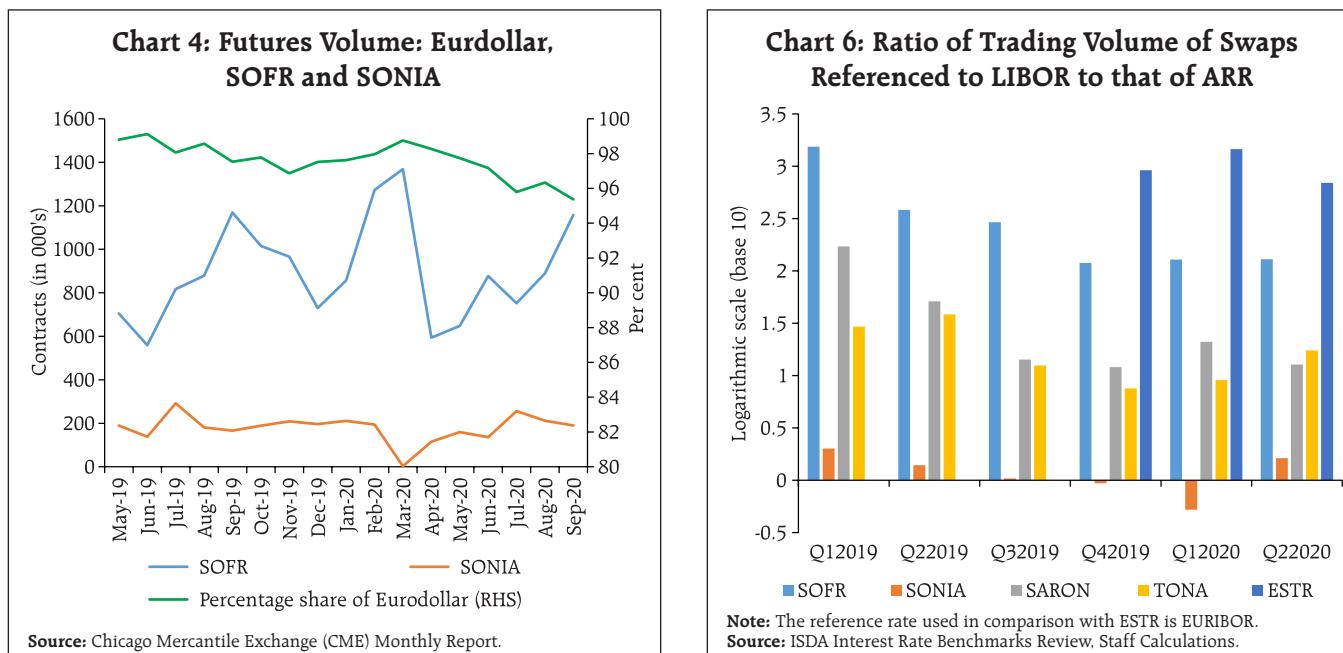
Development of term benchmarks should ideally be based on actual transactions in line with the overall thrust of benchmark reforms. The simplest construct of term structures will be to compound overnight interest rates, *i.e.*, 'compounding in arrears'. These term structures will, however, be backward looking in contrast to the LIBOR, which is forward-looking. By design, therefore, the ARRs will not reflect market expectations about future interest rates or financial conditions. Policy makers across the world, including the Financial Stability Board (FSB), have been emphasising that overnight ARRs compounded in arrears will and should become the norm and that transition efforts should not await the emergence of forward-looking term versions of risk-free rates (FSB, 2019). Nevertheless, there will be some parts of the market, which will need forward-looking term reference rates.

Development of liquidity in contracts that reference ARRs remains a challenge, and is, in many ways, a chicken-and-egg problem. Deep markets are likely to develop only when new contracts start referencing the ARRs.



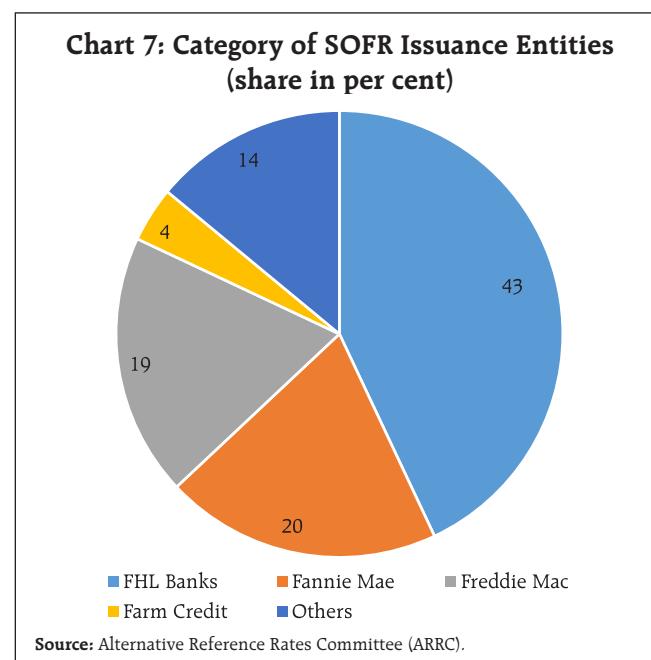
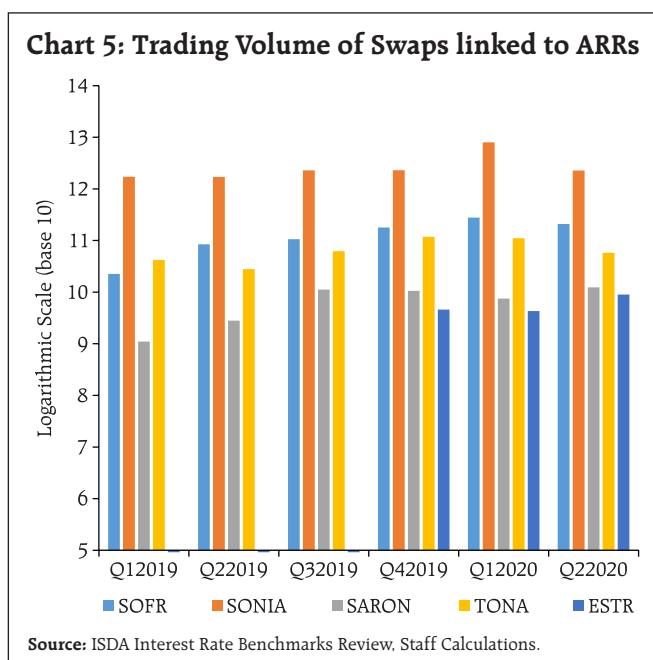
At present, bond issuances linked to Secured Overnight Financing Rate (SOFR) and Sterling Overnight Interbank Average Rate (SONIA), in particular, have begun and now constitute a significant share of total floating rate bond issuances (Charts 2 and 3). Trading in derivatives has also begun. Trading volume in SOFR and SONIA futures has been increasing over the months. However, Eurodollar futures still





account for a major portion of the total interest rate futures market (Chart 4). Trading in swaps referencing SOFR and SONIA are also growing (Charts 5 and 6). In particular, there is now a significant volume of trading in swaps referencing SONIA. In the loan segment, however, new loan contracts referencing ARRs remain limited with only 23 loan contracts currently referencing ARRs (Loan Markets Association, 2020).

Several regulatory initiatives are being taken globally to provide greater liquidity to ARR-referenced contracts. Bond referencing ARRs have primarily been issued by quasi-government entities. Most SOFR referenced issuances are by entities like Fannie Mae, Freddie Mac and Federal Home Loan (FHL) banks (Chart 7). The decision to use Euro Short Term Rate (ESTR) instead of Euro Overnight Index Average



(EONIA) in the discounting methodology used by European exchanges to value Euro-denominated Interest Rate Swap (IRS) contracts from July 2020 and SOFR instead of the Fed Funds Rate in the discounting methodology used by the Chicago Mercantile Exchange (CME) and London Clearing House (LCH) for the valuation of USD-denominated IRS contracts from October 2020 are expected to provide a fillip to derivatives referencing ARR. The trading volume in swap contracts referenced to ESTR has more than doubled from USD 9 bn in Q2 2020 to USD 24.2 bn in Q3 2020⁵. Going forward, liquidity in ARR-referenced contracts is likely to increase as deadlines provided by regulatory authorities in USA and UK, beyond which entities have to stop issuing contracts that reference LIBOR, come into effect. From April, 2021, higher haircuts will be applied by the Bank of England (BOE) for collaterals referenced to LIBOR and such collateral maturing beyond 2021 will not be eligible for use in the Bank of England's operations under the Sterling Monetary Framework (BOE, 2020).

A large book of bonds, loans and financial instruments referenced to LIBOR will continue beyond the cessation of LIBOR on January 1, 2022. Fresh contracts referencing LIBOR are still being contracted every day. Many of these will also outlive the cessation of LIBOR. Dealing with such contracts is a key transition challenge. In most cases, there are no fallback arrangements which cater to such cessation. These give rise to two specific sets of issues.

First, the contracts will need to be individually renegotiated and fallback clauses inserted. Industry bodies such as the International Swaps and Derivatives Association (ISDA) and the Loan Market Association have been working towards developing such fallback options in consultation with stakeholders. On October 23, 2020, the ISDA published the Fallback protocol. The main goal is to agree *ex ante* rather than *ex post* on the fallbacks so as to ensure efficient pricing and smooth transition.

⁵ ISDA Publication: Transition to RFRs Review: Third Quarter of 2020 and Year-to-September 30, 2020

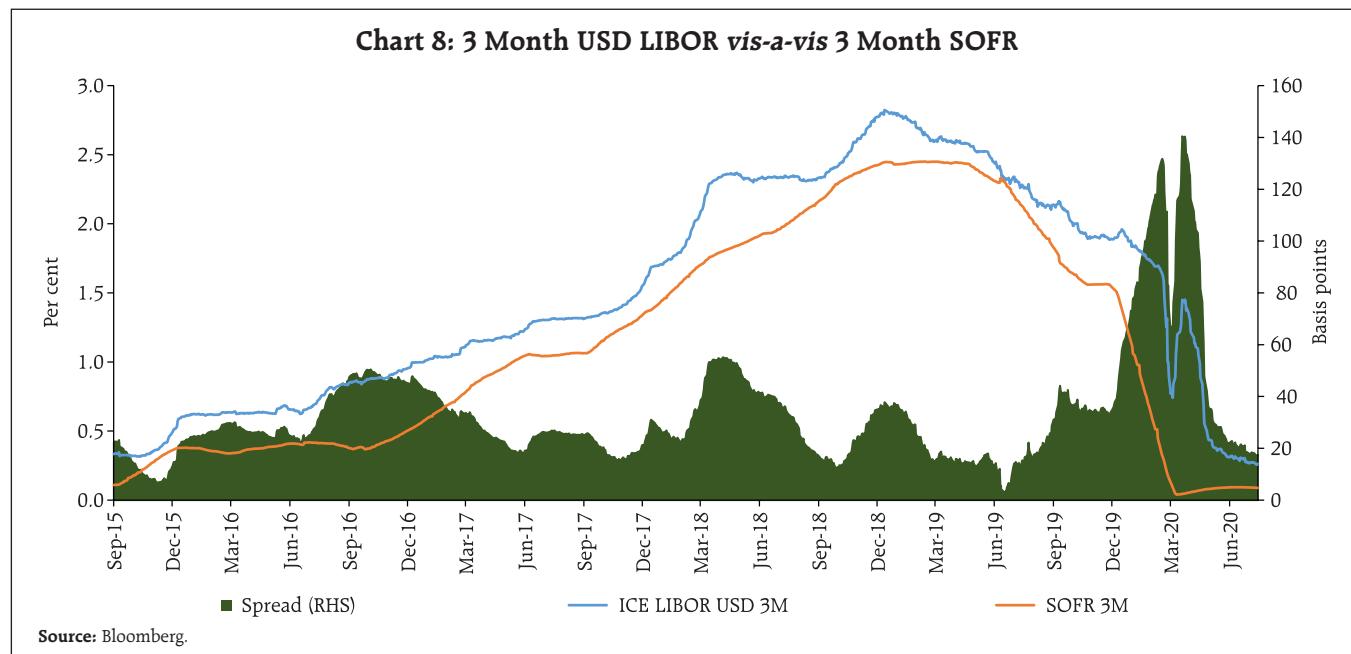
In derivative markets, conventions for the adoption of fallbacks are more standardised due to actions by bodies such as the ISDA. The challenges are trickier in case of cash market contracts, including loan contracts, which are typically customised, leading to potential basis risks between the loan and underlying derivative and requiring separate renegotiation of each contract. Many such contracts contain non-standardised features, which may make them difficult to negotiate ('tough legacy' contracts). In the UK, a legislation to deal, *inter-alia*, with such contracts has been proposed (RFRWG, 2020)⁶. A similar legislation has been recommended in the US as well (ARRC, 2020)

The second challenge arises from the fact that the development of a fallback mechanism notwithstanding, there will be winners and losers as a result of contract renegotiation. Spreads between term LIBOR and term ARR could vary for various reasons. The renegotiation and conversion at wide spreads may lead to the requirement of substantial pay-outs by one of the counterparties to a contract. For example, disruptions in financial markets in March 2020 led to a widening of spreads between 3-month LIBOR and 3 Month SOFR / SONIA (Charts 8 and 9).

With large changes in fair value, the modified contract may be seen as a deemed sale and the creation of a fresh contract, potentially imparting risk to associated tax liabilities. Hedge re-designation of contracts cannot be ruled out if the qualifying standards for hedge effectiveness assessment are not met. Tax and accounting issues will need to be addressed, necessitating widespread customer sensitisation. They could engender significant legal and conduct risks.

A number of efforts are ongoing globally to create awareness and clarify issues, where possible. For example, jurisdictions such as UK, Hong Kong, Japan and Australia have issued 'Dear CEO' letters, requesting, *inter-alia*, financial institutions to sensitise customers, set internal deadlines for the

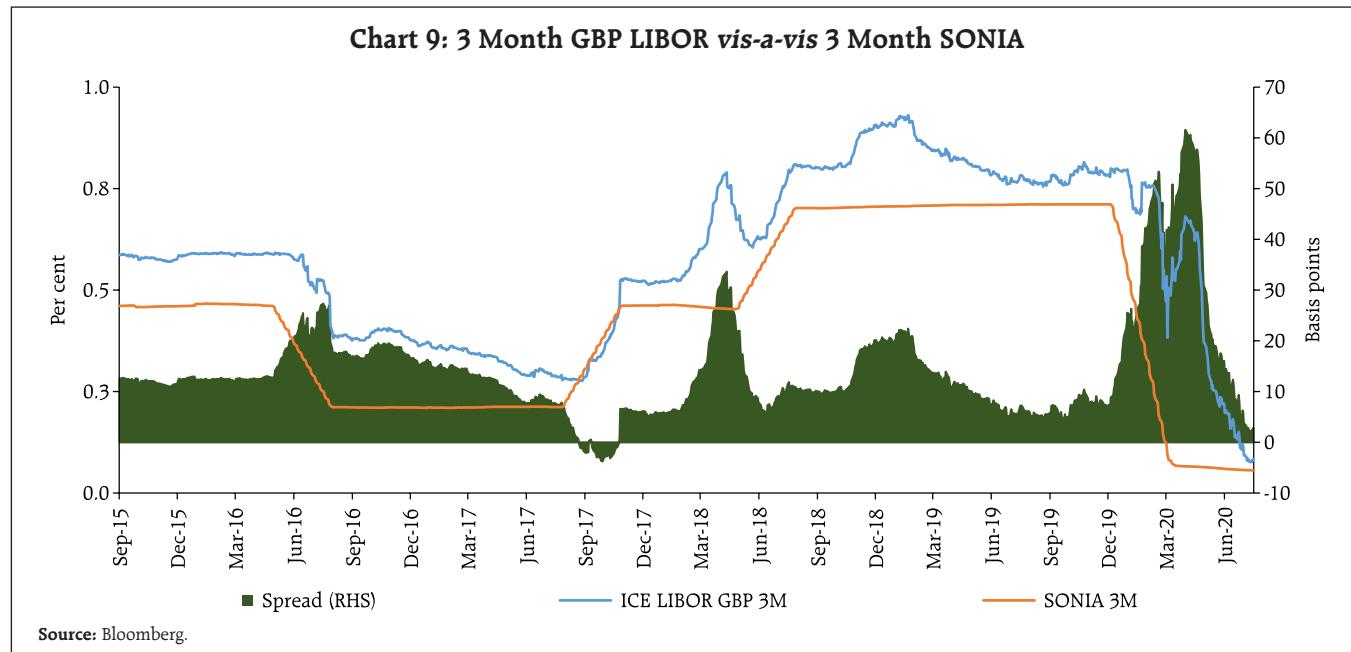
⁶ The Working Group on Sterling Risk-Free Reference Rates



transition from LIBOR, assess LIBOR exposures and manage associated risks. Tax authorities in the US have published guidance on issues that could arise on account of the transition. The Financial Accounting Standards Board has issued guidance on certain accounting aspects that could arise at the time of contract renegotiation.

IV. The Indian Context

The use of benchmarks in the Indian financial system is not new. A range of foreign exchange and interest rate benchmarks have been in use, primarily by the banking sector, to price contracts and value assets and liabilities. The Reserve Bank has been taking steps to preserve the integrity of such benchmarks.



In the context of manipulation of LIBOR, it constituted a Committee on Financial Benchmarks (Chair: Shri P Vijaya Bhaskar) in June 2013, to review the systems governing financial benchmarks in India.⁷

Pursuant to the recommendations of the Committee, an independent entity, *i.e.*, Financial Benchmark India Pvt. Ltd (FBIL), was set up to act as an administrator for benchmarks in debt, interest rates and foreign exchange markets. The FBIL now administers various benchmarks - Overnight Mumbai Interbank Outright Rate (MIBOR); Mumbai Interbank Forward Outright Rate (MIFOR); Market Repo Overnight Rate (MROR); Forward Premia Curve; Foreign Currency Rupee Options Volatility Matrix; and Rupee reference rates. In June 2019, the Reserve Bank put in place a regulatory framework for financial benchmark administrators, aimed at ensuring acceptable standards of governance and accountability as well as the quality of benchmarks and of the computation methodology in the benchmark administration process. Six financial benchmarks, *viz.*, MIBOR, MIFOR, USD/INR Reference Rate, Treasury Bill rates, valuation of Government Securities and valuation of State Development Loans (SDL) were notified as significant benchmarks in January 2020.

In India, exposures to LIBOR arise from loan contracts (*e.g.* External Commercial Borrowings (ECBs)) linked to LIBOR; FCNR (B) deposits with floating rates of interest linked to LIBOR; and derivatives linked to LIBOR or to the MIFOR - a domestic benchmark based on LIBOR. Preliminary estimates suggest that about \$50 billion of debt contracts in the form of ECB/FCCBs and \$281 billion of derivative contracts will expire beyond 2021 (Table 2). These figures are, however, not static as new contracts referencing LIBOR continue to be signed.

⁷ <https://www.rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=761>

Table 2: LIBOR-linked Exposures in India

Financial Contract	Exposure (USD Billion)
External Commercial Borrowing (ECB)*	74
FCNR (B) Deposit*	24
Cross Currency Swap ^{\$}	83
FCY Interest Rate Swap ^{\$}	260
MIFOR Interest Rate Swap ^{\$}	91

*As on March 31,2020; \$ As on August 31,2020.

*ECB data is as of March 31,2020. Data related to FCNR(B) deposits is from the latest available report on External Debt and includes both fixed rate and floating rate deposits (March 31,2020).

Source: RBI, India's External Debt: A Status Report 2019-20 (Department of Economic Affairs), Clearing Corporation of India Limited, RBI Staff Calculations

In addition, there are Government exposures linked to LIBOR. These include LIBOR-referenced loans availed by the Government from multilateral / bilateral agencies and Lines of Credit offered to other countries. A large number of trade contracts also reference LIBOR but most of these are short term and existing contracts may not continue after the cessation of LIBOR.

The challenges for India and milestones for preparing for the cessation of LIBOR at the end of December 2021 are similar to those faced by other jurisdictions, especially those which are, in some sense, 'LIBOR-takers', *i.e.*, they rely on LIBOR interest rates of major jurisdictions.

In India, MIFOR – which has LIBOR as one of its components – is a key benchmark used in the interest rate swap (IRS) markets. An alternate benchmark based on global ARRs will need to be developed in place of the MIFOR. At present, the Clearing Corporation of India Limited provides guaranteed settlement for IRS contracts that reference the MIFOR. The clearing and settlement arrangements will also need to be modified to provide for the alternate benchmark.

A scrutiny of existing loan/derivative contracts show that contractual fallback clauses catering to cessation of LIBOR are not available in existing contracts, which will continue beyond 2021. Fallback clauses customised to domestic markets but based on

global practices will, therefore, need to be developed. These contracts may have to adopt the country specific ARR as a substitute once LIBOR ceases to exist, beyond 2021.

As we move closer to the transition date, all contracts which will continue after LIBOR cessation will need to be renegotiated and replaced. Critical for this will be the creation of adequate stakeholder awareness across all classes of financial market participants. Related accounting and tax issues will also need to be addressed. Existing regulations, which reference LIBOR will need to be amended to provide for contracts referencing ARRs. As is being planned in most jurisdictions globally, a cut-off date after which no new contracts can be entered using LIBOR will need to be notified. This will, of course, largely be dependent on development of liquid debt and derivative markets linked to ARR and the cut-off date announced by the advanced economies.

The MIFOR benchmark is a synthetic benchmark, a composite rate with the USD LIBOR and USD INR forward premia as its components. Essentially, the MIFOR represents the cost of borrowing in US dollars and swapping the same to INR, thus synthetically representing the domestic term interest rate. IRS contracts referenced to MIFOR are used by banks to price and cover currency swaps offered to ECB borrowers. At present, about a fifth of outstanding IRS contracts in the country are referenced to the MIFOR. With the cessation of LIBOR, an alternate to MIFOR will also need to be developed. Several alternative benchmarks based on daily SOFR (compounded in arrears) in place of LIBOR along with USD INR forward premium; daily SOFR with USDINR cash / Tom swap rate (both compounded in arrears); MIBOR (an unsecured daily benchmark based on call money market transactions) and MROR (a secured daily benchmark based on repo transactions) or Treasury Bills rate are possible.

Each of the alternate benchmarks has advantages and issues. The use of the SOFR with the forward

premia, for example, will closely mimic the MIFOR but will involve the use of one forward-looking and one backward-looking component. Use of the SOFR and the USD INR Cash/Tom Swap Rate, both of which are compounded in arrears, will address this issue but a benchmark based on cash / tom swap rates is likely to be more volatile than one based on forward premia. The MROR is a benchmark based on secured overnight transactions in a liquid market encompassing both bank and non-bank participants and hence closely shares the features of international ARRs. At present, however, IRS contracts referencing the MROR are not prevalent. The MIBOR is based on a less liquid interbank call market but MIBOR-based swaps account for the bulk of outstanding IRS contracts in the country. In any case, MIBOR, MROR and T-bill rates are domestic rates and their use as an ARR will need the development of a market for cross currency basis swaps. Issues associated with deriving a term structure for the ARR, as in global markets, will also need to be addressed.

As is the case globally, financial contracts referencing LIBOR – both loan and derivative contract - which will outlive the cessation will need to be renegotiated to ensure insertion of appropriate fallback language. Customer sensitisation and addressing of legal, taxation and accounting issues will also be crucial. Transition arrangements for MIFOR-linked IRS contracts will be unique to the country but could be relatively less tricky to handle, as such contracts are traded only in the interbank market.

Beyond these issues is the need for preparation of the banking and the broader financial system for the transition. A large number of business processes that will be impacted by the transition will need to be re-engineered. All IT systems that use LIBOR will need to be changed. With financial institutions in India often using a mix of inhouse and third-party vendors, IT changes will be far from easy. Most importantly, personnel at different levels will need to be made aware and even trained.

V. Conclusion

The Reserve Bank has been participating in and monitoring global developments related to LIBOR transition and has tasked the Indian Banks' Association (IBA) to consult on relevant issues. The IBA has since formed three workstreams on (i) LIBOR transition arrangements, (ii) rates and methodology and (iii) outreach to market participants. IBA has also circulated a guidance note among its member banks to enable them assess their preparedness for LIBOR transition on various parameters, *viz.*, exposure assessment and assessment of the accounting, tax, information technology (IT) related implications. The rates and methodology workstream is developing an acceptable alternative for MIFOR while the outreach workstream is reaching out to stakeholders through webinars and conferences to create awareness about the upcoming challenge.

In August 2020, the Reserve Bank issued a 'Dear CEO' letter to all scheduled commercial banks sensitising the banks about the need to be prepared for the LIBOR cessation. Banks were asked to identify exposures that reference LIBOR and which are likely to continue beyond cessation date; assess preparedness for the transition and identify associated risks; and ensure customer sensitisation on the subject.

The transition away from LIBOR to a new benchmark will be full of challenges. Every stakeholder – the financial sector; regulators; tax, legal and accounting systems; and real sector participants needs to play a role.

Alternative reference rates have been identified in major jurisdictions, but development of liquidity markets in these rates – a *sine quo non* for ensuring smooth transition - remains at a nascent stage. The FSB has laid out a global transition roadmap for LIBOR, emphasising that firms should be in a position to assess their LIBOR exposures and encouraging firms to adhere to the ISDA protocol for the transition. The FSB has also suggested that by end-2020, firms should be in a position to offer non-LIBOR linked loans to their customers. Achieving this roadmap will, however, require significant efforts from all stakeholders.

The transition arrangements for a benchmark embedded in the financial system involve multiple stakeholders across market bodies, regulators, governmental agencies and financial entities. A coordinated approach will be necessary to enable the smooth transition from LIBOR.

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*FinTech: The Force of Creative Disruption**

FinTech has the potential to fundamentally transform the financial landscape, provide consumers with a greater variety of financial products at competitive prices, and help financial institutions become more efficient. The rapid and transformational changes brought on by FinTech need to be monitored and evaluated so that regulators and society can keep up with the underlying technological and entrepreneurial flux. This article provides a succinct review of the sector, encompassing its evolution, characteristics and driving factors, both for the world and India. For a sustainable business ecosystem, FinTechs need to bridge the digital divide and promote equitable and broad-based customer participation.

Introduction

The landscape of banking and financial sector has undergone a phenomenal transformation since 2008 Global Financial Crisis (GFC), owing to financial technology firms, popularly known as 'FinTechs'. Both as creative disruptors and facilitators, FinTechs have contributed to the modern banking and financial sector through various channels including cost optimisation, better customer service and financial inclusion. FinTechs have played an important role in unbundling banking into core functions of settling payments, performing maturity transformation, sharing risk and allocating capital (Carney, 2019). The information and telecommunications (IT) revolution is regarded as the fifth 'Technological Revolution' driving growth¹, and FinTech is at the helm of this creative disruption (Hendrikse et al., 2018). The scope

of operations of FinTechs has also broadened, moving from crypto assets to payments, insurance, stocks, bonds, peer to peer lending, robo-advisors, regtech and suptech.

In India, FinTechs and digital players could function as the fourth segment of the Indian financial system, alongside large banks, mid-sized banks including niche banks, small finance banks, regional rural banks and cooperative banks (Das, 2020). This segment has the potential to fundamentally transform the financial landscape where consumers will be able to choose from broader set of alternatives at competitive prices, and financial institutions could improve efficiency through lower costs. India has emerged as the fastest growing FinTech market and the third largest FinTech ecosystem in the world (Mankotia, 2020). Today, we carry out complex financial actions like sending or receiving money, paying bills, buying goods and services, purchasing insurance, trading on stock markets, opening bank accounts and applying for personal loans online using smartphones, without ever physically interfacing with a bank employee. India has the opportunity of a digital payments market of \$ 1 trillion (PIB, 2018). It recorded 3,435 crore digital payments in the year 2019-20 (Annex 1).

The exciting, rapid and transformational changes in financial services brought on by FinTechs need to be continuously monitored and evaluated so that regulators and society can keep up with the underlying technological and entrepreneurial flux. Regulators need to be creative, nimble and tech savvy with their approach. They will have to further expand their focus from entities to activities, while also becoming experts in assessing the soundness and security of algorithms, which is easier said than done (Lagarde, 2017). Thus, for facilitating discussion and understanding that could be useful for policy and regulation purposes, this article attempts to provide a succinct review of FinTechs, encompassing their evolution,

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¹ The five Technological Revolutions defined by Perez (2002) are the Industrial Revolution, The Age of Steam and Railways, The Age of Steel, Electricity and Heavy Engineering, The Age of Oil, Automobiles and Mass Production and, The Age of Information and Communications.

characteristics and driving factors. Our evaluation throws up sobering concerns regarding the future of FinTechs, such as the status of digital hygiene, data use and privacy. The article proceeds in five sections: the FinTech revolution in the global context, delving into its history, evolution, and adoption in Section II, the FinTech ecosystem in India, its enablers, diversity, funding and collaboration with banks in Section III, challenges for future development in Section IV, and the way forward in Section V.

II. FinTech Revolution: The Global Context

Definition of FinTech

With no universally agreed upon definition, FinTech is generally described as an industry that uses technology to make financial systems and the delivery of financial services more efficient. It is "technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services" (FSB, 2019). FinTechs are "start-ups and other companies that use technologies (Table 1) to conduct the fundamental functions provided by financial services, impacting how consumers store, save, borrow, invest, move, pay, and protect money" (McKinsey, 2016).

In today's app-centric world, consumers are less concerned about receiving all their services from a single provider, and instead expect a seamless experience. FinTechs are realising this new value expectation and have started to 'unbundle' many of the traditional financial offerings (Basole and Patel, 2018). At the same time, the financial services provided by FinTechs are being re-bundled with a range of non-financial services, thereby allowing services to be provided seamlessly via application software (Bank of Japan, 2018). Illustratively, taxi aggregators bundle ride sharing with instantaneous fare payment upon arrival at destination.

FinTech History and Evolution

Technology-induced financial innovation has a long history. In the 1950s, credit cards appeared for the first time, followed by Automated Teller Machines (ATMs) in the 1960s, electronic stock trading and banks' new data recording systems in 1970s and 1980s, and e-commerce and online brokering in 1990s (Basole and Patel, 2018). The online revolution in the last decade of the 20th century connected the world through the Internet, and enabled e-commerce, Internet banking and pioneering online payment platforms like PayPal. The next decade witnessed the emergence of smart technology. The smartphone materialised as a powerful computer in human

Table 1 : Key Enabling Technologies used by FinTechs

Technology	Description
API (Application Programming Interface)	APIs comprise a set of rules and specifications that software programmes use to communicate with each other. They allow new applications to be built on top of others.
Cloud Computing	The use of an online network ('cloud') of hosting processors to increase the scale and flexibility of computing capacity, generating cost savings.
Biometrics	The study of distinctive and measurable human characteristics that can be used to categorize and identify individuals.
DLT (Distributed Ledger Technology)	A digital system for recording the transaction of assets in which details are recorded in multiple places at the same time.
Big Data	Voluminous amounts of structured or unstructured data that can be generated, analysed and utilized by digital tools and information systems.
AI (Artificial Intelligence) & ML (Machine Learning)	IT systems that can perform functions that would otherwise require human capabilities. ML entails computers learning from data without human intervention.

palms, and the movement to app-based operating systems spurred innovation, unbundling and sharing of services. Bitcoin came as another important development in 2009. The present decade is dedicated to the 'rise of the robots', where the emergence of big and unconventional datasets has enabled AI to provide accurate predictions and personalise banking (King, 2019).

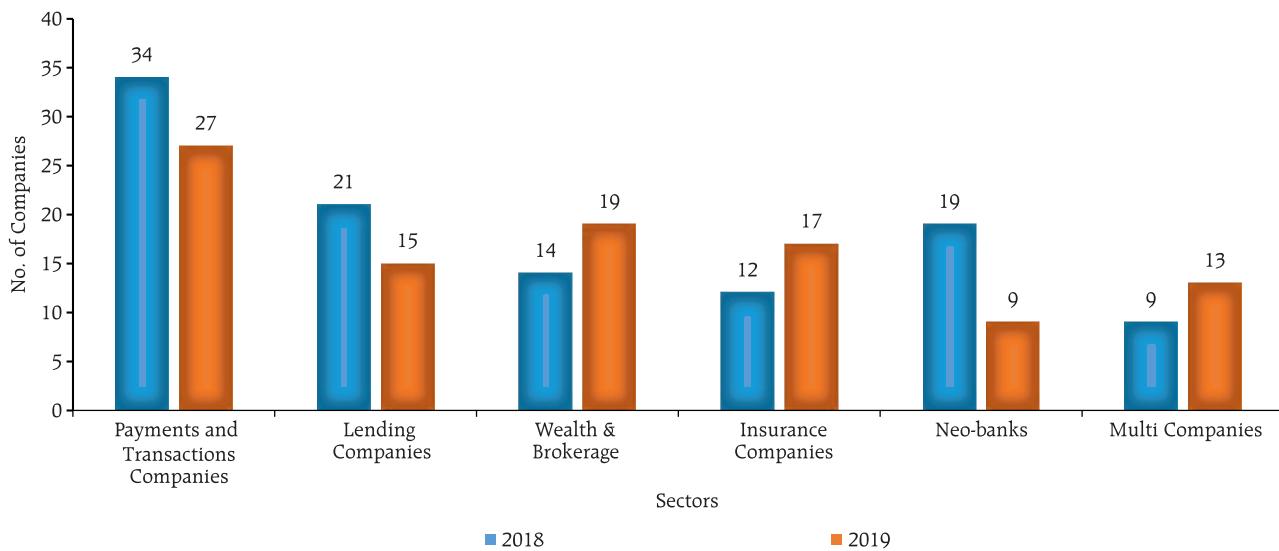
The 'new' FinTech sector gained momentum in its modern incarnation after the GFC as FinTech entrepreneurs realised that banking services should be transparent, facilitative and economical (Hendrikse *et al.*, 2018). After the GFC, public perception of banks had deteriorated, as savings were diverted to subprime borrowing without adequate consumer protection. Many finance professionals confronted job losses or pay cuts, which inspired enterprising innovation as FinTechs (Buckley *et al.*, 2016). Also, tighter regulation of traditional banking after GFC supported the growth of the FinTech sector (Cortina *et al.*, 2018).

At present, FinTechs are diversifying into different sectors (Chart 1). Among the top 100 FinTechs, payment and lending companies are being replaced by wealth and brokerage, insurance and multi-sector companies² (KPMG, 2019).

Demand-side Push to FinTech Adoption

Against the backdrop of globalisation and digitisation, users' appetite for financial services has become increasingly diversified and sophisticated in line with their changing lifestyles. The rate of FinTech adoption is greater in jurisdictions where there is unmet demand for financial services, less competition from traditional finance, macroeconomic conditions are conducive, regulation is accommodative and demographics are favourable (Frost, 2020). According to the 'Global FinTech Adoption Index 2019', the adoption of FinTech services globally has progressed from 16 per cent in 2015 to 33 per cent in 2017 and 64 per cent in 2019. Despite concerns about data

Chart 1: Top 100 FinTechs by Business Models



² Neo-banks have digital as the only or predominant channel for engaging with customers and challenge either the products, user experience or business models of traditional banks and other financial services organisations; Multi-companies are FinTechs providing a diversified range of financial services products to customers

security, the respondents preferred FinTechs over the traditional sector due to low fees and ease of opening of accounts (EY, 2019).

Supply-side Support to FinTech

Reflecting on growing adoption over the past decade, many start-ups have come up with diverse and innovative FinTech products. They have been supported enthusiastically by investors, with investments in the sector increasing from \$5 billion in 2010 to \$78 billion in 2019 (Chart 2).

Geographical Distribution of FinTechs

A unique feature of FinTech has been its shifting geography; both in terms of the locus of activities and the area of influence. According to KPMG's FinTech100, the new productive ground for FinTech companies is shifting from North America and Europe to the Asia-Pacific; 42 companies from the Asia-Pacific region (highest among all regions) were featured in 2019 as compared to 31 companies in 2017. Within the Asia-Pacific, China is facing stiff competition from countries like India, Vietnam and Korea. With a total

of 8 companies on the FinTech100, India is emerging as a prominent FinTech force³.

Benefits of FinTechs

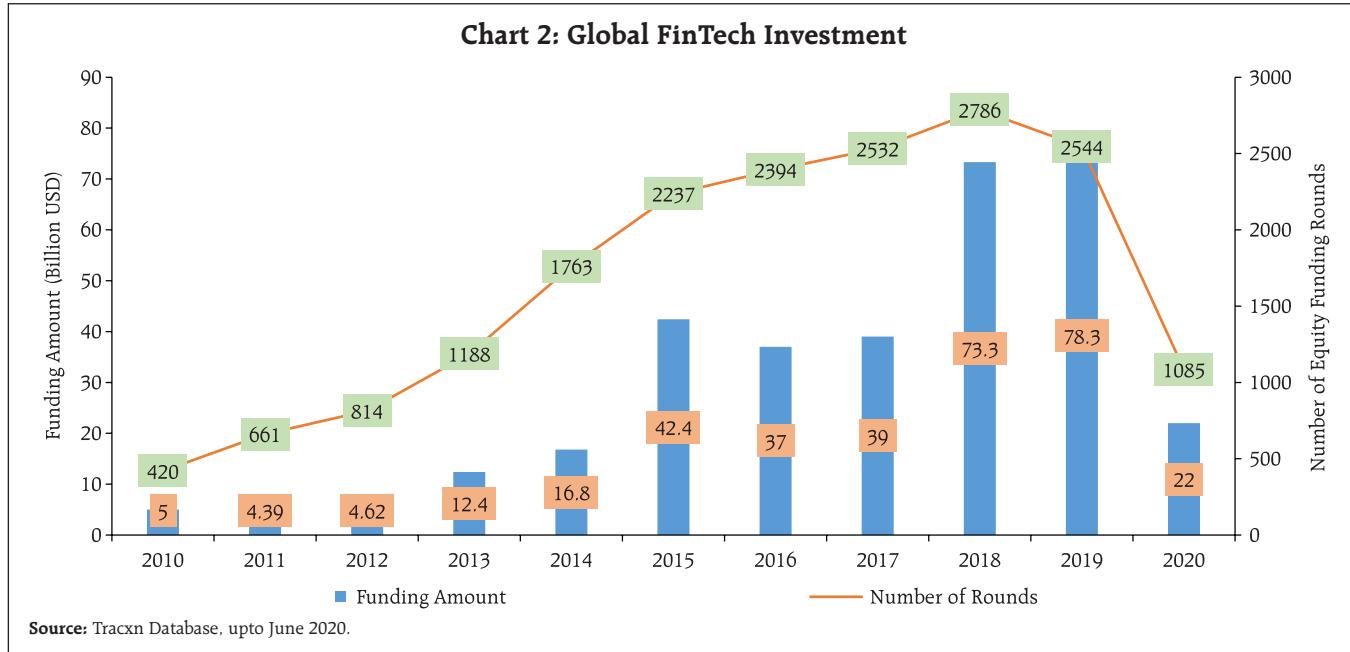
Efficiency enhancement

FinTechs have played a key role in making the financial sector more efficient (Philippon, 2020). In the USA, FinTech lenders enhanced ease of borrowing by processing mortgages 15-30 per cent quicker than other lenders with no evidence of higher (conditional) default rates (Fuster *et al.*, 2018).

Financial inclusion

By overcoming market failures such as information asymmetry or high transaction costs, FinTechs help enhance financial inclusion. In a survey of retail borrowers on a large Chinese platform, more than half reported that they had no prior borrowing history from a financial institution (Deer *et al.*, 2015). Big data and machine learning techniques may even help reduce human biases against discriminated groups (Bartlett *et al.*, 2018).

Chart 2: Global FinTech Investment



³ Paytm ranked fifth and OlaMoney ranked eighth.

Reduced credit risks

By providing more choice of credit sources, proliferation of FinTechs could lower the risks an economy faces if credit provisioning is dominated by a few banks. FinTechs focused on credit could be beneficial for commercial banks as some of them rely on FinTech platforms' credit assessment processes (Claessens *et al.*, 2018).

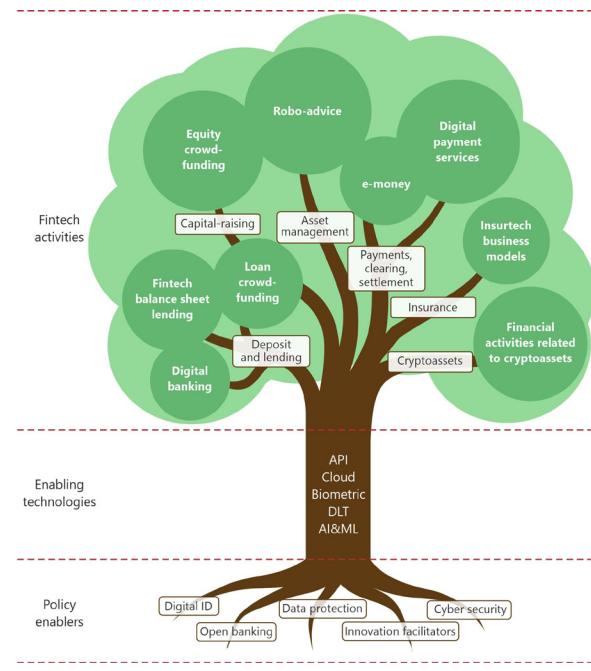
FinTech Regulation

Fintechs can be viewed as double edged swords. Despite various benefits, these innovations can sometimes magnify existing threats to consumers such as likelihood of privacy breaches and cybersecurity risks, leaving behind digitally illiterate and unconnected consumers. Thus, while the role of regulation is undisputed for the financial system as such, it assumes greater importance for newer innovations such as FinTechs.

A central bank's interest in FinTech is not confined to its impact on the financial sector *per se*, but rather its implications for financial stability and monetary policy. The regulatory environment, like the roots that provide life to a tree, provides a solid foundation for FinTech activities (Chart 3).

A survey-based study under the aegis of the Bank for International Settlements (BIS) summarises the responses of regulators across the world to rapidly emerging FinTech (Ehrehraud *et al.*, 2020). While most surveyed jurisdictions did not have a dedicated regulatory regime for FinTech lending, many had it in place for digital payments and crowdfunding. For insurance, existing regulations were broadly considered sufficient. Warnings and clarifications were the most common regulatory responses to crypto-assets, but a few respondent jurisdictions also reported emergence of crypto-specific licenses. With regards to enabling technologies, most regulators tweaked existing guidelines to include tech-specific elements. Regulators have been particularly active on application programming interfaces (APIs), cloud computing and biometric identification. With

Chart 3: FinTech Tree Highlighting the Role of Regulation



Source: Financial Stability Institute, BIS (2020).

many FinTechs leveraging on cloud computing, it is becoming systemically important to the financial system. It is possible that going forward some future software could end up being exclusively available on cloud platforms. In such cases, central banks may have to opt for in-house cloud development or collaborate with various service providers. For instance, the US Federal Reserve has visited Amazon's cloud facilities for on-site inspections, while the European Banking Authority has published guidelines for cloud outsourcing (King, 2019). However, for artificial intelligence, machine learning and DLT, regulatory action has been limited to risk assessments and issuance of general guidance.

Financial regulators are facing unprecedented challenges with the emergence of FinTechs. These firms come in new shapes and forms, so fitting them into buckets for prudential or risk-based supervision is not easy. As the scope of activities widens from national to global, regulation too has to reach out across borders. Furthermore, if the importance of

traditional banks in the financial system declines, central banks might have to increase the number of counterparties to their operations in money markets for effective monetary transmission (Lagarde, 2017).

III. Evolution of the FinTech Ecosystem in India

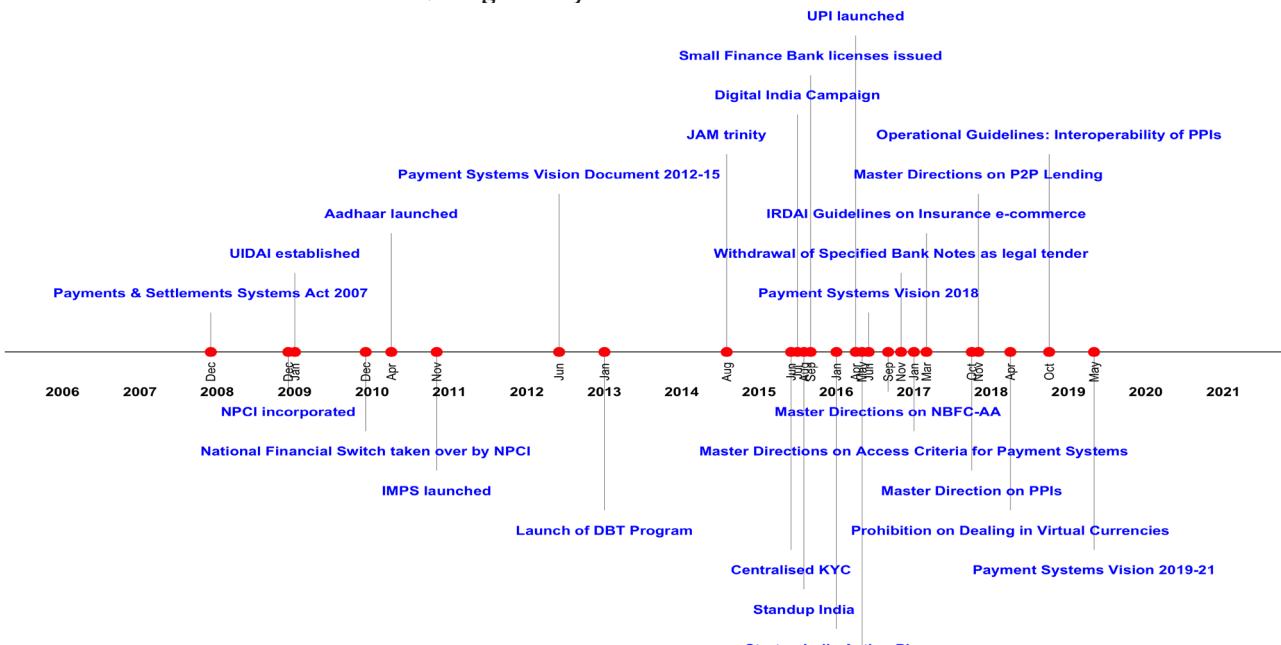
The roots of Indian FinTechs lie in the groundwork done over the previous decade in developing key enablers. The Indian FinTech industry as it stands today is the result of a unique concoction of technological enablers, regulatory interventions and business opportunities as well as certain other characteristics unique to India.

As the regulator of payment systems, the Reserve Bank has undertaken numerous measures to ensure increased efficiency and uninterrupted availability of secure, accessible and affordable payment systems and to serve segments of the population which are hitherto untouched by the payment systems. To achieve this, Reserve Bank's Vision 2021 envisages four goal posts (4 Cs), i.e., Competition, Cost, Convenience and Confidence.

Regulatory Environment

India is one of the few jurisdictions with a specific Payments and Settlements law to "provide for regulation and supervision of payments and settlement systems in India and to designate the Reserve Bank as the authority for the purpose and the matters connected therewith or incidental hitherto". The Reserve Bank regulates some FinTechs directly by granting them NBFC licenses (such as NBFC-P2P), or indirectly by regulating the banks and NBFCs associated with them. National Payments Corporation of India (NPCI) is the umbrella organisation for operating retail payments and settlement systems in India, as an initiative of the Reserve Bank and the Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007. The interventions in Payment and Settlement System proposed by the Reserve Bank in its various Monetary Policy Statements over the past year are presented in Annex 2. A regulatory timeline depicting India's favorable policy moves to promote FinTech has been illustrated in Chart 4.

Chart 4: Regulatory Timeline of Indian FinTech



Note: Vide its order dated March 04, 2020, Hon'ble Supreme Court of India set aside the RBI Circular on Prohibition on Dealing in Virtual Currencies on the ground of proportionality.

Major Enablers of Indian FinTech

Penetration of internet and smart phones

Propelled by massive strides in internet and smartphone penetration, FinTechs have expanded their reach rapidly in India (Table 2).

Favourable Demography

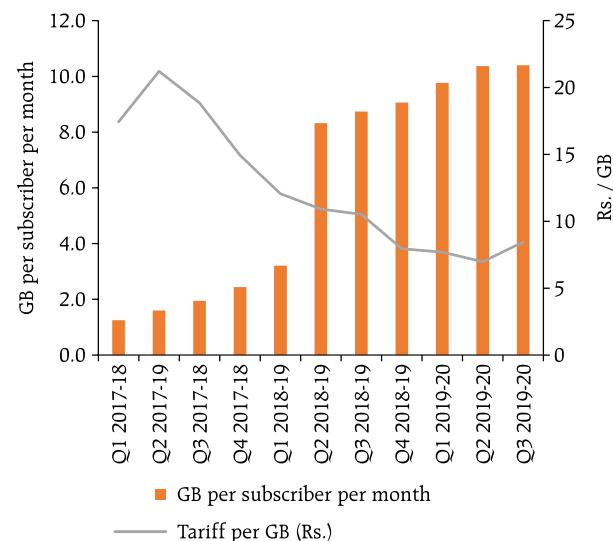
The Indian market is blessed with a higher proportion of young population, who are more likely to trust and adopt FinTech. There were 1157.75 million wireless subscribers in the country as on March 31, 2020, comprising 638 million urban and 519 million rural subscribers (TRAI, 2020). India and China lead

Table 2 : Telecommunications Indicators

Parameter	Period	Cumulative amount
Telephone Subscribers	31-Mar-14 to 30-Apr-20	116.8 Crore
Teledensity	31-Mar-14 to 30-Apr-20	86.6 %
Internet Subscribers	31-Mar-14 to 31-Mar-20	74.3 Crore
Broadband Subscribers	31-Mar-14 to 31-Mar-20	68.7 Crore
Wireless Data Usage	Q3 2019-20	21,402 Petabytes
Telecom Usage (Monthly Wireless Average Revenue per User)	31-Mar-14 to 31-Dec-19	₹ 78.7
Telecom Towers	01-Sep-17 to 27-Jul-20	6,05,788
Gram Panchayats connected under BharatNet	31-Aug-14 to 30-Jun-20	1,41,098
Telecom Licenses	31-Mar-14 to 30-Jun-20	156

Source: Department of Telecommunications, Government of India (2020)

Chart 5 : Wireless Data Usage and Tariff



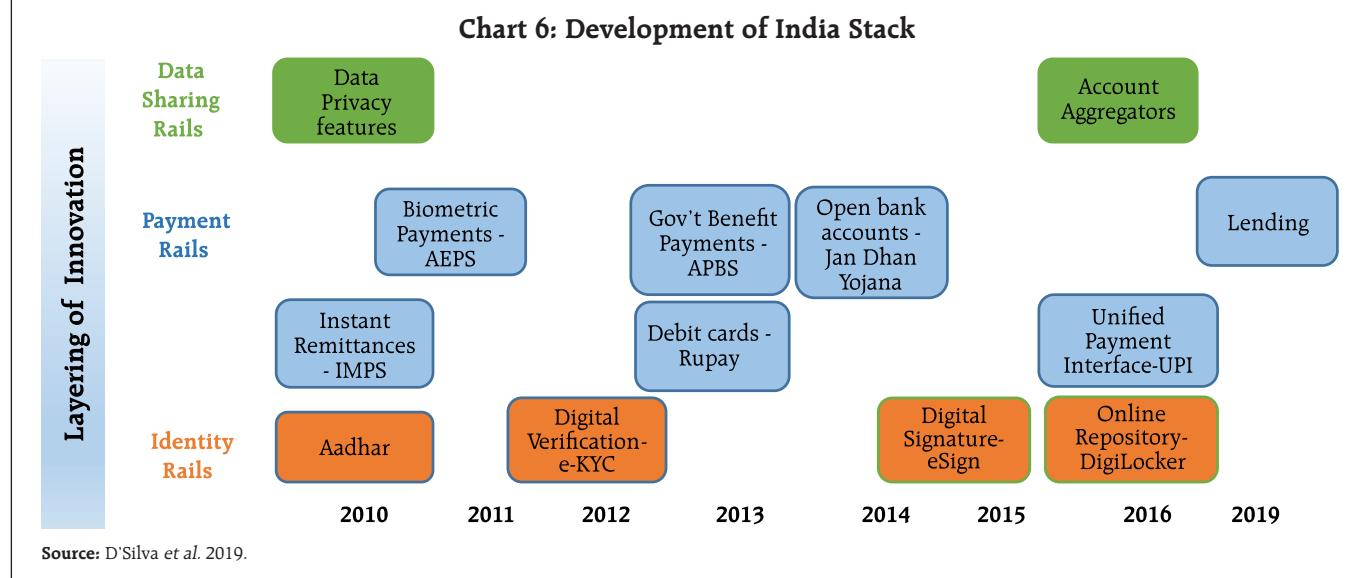
Source: Department of Telecommunications, Government of India (2020).

the Global FinTech Adoption Index 2019 with an adoption rate of 87 per cent. While per capita internet usage has increased, tariffs have declined (Chart 5).

India Stack

India's evolution as a progressive FinTech nation happened on the back of the 'India Stack' – an indigenous set of technologies and policies that act as enablers to innovation (Chart 6)

Chart 6: Development of India Stack



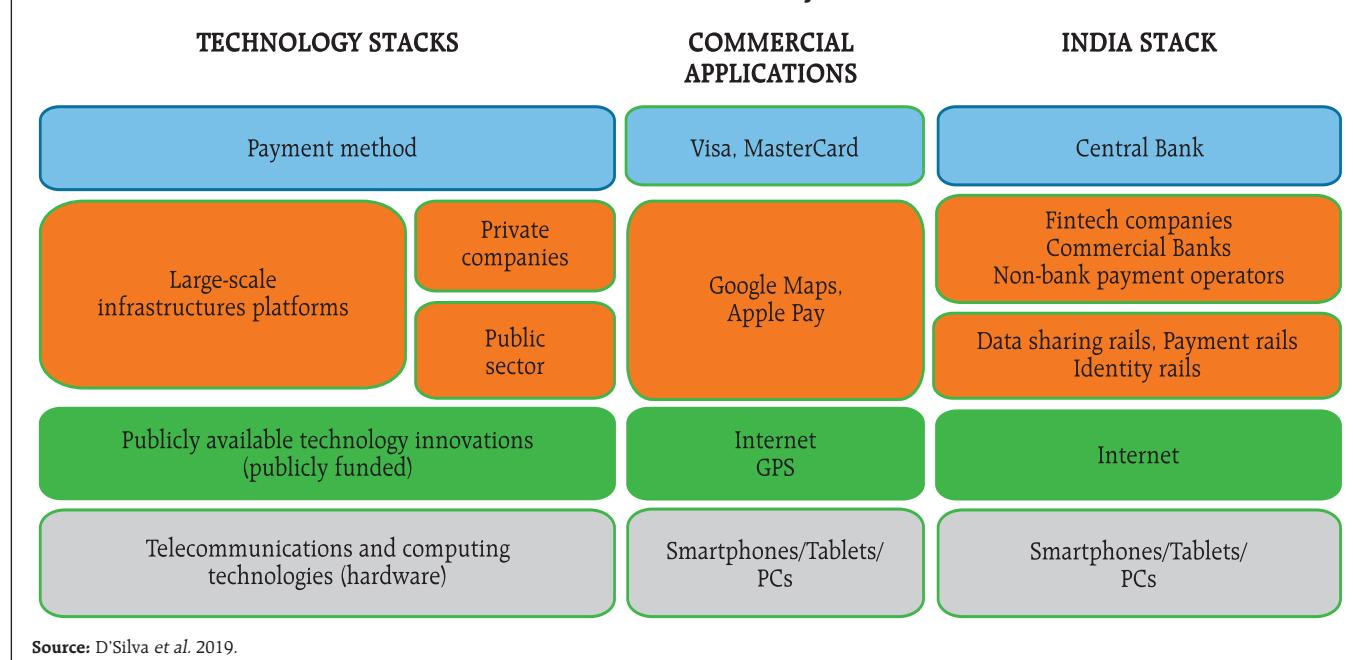
The 'India Stack' encompasses two core principles - building digital platforms as public goods and incorporating data privacy and security in the design of digital public goods (D'Silva *et al.*, 2019). An example of the India Stack for payment systems is shown in Chart 7. The cornerstone of the India Stack is the Aadhaar enabler, used to access a unique, verifiable identity at low marginal cost by FinTechs. Over 1.25 billion residents of India have been issued Aadhaar, and 30 million authentication requests are processed daily (UIDAI, 2019). Various publicly provided platforms for verification (e-KYC), digital signature (e-sign), cloud storage (DigiLocker) and payments have been developed over Aadhaar, which can be used by innovators to create and exchange value, obviating the need to build their own digital infrastructure.

Unified Payments Interface (UPI) is a pivotal enabler, which virtualises accounts and facilitates customers to undertake merchant payments and fund transfers.

Data sharing framework

Wider access to data generated by online activity could be beneficial since they are often obtained at zero marginal cost and are non-rival⁴. Open access to data could also lower switching costs for customers and generally foster competition and financial inclusion. In 2016, the Reserve Bank established a legal framework for a class of regulated data fiduciary entities, called Account Aggregators (NBFC-AA), enabling customer data to be shared within the regulated financial system with the customer's knowledge and consent. Access to data will be granted to regulated entities (under the RBI, SEBI, IRDA and PFRDA) for a limited time for a specific purpose. Innovation facilitators are also important FInTech enablers. The Reserve Bank has set up a 'Regulatory Sandbox' for issuing facilitative regulation to help the fast-developing FinTech sector, allowing live testing of new products in a controlled

Chart 7: India Stack for Payments

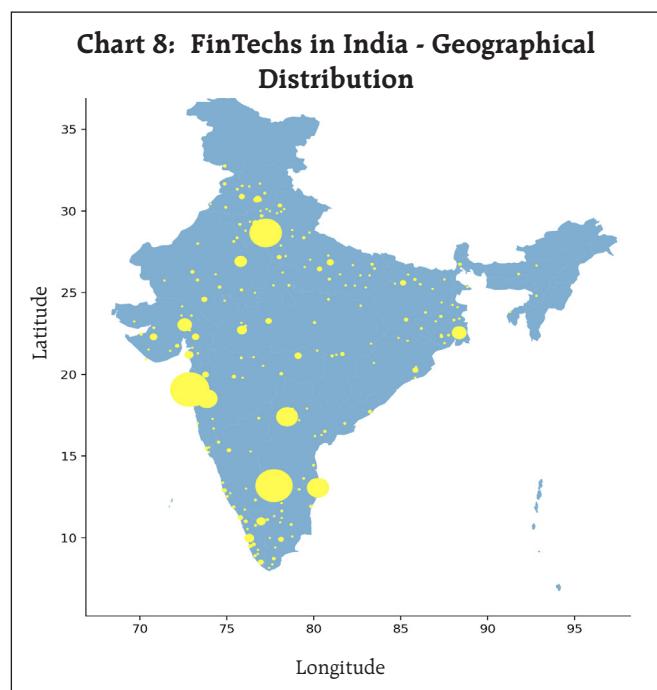


⁴ A good is non-rival in nature when its consumption by one individual does not diminish the amount available for others.

regulatory environment to generate evidence on the benefits and risks of financial innovations (RBI, 2019). The first cohort of applications considered for the Regulatory Sandbox was under the operational theme 'retail payments' (RBI 2019a).

Indian FinTechs: Strength in Diversity

The hallmark of India's FinTech ecosystem is diversity of markets and applications. It is seen that emerging industries often concentrate regionally to benefit from agglomeration effects, but FinTech does not follow this trend (Basole and Patel, 2018). Though concentrated in major metropolitan cities such as Mumbai, Bangalore, Delhi-NCR, and Hyderabad, FinTech is also expanding to smaller cities (Chart 8). Mumbai and Bangalore lead the FinTech momentum and account for 42 per cent of the startup headquarters. Other cities like Jaipur, Pune, and Ahmedabad are also emerging as centers of FinTechs (Medici & Pisabazaar: India FinTech Report 2019). According to the Tracxn database, there are a total of 4,680 companies in India



classified as FinTechs, which can be grouped broadly into fifteen business models (Annex 3).

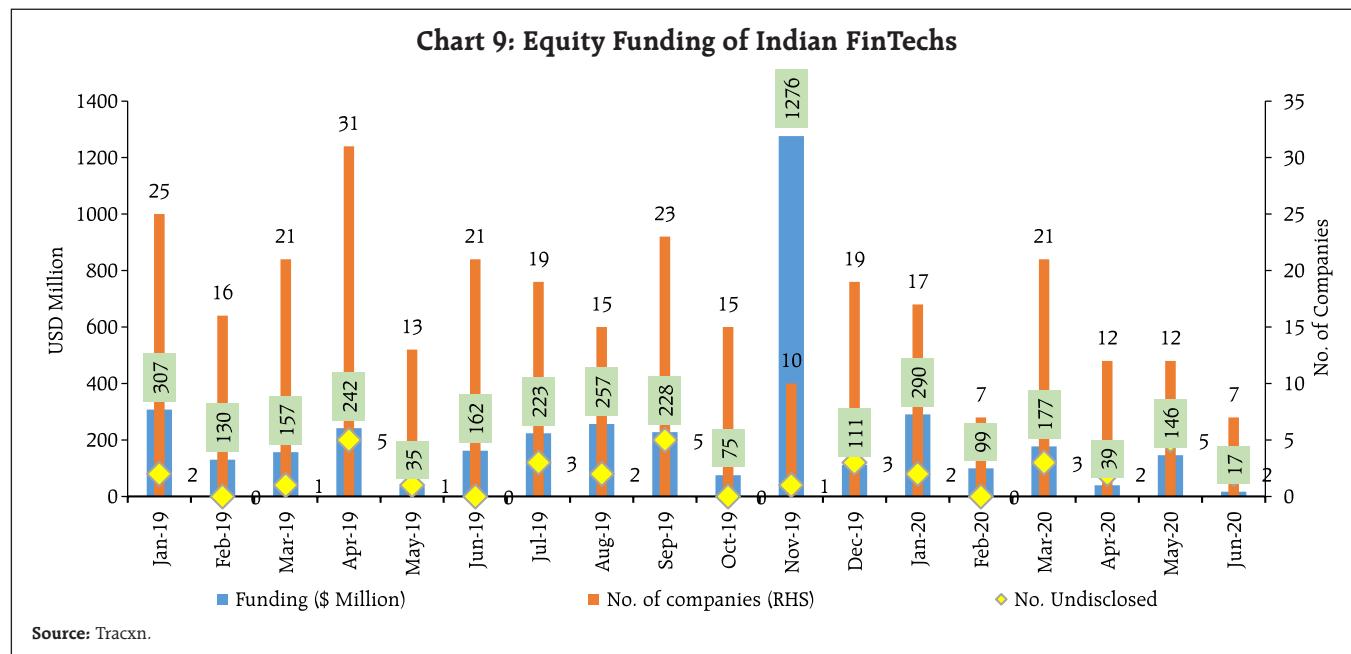
Equity Funding

Startups tend to raise money through equity, since they usually have no history of demonstrated earnings or collateral to offer to banks, which are generally conservative in lending. Lending to a startup requires assessment of novel parameters like the future earnings potential of the unconventional business model, motivation and suitability of the founders, business climate, domain knowledge, etc. Also, specialised equity investors like Venture Capital firms can be more 'hands-on' and guide startups to make them more successful in the long run. Equity funding also allows startups to take a long view of their business, since they are freed from immediate loan repayment obligations.

According to Tracxn database, 211 Indian FinTechs raised \$ 3.18 billion (in equity rounds and from angel investors) over 2019-20 (Chart 9). 25 FinTechs over and above these 211 also raised funding but did not provide details. Fundraising activity took a hit in April 2020 due to the spread of COVID-19 and the enforcement of a nationwide lockdown.

The distribution of the funding of \$3.18 billion raised during 2019-20 was highly skewed with the top 10 companies (by equity funding) accounting for approximately two-thirds of the total funding (Annex 4). Of this, \$ 1 billion was raised by Paytm alone in November 2019. Most of the top FinTech fundraisers operate in the payments arena. Seed and Series A, Series B and Series C funding⁵ constituted

⁵ Start-ups tend to raise equity in successive pitches or rounds (Seed, Series A, B, C and so on), which broadly follow the growth/scale of the business, and serve the needs of the business in that stage. Early rounds may be used to establish a foothold in the market, while later rounds can be used for expansion.



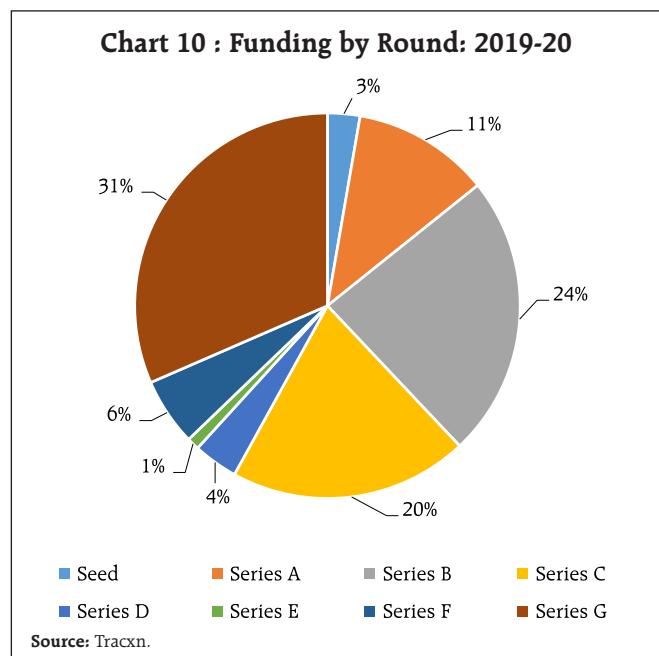
14, 24 and 20 per cent of the equity pie respectively (Chart 10). Almost a third of the entire year's FinTech funding was obtained in the late Series G round by Paytm.

FinTechs and Banks: Collaboration

FinTech firms are no longer viewed by banks as disruptive forces. There is evidence that FinTechs

are acting as enablers in banking and finance. Banks are relying on a number of strategies to embrace technological innovation; ranging from investing in FinTech companies and launching FinTech subsidiaries, to collaborating with FinTechs for various operational functions. Banks and non-banks are partnering to offer the combination of trust and innovation to the Indian consumer (Das, 2020). For enhancing revenues and profits, they are diversifying into newer areas such as insurance, asset management, brokerage and other services supported by financial technologies.

There are synergies to be explored between FinTechs and banks. FinTechs, while possessing vast technological knowhow and new ideas, lack a large client base and the expertise to navigate the regulations and licensing discipline of the finance industry. Traditional banks possess a major strength - reputation for trustworthiness built over several decades. Banks have capital and can weather intense competition. They also have the benefit of experience and tried-and-tested infrastructure alongside specific knowledge of risk management, local regulations and compliance. In fact, banks' on-the-ground market and



customer knowledge and pre-existing client base can be of immense value to FinTech projects. In a nutshell, banks and FinTech firms have different comparative advantages and a strategic collaborative partnership between the two would liberate them to focus on their respective core competencies (Mundra, 2017).

IV. Challenges for Future Development

FinTechs will confront several opportunities and challenges in the future. Broadly, they need to address six concerns to become more efficient, reliable, equitable and resilient.

First, despite immense scope for innovation, cross-border payments are still uncharted territory for FinTechs. Availing remittance services burdens migrant workers due to steep costs associated with such remittances (D'Silva et al., 2019). A high share of cross-border payments flows through correspondent banks, whose dwindling numbers could result in even higher costs and retrogression to informal, unregulated payment networks (Carstens, 2020). In India, cross-border transactions are slow compared to domestic payments and few alternatives are available, despite heavy inward personal remittances (RBI, 2019). To make payment systems in different jurisdictions interoperable, payment instructions need to be translated to a common language. For this, standards and practices across jurisdictions must be coordinated, and mutual confidence in each domestic network's Know Your Customer (KYC) and Anti-Money Laundering (AML) frameworks must be established. Recently, UPI was connected with Singapore's Network for Electronic Transfers (NETS) on a pilot basis at the Singapore FinTech Festival 2019 (ET, 2019), suggesting that significant advances could be made within the existing setup. The UPI system settles in fiat money within the regulated financial system perimeter and therefore, poses less risk than systems such as stablecoins which are usually managed by BigTechs.

Second, the increasing popularity of FinTechs could exacerbate data use, protection and privacy concerns if the statutory rights and obligations of service providers are not clearly delineated. Machine learning algorithms could reproduce and perpetuate existing patterns of discrimination and exclude vulnerable sections. As the Indian population becomes data-rich with increasing Internet and mobile coverage, the next challenge is empowering consumers with the data generated by them through adequate legal and regulatory interventions. Citizens should be able to exercise control of their data like any other personal asset. There is an emerging demand for data localisation from various jurisdictions. In this context, a solution could be a model where data is stored locally, and only binary (Yes or No) queries are allowed on it from abroad, from a specified and globally agreed upon set of permitted queries.

Third, there is a need to ascertain the impact of FinTech on financial stability, due to higher potential for system-wide risk with its expansion. Lending standards could weaken due to wider credit access and higher competition. Since FinTech lenders give advances from debt and equity rather than from deposits, such credit could be more procyclical and volatile due to lack of standard credit guidelines. Further, credit activity outside the prudential regulation space could render credit-related countercyclical policies less effective. Reputational, cyber and third-party risks may arise for banks interacting with FinTechs.

Fourth, there is inequality of access to FinTech services. Despite having the world's second largest Internet user base, the access to Internet is still highly biased towards the urban, male and affluent population segments. Trust in the online marketplace is low and a typical user takes 3-4 months to make their first online transaction. Most users use online platforms for product research, but prefer

subsequent offline purchase (Bain & Company, 2018). Though 'micro-merchants' in India account for an overwhelming proportion of sales, they have been left out of the cashless revolution especially in smaller cities. Despite high penetration of mobile-data and smartphones, use for financial transactions is low due to behavioral reasons like lack of trust, misconceptions about taxation, lack of applied knowledge in using digital payment modes and perceived security threats (IFMR, 2017).

Fifth is the issue of consumer protection and digital education. Regulators need to stress on pre-emptive fraud detection, while also integrating digital literacy into financial literacy to dispel misconceptions. Safety provisions and grievance redressal mechanisms need to be simplified and publicised to encourage participation by low-income groups. However, financial literacy and digital hygiene alone may be insufficient. Cross-country evidences suggest that paying with cash is a habit, generally slow to change. In China, street vendors, buskers, and even beggars accept electronic payments (Jenkins, 2018). However, in Tokyo, six of ten restaurants require cash payment (Lewis, 2019). Cash use increases as concerns about privacy rise, while it declines as confidence in banks rises (Png and Tan, 2020). Thus, policies to promote electronic payments need to address fundamental concerns about privacy and confidence in financial institutions.

Finally, regulators need to conduct themselves neutrally. The Report of the Working Group on FinTech and Digital Banking (RBI, 2018a) cautions that regulators should neither overprotect incumbents, nor unduly favour newcomers by applying differential regulatory treatment. With increasing dominance of big firms in digital payments, there will emerge a tradeoff between data-fueled oligopoly for cheap services and the need for re-aligning incentives to foster smaller, more innovative firms for a competitive

ecosystem. However, to follow the principle of neutrality, "authorities may have to contend with stricter treatment for certain types of activity, such as where a claim on the platform's balance sheet is generated or where retail investors and consumers are involved" (Claessens *et al.*, 2018).

V. The Way Forward

As a facilitative regulator, the Reserve Bank has broadened the scope of priority sector lending to include start-ups. In order to overcome internet connectivity problems as major hurdle for digital payments in rural areas and encourage innovations that enable offline digital transactions, the Reserve Bank has announced a pilot scheme under which, authorised Payment System Operators (PSOs) including banks and non-banks, will be able to provide offline payment solutions using cards, wallets or mobile devices for remote or proximity payments (RBI 2020b). Over the years, the Reserve Bank has prioritised security measures for digital payments such as the requirement of Additional Factor of Authentication and online alerts for every transaction. These measures have significantly increased customer confidence and safety leading to increased adoption of digital payments. Going ahead, FinTechs need to prioritise regulatory compliance and the management of cyber risks. They should design and implement cyber-risk prevention frameworks and regularly conduct penetration tests.

Indian FinTechs are now witnessing one of their biggest challenges till now - the COVID-19 pandemic. A survey of 250 Indian startups confirms that largely, the pandemic had a negative impact on business, though the FinTech startups among these reported the lowest operational disruptions (FICCI-IAN, 2020). Experts foresee that new firms are bound to lose out and established, well-funded startups and BigTechs in favorable sectors such as payments, e-commerce and online learning will tide through the business

disruptions. Ensuring a high degree of interoperability among startups is key to ensure a coordinated response to market demand and changing attitudes. The pandemic also challenges the belief that FinTechs promote financial inclusion; a topic of future research is to ascertain whether Indian FinTechs helped their vulnerable customers when they most needed them, or were they helpless in servicing their needs. For a healthy and sustainable business ecosystem, FinTechs need to bridge the digital divide and promote equitable, broad-based customer participation across urban and rural areas and the various producing and consuming sectors.

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Annex 1 : Digital Transactions

	Volume (Lakhs)			Value (₹ Crores)		
	2017-18	2018-19	2019-20	2017-18	2018-19	2019-20
1. Large Value Credit Transfers (RTGS – Customer and Interbank)	1,244	1,366	1,507	11,67,12,478	13,56,88,187	13,11,56,475
2. Retail Credit Transfers (AePS, APBS, ECS, IMPS, NACH, NEFT, UPI)	58,793	1,18,750	2,06,661	1,88,14,287	2,60,97,655	2,85,72,100
3. Debit Transfers and Direct Debits (BHIM Aadhaar Pay, ECS, NACH, NETC)	3,788	6,382	8,957	3,99,300	6,56,232	8,26,036
4. Card Payments (Credit and Debit cards at PoS terminals and Online transactions)	47,486	61,769	73,012	9,19,035	11,96,888	15,35,765
5. Prepaid Payment Instruments (PPIs)	34,591	46,072	53,318	1,41,634	2,13,323	2,15,558
Total Digital Payments	1,45,902	2,34,339	3,43,455	13,69,86,734	16,38,52,285	16,23,05,934

Source: RBI Annual Report, 2019-20.

Annex 2: Statement on Developmental and Regulatory Policies: Decisions regarding Payment and Settlement System

Date	Decision Taken
Feb 07, 2019	Regulation of Payment Gateways and Payment Aggregators
Apr 04, 2019	A report to benchmark India's payment systems would be prepared.
Apr 04, 2019	A Framework for Harmonising Turn Around Time for the Resolution of Customer Complaints and Compensation to be put in place for all authorised payment systems.
Jun 06, 2019	Removing charges levied by the RBI for RTGS and NEFT transactions
Jun 06, 2019	Committee to Review the ATM Interchange Fee Structure
Aug 07, 2019	24x7 availability of NEFT
Aug 07, 2019	Expansion of Biller Categories for Bharat Bill Payment System (BBPS)
Aug 07, 2019	'On-tap' Authorisation for Bharat Bill Payment Operating Unit (BBPOU), Trade Receivables Discounting System (TReDS), and White Label ATMs (WLAs).
Aug 07, 2019	Creation of Central Payments Fraud Information Registry
Oct 04, 2019	Internal Ombudsman by large non-bank Prepaid Payment Instrument (PPI) Issuers (more than 1 crore outstanding PPIs)
Oct 04, 2019	Dissemination of granular payments data
Oct 04, 2019	Payments Infrastructure Development Fund (PIDF) to increase digitisation through cards in Tier III-VI centres
Oct 04, 2019	100 per cent digitally enabled districts
Dec 05, 2019	Introduction of a new PPI only for purchases up to ₹10,000, with loading only from a bank account and usage only for digital payments. Only minimum customer details required.
Dec 05, 2019	Previously, NBFC-P2P aggregate limits for both borrowers and lenders were ₹10 lakh, whereas exposure of a single lender to a single borrower was capped at ₹50,000. It was proposed to increase the aggregate exposure limit of a P2P lender to all borrowers to ₹50 lakh.
Dec 05, 2019	Baseline cyber security controls shall be mandated by regulated entities in contractual agreements with ATM Switch application service providers
Feb 06, 2020	Publication of a "Digital Payments Index" (DPI)
Feb 06, 2020	A framework for establishing a Self-Regulatory Organisation (SRO) for the digital payment system to be prepared to foster best practices on security, customer protection and pricing etc.
Feb 06, 2020	A pan India Cheque Truncation System to be operationalized.
Aug 06, 2020	Broadening the scope of Priority Sector Lending to include start-ups
Aug 06, 2020	Scheme of Offline Retail Payments Using Cards and Mobile Devices
Aug 06, 2020	Online Dispute Resolution (ODR) for Digital Payments
Aug 06, 2020	Positive Pay Mechanism for Cheques
Aug 06, 2020	Creation of Reserve Bank Innovation Hub
Oct 09, 2020	Round-the-Clock availability of Real Time Gross Settlement System (RTGS)
Oct 09, 2020	Perpetual Validity for Certificate of Authorisation (CoA) issued to Payment System Operators (PSOs)

Note: Updates on the above may be found in the RBI Annual Report 2019-20

Annex 3 : Indian FinTechs by Business Model

Business Model	No. of Firms*	Description
Investment Tech	990	Platforms for retail and institutional investors to research and invest in multiple financial assets.
Payments	978	Companies which participate in traditional web based and offline payment cycle; provide alternative mode of payment, and support the payment companies in terms of security, analytics, platform, etc.
Finance and Accounting Tech	906	Automate functions of finance and accounting departments of organisations.
Alternative Lending	702	Online lending platforms (including balance sheet lenders, marketplaces, P2P lenders as well as lead generators) and enablers.
Banking Tech	369	Tech solutions for banking industry including software, hardware, and Tech-enabled services.
Cryptocurrencies	342	Bitcoin and other digital currency products and services.
Crowdfunding	185	Online platforms where people, organisations raise money from the masses.
Internet First Insurance Platforms	161	Tech platforms to consumers for purchasing and managing their insurance
Insurance IT	98	Software products and data solutions primarily for the insurance industry
RegTech	95	Tech products primarily for financial institutions and regulators for efficient implementation and monitoring of regulations
Robo advisory	68	Automated, low-cost investment services to retail investors and technological solutions for automated investments.
Remittance	46	Cross-border money transfer solutions & services
Forex Tech	32	Tech solutions, including internet-first platforms and software for forex market .
Islamic FinTech	7	Internet-first platforms and software for sharia-compliant finance
Employer Insurance	6	Solutions for managing employee insurance benefits.

* **Source:** Tracxn database. The total is more than 4,680 as some companies have multiple business models.

Annex 4: Top Indian FinTechs by Funding Raised in 2019-20

Rank	Company	Founded	Funding Rounds	Total Amount Raised (\$ Million)	Description
1	Paytm	2010	Series G	1000	App-based wallet for consumer payments
2	BharatPe	2017	Series A, B, C	154.3	QR code based payment app
3	Policybazaar	2008	Series F	150	Online insurance comparison platform
4	CRED	2018	Series A, B	145.6	Rewards-based platform for credit card bill payments
5	KhataBook	2016	Angel, Seed, Series A, Series B	140.6	Digital ledger account book
6	Acko	2017	Series C	101.6	Tech-enabled automotive insurance
7	ZestMoney	2015	Series B	30.47	Online platform for point-of-sale financing
8	Lendingkart	2014	Series C, D	87.87	Online platform providing working capital for SMEs
9	InCred	2016	Series A	85.9	Alternative lending platform focusing on SME, consumer & personal, home and education loans.
10	Pine Labs	1998	Series C	85	PoS software solutions for offline retailers
11	Billdesk	2000	Series C	84.8	Payment Gateway
12	Digit Insurance	2016	Series C	84.35	Insurance platform for individuals

Source: Tracxn database.

CURRENT STATISTICS

Select Economic Indicators

Reserve Bank of India

Money and Banking

Prices and Production

Government Accounts and Treasury Bills

Financial Markets

External Sector

Payment and Settlement Systems

Occasional Series

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Notes: .. = Not available.
 - = Nil/Negligible.
 P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

Item	2019-20	2018-19	2019-20		2020-21
		Q4	Q1	Q4	Q1
		1	2	3	4
1 Real Sector (% Change)					
1.1 GVA at Basic Prices		3.9	5.6	4.8	3.0
1.1.1 Agriculture		4.0	1.6	3.0	5.9
1.1.2 Industry		0.8	1.4	3.8	-0.01
1.1.3 Services		5.0	8.3	5.5	3.5
1.1a Final Consumption Expenditure		6.3	7.3	5.6	4.2
1.1b Gross Fixed Capital Formation		-2.8	4.4	4.6	-6.5
	2019-20	2019		2020	
		Aug.	Sep.	Aug.	Sep.
		1	2	3	4
1.2 Index of Industrial Production		-0.8	-1.4	-4.6	-8.0
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits		7.9	9.7	9.4	10.9
2.1.2 Credit		6.1	10.2	8.8	5.5
2.1.2.1 Non-food Credit		6.1	10.1	8.7	5.5
2.1.3 Investment in Govt. Securities		10.6	2.1	7.1	21.8
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)		9.4	13.1	12.0	14.7
2.2.2 Broad Money (M3)		8.9	9.8	9.6	12.6
3 Ratios (%)					
3.1 Cash Reserve Ratio		3.00	4.00	4.00	3.00
3.2 Statutory Liquidity Ratio		18.25	18.75	18.75	18.00
3.3 Cash-Deposit Ratio		4.6	4.9	4.8	3.7
3.4 Credit-Deposit Ratio		76.4	75.7	75.7	72.1
3.5 Incremental Credit-Deposit Ratio		60.3	-44.4	-0.9	-25.4
3.6 Investment-Deposit Ratio		27.6	28.0	28.6	30.7
3.7 Incremental Investment-Deposit Ratio		36.2	96.5	93.3	101.9
4 Interest Rates (%)					
4.1 Policy Repo Rate		4.40	5.40	5.40	4.00
4.2 Reverse Repo Rate		4.00	5.15	5.15	3.35
4.3 Marginal Standing Facility (MSF) Rate		4.65	5.65	5.65	4.25
4.4 Bank Rate		4.65	5.65	5.65	4.25
4.5 Base Rate		8.15/9.40	8.95/9.40	8.95/9.40	7.40/9.00
4.6 MCLR (Overnight)		7.40/7.90	7.90/8.40	7.80/8.30	6.65/7.20
4.7 Term Deposit Rate >1 Year		5.90/6.40	6.35/7.10	6.25/7.00	5.00/5.50
4.8 Savings Deposit Rate		3.00/3.50	3.25/3.50	3.25/3.50	2.70/3.00
4.9 Call Money Rate (Weighted Average)		5.05	5.36	5.31	3.43
4.10 91-Day Treasury Bill (Primary) Yield		4.36	5.41	5.41	3.24
4.11 182-Day Treasury Bill (Primary) Yield		4.97	5.63	5.50	3.49
4.12 364-Day Treasury Bill (Primary) Yield		4.94	5.72	5.60	3.59
4.13 10-Year G-Sec Par Yield (FBIL)		6.71	6.70	6.85	6.12
5 Reference Rate and Forward Premium					
5.1 INR-US\$ Spot Rate (Rs. Per Foreign Currency)		74.84	71.76	70.84	73.35
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)		82.64	79.24	77.32	87.07
5.3 Forward Premium of US\$ 1-month (%)		8.98	3.85	3.98	3.76
3-month (%)		5.93	4.18	3.95	3.90
6-month (%)		5.05	4.24	4.23	4.01
6 Inflation (%)					
6.1 All India Consumer Price Index		4.76	3.3	4.0	6.7
6.2 Consumer Price Index for Industrial Workers		7.54	6.3	7.0	5.6
6.3 Wholesale Price Index		1.69	1.2	0.3	0.2
6.3.1 Primary Articles		6.77	6.5	5.5	1.6
6.3.2 Fuel and Power		-1.63	-3.5	-6.7	-9.7
6.3.3 Manufactured Products		0.29	0.0	-0.4	1.3
7 Foreign Trade (% Change)					
7.1 Imports		-7.66	-12.9	-12.0	-26.0
7.2 Exports		-5.06	-6.5	-6.6	-12.6
					6.0

Note : Financial Benchmark India Pvt. Ltd. (FBIL) has commenced publication of the G-Sec benchmarks with effect from March 31, 2018 as per RBI circular FMRD.DIRD.7/14.03.025/2017-18 dated March 31, 2018. FBIL has started dissemination of reference rates w.e.f. July 10, 2018.

Reserve Bank of India

No. 2: RBI - Liabilities and Assets *

Item	(₹ Crore)						
	As on the Last Friday/ Friday						
	2019-20	2019	2020				
		Oct.	Oct. 2	Oct. 9	Oct. 16	Oct. 23	Oct. 30
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	2412993	2231090	2653562	2675166	2679925	2688064	2688725
1.1.2 Notes held in Banking Department	10	11	16	17	12	10	12
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	2413003	2231101	2653578	2675183	2679937	2688074	2688737
1.2 Assets							
1.2.1 Gold Coin and Bullion	103439	89777	116725	116776	117374	118351	117206
1.2.2 Foreign Securities	2308718	2140619	2535931	2557496	2561665	2568845	2570667
1.2.3 Rupee Coin	846	705	922	911	898	878	864
1.2.4 Government of India Rupee Securities	—	—	—	—	—	—	—
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	1187409	830440	1332952	1360249	1396755	1428984	1439019
2.1.1.1 Central Government	100	100	101	101	100	100	100
2.1.1.2 Market Stabilisation Scheme	43	43	42	42	43	43	43
2.1.1.3 State Governments	536186	548240	455586	439497	449669	437010	453999
2.1.1.4 Scheduled Commercial Banks	7603	4492	5382	5414	5188	5137	5623
2.1.1.5 Scheduled State Co-operative Banks	3445	2857	2632	2503	2580	2527	2405
2.1.1.6 Non-Scheduled State Co-operative Banks	32641	32264	26454	26061	26083	25878	26036
2.1.1.7 Other Banks	605100	241723	842640	886464	913041	958146	950693
2.1.1.9 Financial Institution Outside India	2291	721	115	167	51	143	120
2.1.2 Other Liabilities	1350333	1093743	1379007	1381517	1388574	1411775	1424609
2.1/2 Total Liabilities or Assets	2537742	1924183	2711959	2741766	2785329	2840759	2863628
2.2 Assets							
2.2.1 Notes and Coins	10	11	16	17	12	10	12
2.2.2 Balances held Abroad	1006357	794682	1173132	1194115	1226227	1270748	1300811
2.2.3 Loans and Advances							
2.2.3.1 Central Government	50477	—	—	—	—	—	—
2.2.3.2 State Governments	1967	670	13169	15478	14867	6463	4190
2.2.3.3 Scheduled Commercial Banks	285623	22273	119525	117467	115455	115451	115757
2.2.3.4 Scheduled State Co-op.Banks	—	—	—	—	—	—	—
2.2.3.5 Industrial Dev. Bank of India	—	—	—	—	—	—	—
2.2.3.6 NABARD	—	—	25142	25142	24237	24127	23320
2.2.3.7 EXIM Bank	—	—	—	—	—	—	—
2.2.3.8 Others	10064	5716	12830	12840	12841	12853	12931
2.2.3.9 Financial Institution Outside India	2300	721	11082	11083	4445	10409	10480
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	—	—	—	—	—	—	—
2.2.4.2 Government Treasury Bills	—	—	—	—	—	—	—
2.2.5 Investments	1042951	994053	1203119	1210858	1231475	1243425	1239727
2.2.6 Other Assets	137993	106057	153944	154766	155770	157273	156400
2.2.6.1 Gold	127644	102091	150127	150938	151710	152974	151494

* Data are provisional

No. 3: Liquidity Operations by RBI

(₹ Crore)

Date	Repo	Reverse Repo	Variable Rate Repo	Variable Rate Reverse Repo	MSF	Standing Liquidity Facilities	Market Stabilisation Scheme	Sale	Purchase	Long Term Repo Operations &	Targeted Long Term Repo Operations #	Special Liquidity Facility for Mutual Funds	Special Liquidity Scheme for NBFCs/ HFCs **	Net Injection (+)/ Absorption (-) (I+3+5+6+9+10+11+12+13-2-4-7-8)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Sep. 1, 2020	-	715178	-	-	104	-120	-	-	555	-	-	-	-	-714639
Sep. 2, 2020	-	709520	-	-	215	-	-	-	-	-	-	-	-	-709305
Sep. 3, 2020	-	728123	-	-	5	-	-	-	-	-	-	-	492	-727626
Sep. 4, 2020	-	687713	-	-	0	-	-	10000	7132	-	-	-	-	-690581
Sep. 5, 2020	-	7255	-	-	0	-	-	-	-	-	-	-	-	-7255
Sep. 6, 2020	-	13	-	-	4	-	-	-	-	-	-	-	-	-9
Sep. 7, 2020	-	669621	-	-	92	-	-	-	-	-	-	-	-	-669529
Sep. 8, 2020	-	648065	-	-	1614	-	-	-	-	-	-	-	-	-646451
Sep. 9, 2020	-	640443	-	-	990	-	-	-	770	-	-	-	-	-638683
Sep. 10, 2020	-	640135	-	-	60	-	-	-	1980	-	-	-	98	-637997
Sep. 11, 2020	1000##	630509	-	-	0	155	-	9900	10000	-	-	-	-	-629254
Sep. 12, 2020	-	880	-	-	0	-	-	-	-	-	-	-	-	-880
Sep. 13, 2020	-	181	-	-	0	-	-	-	-	-	-	-	-	-181
Sep. 14, 2020	0##	591681	-	-	101	-	-	-	935	-24536	-	-	-	-615181
Sep. 15, 2020	-	561810	-	-	0	-	-	-	2300	-25006	-	-	66	-584450
Sep. 16, 2020	-	468946	-	-	6	-	-	-	1970	-24775	-	-	522	-491223
Sep. 17, 2020	-	447539	-	-	70	-	-	-	1640	-24537	-	-	189	-470177
Sep. 18, 2020	-	408353	-	-	4	-	-	10000	10000	-24718	-	-	550	-432517
Sep. 19, 2020	-	19886	-	-	265	-	-	-	-	-	-	-	-	-19621
Sep. 20, 2020	-	332	-	-	0	-	-	-	-	-	-	-	-	-332
Sep. 21, 2020	-	365617	-	-	0	840	-	-	1960	-	-	-	-	-362817
Sep. 22, 2020	-	411505	-	-	0	-	-	-	1755	-	-	-	49	-409701
Sep. 23, 2020	-	406841	-	-	0	-	-	-	1335	-	-	-	-	-405506
Sep. 24, 2020	-	424974	-	-	0	-	-	-	1205	-	-	-	373	-423396
Sep. 25, 2020	-	436263	-	-	50	896	-	-	0	-	-	-	-	-435317
Sep. 26, 2020	-	2353	-	-	2	-	-	-	-	-	-	-	-	-2351
Sep. 27, 2020	-	384	-	-	0	-	-	-	-	-	-	-	-	-384
Sep. 28, 2020	-	425051	-	-	9	15	-	-	2475	-	-	-	-	-422552
Sep. 29, 2020	-	454917	-	-	1249	-	-	-	2800	-	-	-	20	-450848
Sep. 30, 2020	-	486320	-	-	0	-	-	-	3620	-	-	-	551	-482149

Notes: # Includes Targeted Long Term Repo Operations (TLTRO) and Targeted Long Term Repo Operations 2.0 (TLTRO 2.0)

**As per the RBI Notification No. 2020-21/01 dated July 01, 2020

& Negative (-) sign indicates repayments done by Banks.

56-day Term Repo Operation conducted as per the Press Release: 2020-2021/288 dated September 4, 2020 and Press Release: 2020-2021/326 dated September 14, 2020.

No. 4: Sale/ Purchase of U.S. Dollar by the RBI

i) Operations in onshore / offshore OTC segment

ii) Operations in currency futures segment

Item	2019-20	2019		2020	
		Sep.	Aug.	Sep.	
		1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US \$ Million) (1.1-1.2)		0	0	0	0
1.1 Purchase (+)		7713	475	0	0
1.2 Sale (-)		7713	475	0	0
2 Outstanding Net Currency Futures Sales (-)/ Purchase (+) at the end of month (US \$ Million)		-500	0	0	0

**No. 4 A : Maturity Breakdown (by Residual Maturity) of Outstanding
Forwards of RBI (US \$ Million)**

Item	As on September 30, 2020		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	1300	0	1300
2. More than 1 month and upto 3 months	4957	0	4957
3. More than 3 months and upto 1 year	16684	0	16684
4. More than 1 year	960	10020	-9060
Total (1+2+3+4)	23901	10020	13881

No. 5: RBI's Standing Facilities

(₹ Crore)

Item	As on the Last Reporting Friday							
	2019-20		2019		2020			
			Oct. 25	May 22	Jun. 19	Jul. 31	Aug. 28	Sep. 25
	1	2	3	4	5	6	7	8
1 MSF	1262	4373	1400	310	80	300	50	6
2 Export Credit Refinance for Scheduled Banks								
2.1 Limit	-	-	-	-	-	-	-	-
2.2 Outstanding	-	-	-	-	-	-	-	-
3 Liquidity Facility for PDs								
3.1 Limit	10000	2800	4900	4900	4900	4900	4900	4900
3.2 Outstanding	4782	1884	1372	326	30	-	-	-
4 Others								
4.1 Limit	-	-	50000	50000	65000	65000	65000	65000
4.2 Outstanding	-	-	21369	26894	34376	34166	37691	36488
5 Total Outstanding (1+2.2+3.2+4.2)	6044	6257	24141	27530	34486	34466	37741	36494

Note :1.Special refinance facility to Others, i.e. to the EXIM Bank, is reopened since May 22, 2020

2.Refinance facility to Others, i.e. to the NABARD/SIDBI/NHB U/S 17(4H) of RBI ACT,1934, since, April 17, 2020.

Money and Banking

No. 6: Money Stock Measures

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2019-20	2019	2020		
		Sep. 27	Aug. 28	Sep. 11	Sep. 25
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	2349748	2089198	2583111	2600240	2585212
1.1 Notes in Circulation	2420964	2160124	2654096	2669875	2656476
1.2 Circulation of Rupee Coin	25605	25281	25708	25708	25708
1.3 Circulation of Small Coins	743	743	743	743	743
1.4 Cash on Hand with Banks	97563	96950	97436	96086	97715
2 Deposit Money of the Public	1776200	1557208	1702537	1680269	1739732
2.1 Demand Deposits with Banks	1737692	1525227	1662573	1638205	1696910
2.2 ‘Other’ Deposits with Reserve Bank	38507	31981	39964	42064	42822
3 M₁ (1+2)	4125948	3646406	4285648	4280509	4324944
4 Post Office Saving Bank Deposits	150963	137494	150963	150963	150963
5 M₂ (3+4)	4276911	3783900	4436611	4431472	4475907
6 Time Deposits with Banks	12674016	12167762	13362349	13458611	13414790
7 M₃ (3+6)	16799963	15814167	17647997	17739119	17739734
8 Total Post Office Deposits	433441	390764	433441	433441	433441
9 M₄ (7+8)	17233404	16204931	18081438	18172560	18173175

No. 7: Sources of Money Stock (M₃)

(₹ Crore)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2019-20	2019	2020		
		Sep. 27	Aug. 28	Sep. 11	Sep. 25
	1	2	3	4	5
1 Net Bank Credit to Government	4960362	4837135	5613739	5617989	5518318
1.1 RBI's net credit to Government (1.1.1–1.1.2)	992192	936889	1015146	976999	836430
1.1.1 Claims on Government	1047808	999374	1194026	1196995	1196304
1.1.1.1 Central Government	1045314	998915	1184993	1170380	1185788
1.1.1.2 State Governments	2494	459	9033	26615	10516
1.1.2 Government deposits with RBI	55616	62485	178880	219996	359874
1.1.2.1 Central Government	55573	62443	178838	219954	359832
1.1.2.2 State Governments	43	42	42	42	42
1.2 Other Banks' Credit to Government	3968170	3900246	4598593	4640990	4681888
2 Bank Credit to Commercial Sector	11038644	10378946	10876306	10890235	10933906
2.1 RBI's credit to commercial sector	13166	8103	11565	13844	14740
2.2 Other banks' credit to commercial sector	11025478	10370843	10864741	10876391	10919166
2.2.1 Bank credit by commercial banks	10370861	9766854	10216227	10227647	10271581
2.2.2 Bank credit by co-operative banks	637776	592065	638172	638153	637509
2.2.3 Investments by commercial and co-operative banks in other securities	16842	11924	10342	10591	10076
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	3801036	3266036	4202376	4209461	4230223
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	3590402	3048039	3957722	3964807	3985569
3.1.1 Gross foreign assets	3590636	3048248	3957965	3965050	3985812
3.1.2 Foreign liabilities	234	209	243	243	243
3.2 Other banks' net foreign exchange assets	210634	217997	244655	244655	244655
4 Government's Currency Liabilities to the Public	26348	26024	26451	26451	26451
5 Banking Sector's Net Non-monetary Liabilities	3026427	2693973	3070875	3005016	2969164
5.1 Net non-monetary liabilities of RBI	1378342	1065938	1421949	1408599	1384384
5.2 Net non-monetary liabilities of other banks (residual)	1648085	1628035	1648926	1596417	1584780
M₃ (1+2+3+4–5)	16799963	15814167	17647997	17739119	17739734

No. 8: Monetary Survey

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2019-20	2019	2020		
		Sep. 27	Aug. 28	Sep. 11	Sep. 25
	1	2	3	4	5
Monetary Aggregates					
NM ₁ (1.1 + 1.2.1+1.3)	4125948	3646406	4285648	4280509	4324944
NM ₂ (NM ₁ + 1.2.2.1)	9745776	9041399	10223166	10260713	10285434
NM ₃ (NM ₂ + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	16923893	15976308	17752801	17828409	17826693
1 Components					
1.1 Currency with the Public	2349748	2089198	2583111	2600240	2585212
1.2 Aggregate Deposits of Residents	14226198	13514101	14857059	14927549	14942443
1.2.1 Demand Deposits	1737692	1525227	1662573	1638205	1696910
1.2.2 Time Deposits of Residents	12488506	11988874	13194485	13289343	13245533
1.2.2.1 Short-term Time Deposits	5619828	5394993	5937518	5980204	5960490
1.2.2.1.1 Certificates of Deposit (CDs)	169419	182922	88084	85476	73353
1.2.2.2 Long-term Time Deposits	6868678	6593881	7256967	7309139	7285043
1.3 ‘Other’ Deposits with RBI	38507	31981	39964	42064	42822
1.4 Call/Term Funding from Financial Institutions	309439	341028	272668	258557	256217
2 Sources					
2.1 Domestic Credit	16856406	16085854	17466357	17484106	17430220
2.1.1 Net Bank Credit to the Government	4960362	4837135	5613739	5617989	5518318
2.1.1.1 Net RBI credit to the Government	992192	936889	1015146	976999	836430
2.1.1.2 Credit to the Government by the Banking System	3968170	3900246	4598593	4640990	4681888
2.1.2 Bank Credit to the Commercial Sector	11896044	11248719	11852618	11866117	11911902
2.1.2.1 RBI Credit to the Commercial Sector	13166	8103	36368	38291	40026
2.1.2.2 Credit to the Commercial Sector by the Banking System	11882878	11240616	11816250	11827826	11871876
2.1.2.2.1 Other Investments (Non-SLR Securities)	846284	859018	940213	939977	940628
2.2 Government’s Currency Liabilities to the Public	26348	26024	26451	26451	26451
2.3 Net Foreign Exchange Assets of the Banking Sector	3612303	2995699	4067798	4099584	4110620
2.3.1 Net Foreign Exchange Assets of the RBI	3590402	3048039	3957722	3964807	3985569
2.3.2 Net Foreign Currency Assets of the Banking System	21900	-52340	110076	134777	125051
2.4 Capital Account	2670439	2385844	2828647	2840728	2811108
2.5 Other items (net)	900725	745425	979157	941004	929489

No. 9: Liquidity Aggregates

(₹ Crore)

Aggregates	2019-20	2019	2020		
		Sep.	Jul.	Aug.	Sep.
	1	2	3	4	5
1 NM₃	16923893	15976308	17727030	17752801	17826693
2 Postal Deposits	433441	390762	433441	433441	433441
3 L₁ (1 + 2)	17357334	16367070	18160471	18186242	18260134
4 Liabilities of Financial Institutions	57479	2932	43663	40802	35344
4.1 Term Money Borrowings	7928	2656	8425	7940	3114
4.2 Certificates of Deposit	46249	31	31750	29300	28700
4.3 Term Deposits	3302	245	3489	3561	3531
5 L₂ (3 + 4)	17414812	16370002	18204134	18227044	18295478
6 Public Deposits with Non-Banking Financial Companies	31905	31905	31905
7 L₃ (5 + 6)	17446717	16401907	18327383

Note : Since November 2019, updated data on liabilities of financial institutions have been incorporated in this table , and hence, are not comparable with past data.

No. 10: Reserve Bank of India Survey

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2019-20	2019	2020		
		Sep. 27	Aug. 28	Sep. 11	Sep. 25
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	2447312	2186148	2680547	2696326	2682927
1.2 Bankers' Deposits with the RBI	543888	570065	472795	468067	463610
1.2.1 Scheduled Commercial Banks	505131	532442	439411	434587	429915
1.3 'Other' Deposits with the RBI	38507	31981	39964	42064	42822
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 - 2.4 - 2.5)	3029707	2788194	3193305	3206456	3189358
2 Sources					
2.1 RBI's Domestic Credit	791299	780069	631082	623798	561723
2.1.1 Net RBI credit to the Government	992192	936889	1015146	976999	836430
2.1.1.1 Net RBI credit to the Central Government (2.1.1.1 + 2.1.1.2 + 2.1.1.3 + 2.1.1.4 - 2.1.1.5)	989741	936472	1006155	950426	825956
2.1.1.1.1 Loans and Advances to the Central Government	-	-	-	-	-
2.1.1.1.2 Investments in Treasury Bills	-	-	-	-	-
2.1.1.1.3 Investments in dated Government Securities	1044468	998152	1184242	1169645	1185063
2.1.1.1.3.1 Central Government Securities	1044468	998152	1184242	1169645	1185063
2.1.1.1.4 Rupee Coins	846	763	751	735	725
2.1.1.1.5 Deposits of the Central Government	55573	62443	178838	219954	359832
2.1.1.2 Net RBI credit to State Governments	2451	417	8991	26573	10474
2.1.2 RBI's Claims on Banks	-214059	-164923	-420432	-391492	-314733
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	-214059	-164923	-395629	-367045	-289447
2.1.3 RBI's Credit to Commercial Sector	13166	8103	36368	38291	40026
2.1.3.1 Loans and Advances to Primary Dealers	5920	2373	-	-	-
2.1.3.2 Loans and Advances to NABARD	-	-	24803	24447	25286
2.2 Government's Currency Liabilities to the Public	26348	26024	26451	26451	26451
2.3 Net Foreign Exchange Assets of the RBI	3590402	3048039	3957722	3964807	3985569
2.3.1 Gold	230527	190217	273025	279568	264971
2.3.2 Foreign Currency Assets	3359893	2857839	3684714	3685256	3720615
2.4 Capital Account	1165066	950734	1254854	1253664	1223306
2.5 Other Items (net)	213276	115204	167095	154935	161078

No. 11: Reserve Money - Components and Sources

(₹ Crore)

Item	2019-20	Outstanding as on March 31/ last Fridays of the month/ Fridays					
		2019	2020				
			Sep. 27	Aug. 28	Sep. 4	Sep. 11	Sep. 18
		1	2	3	4	5	6
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 + 2.4 + 2.5 - 2.6)	3029707	2788194	3193305	3216001	3206456	3220303	3189358
1 Components							
1.1 Currency in Circulation	2447312	2186148	2680547	2687356	2696326	2690467	2682927
1.2 Bankers' Deposits with RBI	543888	570065	472795	488825	468067	487789	463610
1.3 'Other' Deposits with RBI	38507	31981	39964	39821	42064	42048	42822
2 Sources							
2.1 Net Reserve Bank Credit to Government	992192	936889	1015146	1037110	976999	848892	836430
2.2 Reserve Bank Credit to Banks	-214059	-164923	-395629	-414682	-367045	-258457	-289447
2.3 Reserve Bank Credit to Commercial Sector	13166	8103	11565	13530	13844	13844	14740
2.4 Net Foreign Exchange Assets of RBI	3590402	3048039	3957722	3946000	3964807	3998255	3985569
2.5 Government's Currency Liabilities to the Public	26348	26024	26451	26451	26451	26451	26451
2.6 Net Non- Monetary Liabilities of RBI	1378342	1065938	1421949	1392407	1408599	1408681	1384384

No. 12: Commercial Bank Survey

(₹ Crore)

Item	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2019-20	2019	2020		
		Sep. 27	Aug. 28	Sep. 11	Sep. 25
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	13381983	12727573	14008954	14078775	14093146
1.1.1 Demand Deposits	1617003	1408886	1541081	1516484	1576060
1.1.2 Time Deposits of Residents	11764979	11318687	12467873	12562291	12517086
1.1.2.1 Short-term Time Deposits	5294241	5093409	5610543	5653031	5632689
1.1.2.1.1 Certificates of Deposits (CDs)	169419	182922	88084	85476	73353
1.1.2.2 Long-term Time Deposits	6470739	6225278	6857330	6909260	6884397
1.2 Call/Term Funding from Financial Institutions	309439	341028	272668	258557	256217
2 Sources					
2.1 Domestic Credit	14966910	14320681	15520259	15572082	15654684
2.1.1 Credit to the Government	3738696	3689379	4359336	4399674	4437464
2.1.2 Credit to the Commercial Sector	11228214	10631302	11160923	11172407	11217220
2.1.2.1 Bank Credit	10370861	9766854	10216227	10227647	10271581
2.1.2.1.1 Non-food Credit	10319097	9706769	10150286	10163792	10205154
2.1.2.2 Net Credit to Primary Dealers	11378	11018	11559	11721	12345
2.1.2.3 Investments in Other Approved Securities	8653	3374	1886	2025	1629
2.1.2.4 Other Investments (in non-SLR Securities)	837321	850056	931250	931015	931666
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	21900	-52340	110076	134777	125051
2.2.1 Foreign Currency Assets	315641	250991	364293	372587	361222
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	185510	178888	167864	169267	169257
2.2.3 Overseas Foreign Currency Borrowings	108231	124442	86353	68542	66914
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	899410	784346	922291	887641	806963
2.3.1 Balances with the RBI	536186	532442	439411	434587	429915
2.3.2 Cash in Hand	87260	86981	87251	86009	87601
2.3.3 Loans and Advances from the RBI	-275964	-164923	-395629	-367045	-289447
2.4 Capital Account	1481202	1410939	1549623	1562893	1563631
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	715597	573146	721381	694274	673704
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	495445	407969	481042	479911	484513
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	65654	-44722	73801	73831	71093

No. 13: Scheduled Commercial Banks' Investments

(₹ Crore)

Item	As on March 27, 2020	2020			
		Sep. 27	2020		
			1	2	3
1 SLR Securities	3747349	3692753	4361222	4401699	4439092
2 Commercial Paper	104526	93829	85249	86104	92022
3 Shares issued by					
3.1 PSUs	14106	11508	11746	11758	11862
3.2 Private Corporate Sector	75415	66724	72540	72571	71294
3.3 Others	5734	5595	5032	5038	5037
4 Bonds/Debentures issued by					
4.1 PSUs	125710	122282	124406	125448	123873
4.2 Private Corporate Sector	226559	251811	306420	305069	304478
4.3 Others	191690	187785	150313	150217	148503
5 Instruments issued by					
5.1 Mutual funds	35610	22829	44412	44620	40302
5.2 Financial institutions	97665	87703	131117	130189	132981

No. 14: Business in India - All Scheduled Banks and All Scheduled Commercial Banks

(₹ Crore)

Item	As on the Last Reporting Friday (in case of March)/ Last Friday							
	All Scheduled Banks				All Scheduled Commercial Banks			
	2019-20	2019	2020		2019-20	2019	2020	
		Sep.	Aug.	Sep.		Sep.	Aug.	Sep.
	1	2	3	4	5	6	7	8
Number of Reporting Banks	219	219	209	209	142	142	133	133
1 Liabilities to the Banking System	320240	267832	287863	282298	314513	262670	282629	277070
1.1 Demand and Time Deposits from Banks	239943	192431	222515	221020	234348	187729	217476	215993
1.2 Borrowings from Banks	64001	63486	49330	45238	64001	63163	49330	45238
1.3 Other Demand and Time Liabilities	16295	11916	16018	16040	16163	11777	15824	15839
2 Liabilities to Others	14905949	14141052	15447179	15498954	14480607	13779901	15016838	15070047
2.1 Aggregate Deposits	13975551	13253770	14589173	14674557	13567492	12906461	14176793	14262404
2.1.1 Demand	1653242	1440859	1576862	1611231	1617003	1408886	1541091	1576060
2.1.2 Time	12322309	11812911	13012311	13063326	11950489	11497575	12635702	12686343
2.2 Borrowings	313908	344756	277321	260783	309439	341028	272668	256217
2.3 Other Demand and Time Liabilities	616491	542526	580685	563614	603676	532412	567377	551427
3 Borrowings from Reserve Bank	285623	47478	253645	121530	285623	47478	253645	121495
3.1 Against Usance Bills /Promissory Notes	—	—	—	—	—	—	—	—
3.2 Others	285623	47478	253645	121530	285623	47478	253645	121495
4 Cash in Hand and Balances with Reserve Bank	643038	634626	541243	531962	623446	619423	526662	517516
4.1 Cash in Hand	89671	88943	89431	89708	87260	86981	87251	87601
4.2 Balances with Reserve Bank	553367	545683	451812	442254	536186	532442	439411	429915
5 Assets with the Banking System	323680	375036	279701	280685	260238	318410	219489	218322
5.1 Balances with Other Banks	181460	264299	180377	187654	155401	237242	148257	153334
5.1.1 In Current Account	17204	15901	14740	16431	14457	13081	12609	14410
5.1.2 In Other Accounts	164256	248397	165636	171224	140945	224162	135648	138924
5.2 Money at Call and Short Notice	43335	37829	34222	33898	20273	20426	12448	11399
5.3 Advances to Banks	38266	28373	25023	21840	30531	25585	24494	21374
5.4 Other Assets	60619	44536	40080	37292	54032	35157	34290	32214
6 Investment	3865544	3791535	4488286	4571329	3747349	3692753	4361222	4439092
6.1 Government Securities	3850819	3781817	4479884	4563193	3738696	3689379	4359336	4437464
6.2 Other Approved Securities	14724	9719	8401	8135	8653	3374	1886	1629
7 Bank Credit	10705336	10052171	10546725	10602888	10370861	9768854	10216158	10271581
7a Food Credit	82172	87117	96346	96831	51763	60085	65941	66427
7.1 Loans, Cash-credits and Overdrafts	10480934	9840009	10379425	10440066	10149509	9560550	10050841	10110780
7.2 Inland Bills-Purchased	26214	25150	19412	20531	25658	24352	19148	20266
7.3 Inland Bills-Discounted	147209	128567	104517	95221	145683	126360	103201	94174
7.4 Foreign Bills-Purchased	20866	24504	16559	18608	20458	24243	16317	18357
7.5 Foreign Bills-Discounted	30114	33940	26813	28463	29554	33348	26651	28004

No. 15: Deployment of Gross Bank Credit by Major Sectors

(₹ Crore)

Item	Outstanding as on				Growth (%)	
	Mar. 27, 2020	2019	2020		Financial year so far	Y-o-Y
		Sep. 27	Aug. 28	Sep. 25	2020-21	2020
	1	2	3	4	5	6
1 Gross Bank Credit	9263134	8680216	9112035	9183525	-0.9	5.8
1.1 Food Credit	51590	59887	65708	66204	28.3	10.5
1.2 Non-food Credit	9211544	8620329	9046327	9117321	-1.0	5.8
1.2.1 Agriculture & Allied Activities	1157796	1127794	1168075	1194488	3.2	5.9
1.2.2 Industry	2905151	2774883	2778672	2774867	-4.5	0.0
1.2.2.1 Micro & Small	381825	361328	354546	360833	-5.5	-0.1
1.2.2.2 Medium	105598	104989	107386	120210	13.8	14.5
1.2.2.3 Large	2417728	2308566	2316740	2293824	-5.1	-0.6
1.2.3 Services	2594945	2361867	2551467	2576254	-0.7	9.1
1.2.3.1 Transport Operators	144466	142605	148575	147616	2.2	3.5
1.2.3.2 Computer Software	20051	18772	20089	19828	-1.1	5.6
1.2.3.3 Tourism, Hotels & Restaurants	45977	40419	47282	48378	5.2	19.7
1.2.3.4 Shipping	6557	5963	4987	5099	-22.2	-14.5
1.2.3.5 Professional Services	177085	171733	175191	175455	-0.9	2.2
1.2.3.6 Trade	552392	508039	567367	566336	2.5	11.5
1.2.3.6.1 Wholesale Trade	263397	217325	265152	263499	0.0	21.2
1.2.3.6.2 Retail Trade	288995	290714	302215	302837	4.8	4.2
1.2.3.7 Commercial Real Estate	229770	218088	230759	230025	0.1	5.5
1.2.3.8 Non-Banking Financial Companies (NBFCs)	807383	713510	796763	802552	-0.6	12.5
1.2.3.9 Other Services	611264	542738	560454	580965	-5.0	7.0
1.2.4 Personal Loans	2553652	2355785	2548113	2571712	0.7	9.2
1.2.4.1 Consumer Durables	9298	5445	9053	6661	-28.4	22.3
1.2.4.2 Housing	1338964	1253190	1349501	1359824	1.6	8.5
1.2.4.3 Advances against Fixed Deposits	79496	64192	62568	63167	-20.5	-1.6
1.2.4.4 Advances to Individuals against share & bond	5334	5105	6313	6325	18.6	23.9
1.2.4.5 Credit Card Outstanding	108094	99372	104833	105640	-2.3	6.3
1.2.4.6 Education	65745	68229	64865	65146	-0.9	-4.5
1.2.4.7 Vehicle Loans	220609	203446	219769	221388	0.4	8.8
1.2.4.8 Other Personal Loans	726112	656806	731211	743561	2.4	13.2
1.2A Priority Sector	2897461	2759852	2842996	2884154	-0.5	4.5
1.2A.1 Agriculture & Allied Activities	1146624	1118871	1154411	1180052	2.9	5.5
1.2A.2 Micro & Small Enterprises	1149394	1056600	1104504	1127110	-1.9	6.7
1.2A.2.1 Manufacturing	381826	361328	354546	360833	-5.5	-0.1
1.2A.2.2 Services	767568	695272	749958	766277	-0.2	10.2
1.2A.3 Housing	449945	454566	473151	464642	3.3	2.2
1.2A.4 Micro-Credit	38237	32077	32139	32333	-15.4	0.8
1.2A.5 Education Loans	51906	53921	52013	51898	-0.0	-3.8
1.2A.6 State-Sponsored Orgs. for SC/ST	388	410	443	515	32.7	25.6
1.2A.7 Weaker Sections	731409	696626	743473	743792	1.7	6.8
1.2A.8 Export Credit	16114	14454	13959	14831	-8.0	2.6

No. 16: Industry-wise Deployment of Gross Bank Credit

(₹ Crore)

Industry	Outstanding as on				Growth (%)	
	Mar. 27, 2020	2019	2020		Financial year so far	Y-o-Y
		Sep. 27	Aug. 28	Sep. 25	2020-21	2020
	1	2	3	4	5	6
1 Industry	2905151	2774883	2778672	2774867	-4.5	0.0
1.1 Mining & Quarrying (incl. Coal)	43927	41380	41419	41366	-5.8	0.0
1.2 Food Processing	154146	142388	155228	148446	-3.7	4.3
1.2.1 Sugar	27382	27424	21348	20783	-24.1	-24.2
1.2.2 Edible Oils & Vanaspati	19240	17923	18156	18412	-4.3	2.7
1.2.3 Tea	5375	5558	5373	5587	3.9	0.5
1.2.4 Others	102149	91483	110351	103664	1.5	13.3
1.3 Beverage & Tobacco	16522	14973	14430	14961	-9.4	-0.1
1.4 Textiles	192424	186773	188159	188917	-1.8	1.1
1.4.1 Cotton Textiles	89283	84020	85318	84905	-4.9	1.1
1.4.2 Jute Textiles	2116	2168	2059	2420	14.4	11.6
1.4.3 Man-Made Textiles	26074	25295	26792	26996	3.5	6.7
1.4.4 Other Textiles	74951	75290	73990	74596	-0.5	-0.9
1.5 Leather & Leather Products	11098	11044	11809	11856	6.8	7.4
1.6 Wood & Wood Products	12233	12082	12792	13039	6.6	7.9
1.7 Paper & Paper Products	30965	29973	32742	33118	7.0	10.5
1.8 Petroleum, Coal Products & Nuclear Fuels	75834	53576	54850	60536	-20.2	13.0
1.9 Chemicals & Chemical Products	202949	180523	173975	175174	-13.7	-3.0
1.9.1 Fertiliser	49066	36835	35383	34167	-30.4	-7.2
1.9.2 Drugs & Pharmaceuticals	53427	49177	48558	50111	-6.2	1.9
1.9.3 Petro Chemicals	42233	39110	36176	35851	-15.1	-8.3
1.9.4 Others	58223	55401	53858	55045	-5.5	-0.6
1.10 Rubber, Plastic & their Products	50415	47007	48780	49187	-2.4	4.6
1.11 Glass & Glassware	8777	9387	8666	8989	2.4	-4.2
1.12 Cement & Cement Products	58689	60809	57809	58324	-0.6	-4.1
1.13 Basic Metal & Metal Product	350325	354021	344005	343016	-2.1	-3.1
1.13.1 Iron & Steel	262396	269955	256866	252654	-3.7	-6.4
1.13.2 Other Metal & Metal Product	87929	84066	87139	90362	2.8	7.5
1.14 All Engineering	157259	163374	139390	140249	-10.8	-14.2
1.14.1 Electronics	30159	35168	27558	27706	-8.1	-21.2
1.14.2 Others	127100	128206	111832	112543	-11.5	-12.2
1.15 Vehicles, Vehicle Parts & Transport Equipment	82606	83038	89286	90109	9.1	8.5
1.16 Gems & Jewellery	59515	65637	54220	55619	-6.5	-15.3
1.17 Construction	104288	100074	103744	104600	0.3	4.5
1.18 Infrastructure	1053913	1003786	1023148	1015238	-3.7	1.1
1.18.1 Power	559774	557170	549080	551886	-1.4	-0.9
1.18.2 Telecommunications	143760	115017	125386	114825	-20.1	-0.2
1.18.3 Roads	190676	185293	196875	198304	4.0	7.0
1.18.4 Other Infrastructure	159703	146306	151807	150223	-5.9	2.7
1.19 Other Industries	239266	215038	224220	222123	-7.2	3.3

No. 17: State Co-operative Banks Maintaining Accounts with the Reserve Bank of India

(₹ Crore)

Item	Last Reporting Friday (in case of March)/Last Friday/ Reporting Friday								
	2019-20	2019		2020					
		Aug. 30	Jun. 19	Jun. 26	Jul. 03	Jul. 17	Jul. 31	Aug. 14	Aug. 28
		1	2	3	4	5	6	7	8
Number of Reporting Banks		32	32	31	31	31	31	31	31
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	124101.8	64114.5	126309.6	126689.0	126452.9	127076.2	126359.1	125939.1	126547.5
2 Demand and Time Liabilities									
2.1 Demand Liabilities	26213.8	18923.0	24214.0	23797.4	25074.2	25271.3	24479.1	24074.5	24751.6
2.1.1 Deposits									
2.1.1.1 Inter-Bank	5295.0	5228.2	4365.2	4100.6	4876.4	4823.2	4000.0	3821.7	3773.1
2.1.1.2 Others	14,523.6	10115.9	13836.4	13675.2	13533.9	13870.4	13837.0	13677.4	14264.3
2.1.2 Borrowings from Banks	100.0	0.0	199.9	110.0	0.0	0.0	268.7	135.0	264.9
2.1.3 Other Demand Liabilities	6295.2	3579.0	5812.5	5911.7	6663.9	6577.6	6373.3	6440.4	6449.2
2.2 Time Liabilities	167684.5	107029.1	177293.4	177574.4	176605.2	176793.3	174061.7	172745.5	171640.9
2.2.1 Deposits									
2.2.1.1 Inter-Bank	56564.0	52121.4	62670.0	62430.6	62166.3	61276.4	59247.7	58983.7	57209.2
2.2.1.2 Others	109578.2	53998.7	112473.2	113013.8	112919.0	113205.8	112522.0	112261.6	112283.2
2.2.2 Borrowings from Banks	630.2	54.5	635.1	630.0	629.9	629.9	629.9	629.9	629.9
2.2.3 Other Time Liabilities	912.1	854.5	1515.1	1500.1	890.0	1681.1	1662.1	870.2	1518.6
3 Borrowing from Reserve Bank	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 Borrowings from a notified bank / Government	52772.2	42816.5	54148.6	55983.2	55890.4	56131.0	57274.5	57354.0	53795.3
4.1 Demand	13764.4	14751.5	11750.2	12464.4	12098.1	12152.6	14236.6	14067.2	13174.5
4.2 Time	39007.8	28065.1	42398.4	43518.8	43792.3	43978.5	43037.9	43286.7	40620.8
5 Cash in Hand and Balances with Reserve Bank	9428.2	5387.6	7247.2	7422.0	6999.4	7149.1	7112.2	6875.5	6841.4
5.1 Cash in Hand	750.5	331.4	751.6	710.0	685.9	677.3	552.6	572.4	592.3
5.2 Balance with Reserve Bank	8677.8	5056.2	6495.6	6712.1	6313.4	6471.7	6559.6	6303.2	6249.1
6 Balances with Other Banks in Current Account	1521.7	1078.9	2099.1	2019.9	1049.6	1134.0	965.4	809.9	807.4
7 Investments in Government Securities	50626.9	30940.3	53092.2	53708.4	55424.4	55598.4	56888.2	58199.1	55743.6
8 Money at Call and Short Notice	25283.9	16766.5	29405.7	29380.8	29114.7	28181.5	25336.5	25269.1	25414.9
9 Bank Credit (10.1+11)	110905.5	62585.4	112198.2	111349.3	110067.3	111344.7	112074.1	112631.8	113285.8
10 Advances									
10.1 Loans, Cash-Credits and Overdrafts	110901.5	62584.1	112197.6	111348.7	110066.6	111344.0	112073.4	112631.2	113285.2
10.2 Due from Banks	81300.1	74819.4	79958.6	80858.7	80854.4	81068.7	80109.4	79793.4	77827.8
11 Bills Purchased and Discounted	4.0	1.3	0.6	0.6	0.6	0.6	0.7	0.6	0.6

Prices and Production

No. 18: Consumer Price Index (Base: 2012=100)

Group/Sub group	2019-20			Rural			Urban			Combined		
	Rural	Urban	Combined	Sep. '19	Aug. '20	Sep. '20(P)	Sep. '19	Aug. '20	Sep. '20(P)	Sep. '19	Aug. '20	Sep. '20(P)
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	146.3	149.6	147.5	145.5	156.1	159.6	149.5	161.3	164.3	147.0	158.0	161.3
1.1 Cereals and products	140.7	143.2	141.4	140.1	146.9	146.0	142.7	151.5	150.6	140.9	148.4	147.5
1.2 Meat and fish	163.3	161.4	162.6	161.9	183.9	186.6	158.7	193.1	193.8	160.8	187.1	189.1
1.3 Egg	142.1	145.7	143.5	138.3	149.5	159.0	141.6	157.3	164.7	139.6	152.5	161.2
1.4 Milk and products	146.5	146.0	146.3	145.7	153.4	153.6	144.9	153.9	153.6	145.4	153.6	153.6
1.5 Oils and fats	127.1	121.8	125.1	125.1	140.4	142.6	120.8	134.4	135.7	123.5	138.2	140.1
1.6 Fruits	144.0	148.8	146.2	143.8	147.0	147.4	149.8	155.4	155.7	146.6	150.9	151.3
1.7 Vegetables	163.5	187.8	171.7	163.4	178.8	200.5	192.4	202.0	225.9	173.2	186.7	209.1
1.8 Pulses and products	133.7	132.0	133.1	132.2	149.3	150.3	130.3	150.8	152.2	131.6	149.8	150.9
1.9 Sugar and confectionery	112.0	113.4	112.5	112.8	115.1	115.0	114.0	118.9	117.9	113.2	116.4	116.0
1.10 Spices	145.6	145.1	145.5	144.2	160.0	160.9	143.8	160.9	161.3	144.1	160.3	161.0
1.11 Non-alcoholic beverages	138.8	130.2	135.2	138.5	145.4	147.3	130.0	137.7	139.2	135.0	142.2	143.9
1.12 Prepared meals, snacks, sweets	157.6	156.7	157.2	157.2	161.6	162.0	156.4	164.4	164.6	156.8	162.9	163.2
2 Pan, tobacco and intoxicants	166.3	169.0	167.0	165.7	182.9	183.0	168.6	188.7	188.8	166.5	184.4	184.5
3 Clothing and footwear	151.3	143.7	148.3	151.0	154.6	155.1	143.3	148.1	148.3	147.9	152.0	152.4
3.1 Clothing	152.0	145.7	149.5	151.7	155.4	155.8	145.3	150.2	150.5	149.2	153.4	153.7
3.2 Footwear	146.9	132.4	140.9	146.6	149.9	150.6	132.2	136.3	136.1	140.6	144.3	144.6
4 Housing	--	152.2	152.2	--	--	--	152.2	156.3	156.5	152.2	156.3	156.5
5 Fuel and light	148.6	131.5	142.2	146.9	146.4	146.9	126.6	137.2	137.2	139.2	142.9	143.2
6 Miscellaneous	145.6	135.9	140.9	145.4	153.7	154.3	135.7	146.0	146.2	140.7	150.0	150.4
6.1 Household goods and services	150.6	138.7	145.0	150.3	151.6	152.1	138.3	145.4	145.2	144.6	148.7	148.8
6.2 Health	153.6	142.1	149.3	153.4	159.1	159.6	141.9	150.0	150.9	149.0	155.6	156.3
6.3 Transport and communication	132.6	122.2	127.1	131.6	144.6	146.3	121.2	135.1	135.5	126.1	139.6	140.6
6.4 Recreation and amusement	148.3	135.9	141.3	148.3	152.8	152.4	135.9	141.8	142.1	141.3	146.6	146.6
6.5 Education	159.8	150.9	154.5	160.2	161.1	162.6	151.6	154.9	155.7	155.2	157.5	158.6
6.6 Personal care and effects	139.2	138.4	138.9	140.2	157.4	156.2	139.0	159.8	158.0	139.7	158.4	156.9
General Index (All Groups)	147.3	145.1	146.3	146.7	155.4	157.6	144.7	154.0	155.2	145.8	154.7	156.5

Source: National Statistical Office, Ministry of Statistics and Programme Implementation, Government of India.

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2019-20		2019		2020	
			Sep.	Aug.	Sep.	Aug.	Sep.	Aug.
	1	2	3	4	5	6		
1 Consumer Price Index for Industrial Workers	2016	2.88	-	-	-	-	118	
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	980	976	1026	1037		
3 Consumer Price Index for Rural Labourers	1986-87	-	986	983	1033	1043		

Source: Labour Bureau, Ministry of Labour and Employment, Government of India.

No. 20: Monthly Average Price of Gold and Silver in Mumbai

Item	2019-20	2019		2020	
		Sep.	Aug.	Sep.	Aug.
	1	2	3	4	
1 Standard Gold (₹ per 10 grams)	37018	37927	52917	50784	
2 Silver (₹ per kilogram)	42514	46682	67717	63337	

Source: India Bullion & Jewellers Association Ltd., Mumbai for Gold and Silver prices in Mumbai.

No. 21: Wholesale Price Index
(Base: 2011-12 = 100)

Commodities	Weight	2019-20	2019		2020		
			Sep.	Jul.	Aug. (P)	Sep. (P)	
	1	2	3	4	5	6	
1 ALL COMMODITIES	100.000	121.8	121.3	121.0	121.7	122.9	
1.1 PRIMARY ARTICLES	22.618	143.3	143.0	145.1	146.3	150.3	
1.1.1 FOOD ARTICLES	15.256	155.8	155.4	161.3	162.1	168.1	
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	159.6	160.1	161.1	159.5	158.3	
1.1.1.2 Fruits & Vegetables	3.475	174.7	175.2	181.8	187.4	210.0	
1.1.1.3 Milk	4.440	146.7	145.7	152.1	152.1	153.8	
1.1.1.4 Eggs, Meat & Fish	2.402	147.0	144.7	151.9	153.4	150.7	
1.1.1.5 Condiments & Spices	0.529	143.9	145.1	143.0	143.8	149.1	
1.1.1.6 Other Food Articles	0.948	144.0	143.0	164.7	157.7	172.1	
1.1.2 NON-FOOD ARTICLES	4.119	128.7	126.8	123.8	127.9	126.7	
1.1.2.1 Fibres	0.839	128.2	129.4	116.0	118.9	121.2	
1.1.2.2 Oil Seeds	1.115	151.4	154.5	154.1	155.7	155.5	
1.1.2.3 Other non-food Articles	1.960	104.8	104.2	104.8	104.8	104.6	
1.1.2.4 Floriculture	0.204	238.0	181.7	173.3	235.0	203.4	
1.1.3 MINERALS	0.833	154.5	154.8	166.5	166.3	166.5	
1.1.3.1 Metallic Minerals	0.648	147.4	149.8	160.6	162.5	160.6	
1.1.3.2 Other Minerals	0.185	179.0	172.3	187.0	179.7	187.0	
1.1.4 CRUDE PETROLEUM & NATURAL GAS	2.410	85.3	88.0	71.0	71.0	72.0	
1.2 FUEL & POWER	13.152	102.2	100.6	90.7	91.4	91.0	
1.2.1 COAL	2.138	125.3	124.8	126.4	126.4	126.4	
1.2.1.1 Coking Coal	0.647	138.1	136.5	141.6	141.6	141.6	
1.2.1.2 Non-Coking Coal	1.401	119.0	119.0	119.0	119.0	119.0	
1.2.1.3 Lignite	0.090	129.1	129.9	131.1	131.1	131.1	
1.2.2 MINERAL OILS	7.950	92.3	90.5	77.1	78.2	77.7	
1.2.3 ELECTRICITY	3.064	111.8	110.0	101.0	101.0	101.0	
1.3 MANUFACTURED PRODUCTS	64.231	118.3	117.9	118.7	119.3	119.8	
1.3.1 MANUFACTURE OF FOOD PRODUCTS	9.122	133.9	134.1	137.8	138.7	140.0	
1.3.1.1 Processing and Preserving of meat	0.134	137.5	136.8	135.3	135.2	138.0	
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	136.1	141.5	137.0	136.7	146.1	
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	114.3	113.7	119.6	119.8	119.7	
1.3.1.4 Vegetable and Animal oils and Fats	2.643	119.3	115.7	130.1	133.7	136.7	
1.3.1.5 Dairy products	1.165	145.0	145.6	145.9	144.3	145.3	
1.3.1.6 Grain mill products	2.010	146.3	147.5	144.2	144.1	143.7	
1.3.1.7 Starches and Starch products	0.110	135.5	138.0	112.6	110.4	106.6	
1.3.1.8 Bakery products	0.215	133.5	132.9	137.6	137.8	137.8	
1.3.1.9 Sugar, Molasses & honey	1.163	118.3	120.2	120.5	120.0	119.7	
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	127.2	127.6	128.2	127.5	127.5	
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	132.7	137.9	132.1	134.4	132.4	
1.3.1.12 Tea & Coffee products	0.371	139.7	144.0	171.6	174.3	179.5	
1.3.1.13 Processed condiments & salt	0.163	132.4	131.9	145.9	145.8	146.0	
1.3.1.14 Processed ready to eat food	0.024	128.7	127.9	130.2	133.6	134.0	
1.3.1.15 Health supplements	0.225	159.9	165.1	144.3	146.8	143.2	
1.3.1.16 Prepared animal feeds	0.356	173.6	179.9	167.4	168.3	171.1	
1.3.2 MANUFACTURE OF BEVERAGES	0.909	123.6	123.9	125.0	125.1	124.6	
1.3.2.1 Wines & spirits	0.408	117.8	118.3	121.1	120.6	120.2	
1.3.2.2 Malt liquors and Malt	0.225	125.7	126.8	126.6	126.7	127.1	
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	130.5	129.8	129.7	130.4	129.0	
1.3.3 MANUFACTURE OF TOBACCO PRODUCTS	0.514	153.4	154.6	157.6	155.2	157.9	
1.3.3.1 Tobacco products	0.514	153.4	154.6	157.6	155.2	157.9	

No. 21: Wholesale Price Index (Contd.)
 (Base: 2011-12 = 100)

Commodities	Weight	2019-20	2019	2020		
				Sep.	Jul.	Aug. (P)
1.3.4 MANUFACTURE OF TEXTILES	4.881	117.7	117.6	112.9	113.1	113.4
1.3.4.1 Preparation and Spinning of textile fibres	2.582	107.9	107.9	100.6	100.3	101.2
1.3.4.2 Weaving & Finishing of textiles	1.509	130.1	129.1	127.1	128.0	127.8
1.3.4.3 Knitted and Crocheted fabrics	0.193	114.5	115.9	114.4	114.9	114.6
1.3.4.4 Made-up textile articles, Except apparel	0.299	134.5	135.6	131.0	131.3	131.0
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	143.1	142.1	150.2	149.0	154.8
1.3.4.6 Other textiles	0.201	116.8	117.8	116.8	119.1	114.5
1.3.5 MANUFACTURE OF WEARING APPAREL	0.814	138.3	138.8	136.4	136.4	138.1
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	139.2	139.4	137.8	137.2	137.8
1.3.5.2 Knitted and Crocheted apparel	0.221	135.9	137.0	132.6	134.3	138.8
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	0.535	118.6	118.6	117.7	118.3	118.1
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	105.5	104.8	102.1	102.5	102.4
1.3.6.2 Luggage, Handbags, Saddlery and Harness	0.075	136.3	135.3	138.5	137.9	138.4
1.3.6.3 Footwear	0.318	120.3	120.8	119.7	120.8	120.3
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	0.772	133.7	134.1	134.3	134.7	134.6
1.3.7.1 Saw milling and Planing of wood	0.124	122.2	120.0	120.2	119.1	118.4
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	135.5	135.2	136.8	137.2	136.6
1.3.7.3 Builder's carpentry and Joinery	0.036	176.2	176.1	180.2	188.0	188.2
1.3.7.4 Wooden containers	0.119	125.7	131.8	124.7	124.6	127.5
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	1.113	121.1	120.7	119.9	119.6	119.8
1.3.8.1 Pulp, Paper and Paperboard	0.493	125.0	125.0	121.4	121.3	121.6
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	115.0	113.4	119.5	118.7	119.9
1.3.8.3 Other articles of paper and Paperboard	0.306	121.2	121.2	117.9	117.9	116.8
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	0.676	150.6	149.9	152.7	153.3	155.1
1.3.9.1 Printing	0.676	150.6	149.9	152.7	153.3	155.1
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	6.465	117.5	117.7	115.9	115.8	116.0
1.3.10.1 Basic chemicals	1.433	119.9	120.3	114.5	114.8	114.7
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	123.1	123.1	123.4	123.5	123.2
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	112.4	113.7	111.1	111.3	112.7
1.3.10.4 Pesticides and Other agrochemical products	0.454	122.6	122.8	124.2	124.6	124.8
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	114.7	114.3	113.1	112.6	114.0
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	118.6	118.3	119.8	119.7	119.3
1.3.10.7 Other chemical products	0.692	114.2	113.7	113.6	112.5	112.7
1.3.10.8 Man-made fibres	0.296	97.9	98.1	90.8	88.4	88.4
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	1.993	127.3	125.8	130.0	130.2	129.2
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	127.3	125.8	130.0	130.2	129.2
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	2.299	108.5	108.2	107.3	107.5	108.7
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	98.9	99.2	97.8	97.5	97.7
1.3.12.2 Other Rubber Products	0.272	93.5	94.1	92.1	91.6	91.7
1.3.12.3 Plastics products	1.418	115.4	114.8	114.2	114.8	116.7
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	3.202	116.7	116.9	117.3	117.2	116.8
1.3.13.1 Glass and Glass products	0.295	124.5	123.1	126.0	127.5	128.3
1.3.13.2 Refractory products	0.223	108.7	109.6	109.1	108.1	108.9
1.3.13.3 Clay Building Materials	0.121	102.8	102.7	105.3	107.0	107.5
1.3.13.4 Other Porcelain and Ceramic Products	0.222	113.9	114.5	108.6	106.9	107.9
1.3.13.5 Cement, Lime and Plaster	1.645	119.5	119.9	121.5	120.9	119.9

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2019-20	2019	2020		
			Sep.	Jul.	Aug. (P)	Sep. (P)
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	121.6	121.2	124.7	126.1	124.1
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	120.2	119.1	119.3	119.6	120.4
1.3.13.8 Other Non-Metallic Mineral Products	0.169	86.6	89.8	77.6	77.6	77.6
1.3.14 MANUFACTURE OF BASIC METALS	9.646	106.2	104.4	103.8	106.5	107.9
1.3.14.1 Inputs into steel making	1.411	100.6	95.5	96.4	101.5	103.6
1.3.14.2 Metallic Iron	0.653	107.7	103.9	101.0	109.2	110.8
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	95.1	93.5	94.9	97.5	97.3
1.3.14.4 Mild Steel -Long Products	1.081	105.5	103.4	102.8	103.9	105.8
1.3.14.5 Mild Steel - Flat products	1.144	108.7	106.4	105.4	109.0	112.1
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	102.8	99.6	101.2	102.6	103.2
1.3.14.7 Stainless Steel - Semi Finished	0.924	102.9	101.0	103.3	102.8	105.6
1.3.14.8 Pipes & tubes	0.205	126.2	124.8	123.3	125.1	123.6
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	107.0	106.9	107.2	109.2	110.6
1.3.14.10 Castings	0.925	112.8	114.2	106.5	108.1	107.4
1.3.14.11 forgings of steel	0.271	146.5	149.2	146.1	145.1	144.3
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	3.155	115.5	115.3	113.3	113.2	113.3
1.3.15.1 Structural Metal Products	1.031	113.9	113.6	111.4	110.8	110.0
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	124.4	123.4	121.7	120.6	122.2
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	104.7	106.0	99.0	99.0	99.0
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	100.5	100.2	95.9	98.4	99.6
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	100.5	100.5	101.7	101.9	102.5
1.3.15.6 Other Fabricated Metal Products	0.728	124.0	124.2	123.7	123.6	122.9
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	2.009	110.4	109.9	109.6	109.1	109.1
1.3.16.1 Electronic Components	0.402	98.1	97.9	97.5	97.2	96.8
1.3.16.2 Computers and Peripheral Equipment	0.336	135.0	135.1	135.1	135.1	135.1
1.3.16.3 Communication Equipment	0.310	117.0	117.6	114.8	114.2	114.3
1.3.16.4 Consumer Electronics	0.641	98.8	97.3	99.1	98.0	97.9
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	111.5	112.9	106.0	106.0	106.1
1.3.16.6 Watches and Clocks	0.076	139.1	136.5	141.7	141.9	142.9
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	103.6	102.8	103.5	103.5	103.0
1.3.16.8 Optical instruments and Photographic equipment	0.008	110.2	109.5	112.1	108.8	111.2
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	2.930	111.3	110.6	112.6	113.0	112.2
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	109.0	107.7	114.0	114.5	112.5
1.3.17.2 Batteries and Accumulators	0.236	117.0	116.8	116.3	117.0	116.9
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	109.9	105.0	93.7	93.0	93.3
1.3.17.4 Other electronic and Electric wires and Cables	0.428	109.7	109.5	110.9	111.6	113.3
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	111.1	111.9	110.5	110.9	110.0
1.3.17.6 Domestic appliances	0.366	119.9	120.7	118.2	118.3	118.6
1.3.17.7 Other electrical equipment	0.206	108.6	108.7	107.7	108.4	107.3
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	4.789	113.1	113.6	112.9	113.6	113.7
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	104.8	105.2	104.9	106.2	104.4
1.3.18.2 Fluid power equipment	0.162	119.9	120.1	117.4	118.2	119.6
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	111.2	111.7	110.8	112.2	111.2
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	110.1	109.6	110.6	109.2	111.8
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	80.0	80.0	81.5	81.6	81.9
1.3.18.6 Lifting and Handling equipment	0.285	111.5	112.4	112.0	111.8	113.3

No. 21: Wholesale Price Index (Concl.)

(Base: 2011-12 = 100)

Commodities	Weight	2019-20	2019	2020		
			Sep.	Jul.	Aug. (P)	Sep. (P)
1.3.18.7 Office machinery and Equipment	0.006	130.2	130.2	130.2	130.2	130.2
1.3.18.8 Other general-purpose machinery	0.437	130.9	135.2	127.9	128.2	127.8
1.3.18.9 Agricultural and Forestry machinery	0.833	120.6	121.1	120.6	121.5	121.7
1.3.18.10 Metal-forming machinery and Machine tools	0.224	108.1	108.8	108.3	107.7	108.7
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	75.1	74.2	75.1	75.3	75.2
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	125.2	121.5	125.7	128.1	128.3
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	119.7	122.3	121.9	123.9	122.3
1.3.18.14 Other special-purpose machinery	0.468	126.3	126.5	126.9	127.2	128.9
1.3.18.15 Renewable electricity generating equipment	0.046	66.0	66.6	64.6	64.3	64.4
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	4.969	114.5	113.7	117.3	116.9	117.5
1.3.19.1 Motor vehicles	2.600	115.2	114.7	118.7	117.6	118.5
1.3.19.2 Parts and Accessories for motor vehicles	2.368	113.7	112.6	115.9	116.1	116.4
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	1.648	118.0	117.9	125.6	125.7	126.3
1.3.20.1 Building of ships and Floating structures	0.117	158.8	158.8	158.8	158.8	158.8
1.3.20.2 Railway locomotives and Rolling stock	0.110	106.4	106.7	105.7	105.8	105.8
1.3.20.3 Motor cycles	1.302	114.3	114.3	124.0	124.1	124.9
1.3.20.4 Bicycles and Invalid carriages	0.117	128.9	128.0	128.7	128.7	128.9
1.3.20.5 Other transport equipment	0.002	126.1	125.7	127.4	127.5	127.5
1.3.21 MANUFACTURE OF FURNITURE	0.727	130.9	131.1	127.7	128.2	129.5
1.3.21.1 Furniture	0.727	130.9	131.1	127.7	128.2	129.5
1.3.22 OTHER MANUFACTURING	1.064	112.7	114.1	134.1	135.6	136.1
1.3.22.1 Jewellery and Related articles	0.996	109.9	111.3	132.4	134.0	134.5
1.3.22.2 Musical instruments	0.001	174.0	176.0	166.5	159.1	163.0
1.3.22.3 Sports goods	0.012	129.7	129.2	130.9	130.9	131.1
1.3.22.4 Games and Toys	0.005	136.9	136.0	143.9	144.2	142.6
1.3.22.5 Medical and Dental instruments and Supplies	0.049	162.1	162.4	167.3	167.5	166.9
2 FOOD INDEX	24.378	147.6	147.4	152.5	153.3	157.6

Source: Office of the Economic Adviser, Ministry of Commerce and Industry, Government of India.

No. 22: Index of Industrial Production (Base:2011-12=100)

Industry	Weight	2018-19	2019-20	April-August		August	
				2019-20	2020-21	2019	2020
	1	2	3	4	5	6	7
General Index	100.00	130.1	129.0	129.8	97.4	126.2	116.1
1 Sectoral Classification							
1.1 Mining	14.37	107.9	109.6	103.3	84.5	92.0	83.0
1.2 Manufacturing	77.63	131.5	129.6	130.6	94.1	128.4	117.4
1.3 Electricity	7.99	156.9	158.4	169.9	152.3	165.7	162.7
2 Use-Based Classification							
2.1 Primary Goods	34.05	126.1	127.0	127.1	106.1	121.9	108.4
2.2 Capital Goods	8.22	108.4	93.3	96.5	50.4	88.7	75.0
2.3 Intermediate Goods	17.22	126.2	137.7	135.1	96.8	135.9	126.6
2.4 Infrastructure/ Construction Goods	12.34	141.7	136.6	138.3	95.7	130.7	127.7
2.5 Consumer Durables	12.84	130.4	119.0	126.6	66.8	122.0	109.4
2.6 Consumer Non-Durables	15.33	145.5	145.3	143.8	130.9	144.4	139.6

Source : National Statistical Office, Ministry of Statistics and Programme Implementation, Government of India.

Government Accounts and Treasury Bills**No. 23: Union Government Accounts at a Glance**

(₹ Crore)

Item	Financial Year 2020-21 (Budget Estimates)	April - September				
		2020-21 (Actuals)	2019-20 (Actuals)	Percentage to Budget Estimates		
				2020-21	2019-20	
		1	2	3	4	5
1 Revenue Receipts	2020926	550782	816467	27.3	41.6	
1.1 Tax Revenue (Net)	1635909	458508	607429	28.0	36.8	
1.2 Non-Tax Revenue	385017	92274	209038	24.0	66.7	
2 Non-Debt Capital Receipt	224967	14635	20598	6.5	17.2	
2.1 Recovery of Loans	14967	8854	8239	59.2	55.6	
2.2 Other Receipts	210000	5781	12359	2.8	11.8	
3 Total Receipts (excluding borrowings) (1+2)	2245893	565417	837065	25.2	40.2	
4 Revenue Expenditure	2630145	1313574	1301082	49.9	53.2	
4.1 Interest Payments	708203	305652	270696	43.2	41.0	
5 Capital Expenditure	412085	165836	187537	40.2	55.4	
6 Total Expenditure (4+5)	3042230	1479410	1488619	48.6	53.4	
7 Revenue Deficit (4-1)	609219	762792	484615	125.2	99.9	
8 Fiscal Deficit (6-3)	796337	913993	651554	114.8	92.6	
9 Gross Primary Deficit (8-4.1)	88134	608341	380858	690.2	879.8	

Source: Controller General of Accounts, Ministry of Finance, Government of India and Union Budget 2020-21.

No. 24: Treasury Bills – Ownership Pattern

(₹ Crore)

Item	2019-20	2019		2020					
		Sep. 27	Aug. 21	Aug. 28	Sep. 4	Sep. 11	Sep. 18	Sep. 25	
		1	2	3	4	5	6	7	8
1 91-day									
1.1 Banks	10165	24901	9209	8100	5564	4544	11608	13536	
1.2 Primary Dealers	9190	10155	15931	17932	22066	32928	23928	32019	
1.3 State Governments	8173	70211	42164	44094	48959	49959	49459	55395	
1.4 Others	48004	70022	160782	157140	152897	140950	140450	127184	
2 182-day									
2.1 Banks	66419	77199	171880	170892	173239	179260	181249	181537	
2.2 Primary Dealers	43302	48024	65468	63853	65689	65867	64214	65936	
2.3 State Governments	13386	8104	4453	4348	4368	4383	4383	4323	
2.4 Others	22465	27026	99218	110486	113920	113885	113341	114302	
3 364-day									
3.1 Banks	49660	62849	135072	133144	131928	135225	135202	133861	
3.2 Primary Dealers	70672	67912	84137	93620	99594	111621	114334	125921	
3.3 State Governments	11945	18060	17526	16676	17890	16576	16576	16502	
3.4 Others	70576	53578	133781	132012	133019	123667	127297	122943	
4 14-day Intermediate									
4.1 Banks									
4.2 Primary Dealers									
4.3 State Governments	155112	131653	134404	138620	86211	73694	71851	102540	
4.4 Others	617	375	659	687	568	829	765	604	
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	423957	538041	939620	952296	969134	978865	982041	993460	

14D intermediate T-Bills are non-marketable unlike 91D, 182D and 364D T-Bills. These bills are ‘intermediate’ by nature as these are liquidated to replenish shortfall in the daily minimum cash balances of State Governments

No. 25: Auctions of Treasury Bills

(Amount in ₹ Crore)

Date of Auction	Notified Amount	Bids Received			Bids Accepted			Total Issue (6+7)	Cut-off Price	Implicit Yield at Cut-off Price (per cent)			
		Number	Total Face Value		Number	Total Face Value							
			Competitive	Non-Competitive		Competitive	Non-Competitive						
		1	2	3	4	5	6	7	8	9			
91-day Treasury Bills													
2020-21													
Aug. 26	12000	105	90881	4045	20	11996	4045	16041	99.20	3.2367			
Sep. 2	12000	110	64625	6341	16	11999	6341	18340	99.21	3.1939			
Sep. 9	12000	80	49026	3494	23	11996	3494	15490	99.20	3.2294			
Sep. 16	12000	75	38550	8303	31	11997	8303	20300	99.18	3.3195			
Sep. 23	12000	84	29965	12332	41	11997	12332	24330	99.17	3.3578			
182-day Treasury Bills													
2020-21													
Aug. 26	13000	91	43819	0	51	13000	0	13000	98.29	3.4889			
Sep. 2	13000	115	50527	0	48	13000	0	13000	98.30	3.4600			
Sep. 9	13000	136	31763	0	109	13000	0	13000	98.28	3.5200			
Sep. 16	13000	119	35500	0	68	13000	0	13000	98.26	3.5462			
Sep. 23	13000	101	33086	6	63	12994	6	13000	98.25	3.5779			
364-day Treasury Bills													
2020-21													
Aug. 26	10000	83	31265	0	43	10000	0	10000	96.54	3.5891			
Sep. 2	10000	78	27130	1100	33	10000	1100	11100	96.56	3.5692			
Sep. 9	10000	71	24714	0	49	10000	0	10000	96.51	3.6300			
Sep. 16	10000	91	29230	0	63	10000	0	10000	96.45	3.6897			
Sep. 23	10000	81	24373	0	50	10000	0	10000	96.41	3.7312			

Financial Markets

No. 26: Daily Call Money Rates

(Per cent per annum)

As on		Range of Rates	Weighted Average Rates
		Borrowings/ Lendings	Borrowings/ Lendings
		1	2
September	1, 2020	1.80-4.10	3.42
September	2, 2020	1.80-4.10	3.42
September	3, 2020	1.80-4.05	3.42
September	4, 2020	1.80-4.05	3.39
September	5, 2020	2.15-3.95	2.63
September	7, 2020	1.80-4.10	3.41
September	8, 2020	1.80-4.05	3.39
September	9, 2020	1.80-4.05	3.42
September	10, 2020	1.80-4.05	3.41
September	11, 2020	1.50-4.05	3.41
September	14, 2020	1.80-4.00	3.42
September	15, 2020	1.80-4.05	3.41
September	16, 2020	1.80-4.00	3.40
September	17, 2020	1.80-4.05	3.43
September	18, 2020	1.80-4.00	3.40
September	19, 2020	2.40-3.80	3.41
September	21, 2020	1.80-4.00	3.42
September	22, 2020	1.80-4.00	3.40
September	23, 2020	1.80-4.00	3.42
September	24, 2020	2.00-4.00	3.43
September	25, 2020	1.50-4.00	3.40
September	28, 2020	1.80-4.00	3.42
September	29, 2020	1.80-3.90	3.40
September	30, 2020	1.80-4.00	3.42
October	1, 2020	1.80-3.90	3.40
October	3, 2020	2.50-3.30	2.67
October	5, 2020	1.80-4.00	3.41
October	6, 2020	1.80-3.90	3.43
October	7, 2020	1.80-3.90	3.44
October	8, 2020	1.80-3.90	3.43
October	9, 2020	1.50-3.90	3.39
October	12, 2020	1.80-3.90	3.41
October	13, 2020	1.80-3.90	3.39
October	14, 2020	1.80-3.90	3.41
October	15, 2020	1.80-3.85	3.40

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2019		2020			
	Sep. 27		Aug. 14	Aug. 28	Sep. 11	Sep. 25
	1	2	3	4	5	
1 Amount Outstanding (₹ Crore)	188101.00	99835.00	90410.00	87710.00	75570.00	
1.1 Issued during the fortnight (₹ Crore)	25997.21	1358.53	3502.17	617.75	6492.55	
2 Rate of Interest (per cent)	5.30-6.76	3.66-6.19	3.44-6.37	4.07-4.40	3.51-5.75	

No. 28: Commercial Paper

Item	2019		2020			
	Sep. 30		Aug. 15	Aug. 31	Sep. 15	Sep. 30
	1	2	3	4	5	
1 Amount Outstanding (₹ Crore)	459742.10	380587.65	372600.80	418270.55	362310.10	
1.1 Reported during the fortnight (₹ Crore)	94892.90	61152.00	68405.75	106924.35	86727.40	
2 Rate of Interest (per cent)	5.30-11.99	3.31-11.79	3.17-13.14	3.10-8.87	3.32-11.86	

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Crore)

Item	2019-20	2019		2020				
		Sep. 27	Aug. 21	Aug. 28	Sep. 4	Sep. 11	Sep. 18	Sep. 25
	1	2	3	4	5	6	7	8
1 Call Money	26815	34535	23599	19387	16962	22402	19386	20575
2 Notice Money	3660	662	426	5150	4592	311	5988	382
3 Term Money	790	660	936	492	636	367	827	857
4 CBLO/TRIPARTY REPO	300691	250695	413808	420081	339659	287427	352176	310900
5 Market Repo	221719	167207	319124	388951	316977	305622	364146	309908
6 Repo in Corporate Bond	2468	871	560	300	2020	518	436	4666
7 Forex (US \$ million)	67793	82200	53940	63978	59780	49525	48919	52906
8 Govt. of India Dated Securities	93960	97160	62320	69966	88596	61854	59775	44251
9 State Govt. Securities	5800	8198	3397	3552	4984	4415	3768	3902
10 Treasury Bills								
10.1 91-Day	3720	9037	502	4053	4713	3753	11096	13686
10.2 182-Day	2380	3621	9678	9139	4107	4483	7513	6978
10.3 364-Day	2900	6024	1892	2105	1591	2263	2215	1373
10.4 Cash Management Bills	2310		3228					
11 Total Govt. Securities (8+9+10)	111070	124040	81017	88815	103991	76768	84366	70190
11.1 RBI	-	355	445	4457	3779	4953	5606	2059

Note : Collateralised Borrowing and Lending Obligation (CBLO) segment of the money market has been discontinued and replaced with Triparty Repo with effect from November 05, 2018.

No. 30: New Capital Issues By Non-Government Public Limited Companies

(Amount in ₹ Crore)

Security & Type of Issue	2019-20		2019-20 (Apr.-Sep.)		2020-21 (Apr.-Sep.) *		Sep. 2019		Sep. 2020 *	
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
	1	2	3	4	5	6	7	8	9	10
1 Equity Shares	72	64926	42	58998	24	76882	5	34	5	1723
1A Premium	70	43259	42	37684	24	73568	5	24	5	1623
1.1 Public	57	9867	33	7978	13	16892	5	34	3	1353
1.1.1 Premium	55	9434	33	7851	13	14317	5	24	3	1282
1.2 Rights	15	55059	9	51020	11	59990	—	—	2	370
1.2.1 Premium	15	33825	9	29833	11	59251	—	—	2	341
2 Preference Shares	—	—	—	—	—	—	—	—	—	—
2.1 Public	—	—	—	—	—	—	—	—	—	—
2.2 Rights	—	—	—	—	—	—	—	—	—	—
3 Bonds & Debentures	34	14984	20	7793	5	882	4	495	—	—
3.1 Convertible	—	—	—	—	—	—	—	—	—	—
3.1.1 Public	—	—	—	—	—	—	—	—	—	—
3.1.2 Rights	—	—	—	—	—	—	—	—	—	—
3.2 Non-Convertible	34	14984	20	7793	5	882	4	495	—	—
3.2.1 Public	34	14984	20	7793	5	882	4	495	—	—
3.2.2 Rights	—	—	—	—	—	—	—	—	—	—
4 Total(1+2+3)	106	79910	62	66791	29	77764	9	530	5	1723
4.1 Public	91	24851	53	15771	18	17773	9	530	3	1353
4.2 Rights	15	55059	9	51020	11	59990	—	—	2	370

Note : Since April 2020, monthly data on equity issues is compiled on the basis of their listing date.**Source :** Securities and Exchange Board of India.

* : Data is Provisional

External Sector

No. 31: Foreign Trade

Item	Unit	2019-20	2019		2020			
			Sep.	May	Jun.	Jul.	Aug.	Sep.
		1	2	3	4	5	6	7
1 Exports	₹ Crore	2219854	185642	145128	165935	177271	169563	202694
	US \$ Million	313361	26024	19182	21912	23638	22708	27584
1.1 Oil	₹ Crore	292340	24527	12900	13949	13253	14304	26501
	US \$ Million	41289	3438	1705	1842	1767	1916	3615
1.2 Non-oil	₹ Crore	1927514	161115	132228	151987	164019	155259	176193
	US \$ Million	272072	22586	17477	20070	21871	20792	23970
2 Imports	₹ Crore	3360954	268891	172505	161322	213524	220082	222708
	US \$ Million	474709	37695	22800	21303	28472	29473	30308
2.1 Oil	₹ Crore	925168	64816	26610	37496	48974	48095	42812
	US \$ Million	130550	9086	3517	4951	6530	6441	5826
2.2 Non-oil	₹ Crore	2435787	204075	145896	123826	164550	171987	179896
	US \$ Million	344159	28609	19283	16352	21942	23032	24482
3 Trade Balance	₹ Crore	-1141100	-83249	-27377	4613	-36253	-50520	-20014
	US \$ Million	-161348	-11670	-3618	609	-4834	-6766	-2724
3.1 Oil	₹ Crore	-632828	-40289	-13709	-23547	-35722	-33792	-16311
	US \$ Million	-89262	-5648	-1812	-3109	-4763	-4525	-2212
3.2 Non-oil	₹ Crore	-508273	-42960	-13668	28161	-531	-16728	-3703
	US \$ Million	-72087	-6022	-1806	3719	-71	-2240	-512

Source: DGCI&S and Ministry of Commerce & Industry.

No. 32: Foreign Exchange Reserves

Item	Unit	2019	2020					
			Oct. 11	Sep. 4	Sep. 11	Sep. 18	Sep. 25	Oct. 2
		1	2	3	4	5	6	7
1 Total Reserves	₹ Crore	3124442	3964198	3982893	4003182	3989568	3990840	4034267
	US \$ Million	439712	542013	541660	545038	542021	545638	551505
1.1 Foreign Currency Assets	₹ Crore	2898265	3644856	3658364	3683211	3679789	3679213	3721726
	US \$ Million	407880	498362	497521	501464	499941	503046	508783
1.2 Gold	₹ Crore	190277	274417	279568	274993	264971	266852	267715
	US \$ Million	26778	37521	38020	37440	35999	36486	36598
1.3 SDRs	SDRs Million	1046	1048	1048	1048	1048	1048	1048
	₹ Crore	10169	10841	10895	10889	10836	10794	10826
	US \$ Million	1431	1482	1482	1483	1472	1476	1480
1.4 Reserve Tranche Position in IMF	₹ Crore	25731	34083	34066	34090	33972	33982	34000
	US \$ Million	3623	4647	4637	4651	4608	4631	4644

* Difference, if any, is due to rounding off.

No. 33: NRI Deposits

(US\$ Million)

Scheme	Outstanding				Flows	
	2019-20	2019		2020		2019-20
		Aug.	Jul.	Aug.	Apr.-Aug.	Apr.-Aug.
	1	2	3	4	5	6
1 NRI Deposits	130581	130515	135097	137812	4043	4864
1.1 FCNR(B)	24244	23895	22471	22473	725	-1771
1.2 NR(E)RA	90367	91136	96076	98436	2496	6042
1.3 NRO	15969	15483	16550	16904	822	592

No. 34: Foreign Investment Inflows

(US\$ Million)

Item	2019-20	2019-20	2020-21	2019	2020	
		Apr.-Sep.	Apr.-Sep.	Sep.	Aug.	Sep.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1–1.1.2)	43013	21307	22859	1981	17689	2412
1.1.1 Direct Investment to India (1.1.1.1–1.1.2)	56006	27587	27740	2950	18371	3288
1.1.1.1 Gross Inflows/Gross Investments	74390	36046	39929	4444	19150	4314
1.1.1.1.1 Equity	51734	26778	30781	2856	17602	3021
1.1.1.1.1.1 Government (SIA/FIPB)	3265	2864	172	55	64	2
1.1.1.1.2 RBI	39364	20108	26887	2150	17314	2373
1.1.1.1.3 Acquisition of shares	7348	3124	2945	536	109	531
1.1.1.1.4 Equity capital of unincorporated bodies	1757	682	778	116	116	116
1.1.1.1.2 Reinvested earnings	14175	6813	7420	1155	1155	1155
1.1.1.1.3 Other capital	8482	2455	1727	433	393	138
1.1.1.2 Repatriation/Disinvestment	18384	8459	12189	1494	779	1026
1.1.1.2.1 Equity	18212	8403	12174	1482	777	1024
1.1.1.2.2 Other capital	173	56	15	12	2	2
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4)	12993	6280	4881	968	683	876
1.1.2.1 Equity capital	7572	3296	2201	486	283	419
1.1.2.2 Reinvested Earnings	3151	1575	1583	263	263	263
1.1.2.3 Other Capital	5674	2568	2225	478	197	1028
1.1.2.4 Repatriation/Disinvestment	3403	1159	1128	258	60	834
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)	1403	7319	7909	2383	6769	-748
1.2.1 GDRs/ADRs	—	—	—	—	—	—
1.2.2 FIIs	552	7161	8122	2225	6737	-332
1.2.3 Offshore funds and others	—	—	—	—	—	—
1.2.4 Portfolio investment by India	-851	-158	212	-157	-32	416
1 Foreign Investment Inflows	44417	28626	30768	4364	24458	1664

No. 35: Outward Remittances under the Liberalised Remittance Scheme (LRS) for Resident Individuals

(US\$ Million)

Item	2019-20	2019	2020		
		Sep.	Jul.	Aug.	Sep.
	1	2	3	4	5
1 Outward Remittances under the LRS	18760.69	1592.36	995.16	1156.62	1648.17
1.1 Deposit	623.37	46.86	48.43	46.55	123.46
1.2 Purchase of immovable property	86.43	7.40	5.03	5.85	8.26
1.3 Investment in equity/debt	431.41	34.74	33.84	27.37	73.61
1.4 Gift	1907.71	129.29	129.75	124.99	225.36
1.5 Donations	22.33	1.55	1.42	0.68	0.61
1.6 Travel	6955.98	642.88	246.17	303.21	358.12
1.7 Maintenance of close relatives	3439.74	242.83	243.61	232.86	416.70
1.8 Medical Treatment	33.90	2.24	2.54	1.65	2.51
1.9 Studies Abroad	4991.07	467.23	277.50	405.48	427.87
1.10 Others	268.75	17.36	6.87	7.98	11.68

No. 36: Indices of Real Effective Exchange Rate (REER) and Nominal Effective Exchange Rate (NEER) of the Indian Rupee

Item	2018-19	2019-20	2019		2020	
			October	September	October	October
	1	2	3	4	5	
36-Currency Export and Trade Based Weights (Base: 2004-05=100)						
1 Trade-Based Weights						
1.1 NEER	72.64	73.28	73.35	70.81	70.69	
1.2 REER	114.01	116.75	117.29	118.33	118.13	
2 Export-Based Weights						
2.1 NEER	74.18	74.33	74.32	71.92	71.89	
2.2 REER	116.32	119.61	120.10	121.95	121.92	
6-Currency Trade Based Weights						
1 Base: 2004-05 (April-March)=100						
1.1 NEER	63.07	63.59	63.90	59.76	59.58	
1.2 REER	121.70	125.76	126.70	125.92	124.84	
2 Base: 2017-18 (April-March)=100						
2.1 NEER	92.88	93.63	94.10	88.01	87.74	
2.2 REER	94.20	97.32	98.07	97.47	96.64	

No. 37: External Commercial Borrowings (ECBs) – Registrations

(Amount in US\$ Million)

Item	2019-20	2019		2020	
		Sep.	Aug.	Sep.	
	1	2	3	4	
1 Automatic Route					
1.1 Number	1292	118	97	99	
1.2 Amount	38011	4139	1715	5223	
2 Approval Route					
2.1 Number	41	1	1	-	
2.2 Amount	14921	750	36	-	
3 Total (1+2)					
3.1 Number	1333	119	98	99	
3.2 Amount	52932	4889	1751	5223	
4 Weighted Average Maturity (in years)					
	6.00	6.10	4.92	3.32	
5 Interest Rate (per cent)					
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	1.34	1.17	1.86	1.66	
5.2 Interest rate range for Fixed Rate Loans	0.00-25.00	0.00-11.30	0.00-9.03	0.00-11.00	

No. 38: India's Overall Balance of Payments

(US \$ Million)

Item	Apr-Jun 2019			Apr-Jun 2020(P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	299344	285360	13984	249201	229355	19846
1 CURRENT ACCOUNT (1.1+ 1.2)	160681	175686	-15004	122408	102634	19774
1.1 MERCHANDISE	82707	129481	-46774	52308	62326	-10017
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	77974	46204	31769	70100	40309	29791
1.2.1 Services	52196	32120	20075	46807	26304	20503
1.2.1.1 Travel	6950	6203	747	1848	2757	-909
1.2.1.2 Transportation	5343	6104	-761	4866	4216	649
1.2.1.3 Insurance	588	409	179	565	378	186
1.2.1.4 G.n.i.e.	151	307	-155	148	330	-182
1.2.1.5 Miscellaneous	39164	19098	20066	39380	18622	20758
1.2.1.5.1 Software Services	22811	1812	20998	22622	1849	20773
1.2.1.5.2 Business Services	11475	11715	-239	11282	11514	-232
1.2.1.5.3 Financial Services	1287	519	769	1009	1062	-52
1.2.1.5.4 Communication Services	700	284	415	707	304	403
1.2.2 Transfers	19963	1999	17964	18223	1237	16986
1.2.2.1 Official	35	295	-260	27	258	-231
1.2.2.2 Private	19928	1705	18224	18196	979	17217
1.2.3 Income	5815	12085	-6270	5070	12768	-7698
1.2.3.1 Investment Income	4463	11446	-6983	3706	12098	-8392
1.2.3.2 Compensation of Employees	1352	639	713	1364	669	695
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	138298	109674	28624	126793	126241	552
2.1 Foreign Investment (2.1.1+2.1.2)	88733	69898	18835	74487	74237	250
2.1.1 Foreign Direct Investment	21555	7563	13993	11973	12365	-392
2.1.1.1 In India	21171	3976	17194	11829	9735	2094
2.1.1.1.1 Equity	16665	3957	12708	6993	9725	-2732
2.1.1.1.2 Reinvested Earnings	3349		3349	3957		3957
2.1.1.1.3 Other Capital	1157	19	1138	879	10	869
2.1.1.2 Abroad	384	3586	-3202	144	2630	-2486
2.1.1.2.1 Equity	384	1592	-1208	144	1117	-972
2.1.1.2.2 Reinvested Earnings	0	788	-788	0	796	-796
2.1.1.2.3 Other Capital	0	1206	-1206	0	718	-718
2.1.2 Portfolio Investment	67178	62335	4843	62514	61872	642
2.1.2.1 In India	67073	61916	5156	61869	60772	1098
2.1.2.1.1 FIIs	67073	61916	5156	61869	60772	1098
2.1.2.1.1.1 Equity	50491	47378	3112	52749	48334	4414
2.1.2.1.1.2 Debt	16582	14538	2044	9121	12437	-3317
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	105	419	-314	644	1100	-456
2.2 Loans (2.2.1+2.2.2+2.2.3)	22209	12648	9561	18508	16227	2281
2.2.1 External Assistance	3018	1550	1468	5735	1645	4090
2.2.1.1 By India	2	29	-27	2	27	-26
2.2.1.2 To India	3016	1521	1495	5733	1618	4116
2.2.2 Commercial Borrowings	9763	3660	6103	3756	5369	-1613
2.2.2.1 By India	881	742	140	442	1003	-562
2.2.2.2 To India	8881	2918	5963	3315	4366	-1051
2.2.3 Short Term to India	9428	7438	1990	9017	9213	-196
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	8028	7438	590	9017	8412	605
2.2.3.2 Suppliers' Credit up to 180 days	1400	0	1400	0	801	-801
2.3 Banking Capital (2.3.1+2.3.2)	17713	14280	3433	17690	15460	2230
2.3.1 Commercial Banks	17713	13897	3816	17690	14693	2997
2.3.1.1 Assets	6339	3595	2744	6865	4383	2482
2.3.1.2 Liabilities	11375	10302	1072	10825	10310	515
2.3.1.2.1 Non-Resident Deposits	10780	8026	2754	10653	7653	3000
2.3.2 Others	0	383	-383	0	767	-767
2.4 Rupee Debt Service	0	60	-60	0	55	-55
2.5 Other Capital	9643	12789	-3146	16108	20261	-4153
3 Errors & Omissions	365	0	365	0	480	-480
4 Monetary Movements (4.1+ 4.2)	0	13984	-13984	0	19846	-19846
4.1 I.M.F.				0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)			13984	-13984	19846	-19846

Note : P : Preliminary

No. 39: India's Overall Balance of Payments

Item	(₹ Crore)					
	Apr-Jun 2019			Apr-Jun 2020(P)		
	Credit	Debit	Net	Credit	Debit	Net
1	2	3	4	5	6	
Overall Balance of Payments(1+2+3)	2081832	1984578	97254	1890800	1740218	150582
1 CURRENT ACCOUNT (1.1+ 1.2)	1117480	1221831	-104351	928766	778731	150034
1.1 MERCHANDISE	575199	900495	-325296	396887	472892	-76006
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	542281	321335	220945	531879	305839	226040
1.2.1 Services	363004	223387	139617	355144	199578	155566
1.2.1.1 Travel	48335	43139	5196	14024	20918	-6894
1.2.1.2 Transportation	37157	42451	-5294	36918	31992	4926
1.2.1.3 Insurance	4088	2846	1242	4286	2872	1415
1.2.1.4 G.n.i.e.	1052	2133	-1081	1123	2504	-1381
1.2.1.5 Miscellaneous	272372	132817	139554	298793	141293	157500
1.2.1.5.1 Software Services	158639	12604	146036	171642	14027	157615
1.2.1.5.2 Business Services	79808	81470	-1663	85604	87365	-1761
1.2.1.5.3 Financial Services	8953	3608	5346	7659	8056	-396
1.2.1.5.4 Communication Services	4865	1976	2889	5364	2309	3055
1.2.2 Transfers	138837	13904	124933	138268	9387	128881
1.2.2.1 Official	242	2048	-1806	205	1959	-1754
1.2.2.2 Private	138595	11855	126740	138063	7428	130635
1.2.3 Income	40440	84045	-43605	38467	96874	-58407
1.2.3.1 Investment Income	31039	79602	-48563	28120	91796	-63677
1.2.3.2 Compensation of Employees	9401	4443	4958	10347	5077	5270
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	961814	762747	199067	962034	957847	4187
2.1 Foreign Investment (2.1.1+2.1.2)	617107	486115	130992	565164	563268	1895
2.1.1 Foreign Direct Investment	149908	52595	97313	90846	93819	-2973
2.1.1.1 In India	147234	27655	119579	89752	73864	15889
2.1.1.1.1 Equity	115899	27522	88377	53061	73787	-20726
2.1.1.1.2 Reinvested Earnings	23291	0	23291	30021	0	30021
2.1.1.1.3 Other Capital	8045	133	7911	6671	77	6594
2.1.1.2 Abroad	2673	24939	-22266	1094	19955	-18862
2.1.1.2.1 Equity	2673	11075	-8402	1094	8472	-7378
2.1.1.2.2 Reinvested Earnings	0	5478	-5478	0	6038	-6038
2.1.1.2.3 Other Capital	0	8386	-8386	0	5446	-5446
2.1.2 Portfolio Investment	467199	433520	33679	474318	469449	4869
2.1.2.1 In India	466467	430607	35860	469430	461102	8328
2.1.2.1.1 FIIs	466467	430607	35860	469430	461102	8328
2.1.2.1.1.1 Equity	351144	329501	21644	400227	366734	33493
2.1.2.1.1.2 Debt	115323	101107	14216	69203	94368	-25165
2.1.2.2 Abroad	0	0	0	0	0	0
2.1.2.2 Abroad	732	2913	-2181	4888	8347	-3459
2.2 Loans (2.2.1+2.2.2+2.2.3)	154456	87960	66495	140429	123124	17305
2.2.1 External Assistance	20988	10780	10208	43513	12481	31031
2.2.1.1 By India	14	201	-187	12	208	-197
2.2.1.2 To India	20974	10579	10395	43501	12273	31228
2.2.2 Commercial Borrowings	67896	25451	42446	28501	40739	-12238
2.2.2.1 By India	6131	5157	974	3350	7612	-4262
2.2.2.2 To India	61766	20294	41472	25151	33127	-7976
2.2.3 Short Term to India	65571	51730	13841	68416	69904	-1488
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	55835	51730	4105	68416	63825	4591
2.2.3.2 Suppliers' Credit up to 180 days	9737	0	9737	0	6079	-6079
2.3 Banking Capital (2.3.1+2.3.2)	123189	99311	23878	134220	117303	16917
2.3.1 Commercial Banks	123189	96648	26540	134220	111481	22739
2.3.1.1 Assets	44083	25000	19082	52088	33257	18831
2.3.1.2 Liabilities	79106	71648	7458	82132	78223	3908
2.3.1.2.1 Non-Resident Deposits	74973	55820	19153	80826	58063	22763
2.3.2 Others	0	2662	-2662	0	5823	-5823
2.4 Rupee Debt Service	0	418	-418	0	419	-419
2.5 Other Capital	67063	88944	-21881	122221	153732	-31511
3 Errors & Omissions	2538	0	2538	0	3640	-3640
4 Monetary Movements (4.1+ 4.2)	0	97254	-97254	0	150582	-150582
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	97254	-97254	0	150582	-150582

Note : P: Preliminary

No. 40: Standard Presentation of BoP in India as per BPM6

(US \$ Million)

Item	Apr-Jun 2019			Apr-Jun 2020(P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)						
1.A Goods and Services (1.A.a+1.A.b)						
1.A.a Goods (1.A.a.1 to 1.A.a.3)						
1.A.a.1 General merchandise on a BOP basis	160681	175657	-14977	122408	102610	19798
1.A.a.2 Net exports of goods under merchanting	134903	161602	-26699	99115	88629	10486
1.A.a.3 Nonmonetary gold	82707	129481	-46774	52308	62326	-10017
1.A.b Services (1.A.b.1 to 1.A.b.13)						
1.A.b.1 Manufacturing services on physical inputs owned by others	82183	118031	-35848	52172	61638	-9466
1.A.b.2 Maintenance and repair services n.i.e.	524	0	524	137	0	137
1.A.b.3 Transport	524	11450	-11450	0	688	-688
1.A.b.4 Travel	52196	32120	20075	46807	26304	20503
1.A.b.5 Construction	6950	6203	747	1848	2757	-909
1.A.b.6 Insurance and pension services	754	754	0	659	625	34
1.A.b.7 Financial services	588	409	179	565	378	186
1.A.b.8 Charges for the use of intellectual property n.i.e.	1287	519	769	1009	1062	-52
1.A.b.9 Telecommunications, computer, and information services	319	2091	-1771	399	1847	-1448
1.A.b.10 Other business services	23604	2207	21397	23395	2269	21126
1.A.b.11 Personal, cultural, and recreational services	11475	11715	-239	11282	11514	-232
1.A.b.12 Government goods and services n.i.e.	532	631	-99	500	347	153
1.A.b.13 Others n.i.e.	151	307	-155	148	330	-182
1.B Primary Income (1.B.1 to 1.B.3)						
1.B.1 Compensation of employees	1114	750	364	2026	823	1203
1.B.2 Investment income	5815	12085	-6270	5070	12768	-7698
1.B.2.1 Direct investment	1352	639	713	1364	669	695
1.B.2.2 Portfolio investment	3247	11246	-7999	3096	11916	-8820
1.B.2.3 Other investment	1607	4790	-3183	1349	7410	-6061
1.B.2.4 Reserve assets	46	2503	-2457	24	1222	-1198
1.B.3 Other primary income	163	3938	-3774	66	3280	-3214
1.C Secondary Income (1.C.1+1.C.2)						
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	1431	15	1415	1657	4	1653
1.C.1.1 Personal transfers (Current transfers between resident and/	1216	200	1016	610	182	428
1.C.1.2 Other current transfers	19963	1971	17992	18223	1212	17010
1.C.2 General government	19928	1705	18224	18196	979	17217
2 Capital Account (2.1+2.2)						
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	19303	1217	18086	17596	739	16857
2.2 Capital transfers	625	487	138	600	240	360
3 Financial Account (3.1 to 3.5)						
3.1 Direct Investment (3.1A+3.1B)						
3.1.A Direct Investment in India	34	266	-232	26	234	-207
3.1.A.1 Equity and investment fund shares	21171	3976	17194	11829	9735	2094
3.1.A.1.1 Equity other than reinvestment of earnings	20014	3957	16057	10950	9725	1225
3.1.A.1.2 Reinvestment of earnings	16665	3957	12708	6993	9725	-2732
3.1.A.2 Debt instruments	3349	3349	3957	0	3957	
3.1.A.2.1 Direct investor in direct investment enterprises	1157	19	1138	879	10	869
3.1.A.2.2 Debt securities	1157	19	1138	879	10	869
3.1.B Direct Investment by India	384	3586	-3202	144	2630	-2486
3.1.B.1 Equity and investment fund shares	384	2380	-1996	144	1912	-1768
3.1.B.1.1 Equity other than reinvestment of earnings	384	1592	-1208	144	1117	-972
3.1.B.1.2 Reinvestment of earnings	788	788	0	796	796	
3.1.B.2 Debt instruments	0	1206	-1206	0	718	-718
3.1.B.2.1 Direct investor in direct investment enterprises	1206	1206	0	718	718	-718
3.2 Portfolio Investment						
3.2.A Portfolio Investment in India	67178	62335	4843	62514	61872	642
3.2.A.1 Equity and investment fund shares	67073	61916	5156	61869	60772	1098
3.2.A.2 Debt securities	50491	47378	3112	52749	48334	4414
3.2.B Portfolio Investment by India	16582	14538	2044	9121	12437	-3317
3.3 Financial derivatives (other than reserves) and employee stock options						
3.4 Other investment						
3.4.1 Other equity (ADRs/GDRs)	42776	33714	9061	40975	39854	1121
3.4.2 Currency and deposits	0	0	0	0	0	0
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	10780	8409	2371	10653	8420	2233
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	0	383	-383	0	767	-767
3.4.2.3 General government	10780	8026	2754	10653	7653	3000
3.4.2.4 Other sectors	0	0	0	0	0	0
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	19714	11080	8633	16528	14054	2474
3.4.3.A Loans to India	18830	10310	8520	16085	13024	3061
3.4.3.B Loans by India	884	770	113	443	1031	-588
3.4.4 Insurance, pension, and standardized guarantee schemes	46	176	-131	40	47	-7
3.4.5 Trade credit and advances	9428	7438	1990	9017	9213	-196
3.4.6 Other accounts receivable/payable - other	2808	6611	-3803	4737	8119	-3382
3.4.7 Special drawing rights	0	0	0	0	0	0
3.5 Reserve assets						
3.5.1 Monetary gold	0	13984	-13984	0	19846	-19846
3.5.2 Special drawing rights n.a.				0	0	0
3.5.3 Reserve position in the IMF n.a.				0	0	0
3.5.4 Other reserve assets (Foreign Currency Assets)	0	13984	-13984	0	19846	-19846
4 Total assets/liabilities						
4.1 Equity and investment fund shares	138212	122778	15434	126703	145241	-18538
4.2 Debt instruments	77743	59493	18250	75768	72422	3346
4.3 Other financial assets and liabilities	57661	42691	14971	46198	44853	1345
5 Net errors and omissions				2808	20594	-17787
				365	365	0
					480	-480

Note : P : Preliminary

No. 41: Standard Presentation of BoP in India as per BPM6

Item	(₹ Crore)					
	Apr-Jun 2019			Apr-Jun 2020(P)		
	Credit	Debit	Net	Credit	Debit	Net
1	2	3	4	5	6	
1 Current Account (1.A+1.B+1.C)						
1.A Goods and Services (1.A.a+1.A.b)						
1.A.a Goods (1.A.a.1 to 1.A.a.3)						
1.A.a.1 General merchandise on a BOP basis	938203	1123882	-185679	752031	672471	79560
1.A.a.2 Net exports of goods under merchanting	575199	900495	-325296	396887	472892	-76006
1.A.a.3 Nonmonetary gold	571553	820866	-249314	395848	467673	-71825
1.A.b Services (1.A.b.1 to 1.A.b.13)	3646	0	3646	1038	0	1038
1.A.b.1 Manufacturing services on physical inputs owned by others	0	79629	-79629	0	5219	-5219
1.A.b.2 Maintenance and repair services n.i.e.	363004	223387	139617	355144	199578	155566
1.A.b.3 Transport	227	127	100	588	45	542
1.A.b.4 Travel	312	2872	-2560	241	975	-733
1.A.b.5 Construction	37157	42451	-5294	36918	31992	4926
1.A.b.6 Insurance and pension services	48335	43139	5196	14024	20918	-6894
1.A.b.7 Financial services	5245	5244	1	5003	4743	260
1.A.b.8 Charges for the use of intellectual property n.i.e.	4088	2846	1242	4286	2872	1415
1.A.b.9 Telecommunications, computer, and information services	8953	3608	5346	7659	8056	-396
1.A.b.10 Other business services	2221	14539	-12318	3026	14016	-10990
1.A.b.11 Personal, cultural, and recreational services	164158	15349	148809	177507	17215	160292
1.A.b.12 Government goods and services n.i.e.	79808	81470	-1663	85604	87365	-1761
1.A.b.13 Others n.i.e.	3700	4390	-690	3792	2632	1160
1.B Primary Income (1.B.1 to 1.B.3)	1052	2133	-1081	1123	2504	-1381
1.B.1 Compensation of employees	7747	5217	2529	15373	6247	9126
1.B.2 Investment income	40440	84045	-43605	38467	96874	-58407
1.B.2.1 Direct investment	9401	4443	4958	10347	5077	5270
1.B.2.2 Portfolio investment	22585	78213	-55628	23494	90414	-66921
1.B.2.3 Other investment	11179	33314	-22134	10234	56223	-45989
1.B.2.4 Reserve assets	321	17407	-17086	185	9273	-9088
1.B.3 Other primary income	9949	107	9842	12574	34	12540
1.C Secondary Income (1.C.1+1.C.2)	8454	1389	7065	4626	1382	3244
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	138835	13707	125128	138262	9200	129063
1.C.1.1 Personal transfers (Current transfers between resident and/	138595	11855	126740	138063	7428	130635
1.C.1.2 Other current transfers	134248	8465	125782	133511	5606	127905
1.C.2 General government	4347	3390	957	4553	1822	2731
2 Capital Account (2.1+2.2)	239	1852	-1612	199	1772	-1573
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	603	6322	-5719	690	6611	-5921
2.2 Capital transfers	76	5731	-5655	34	5996	-5961
3 Financial Account (3.1 to 3.5)	527	591	-64	656	615	41
3.1 Direct Investment (3.1A+3.1B)	961214	853875	107338	961350	1102005	-140655
3.1.A Direct Investment in India	149908	52595	97131	90846	93819	-2973
3.1.A.1 Equity and investment fund shares	147234	27655	119579	89752	73864	15889
3.1.A.1.1 Equity other than reinvestment of earnings	139190	27522	111668	83082	73787	9295
3.1.A.1.2 Reinvestment of earnings	115899	27522	88377	53061	73787	-20726
3.1.A.2 Debt instruments	23291	0	23291	30021	0	30021
3.1.A.2.1 Direct investor in direct investment enterprises	8045	133	7911	6671	77	6594
3.1.B Direct Investment by India	8045	133	7911	6671	77	6594
3.1.B.1 Equity and investment fund shares	2673	16553	-13880	1094	14510	-13416
3.1.B.1.1 Equity other than reinvestment of earnings	2673	11075	-8402	1094	8472	-7378
3.1.B.1.2 Reinvestment of earnings	0	5478	-5478	0	6038	-6038
3.1.B.2 Debt instruments	0	8386	-8386	0	5446	-5446
3.1.B.2.1 Direct investor in direct investment enterprises	0	8386	-8386	0	5446	-5446
3.2 Portfolio Investment	467199	433520	33679	474318	469449	4869
3.2.A Portfolio Investment in India	466467	430607	35860	469430	461102	8328
3.2.1 Equity and investment fund shares	351144	329501	21644	400227	366734	33493
3.2.2 Debt securities	115323	111017	14216	69203	94368	-25165
3.2.B Portfolio Investment by India	732	2913	-2181	4888	8347	-3459
3.3 Financial derivatives (other than reserves) and employee stock options	46618	36037	10581	85289	85765	-476
3.4 Other investment	297489	234470	63019	310898	302390	8507
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	74973	58482	16490	80826	63886	16940
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	2662	-2662	0	5823	-5823
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	74973	55820	19153	80826	58063	22763
3.4.2.3 General government	0	0	0			
3.4.2.4 Other sectors	0	0	0			
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	137100	77059	60042	125407	106637	18770
3.4.3.A Loans to India	130956	71701	59255	122045	98817	23228
3.4.3.B Loans by India	6145	5358	787	3361	7820	-4459
3.4.4 Insurance, pension, and standardized guarantee schemes	318	1226	-908	306	358	-53
3.4.5 Trade credit and advances	65571	51730	13841	68416	69904	-1488
3.4.6 Other accounts receivable/payable - other	19527	45974	-26447	35943	61605	-25662
3.4.7 Special drawing rights	0	0	0			
3.5 Reserve assets	0	97254	-97254	0	150582	-150582
3.5.1 Monetary gold	0	0	0			
3.5.2 Special drawing rights n.a.	0	0	0			
3.5.3 Reserve position in the IMF n.a.	0	0	0			
3.5.4 Other reserve assets (Foreign Currency Assets)	0	97254	-97254	0	150582	-150582
4 Total assets/liabilities	961214	853875	107338	961350	1102005	-140655
4.1 Equity and investment fund shares	540675	413751	126924	574885	549501	25384
4.2 Debt instruments	401012	296897	104115	350523	340318	10205
4.3 Other financial assets and liabilities	19527	143227	-123700	35943	212187	-176244
5 Net errors and omissions	2538	0	2538	0	3640	-3640

Note : P: Preliminary

No. 42: International Investment Position

(US\$ Million)

Item	As on Financial Year /Quarter End							
	2019-20		2019		2020			
			Jun.		Mar.		Jun.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	1	2	3	4	5	6	7	8
1 Direct Investment Abroad/in India	182957	418239	173165	417609	182957	418239	185442	419312
1.1 Equity Capital and Reinvested Earnings	118442	395426	113118	399712	118442	395426	120210	395918
1.2 Other Capital	64515	22813	60047	17897	64515	22813	65233	23394
2 Portfolio Investment	3847	246701	5012	266822	3847	246701	4303	241581
2.1 Equity	602	134778	1806	151162	602	134778	824	138961
2.2 Debt	3246	111923	3206	115660	3246	111923	3480	102621
3 Other Investment	52422	427438	54140	429324	52422	427438	52489	432702
3.1 Trade Credit	1460	104277	2121	107226	1460	104277	1233	103988
3.2 Loan	6741	179767	9762	173725	6741	179767	7435	184385
3.3 Currency and Deposits	26011	130761	24169	133846	26011	130761	27741	132942
3.4 Other Assets/Liabilities	18210	12634	18089	14529	18210	12634	16080	11387
4 Reserves	477807		429837		477807		505702	
5 Total Assets/ Liabilities	717033	1092378	662155	1113756	717033	1092378	747937	1093595
6 IIP (Assets - Liabilities)		-375345		-451601		-375345		-345658

Payment and Settlement Systems

No.43: Payment System Indicators

PART I - Payment System Indicators - Payment & Settlement System Statistics

System	Volume (Lakh)				Value (₹ Crore)			
	FY 2019-20	2019		2020		FY 2019-20	2019	
		Sep.	Aug.	Sep.	Sep.		Sep.	Aug.
	1	2	3	4	5	6	7	8
A. Settlement Systems								
Financial Market Infrastructures (FMIs)								
1 CCIL Operated Systems (1.1 to 1.3)	—	—	2.28	2.70	—	—	12576300	13397758
1.1 Govt. Securities Clearing (1.1.1 to 1.1.3)	—	—	0.96	1.08	—	—	8614891	9021412
1.1.1 Outright	—	—	0.52	0.61	—	—	867395	881023
1.1.2 Repo	—	—	0.27	0.29	—	—	3793333	4115039
1.1.3 Tri-party Repo	—	—	0.18	0.19	—	—	3954162	4025350
1.2 Forex Clearing	—	—	1.28	1.60	—	—	3749569	4238877
1.3 Rupee Derivatives @	—	—	0.03	0.03	—	—	211840	137470
B. Payment Systems								
I Financial Market Infrastructures (FMIs)								
1 Credit Transfers - RTGS (1.1 to 1.2)	—	—	—	—	—	—	—	—
1.1 Customer Transactions	—	—	116.77	130.11	—	—	7292380	9489066
1.2 Interbank Transactions	—	—	115.29	128.49	—	—	6382552	7993814
II Retail								
2 Credit Transfers - Retail (2.1 to 2.7)	—	—	23968.09	25506.62	—	—	2556825	2817678
2.1 AePS (Fund Transfers) @	—	—	0.89	0.96	—	—	46	51
2.2 APBS \$	—	—	1196.39	1059.85	—	—	8313	6243
2.3 IMPS	—	—	2461.25	2796.08	—	—	235137	248662
2.4 NACH Cr \$	—	—	1775.18	1179.79	—	—	84468	68176
2.5 NEFT	—	—	2346.09	2468.27	—	—	1930552	2165515
2.6 UPI @	—	—	16188.28	18001.67	—	—	298308	329032
2.6.1 of which USSD @	—	—	0.92	0.89	—	—	15	14
3 Debit Transfers and Direct Debits (3.1 to 3.4)	—	—	857.28	926.42	—	—	67146	78240
3.1 BHIM Aadhaar Pay @	—	—	19.50	15.28	—	—	253	205
3.2 NACH Dr \$	—	—	791.81	857.43	—	—	66830	77958
3.3 NETC (linked to bank account) @	—	—	45.96	53.71	—	—	63	77
4 Card Payments (4.1 to 4.2)	—	—	4914.48	5110.11	—	—	122089	126220
4.1 Credit Cards (4.1.1 to 4.1.2)	—	—	1425.11	1486.71	—	—	50311	51134
4.1.1 PoS based \$	—	—	659.47	713.37	—	—	21001	21986
4.1.2 Others \$	—	—	765.64	773.33	—	—	29310	29148
4.2 Debit Cards (4.2.1 to 4.2.1)	—	—	3489.38	3623.40	—	—	71778	75086
4.2.1 PoS based \$	—	—	1647.47	1758.83	—	—	29525	30422
4.2.2 Others \$	—	—	1841.91	1864.57	—	—	42253	44664
5 Prepaid Payment Instruments (5.1 to 5.2)	—	—	4932.61	4625.96	—	—	16808	16683
5.1 Wallets	—	—	3967.82	3616.58	—	—	13000	13258
5.2 Cards (5.2.1 to 5.2.2)	—	—	964.79	1009.37	—	—	3808	3425
5.2.1 PoS based \$	—	—	29.20	32.50	—	—	737	910
5.2.2 Others \$	—	—	935.59	976.87	—	—	3072	2515
6 Paper-based Instruments (6.1 to 6.2)	—	—	519.83	612.71	—	—	425462	485243
6.1 CTS (NPCI Managed)	—	—	519.72	612.63	—	—	425252	485114
6.2 Others	—	—	0.11	0.08	—	—	210	128
Total - Retail Payments (2+3+4+5+6)	—	—	35192.30	36781.81	—	—	3188330	3524064
Total Payments (1+2+3+4+5+6)	—	—	35309.07	36911.91	—	—	10480709	13013130
Total Digital Payments (1+2+3+4+5)	—	—	34789.24	36299.21	—	—	10055248	12527887

PART II - Payment Modes and Channels

System	Volume (Lakh)				Value (₹ Crore)			
	FY 2019-20	2019		2020		FY 2019-20	2020	
		Sep.	Aug.	Sep.	Sep.		Aug.	Sep.
	1	2	3	4	5	6	7	8
A. Other Payment Channels								
1 Mobile Payments (mobile app based) (1.1 to 1.2)								
1.1 Intra-bank \$	—	—	19521.47	20919.08	—	—	667279	704109
1.2 Inter-bank \$	—	—	1682.30	1907.78	—	—	138564	145405
2 Internet Payments (Netbanking / Internet Browser Based) @ (2.1 to 2.2)								
2.1 Intra-bank @	—	—	2651.34	2822.04	—	—	3006656	3436124
2.2 Inter-bank @	—	—	557.18	594.83	—	—	1494618	1678942
B. ATMs								
3 Cash Withdrawal at ATMs \$ (3.1 to 3.3)								
3.1 Using Credit Cards \$	—	—	4884.50	5094.80	—	—	238675	243667
3.2 Using Debit Cards \$	—	—	3.66	4.36	—	—	184	217
3.3 Using Pre-paid Cards \$	—	—	4860.29	5067.91	—	—	237778	242649
4 Cash Withdrawal at PoS \$ (4.1 to 4.2)								
4.1 Using Debit Cards \$	—	—	20.55	22.53	—	—	713	801
4.2 Using Pre-paid Cards \$	—	—	32.48	33.62	—	—	134	123
5 Cash Withdrawal at Micro ATMs @								
5.1 AePS @	—	—	814.30	717.65	—	—	19513	17096
			814.30	717.65	—	—	19513	17096

PART III - Payment Infrastructures (Lakh)

System	FY 2019-20	2019		2020		
		Sep.	Aug.	Sep.	Sep.	
		1	2	3	4	
Payment System Infrastructures						
1 Number of Cards (1.1 to 1.2)	—	—	9132.03	9241.29		
1.1 Credit Cards	—	—	578.31	586.94		
1.2 Debit Cards	—	—	8553.73	8654.35		
2 Number of PPIs @ (2.1 to 2.2)	—	—	20134.06	19960.47		
2.1 Wallets @	—	—	18482.49	18287.99		
2.2 Cards @	—	—	1651.58	1672.48		
3 Number of ATMs (3.1 to 3.2)	—	—	2.33	2.34		
3.1 Bank owned ATMs \$	—	—	2.09	2.10		
3.2 White Label ATMs \$	—	—	0.24	0.24		
4 Number of Micro ATMs @	—	—	3.07	3.28		
5 Number of PoS Terminals	—	—	51.07	51.86		
6 Bharat QR @	—	—	22.99	23.96		
7 UPI QR *	—	—	—	604.07		

@: New inclusion w.e.f. November 2019

\$: Inclusion separately initiated from November 2019 - would have been part of other items hitherto.

*: New inclusion w.e.f. September 2020; Includes only static UPI QR Code

Note :

1. Data is provisional.
2. ECS (Debit and Credit) has been merged with NACH with effect from January 31, 2020.
3. The data from November 2019 onwards for card payments (Debit/Credit cards) and Prepaid Payment Instruments (PPIs) may not be comparable with earlier months/ periods, as more granular data is being published along with revision in data definitions.
4. Only domestic financial transactions are considered. The new format captures e-commerce transactions; transactions using FASTags, digital bill payments and card-to-card transfer through ATMs, etc.. Also, failed transactions, chargebacks, reversals, expired cards/ wallets, are excluded.

Occasional Series

No. 44: Small Savings

(₹ Crore)

Scheme		2018-19	2019		2020			
			Feb.	Dec.	Jan.	Feb.		
			1	2	3	4	5	
1 Small Savings			Receipts	115714	9839	15814	15184	16911
			Outstanding	918459	899191	1015010	1030037	1046766
1.1 Total Deposits			Receipts	91108	7130	12117	11091	11460
1.1.1 Post Office Saving Bank Deposits			Outstanding	618418	606920	693812	704903	716363
			Receipts	31037	2360	3455	3106	2690
			Outstanding	140247	134863	150462	153568	156258
1.1.2 MGNREG			Receipts					
			Outstanding					
1.1.3 National Saving Scheme, 1987			Receipts	-31	-19	-31	-25	-20
			Outstanding	3107	2877	2984	2959	2939
1.1.4 National Saving Scheme, 1992			Receipts	53	0	-827	-2	-3
			Outstanding	10	-8	-18	-20	-23
1.1.5 Monthly Income Scheme			Receipts	10967	928	1753	1712	1887
			Outstanding	192658	191653	203460	205172	207059
1.1.6 Senior Citizen Scheme 2004			Receipts	13990	1184	2070	2133	2131
			Outstanding	55708	54446	69464	71597	73728
1.1.7 Post Office Time Deposits			Receipts	25000	2451	4296	3999	4494
			Outstanding	124292	121687	152622	156621	161115
1.1.7.1 1 year Time Deposits			Outstanding	71534	70179	86344	88247	90327
1.1.7.2 2 year Time Deposits			Outstanding	5910	5824	6749	6854	6970
1.1.7.3 3 year Time Deposits			Outstanding	6901	6910	7328	7397	7464
1.1.7.4 5 year Time Deposits			Outstanding	39947	38774	52201	54123	56354
1.1.8 Post Office Recurring Deposits			Receipts	10081	215	1401	168	281
			Outstanding	102401	101407	114842	115010	115291
1.1.9 Post Office Cumulative Time Deposits			Receipts	11	11	0	0	0
			Outstanding	-26	-26	-25	-25	-25
1.1.10 Other Deposits			Receipts	0	0	0	0	0
			Outstanding	21	21	21	21	21
1.2 Saving Certificates			Receipts	16067	1732	3326	3524	3937
			Outstanding	221517	219257	240900	244267	248022
1.2.1 National Savings Certificate VIII issue			Receipts	11318	1262	2272	2458	2619
			Outstanding	98492	94795	110050	112508	115127
1.2.2 Indira Vikas Patras			Receipts	334	3	0	0	1
			Outstanding	263	300	-289	-289	-288
1.2.3 Kisan Vikas Patras			Receipts	-18678	-1609	-971	-1713	-1120
			Outstanding	19303	21232	6782	5069	3949
1.2.4 Kisan Vikas Patras - 2014			Receipts	23018	2065	2025	2782	2452
			Outstanding	93630	91314	113273	116055	118507
1.2.5 National Saving Certificate VI issue			Receipts	93	12	0	-1	0
			Outstanding	2	-47	-179	-180	-180
1.2.6 National Saving Certificate VII issue			Receipts	-18	-1	0	-2	-15
			Outstanding	-80	-82	-82	-84	-99
1.2.7 Other Certificates			Outstanding	9907	11745	11345	11188	11006
1.3 Public Provident Fund			Receipts	8539	977	371	569	1514
			Outstanding	78524	73014	80298	80867	82381

Source: Accountant General, Post and Telegraphs.

Note : Data on receipts from April 2017 are net receipts, i.e., gross receipt minus gross payment.

No. 45 : Ownership Pattern of Central and State Governments Securities

(Per cent)

Category	Central Government Dated Securities				
	2019			2020	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(A) Total (in ₹. Crore)	6072243	6314426	6512659	6486585	6704983
1 Commercial Banks	39.05	39.66	39.05	40.41	38.98
2 Non-Bank PDs	0.36	0.42	0.39	0.39	0.36
3 Insurance Companies	24.88	24.86	24.90	25.09	26.24
4 Mutual Funds	0.64	0.77	1.53	1.43	2.02
5 Co-operative Banks	2.17	2.01	1.97	1.90	1.86
6 Financial Institutions	1.05	1.15	1.14	0.53	1.19
7 Corporates	0.99	0.92	0.84	0.81	0.78
8 Foreign Portfolio Investors	3.27	3.31	3.33	2.44	1.79
9 Provident Funds	5.35	4.87	4.93	4.72	4.96
10 RBI	15.67	14.99	14.72	15.13	14.70
11. Others	6.57	7.05	7.23	7.17	7.11
11.1 State Governments	2.02	1.99	1.97	2.05	1.99

Category	State Governments Securities				
	2019			2020	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(B) Total (in ₹. Crore)	2826935	2905169	3047353	3265990	3393099
1 Commercial Banks	32.57	32.53	32.46	34.99	33.54
2 Non-Bank PDs	0.81	0.72	0.64	0.76	0.74
3 Insurance Companies	33.94	33.39	32.50	31.63	30.85
4 Mutual Funds	1.24	1.12	1.20	1.14	1.74
5 Co-operative Banks	4.65	4.24	4.16	4.12	4.38
6 Financial Institutions	0.44	0.33	0.31	0.11	1.96
7 Corporates	0.32	0.28	0.31	0.30	0.31
8 Foreign Portfolio Investors	0.08	0.05	0.04	0.02	0.02
9 Provident Funds	21.88	22.36	23.66	22.22	21.70
10 RBI	0.00	0.00	0.00	0.00	0.00
11. Others	4.08	4.98	4.73	4.71	4.78
11.1 State Governments	0.14	0.16	0.17	0.18	0.18

Category	Treasury Bills				
	2019			2020	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(C) Total (in ₹. Crore)	524618	538041	514588	538409	881362
1 Commercial Banks	53.60	50.81	45.19	61.06	46.11
2 Non-Bank PDs	1.85	1.92	2.07	2.26	1.48
3 Insurance Companies	5.13	5.55	5.76	7.45	4.64
4 Mutual Funds	13.00	14.08	20.42	13.24	23.45
5 Co-operative Banks	2.54	2.55	2.07	2.55	1.95
6 Financial Institutions	2.14	1.82	2.12	0.58	1.67
7 Corporates	1.67	1.57	1.66	1.89	1.43
8 Foreign Portfolio Investors	0.00	0.00	0.00	0.00	0.00
9 Provident Funds	0.07	0.01	0.01	0.02	0.05
10 RBI	0.00	0.00	0.00	0.00	11.27
11. Others	19.99	21.70	20.70	10.95	7.95
11.1 State Governments	15.59	17.91	16.36	6.22	4.35

No. 46: Combined Receipts and Disbursements of the Central and State Governments

(₹ Crore)

Item	2015-16	2016-17	2017-18	2018-19	2019-20 RE	2020-21 BE
	1	2	3	4	5	6
1 Total Disbursements	3760611	4265969	4515946	5040747	5875914	6470254
1.1 Developmental	2201287	2537905	2635110	2882758	3486519	3818358
1.1.1 Revenue	1668250	1878417	2029044	2224367	2708218	2920507
1.1.2 Capital	412069	501213	519356	596774	694262	794599
1.1.3 Loans	120968	158275	86710	61617	84038	103252
1.2 Non-Developmental	1510810	1672646	1812455	2078276	2295105	2556504
1.2.1 Revenue	1379727	1555239	1741432	1965907	2171963	2421566
1.2.1.1 Interest Payments	648091	724448	814757	894520	969344	1091617
1.2.2 Capital	127306	115775	69370	111029	121159	132961
1.2.3 Loans	3777	1632	1654	1340	1984	1977
1.3 Others	48514	55417	68381	79713	94290	95393
2 Total Receipts	3778049	4288432	4528422	5023352	5779396	6524526
2.1 Revenue Receipts	2748374	3132201	3376416	3797731	4338225	4828088
2.1.1 Tax Receipts	2297101	2622145	2978134	3278947	3547958	3951657
2.1.1.1 Taxes on commodities and services	1440952	1652377	1853859	2030050	2157126	2436871
2.1.1.2 Taxes on Income and Property	852271	965622	1121189	1246083	1386652	1510287
2.1.1.3 Taxes of Union Territories (Without Legislature)	3878	4146	3086	2814	4180	4500
2.1.2 Non-Tax Receipts	451272	510056	398282	518783	790267	876430
2.1.2.1 Interest Receipts	35779	33220	34224	36273	33272	30911
2.2 Non-debt Capital Receipts	59827	69063	142433	140287	129507	232172
2.2.1 Recovery of Loans & Advances	16561	20942	42213	44667	62499	18302
2.2.2 Disinvestment proceeds	43266	48122	100219	95621	67008	213870
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	952410	1064704	997097	1102729	1408183	1409995
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	939662	1046708	989167	1097210	1403250	1405373
3A.1.1 Net Bank Credit to Government	231090	617123	144792	387091	518093	-----
3A.1.1.1 Net RBI Credit to Government	60472	195816	-144847	325987	190241	-----
3A.1.2 Non-Bank Credit to Government	708572	429585	844375	710119	885156	-----
3A.2 External Financing	12748	17997	7931	5519	4933	4622
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	939662	1046708	989167	1097210	1403250	1405373
3B.1.1 Market Borrowings (net)	673298	689821	794856	795845	962386	1105573
3B.1.2 Small Savings (net)	80015	35038	71222	88961	213430	213430
3B.1.3 State Provident Funds (net)	35261	45688	42351	51004	42900	42529
3B.1.4 Reserve Funds	-3322	-6436	18423	-18298	-241	2978
3B.1.5 Deposits and Advances	13470	17792	25138	66289	32949	35987
3B.1.6 Cash Balances	-17438	-22463	-12476	17395	96518	-54272
3B.1.7 Others	158378	287268	49653	96014	55309	59147
3B.2 External Financing	12748	17997	7931	5519	4933	4622
4 Total Disbursements as per cent of GDP	27.3	27.7	26.4	26.6	28.9	28.8
5 Total Receipts as per cent of GDP	27.4	27.9	26.5	26.5	28.4	29.0
6 Revenue Receipts as per cent of GDP	20.0	20.3	19.7	20.0	21.3	21.5
7 Tax Receipts as per cent of GDP	16.7	17.0	17.4	17.3	17.4	17.6
8 Gross Fiscal Deficit as per cent of GDP	6.9	6.9	5.8	5.8	6.9	6.3

...: Not available. RE: Revised Estimates; BE: Budget Estimates

Source : Budget Documents of Central and State Governments.

No. 47: Financial Accommodation Availed by State Governments under various Facilities

(₹ Crore)

Sr. No	State/Union Territory	During September-2020					
		Special Drawing Facility (SDF)		Ways and Means Advances (WMA)		Overdraft (OD)	
		Average amount availed	Number of days availed	Average amount availed	Number of days availed	Average amount availed	Number of days availed
1	2	3	4	5	6	7	
1	Andhra Pradesh	1182	30	1939	29	1520	17
2	Arunachal Pradesh	-	-	-	-	-	-
3	Assam	-	-	-	-	-	-
4	Bihar	-	-	-	-	-	-
5	Chhattisgarh	-	-	-	-	-	-
6	Goa	118	28	110	20	-	-
7	Gujarat	-	-	-	-	-	-
8	Haryana	304	6	418	4	-	-
9	Himachal Pradesh	-	-	531	29	114	5
10	Jammu & Kashmir UT	-	-	1212	30	406	18
11	Jharkhand	-	-	-	-	-	-
12	Karnataka	-	-	-	-	-	-
13	Kerala	250	29	1137	29	358	9
14	Madhya Pradesh	-	-	-	-	-	-
15	Maharashtra	6540	21	-	-	-	-
16	Manipur	52	28	153	19	-	-
17	Meghalaya	-	-	-	-	-	-
18	Mizoram	-	-	44	17	-	-
19	Nagaland	277	30	312	30	126	19
20	Odisha	-	-	-	-	-	-
21	Puducherry	-	-	-	-	-	-
22	Punjab	440	21	413	15	-	-
23	Rajasthan	1167	26	704	7	-	-
24	Tamil Nadu	-	-	-	-	-	-
25	Telangana	1240	30	1576	30	698	21
26	Tripura	51	5	10	1	-	-
27	Uttar Pradesh	-	-	-	-	-	-
28	Uttarakhand	429	30	262	19	-	-
29	West Bengal	-	-	-	-	-	-

Note: The State of J&K has ceased to exist constitutionally from October 31, 2019 and the liabilities of the State continue to remain as liabilities of the new UT of Jammu and Kashmir.

Source: Reserve Bank of India.

No. 48: Investments by State Governments

(₹ Crore)

Sr. No	State/Union Territory	As on end of September 2020			
		Consolidated Sinking Fund (CSF)	Guarantee Redemption Fund (GRF)	Government Securities	Auction Treasury Bills (ATBs)
1	2	3	4	5	
1	Andhra Pradesh	8356	821	--	-
2	Arunachal Pradesh	1487	2	--	-
3	Assam	4498	55	--	-
4	Bihar	7026	--	--	-
5	Chhattisgarh	4462	--	1	4750
6	Goa	600	302	--	-
7	Gujarat	10357	483	--	-
8	Haryana	2099	1211	--	-
9	Himachal Pradesh	--	--	--	-
10	Jammu & Kashmir UT	--	--	--	-
11	Jharkhand	89	--	--	-
12	Karnataka	4267	--	--	18500
13	Kerala	2166	--	--	-
14	Madhya Pradesh	--	925	--	-
15	Maharashtra	41466	430	--	15000
16	Manipur	381	101	--	-
17	Meghalaya	--	36	9	-
18	Mizoram	466	39	--	-
19	Nagaland	1656	33	--	-
20	Odisha	13501	1465	85	20485
21	Puducherry	296	--	--	807
22	Punjab	700	--	8	-
23	Rajasthan	--	--	129	2000
24	Tamil Nadu	6679	--	40	14678
25	Telangana	5704	1243	--	-
26	Tripura	374	9	--	-
27	Uttar Pradesh	473	--	180	-
28	Uttarakhand	3189	80	--	-
29	West Bengal	9770	539	214	-
	Total	130062	7776	665	76220

Note: The State of J&K has ceased to exist constitutionally from October 31, 2019 and the liabilities of the State continue to remain as liabilities of the new UT of Jammu and Kashmir.

No. 49: Market Borrowings of State Governments

(₹ Crore)

Sr. No.	State	2018-19		2019-20		2020-21						Total amount raised, so far in 2020-21	
						July		August		September			
		Gross Amount Raised	Net Amount Raised	Gross	Net								
1	2	3	4	5	6	7	8	9	10	11	12	13	
1	Andhra Pradesh	30200	23824	42415	33444	5000	4417	5250	4667	7000	6417	31250	27168
2	Arunachal Pradesh	719	693	1366	1287	-	-	-	-	-	-	428	428
3	Assam	10595	8089	12906	10996	500	500	-	-	2300	2300	3300	3300
4	Bihar	14300	10903	25601	22601	4000	4000	4000	4000	4000	4000	12000	11000
5	Chhattisgarh	12900	12900	11680	10980	-	-	1300	1300	700	700	2000	2000
6	Goa	2350	1850	2600	2000	200	200	200	200	400	400	1500	1400
7	Gujarat	36971	27437	38900	28600	2700	1950	5000	4000	5500	4500	19780	15823
8	Haryana	21265	17970	24677	20677	2000	2000	3000	3000	4500	4500	18500	16700
9	Himachal Pradesh	4210	2108	6580	4460	500	500	-	-	-	-	500	-300
10	Jammu & Kashmir UT	6684	4927	7869	6760	800	300	800	300	1405	1405	4705	3205
11	Jharkhand	5509	4023	7500	5656	-	-	-	-	-	-	-	-500
12	Karnataka	39600	32183	48500	42500	5000	5000	7000	7000	10000	10000	29000	29000
13	Kerala	19500	13984	18073	12617	1500	1500	1000	1000	2000	2000	15930	15930
14	Madhya Pradesh	20496	15001	22371	16550	2000	2000	2000	2000	2000	2000	11000	11000
15	Maharashtra	20869	3107	48498	32998	8000	7000	3000	2154	14000	12000	48500	43777
16	Manipur	970	667	1757	1254	150	150	100	100	-	-	700	700
17	Meghalaya	1122	863	1344	1070	200	200	-	-	600	550	800	750
18	Mizoram	0	-123	900	745	150	150	-	-	132	132	442	342
19	Nagaland	822	355	1000	423	150	150	-	-	150	150	500	400
20	Odisha	5500	4500	7500	6500	-	-	-	-	-	-	3000	3000
21	Puducherry	825	475	970	470	-	-	-	-	225	225	225	225
22	Punjab	22115	17053	27355	18470	1250	1250	2250	1750	4410	3010	12110	9410
23	Rajasthan	33178	20186	39092	24686	6000	5000	3450	2950	3500	3500	27450	22138
24	Sikkim	1088	795	809	481	-	-	-	-	148	148	615	615
25	Tamil Nadu	43125	32278	62425	49826	10000	8131	9250	7375	3250	2000	48000	42069
26	Telangana	26740	22183	37109	30697	3000	2583	3000	2583	4500	4083	22961	20044
27	Tripura	1543	1387	2928	2578	-	-	-	-	400	400	400	300
28	Uttar Pradesh	46000	33307	69703	52744	1000	-	1000	-200	6000	4000	13500	3267
29	Uttarakhand	6300	5289	5100	4500	-	-200	-	-	1500	1500	2500	1800
30	West Bengal	42828	30431	56992	40882	5500	4500	4000	3500	4500	3000	22000	14000
	Grand Total	478323	348643	634521	487454	59600	51281	55600	47679	83120	72920	353596	298989

- : Nil.

Note: The State of J&K has ceased to exist constitutionally from October 31, 2019 and the liabilities of the State continue to remain as liabilities of the new UT of Jammu and Kashmir.

Source: Reserve Bank of India.

Explanatory Notes to the Current Statistics

Table No. 1

- 1.2& 6: Annual data are average of months.
 3.5 & 3.7: Relate to ratios of increments over financial year so far.
 4.1 to 4.4, 4.8, 4.9 & 5: Relate to the last Friday of the month/financial year.
 4.5, 4.6 & 4.7: Relate to five major banks on the last Friday of the month/financial year.
 4.10 to 4.12: Relate to the last auction day of the month/financial year.
 4.13: Relate to last day of the month/ financial year
 7.1&7.2: Relate to Foreign trade in US Dollar.

Table No. 2

- 2.1.2: Include paid-up capital, reserve fund and Long-Term Operations Funds.
 2.2.2: Include cash, fixed deposits and short-term securities/bonds, e.g., issued by IIFC (UK).

Table No. 4

Maturity-wise position of outstanding forward contracts is available at <http://nsdp.rbi.org.in> under "Reserves Template".

Table No. 5

Special refinance facility to Others, i.e. to the EXIM Bank, is closed since March 31, 2013.

Table No. 6

- For scheduled banks, March-end data pertain to the last reporting Friday.
 2.2: Exclude balances held in IMF Account No.1, RBI employees' provident fund, pension fund, gratuity and superannuation fund.

Table Nos. 7 & 11

- 3.1 in Table 7 and 2.4 in Table 11: Include foreign currency denominated bonds issued by IIFC (UK).

Table No. 8

- NM₂ and NM₃, do not include FCNR (B) deposits.
 2.4: Consist of paid-up capital and reserves.
 2.5: includes other demand and time liabilities of the banking system.

Table No. 9

- Financial institutions comprise EXIM Bank, SIDBI, NABARD and NHB.
 L₁ and L₂ are compiled monthly and L₃ quarterly.
 Wherever data are not available, the last available data have been repeated.

Table No. 13

Data against column Nos. (1), (2) & (3) are Final (including RRBs) and for column Nos. (4) & (5) data are Provisional (excluding RRBs)

Table No. 14

Data in column Nos. (4) & (8) are Provisional.

Table No. 15 & 16

Data are provisional and relate to select 41 scheduled commercial banks, accounting for about 90 per cent of total non-food credit extended by all scheduled commercial banks (excludes ING Vysya which has been merged with Kotak Mahindra since April 2015).

Export credit under priority sector relates to foreign banks only.

Micro & small under item 2.1 includes credit to micro & small industries in manufacturing sector.

Micro & small enterprises under item 5.2 includes credit to micro & small enterprises in manufacturing as well as services sector.

Priority Sector is as per old definition and does not conform to FIDD Circular FIDD.CO.Plan.BC.54/04.09.01/2014-15 dated April 23, 2015.

Table No. 17

2.1.1: Exclude reserve fund maintained by co-operative societies with State Co-operative Banks

2.1.2: Exclude borrowings from RBI, SBI, IDBI, NABARD, notified banks and State Governments.

4: Include borrowings from IDBI and NABARD.

Table No. 24

Primary Dealers (PDs) include banks undertaking PD business.

Table No. 30

Exclude private placement and offer for sale.

1: Exclude bonus shares.

2: Include cumulative convertible preference shares and equi-preference shares.

Table No. 32

Exclude investment in foreign currency denominated bonds issued by IIFC (UK), SDRs transferred by Government of India to RBI and foreign currency received under SAARC SWAP arrangement. Foreign currency assets in US dollar take into account appreciation/depreciation of non-US currencies (such as Euro, Sterling, Yen and Australian Dollar) held in reserves. Foreign exchange holdings are converted into rupees at rupee-US dollar RBI holding rates.

Table No. 34

1.1.1.1.2 & 1.1.1.1.4: Estimates.

1.1.1.2: Estimates for latest months.

'Other capital' pertains to debt transactions between parent and subsidiaries/branches of FDI enterprises.

Data may not tally with the BoP data due to lag in reporting.

Table No. 35

1.10: Include items such as subscription to journals, maintenance of investment abroad, student loan repayments and credit card payments.

Table No. 36

Increase in indices indicates appreciation of rupee and vice versa. For 6-Currency index, base year 2016-17 is a moving one, which gets updated every year. REER figures are based on Consumer Price Index (combined). Methodological details are available in December 2005 and April 2014 issues of the Bulletin.

Table No. 37

Based on applications for ECB/Foreign Currency Convertible Bonds (FCCBs) which have been allotted loan registration number during the period.

Table Nos. 38, 39, 40 & 41

Explanatory notes on these tables are available in December issue of RBI Bulletin, 2012.

Table No. 43

Part I-A. Settlement systems

1.1.3: Tri- party Repo under the securities segment has been operationalised from November 05, 2018.

Part I-B. Payments systems

4.1.2: 'Others' includes e-commerce transactions and digital bill payments through ATMs, etc.

4.2.2: 'Others' includes e-commerce transactions, card to card transfers and digital bill payments through ATMs, etc.

5: Available from December 2010.

5.1: includes purchase of goods and services and fund transfer through wallets.

5.2.2: includes usage of PPI Cards for online transactions and other transactions.

6.1: Pertain to three grids – Mumbai, New Delhi and Chennai.

6.2: 'Others' comprises of Non-MICR transactions which pertains to clearing houses managed by 21 banks.

Part II-A. Other payment channels

1: Mobile Payments –

- o Include transactions done through mobile apps of banks and UPI apps.
- o The data from July 2017 includes only individual payments and corporate payments initiated, processed, and authorised using mobile device. Other corporate payments which are not initiated, processed, and authorised using mobile device are excluded.

2: Internet Payments – includes only e-commerce transactions through 'netbanking' and any financial transaction using internet banking website of the bank.

Part II-B. ATMs

3.3 and 4.2: only relates to transactions using bank issued PPIs.

Part III. Payment systems infrastructure

3: Includes ATMs deployed by Scheduled Commercial Banks (SCBs) and White Label ATM Operators (WLAs). WLAs are included from April 2014 onwards.

Table No. 45

(-): represents nil or negligible

The revised table format since June 2016, incorporates the ownership pattern of State Governments Securities and Treasury Bills along with the Central Government Securities.

State Government Securities include special bonds issued under Ujwal DISCOM Assurance Yojana (UDAY) scheme. Bank PDs are clubbed under Commercial Banks. However, they form very small fraction of total outstanding securities.

The category 'Others' comprises State Governments, Pension Funds, PSUs, Trusts, HUF/Individuals etc.

Table No. 46

GDP data is based on 2011-12 base. GDP data from 2019-20 pertains to the Provisional Estimates of National Income released by National Statistics Office on 29th May 2020. GDP for 2020-21 is from Union Budget 2020-21. Data pertains to all States and Union Territories.

Total receipts and total expenditure exclude National Calamity Contingency Fund expenditure.

1 & 2: Data are net of repayments of the Central Government (including repayments to the NSSF) and State Governments.

1.3: Represents compensation and assignments by States to local bodies and Panchayati Raj institutions.

2: Data are net of variation in cash balances of the Central and State Governments and includes borrowing receipts of the Central and State Governments.

3A.1.1: Data as per RBI records.

3B.1.1: Borrowings through dated securities.

3B.1.2: Represent net investment in Central and State Governments' special securities by the National Small Savings Fund (NSSF).

This data may vary from previous publications due to adjustments across components with availability of new data.

3B.1.6: Include Ways and Means Advances by the Centre to the State Governments.

3B.1.7: Include Treasury Bills, loans from financial institutions, insurance and pension funds, remittances, cash balance investment account.

Table No. 47

SDF is availed by State Governments against the collateral of Consolidated Sinking Fund (CSF), Guarantee Redemption Fund (GRF) & Auction Treasury Bills (ATBs) balances and other investments in government securities.

WMA is advance by Reserve Bank of India to State Governments for meeting temporary cash mismatches.

OD is advanced to State Governments beyond their WMA limits.

Average amount Availed is the total accommodation (SDF/WMA/OD) availed divided by number of days for which accommodation was extended during the month.

- : Nil.

Table No. 48

CSF and GRF are reserve funds maintained by some State Governments with the Reserve Bank of India.

ATBs include Treasury bills of 91 days, 182 days and 364 days invested by State Governments in the primary market.

--: Not Applicable (not a member of the scheme).

The concepts and methodologies for Current Statistics are available in Comprehensive Guide for Current Statistics of the RBI Monthly Bulletin (<https://rbi.org.in/Scripts/PublicationsView.aspx?id=17618>)

Time series data of 'Current Statistics' is available at <https://dbie.rbi.org.in>.

Detailed explanatory notes are available in the relevant press releases issued by RBI and other publications/releases of the Bank such as **Handbook of Statistics on the Indian Economy**.

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12. Perspectives on Central Banking Governors Speak (1935-2010) Platinum Jubilee	₹1400 per copy (over the counter)	US\$ 50 per copy (inclusive of air mail courier charges)

Notes

1. Many of the above publications are available at the RBI website (www.rbi.org.in).
 2. Time Series data are available at the Database on Indian Economy (<http://dbie.rbi.org.in>).
 3. The Reserve Bank of India History 1935-1997 (4 Volumes), Challenges to Central Banking in the Context of Financial Crisis and the Regional Economy of India: Growth and Finance are available at leading book stores in India.
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