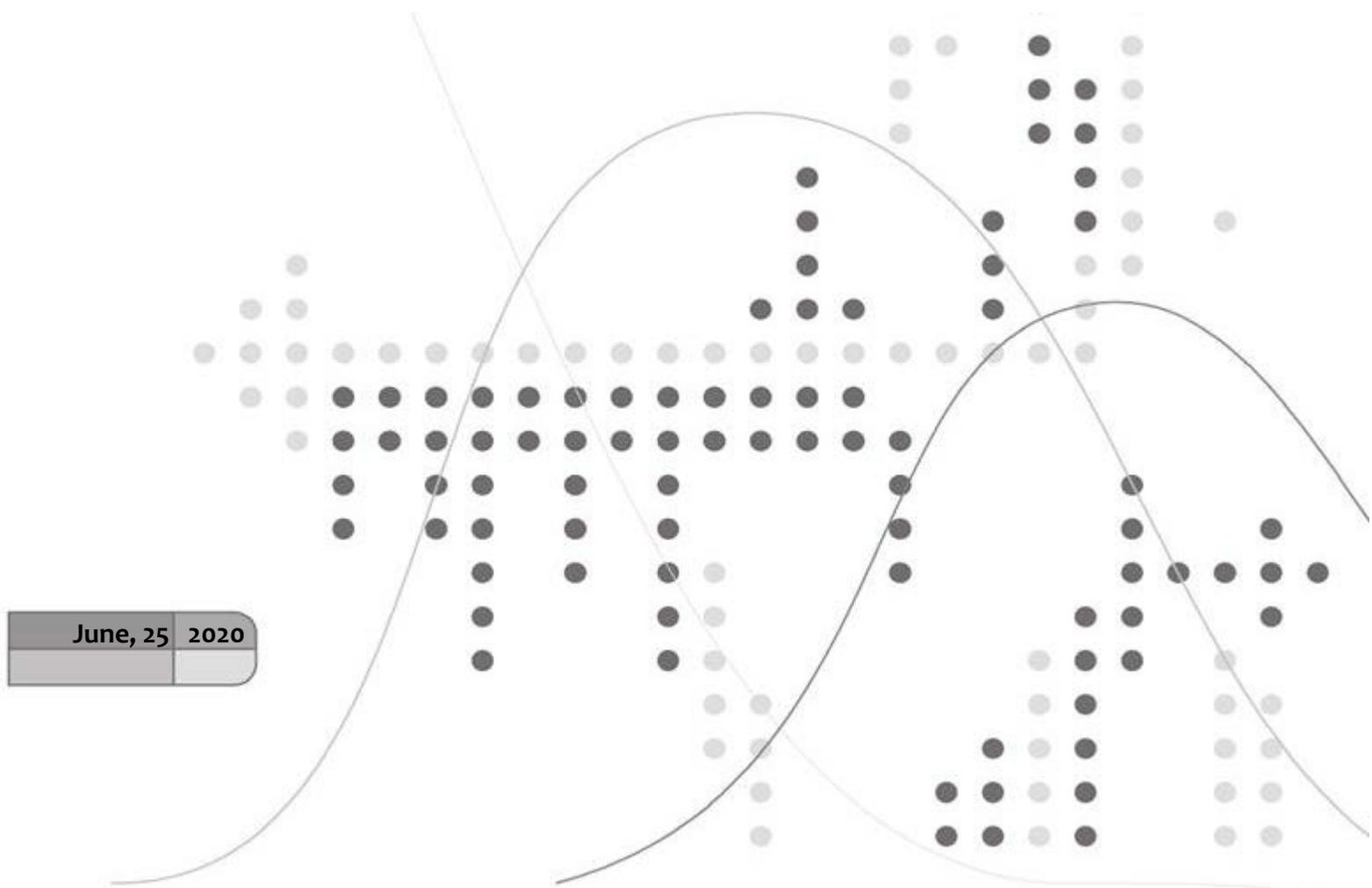


JUNE UPDATE

Quarterly Review of the Economy, 2020-21:Q1 in Coronavirus times



June, 25 2020

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NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH

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The QRE is normally available by subscription. As a consequence of the Coronavirus crisis that India and the rest of the world is going through, this edition of the QRE is freely downloadable.

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Chapter 1: Overview

Sudipto Mundle and Bornali Bhandari

Introduction

The novel coronavirus pandemic is like a tsunami that has engulfed the whole world, though with varied intensity¹. It began spreading late in India, giving the Government an opportunity to prepare for it, drawing lessons from the experience of countries where it struck earlier². India has responded with one of the toughest lockdowns in the world³. It has been rolled out in four phases with varying degrees of stringency, starting with maximum stringency in the first phase (Figure 1.1). The objective of the lockdown was to control the spread of coronavirus & the rate of spread, thereby moderating the initial testing, tracing, treatment burden on the public healthcare system and buying some time for medical services to be ramped up. The lockdown has met with some success in the sense that the average daily growth rate of deaths related to COVID-19 has declined significantly since March 2020 (Figure 1.2)⁴. However, the number of total deaths is still rising. Also, the lockdown has unleashed a humanitarian crisis and also a severe economic crisis.

The humanitarian crisis has arisen because the lockdown was launched without proper preparation. Daily wage workers were suddenly left with no jobs, no income, no food and in the case of migrant workers no means of transport to go home. Lakhs of migrant workers walked back to their homes with no means of survival in the cities where they worked. The Central Government and some State Governments did announce the allocation of free extra rations and cash support for some target groups but

¹ The coronavirus infection leads to the medical condition COVID-19. It may be referenced interchangeably in the report.

² There is also the experience of earlier pandemics, especially the Spanish Flu of 1918 (see Hatchett al. 2007 below).

Hatchett, R. J., Mecher, Carter E. and Lipsitch, M. 2007. "Public health interventions and epidemic intensity during the 1918 influenza pandemic". *Proceedings of the National Academy of Sciences*. 104(18): 7582-7587; DOI: 10.1073/pnas.0610941104. Accessed May 4, 2020.

³ It has been rated as having a stringency index of 100 in global comparisons (see Hale at al. 2020 below). Hale, Thomas, Noam Angrist, Beatriz Kira, Anna Petherick, Toby Phillips, Samuel Webster. "Variation in Government Responses to COVID-19" Version 5.0. Blavatnik School of Government Working Paper. April 29, 2020. Available: www.bsg.ox.ac.uk/covidtracker.

⁴ During Phase II of the implementation of the lockdown, the districts of India were divided into three zones: green, orange and red. The green zones are districts with either zero confirmed cases till date or no confirmed case in the last 21 days. The red zone classification is based on the total number of active cases, doubling rate of confirmed cases, extent of testing and surveillance feedback from the districts. Those districts, which were neither classified as red nor green, were classified as orange zones. As on 30th April, there were 130 districts in the red zone, 284 in the orange zone and 319 in the green zone. Unfortunately, all the seven major metros or economic centres of India – Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Pune and Mumbai are in red zones. (see PIB 2020 below). Press Information Bureau. 2020. *Extension of Lockdown for a further period of two weeks with effect from May 4, 2020*. <https://pib.gov.in/PressReleasePage.aspx?PRID=1620095>. May 1.

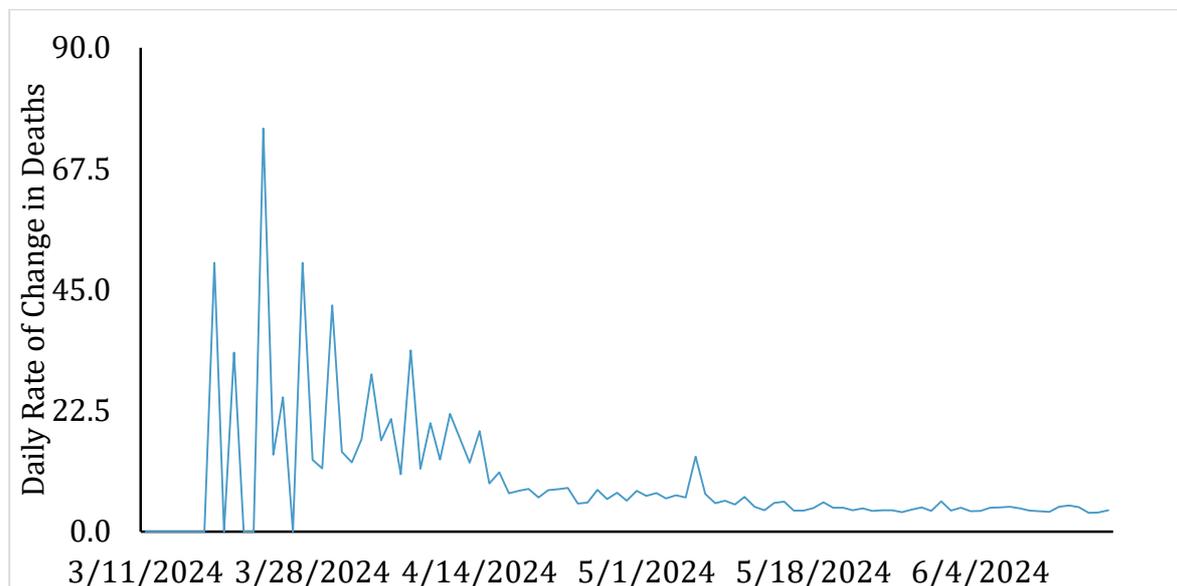
migrant workers found it difficult to access these⁵. At the end of the second phase special trains were announced to take migrants home, but only a few every day and with much uncertainty about who should pay the fares etc. The third and fourth phases saw relaxations. India set to unlock itself in phases from June 1, 2020. However, the consequent spike on the number of cases has again led to intense shorter lockdowns in specific areas. Further, the reverse migration has raised new health care, logistical and economic challenges in the home states. It also added to their fiscal burden. Some of these States are now mapping the skills of the returnees so that they can be gainfully employed. Some firms are also making private efforts to draw their migrant employees back to their places of work.

Figure 1.1: Timeline of the COVID-19 Lockdown



Source: Press Information Bureau.

Figure 1.2: Daily Rate of Change in Deaths (%) March 10, 2020 to June 16, 2020



Source: Authors’ computations from Ministry of Health and Family Welfare, 5pm data.

Coming on top of a sustained slowdown of the economy, which had been underway since 2016-17, the lockdown has also triggered a severe recessionary crisis with

⁵ NCR Telephone Survey carried out in the National Capital Region during April 2020 revealed that there were urban-rural differences in the receipt of food and cash support with the rural areas at an advantage. However, it was the urban poor who bore the brunt of the lockdown in the first phase. NCAER. 2020. Delhi NCR Coronavirus Telephone Survey (DCVTS)- Round 2. Preliminary Findings. National Data Innovation Centre. http://www.ncaer.org/event_details.php?EID=279. 2nd May. 2020.

large segments of the economy having been shut down. The economic shock has been particularly severe for the micro, small and medium enterprises (MSMEs), which had already suffered a high rate of mortality as a consequence of demonetisation and the faulty rollout of the Goods & Services Tax earlier. MSMEs account for the bulk of employment outside agriculture and the high mortality in this economic segment accounts for a sharp rise in unemployment. The unemployment rate had soared to over 27 per cent (for the week ending May 3 2020), the highest ever recorded as per the Centre for Monitoring Indian Economy, However it has also come down sharply to 11.6 per cent during the week ended 14 June with the end of the lock down ⁶. This raises hopes that the fiscal-monetary stimulus measures announced under the Atmanirbhar Bharat (AB) package, and the measures implemented prior to that, will arrest the recession and help turn the economy around as suggested by our policy simulations in Chapter 2. The outlook for individual sectors, trade and prices are discussed in subsequent chapters followed by our assessment of fiscal and monetary policies in chapters 8 and 9.

Policy Simulations

Forecasting based on conventional techniques is neither feasible nor desirable in view of the massive structural break caused by the lock down and the high level of continuing uncertainty about how the pandemic will play out. Assessments are based on informed judgments and model based exploration of alternative scenarios. Detailed sectoral and sub-sectoral assessments of disruptions, based on the views of domain experts and such information as is available, suggest that GDP has declined by nearly 26 per cent in Q1 of 2020-21 and could decline by (-) 12.4 per cent for the year as a whole in the absence of a strong policy stimulus. However, this is counterfactual since the government and RBI have in fact undertaken strong fiscal and monetary stimulus measures. Our model based policy simulations explore the impact of these fiscal and monetary policy measures, including the AB package, on major macroeconomic aggregates. The results suggest that while a decline in GDP will be significantly contained by these measures, the actual outcomes will depend on the strength of the supply response. Alternative scenarios have been explored where the supply response is varied from (-) 10 per cent of GDP to zero growth. We also examine a base scenario where the stimulus measures are allowed to work themselves out without any supply constraint, resulting in positive growth of 1.3 per cent. The other macroeconomic outcomes are fairly moderate across the scenarios. However, if the supply response is weak this could lead to rising inflation along with negative growth.

⁶ ENS Economic Bureau. 2020. "Unemployment rate soars to 27.11% amid COVID-19 pandemic: CMIE". *Indian Express*. <https://indianexpress.com/article/business/unemployment-rate-soars-to-27-11-amid-covid-19-pandemic-cmie-6395714/>. May 6 and "Expect a Recovery in June", Mahesh Vyas, *Business Standard* 16 June, 2020

Agriculture

While there were disruptions in the agricultural sector in the first phase of the COVID-19 lockdown, there has been a gradual return to normalcy since mid-April. Food inflation has also remained moderately low in April and May 2020. The prospects for output of the agricultural sector in 2020-21 will depend largely on the south-west monsoon. The forecasts released by the India Meteorological Department on April 15, 2020 and June 1, 2020 indicate that the south-west monsoon season rainfall for the country as a whole is likely to be normal. During the first fourteen days of the Southwest monsoon actual rainfall has been 31 per cent above the long period average. The availability of main inputs such as seeds and fertilisers is also reported to be comfortable for the upcoming season and the overall intensity of pests and diseases has remained below the Economic Threshold Level. The target of foodgrains production for the year 2020-21 has been fixed at 298 million tonnes as against an estimated output of about 295.7 million tonnes in 2019-20. In both horticulture and the dairy sector the expectation is that output will be normal. Our assessment is that GVA in Agriculture will grow at 3.0 per cent in 2020-21.

Industry

Industrial GVA grew by 0.9 per cent in 2019-20 and (-) 0.6 per cent in Q4: 2019-20. The IIP declined by (-) 55.5 per cent growth in April 2020. Electricity demand also declined by nearly (-) 24 per cent in April 2020, with a more moderate decline of (-) 17 per cent in May 2020 and the first week of June 2020. The IHS Markit Purchasers Managers' Index for April and May 2020 indicate contraction for both months. Our assessment is that industrial real GVA may have declined by (-) 54.2 per cent in Q1: 2020-21 before gradually recovering to zero per cent growth by the fourth quarter, implying an annual growth of (-) 27.1 per cent for 2020-21. This does not take into account the demand stimulation impact of fiscal and monetary policies undertaken by the government and RBI. The actual outcome will depend on the strength of the supply response to these measures. However, it is likely that there will be decline in industrial output for the year as a whole despite these measures.

Services

Services GVA grew by 5.5 in 2019-20 and 4.4 per cent in Q4: 2019-20. The IHS Markit Purchasers Managers' Index for April and May 2020 indicate contraction for both months. Other available lead indicators from April and May 2020 suggest mixed trends in line with our expectations. GVA in the services sector is estimated to decline by (-) 16 per cent in Q1: 2020-21 and is likely to register negative growth for the whole year. Of its three sub-sectors, 'trade, hotels, transport, communication and broadcasting' would suffer maximum disruptions. However, within this sub-sector communications is likely to register high growth because of the increased use of e-communications for both professional and social purposes. The sub-sector 'real estate, financial services & professional services' is expected to grow by 6.7 per cent in Q1: 2020-21. Within this sub-sector value added in real estate is expected to decline most sharply. In the 'public administration,

defence and other services' sub-sector, public administration itself and health services have had to perform at higher than normal levels in response to the novel coronavirus crisis and related challenges. Education services remained operational, but at a reduced pace. Other personal services mostly remain closed. Overall, the 'public administration & other services' sub-sector is expected to show positive income growth throughout 2020-21.

External Sector

The Coronavirus pandemic continues to take a huge toll on lives and also livelihoods throughout the world. In India, we assess the pandemic and the consequent nation-wide lock down may have led to a decline of output of over (-) 25 per cent y-o-y during Q1: 2020-21 and may also lead to negative growth for the whole year 2020-21. Weak external demand and Coronavirus triggered supply chain disruption has severely hit Indian exports, which are estimated to have contracted by (-) 33.7 per cent y-o-y in dollar terms during April-May 2020. However imports have contracted even more [(-) 48.3 per cent cumulatively during April-May 2020 in dollar terms]. This is partly because of weak domestic demand but it is also because of the global oil price crash. The sharper decline in imports compared to exports has moderated the trade deficit. The pandemic has also had a severe adverse impact on remittance flows and triggered a large outflow of portfolio investments while slowing down the inflow of FDI. These developments have depreciated the Indian rupee, which in turn has exacerbated the flight of capital. Accelerated de-globalisation since the pandemic is likely to lead to a very different architecture of global trade and finance post the pandemic. India needs to actively engage with these international developments in its best interest while domestically ensuring finance and other support for key export sectors. One such business segment is the MSME sector, which has been worst hit by the pandemic. Pharmaceuticals is another export sector where India can take advantage of the disruption of old supply chains to embed itself in the new supply chains that will emerge.

Prices

After peaking in January 2020, CPI and WPI inflation moderated in February and March 2020 because of declining food prices. However, the headline retail inflation at 6.7 per cent (for Q4: 2019-20) remained above the RBI inflation tolerance band of four to six per cent. The novel coronavirus lockdown has affected the collection of data with only food and fuel & light inflation being continuously available till May 2020. Food inflation has shown divergent trends for WPI and CPI in April and May 2020. While CPI inflation increased in April 2020, before declining in May 2020, WPI inflation continued to decline through April and May 2020. Fuel and light inflation showed similar trends in both WPI and CPI, continuously declining through April and May 2020. Overall we expect headline inflation to be 6 per cent in Q1:2020-21 and 7 per cent for the full financial year 2020-21. However, much will depend on the pace of supply response to the fiscal and monetary policy stimuli that have been provided. Business expectations and other evidence suggests that at present the decline in demand has exceeded supply side disruptions, hence the decline in inflation. By the same token a faster recovery of

demand in response to stimulus policies relative to supply responses is expected to lead to a rise in inflation later in the year as is also indicated by the policy simulations in Chapter 2.

Fiscal Outlook: Dealing with the Coronavirus shock

India has experienced a strong negative shock to both employment and incomes, hence also government revenues, as a consequence of the sudden countrywide lockdown, the most stringent in the whole world, for over two months. The expected revenue shortfall, combined with the large increase in expenditure required to cope with the crisis will lead to a large increase in central and state government fiscal deficits, requiring a revision of their budgets.

Revenue projections in the central budget, remarkably optimistic in view of the large shortfall in revenues in 2019-20, are now largely only of academic interest. Model based simulations of possible scenarios suggest that revenue growth (Centre plus States) could vary from (-) 2.2 per cent to 7.3 per cent corresponding to variations in aggregate supply response ranging from (-) 10 per cent GDP growth to 0 per cent GDP growth.

On the expenditure side what is most urgently required is a large increase in public health expenditure and provision of humanitarian relief in the form of free food and income support. While various policies have been announced which include these components, they fall far short of what is required. As against an estimated requirement of around 5 per cent of GDP, the current spending is about 2.5 per cent.

The expected revenue shortfall combined with the required increase in expenditure will entail a large increase in the combined fiscal deficit of the Central and State governments. The fiscal stimulus already announced amounts to a very substantial 9.7 per cent of GDP, including about 6.3 per cent budgeted deficits (Centre plus States), 2.1 per cent additional post-budget central borrowing to offset the expected revenue shortfall and 1.3 per cent additional fiscal spending under AB package. If we also count the 2 per cent additional borrowing headroom for states, which they may or may not use it because of the stringent conditionality, the fiscal stimulus would add up to 11.7 per cent of GDP. Together with the liquidity infusion amounting to about 8 per cent of GDP on the monetary side, this should lead to a very significant recovery of aggregate demand.

How that translates into a change in GDP growth and in inflation will depend on how aggregate supply responds to the restoration of demand. Our model simulations of different supply constraint scenarios suggest that with output allowed to vary from (-) 10 per cent of GDP to zero growth, inflation will remain between 6 per cent and 8 per cent, the current account deficit will remain below 3 per cent of GDP. The combined fiscal deficit will be contained below 8 per cent of GDP, implying a total public sector borrowing requirement of probably around 9-10 per cent of GDP.

Money and Financial Markets

With the economy put under great strain in the midst of a global pandemic and a nationwide lockdown, the RBI rolled out a host of relief measures in a bid to soften the blow to the industry and services and stimulate the flow of credit. While well intended, transmission of monetary policy has been somewhat ineffective, with the banking and financial sector under strain even prior to the COVID-19 scenario. With banks unwilling to extend credit to the MSMEs, credit guarantees for loans to, this group of businesses are necessary to offset rising risk aversion. So are partial credit guarantees for investing in NBFCs, particularly small and mid-sized NBFCs, which are the main providers of credit to the MSMEs.

NCAER simulations indicate that output for 2020-21 would contract by nearly 13 per cent in the absence of a strong macroeconomic stimulus. A massive stimulus is necessary for moderating the negative shocks to the economy. The government announced the AB stimulus package on 12 May 2020, cumulatively adding up to over 10 per cent of GDP, with further details provided on 13 May. Most of the package is designed to stimulate credit flows to private business, especially MSMEs and NBFCs. The fiscal component adds up to 1.3 per cent of GDP, with another 0.4 per cent provided for as contingent liabilities for credit guarantees.

The total government borrowing programme could now add up to as much as ₹17-21 trillion (8.8-10 per cent of GDP). This includes the announced Central government borrowing programme amounting to 6 per cent of GDP, including the 1.3 per cent of GDP additional borrowing to finance the fiscal component of AB package. It also includes the budgeted State government borrowing of 2.8 per cent of GDP, which could go up to 4.8 per cent if we also count the additional borrowing headroom of 2 per cent of GDP recently provided to them. Sovereign borrowing of this scale is unprecedented. It poses exceptional challenges for the RBI and a financial sector that is already under considerable stress. No single channel could finance government borrowing on such a huge scale. What is required is a combination of multiple options. Financing by commercial banks, indirect monetization of a part of this through RBI acquisition of government debt in the secondary market, further easing of the 'ways and means' allowance and, as a last resort, RBI acquisition of government debt through private placements, i.e., direct monetisation, of a part of the fiscal deficit.

Chapter 2: Policy Simulations in the context of COVID 19

Sudipto Mundle and NR Bhanumurthy¹

Forecasting based on conventional techniques is neither feasible nor desirable in view of the massive structural break caused by the lock down and the high level of continuing uncertainty about how the pandemic will play out. Assessments in this chapter are based on informed judgments and model based exploration of alternative scenarios. Detailed sectoral and sub-sectoral assessments of disruptions, based on the views of domain experts and such information as is available, suggest that GDP has declined by nearly 26 per cent in Q1 of 2020-21 and could decline by (-) 12.4 per cent for the year as a whole in the absence of a strong policy stimulus. However, this is counterfactual since the government and RBI have in fact undertaken strong fiscal and monetary stimulus measures. Our model based policy simulations explore the impact of these fiscal and monetary policy measures, including the Atmanirbhar Bharat package, on major macroeconomic aggregates. The results suggest that while a decline in GDP will be significantly contained by these measures, the actual outcomes will depend on the strength of the supply response. Alternative scenarios have been explored where the supply response is varied from (-) 10 per cent of GDP to zero growth. We also examine a base scenario where the stimulus measures are allowed to work themselves out without any supply constraint, resulting in positive growth of 1.3 per cent. The other macroeconomic outcomes are fairly moderate across the scenarios. However, if the supply response is weak this could lead to rising inflation along with negative growth.

The impact of the novel coronavirus on the world economy has turned out to be very severe. International agencies which earlier expected the global economy to grow by 3 per cent are now suggesting that it is likely to decline by (-) 3 per cent in 2020. For India also, the World Bank as well as Organization for Economic Cooperation and Development (OECD) have revised their growth forecasts to (-) 3.2 per cent and (-) 3.7 per cent, respectively, compared to the positive growth that they were forecasting just a couple of months ago. The International Monetary Fund (IMF), which had earlier predicted positive growth of 1.9 per cent for India has revised it downwards to (-) 4.5 per cent.

Given the major structural break and severe negative shock arising from the coronavirus pandemic and the consequent lock down in India, the most stringent in the world, it would be inappropriate to use conventional techniques for forecasting the economic outlook for Q1: 2020-21. Instead we have first drawn on the assessment of domain experts about the scale of disruption in different sectors and subsectors of the economy in Q1 (Table 2.1). We have then used model based simulations to assess the implications for annual growth of fiscal and monetary stimulus policies implemented, or announced, by the government and the RBI under alternative supply response assumptions.

¹ NR Bhanumurthy is Professor at NIPFP and now Vice Chancellor, BASE in Bengaluru

Table 2.1: Assumptions of Sector Disruptions in GVA 2020-21, June 2020

Sector	Sector	Assumptions of Disruptions in 2020-21:Q1 on a y-o-y basis (%)	GVA in 2019-20:Q1 (Rs crore)	GVA in 2020-21:Q1 (Rs crore)
Agriculture	Agriculture, forestry and fishing	3.0	4,39,843	4,53,038.3
Industry	Total	(-)54.3	10,16,199	4,64,807.8
	Mining and quarrying	0	92,807	92,807
	Manufacturing	(-)62.4	5,78,936	2,17,892.8
	Electricity, gas, water supply & other utility services	(-)40.0	81,628	48,976.8
	Construction	(-)60	2,62,828	1,05,131.2
Services	Total	(-)16.3	18,51,665	1,554,136
	Trade, hotels, transport, communication and services related to broadcasting	(-)62.4	6,30,860	2,37,518.8
	Financial, real estate & professional services	6.7	8,03,322	8,57,385.6
	Public administration, defence and other services	10.0	4,17,483	4,59,231.3
Total GVA	TOTAL GVA at basic prices	(-)25.7	3,307,707	24,71,982

Source: NCAER QRE Team.

Aggregating the sector and subsector level assessments of disruption shown in Table 2.1, it is estimated that Gross Value Added (GVA) has declined by as much as (-) 25.7 per cent in the first quarter of the current financial year (Table 2.2). Negative growth is expected to continue for the next two quarters as well, though with a gradual reduction in the decline relative output in the corresponding period last year as the lock down is withdrawn and the supply response picks up. This gradual revival is likely to lead finally to a moderate positive growth of 0.5 per cent in the fourth quarter of 2020-21 (Figure 2.1). This would mainly reflect the effect of a low base in Q4 of 2019-20, when GVA growth declined to 3.1 per cent. These quarterly growth assumptions imply

that India will experience a more gradual recovery than the 'V' shaped recovery some expect².

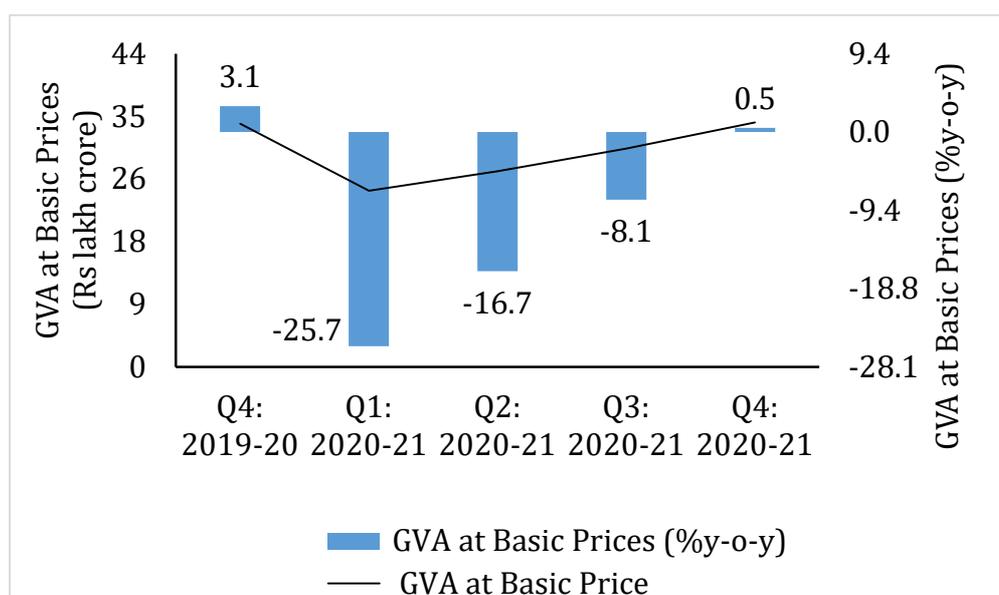
Table 2.2: Quarterly Assumptions about Disruptions in GVA and Key Sectors
(%y-o-y)

Sector	2019-20:Q4*	2020-21:Q1	2020-21:Q2	2020-21:Q3	2020-21:Q4	2019-20*	2020-21
Agriculture	5.9	3.0	3.0	3.0	3.0	4.0	3.0
Industry	(-)0.6	(-)54.2	(-)36.0	(-)18.0	0	0.9	(-)27.1
Services	4.4	(-)16.3	(-)10.9	(-)5.4	0	5.6	(-)8.2
GVA	3.1	(-)25.7	(-)16.7	(-)8.1	0.5	3.9	(-)12.4

Notes: * Provisional Estimates.

Source: MoSPI and NCAER QRE Team.

Figure 2.1: Expected Real GDP in 2020-21



Source: MoSPI and NCAER QRE Team.

For the year as a whole, the GVA growth would turn out to be (-) 12.4 per cent in the absence of any strong macroeconomic stimulus. However, this is counterfactual, since the government (Centre and some States) and RBI have already implemented, or

² See for instance the interview by Chief Economic Advisor, Krishnamurthy Subramanian in Economic Times. <https://economictimes.indiatimes.com/news/economy/finance/gdp-will-contract-in-the-first-quarter-kv-subramanian-cea/articleshow/75567696.cms>

announced, strong fiscal and monetary stimulus measures to address the sharp decline in economic activity following the lock down.

In order to maintain the expenditure levels proposed in the Union Budget: 2020-21 despite the large shortfall in revenues, and to additionally provide a fiscal stimulus under the Atmanirbhar Bharat (AB) stimulus package, the Central government has increased its borrowing program for the current year to Rs 12 trillion (about 6 per cent of GDP) from the earlier planned Rs 7.8 trillion. The states, which had a budgeted borrowing program of about 2.8 per cent of Gross Domestic Product (GDP) earlier have now been permitted additional borrowing of up to 2 per cent of GDP, but with strong conditions attached. The Central Government introduced the AB package on 12th May to help revive growth. Apart from the fiscal component mentioned above, the AB package also includes liquidity infusion and credit guarantee measures. The fiscal stimulus and liquidity infusion are intended to contain the decline in GDP in the short run. The package also includes several schemes to help revive MSME businesses that have suffered the most under the present lock down. It also includes some structural reform measures to help improve supply conditions in the medium to long term.

Against this background, an attempt has been made in this chapter to assess the impact of the stimulus measures on major macroeconomic outcomes under different supply constraint assumptions. This exercise is based on a macroeconomic policy simulation model originally developed by Mundle, Bhanumurthy and Das (2011), which has been used in different versions to address macroeconomic fiscal and monetary issues that have arisen from time to time³. In its present application the negative 2020-21 GDP growth assumption of (-) 12.4 per cent in Table 2.1 is imposed on the model to derive the corresponding expenditure, revenue and deficit conditions for this counterfactual case.

Using these initial numbers, the base case scenario is then simulated by incorporating the additional borrowing program and liquidity infusion measures under the AB package but without imposing any supply constraints, i.e., supply is assumed to respond to the stimulus driven increase in demand. Alternative scenarios are then generated by imposing different speeds of supply response, ranging from (-) 10 per cent GDP growth to zero growth to assess the impact of these varying paces of supply response on other macroeconomic outcomes. The results are presented in Table 2.3. It

³ The model was originally applied to find a macroeconomic path that combined fiscal consolidation with high growth (Mundle et.al. 2011). Its key policy conclusion of expenditure switching expenditure from revenue to capital spending was incorporated into the recommendations of the 13th Finance Commission and later the FRBM Committee. A second version was applied to analyze the impact of oil price policy reform (Mundle et.al. 2014). An expanded version with fiscal multipliers was used to analyze alternative deficit and debt policies (Bhanumurthy et. al. 2018) and most recently to explore alternative fiscal deficit and devolution policies for the 15th Finance Commission (Bhanumurthy et. al. 2019).

See Mundle, S., Bhanumurthy, N.R. and Das, S. 2011. "Fiscal Consolidation with High Growth: A Policy Simulation model for India". *Economic Modelling*. 28 (6): 2657-2688. November.

Mundle, S., Bhanumurthy, N R and Bose, S. 2014. "Subsidy Elimination With and Without a Global Oil Shock: The Macroeconomics of Oil Price Policy Reform" in N. Jung (ed.) *The Political Economy of Energy and Growth*, Oxford University Press, New Delhi.

Bhanumurthy N R, Bose, S. and Chakravatti P. 2018. "Targeting Debt and Deficits in India: A Structural Macroeconometric Approach". *Journal of Quantitative Economics*. Springer; The Indian Econometric Society (TIES). 16(1): 87-119, December.

Bhanumurthy N R, Bose, S. and Satija, S. 2019. "Fiscal Policy, Devolution and Indian Economy". *NIPFP Working Paper No. 287*. <https://nipfp.org.in/publications/working-papers/1883/>. New Delhi. December.

is assumed throughout that monetary policy will be accommodating. On the external side exports are largely dependent on external demand and tariffs while imports are largely dependent on domestic output and the price of oil. It is assumed throughout that advanced countries will grow as per the IMF projections and that international oil prices will remain at \$30 per barrel.

In the base case, we have incorporated the monetary and fiscal stimulus measures undertaken by RBI and the Central Government, including the additional government borrowing of Rs 4.2 trillion for the current year. The base case also incorporates additional borrowing headroom provided to Indian States up to 2 per cent of GDP. The contingent liabilities arising out of government credit guarantees for lending to MSMEs etc. have also been reflected in the public debt component. In Scenarios 1 to 4, we have introduced supply constraint by fixing the GVA growth exogenously at 0 per cent, (-) 2 per cent, (-) 5 per cent and (-) 10 per cent.

Table 2.3: Some Simulation Results

Scenarios	GDP growth (%)	Inflation (%)	Fiscal Deficit (as % of GDP)	CAD (as % of GDP)
Base case	1.33	5.46	7.6	2.8
Scenario-1	0	6.03	7.8	2.6
Scenario-2	-2.0	6.44	7.8	2.3
Scenario-3	-5.0	6.71	7.6	1.8
Scenario-4	-10.0	7.78	7.4	1.1

Source: Estimates using model from Bhanumurthy N R, Bose, S. and Satija, S. 2019. "Fiscal Policy, Devolution and Indian Economy". *NIPFP Working Paper No. 287*. <https://nipfp.org.in/publications/working-papers/1883/>. New Delhi. December.

As against the negative GDP growth of (-) 12.4 per cent in the counterfactual case, GDP growth turns out to be positive 1.3 per cent in our base case. This needs some explanation. The sharp decline in GDP by (-) 12.4 per cent in the counterfactual case implies an equally sharp revenue loss. This is passed on, in the absence of additional borrowing, as a corresponding decline in government expenditure, especially government capital expenditure to much below the level specified in the Union Budget: 2020-21. The base case reflects the increase in government borrowing limits to 5.6 per cent of GDP to maintain the level of spending envisaged in the Budget, the budgeted plus additional borrowing by States, amounting to almost 4.8 per cent of GDP plus the AB stimulus package. As noted earlier, the fiscal component of this package is 1.3 per cent of GDP, implying a total fiscal stimulus of about 11.7 per cent of GDP. The package also includes liquidity infusion amounting to 4 per cent of GDP as well as other measures, altogether adding up to Rs 21 trillion or over 10 per cent of GDP. It is this combination of a massive fiscal stimulus plus a large liquidity infusion which accounts for the swing from a (-) 12.4 per cent decline in GDP in the initial counterfactual case to a positive growth of 1.3 per cent in the base case. The impact on inflation, the combined

fiscal deficit (Centre plus States) and current account deficit (CAD) turn out to be 5.46 per cent, 7.6 per cent, and 2.8 per cent respectively. But this is on the assumption that there are no supply constraints and supply fully responds to the increase in demand generated by the stimulus policies.

However, the ground reality is that the economy is currently subject to very severe supply constraints because of increased mortality of businesses, especially MSMEs, the reverse migration of migrant labour and large scale disruption of supply chains. Varying degrees of supply constraints are introduced into the model simulations in scenarios 1 to 4 by exogenously fixing real GVA growth at 0 per cent, (-) 2 per cent, (-) 5 per cent and (-) 10 per cent. As the strength of the supply response is varied, inflation varies between 6 per cent and 8 per cent, the fiscal deficit is contained at under 8 per cent and the CAD varies between 1 per cent and 3 per cent of GDP. These results suggest that the stimulus package, if it is realised fully, could significantly contain the decline in GDP. The stronger the supply constraint the higher would be the rate of inflation, and it is likely to go above the RBI's tolerance band. This is the most plausible outcome given the prevailing supply constraints. If there is an improved supply response in the second round, one should expect inflation to decline subsequently. However, this may require much broader policy interventions (by both Central and State governments) on the supply side.

Chapter 3: Agriculture

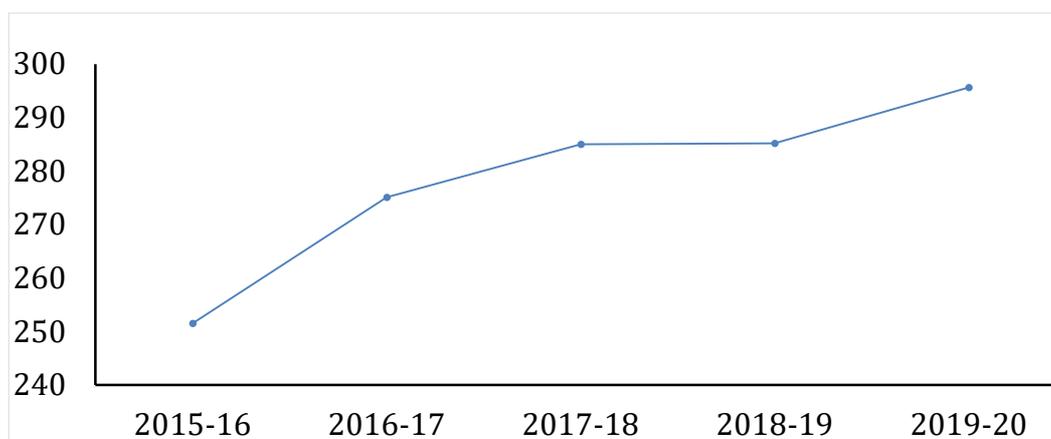
Anil K Sharma

While there were disruptions in the agricultural sector in the first phase of the COVID-19 lockdown, there has been a gradual return to normalcy since mid-April. Food inflation has also remained moderately low in April and May 2020. The prospects for output of the agricultural sector in 2020-21 will depend largely on the south-west monsoon. The forecasts released by the India Meteorological Department on April 15, 2020 and June 1, 2020 indicate that the south-west monsoon season rainfall for the country as a whole is likely to be normal. During the first fourteen days of the Southwest monsoon actual rainfall has been 31 per cent above the long period average. The availability of main inputs such as seeds and fertilisers is also reported to be comfortable for the upcoming season and the overall intensity of pests and diseases has remained below the Economic Threshold Level. The target of foodgrains production for the year 2020-21 has been fixed at 298 million tonnes as against an estimated output of about 295.7 million tonnes in 2019-20. The overall expectations for both horticulture as well as the dairy sectors also remain normal. The NCAER Assessment is that GVA in Agriculture will grow at 3.0 per cent in 2020-21.

3.1 Performance during 2019-20

The agricultural sector grew by 4.0 per cent in 2019-20 compared to the year preceding it, when the growth had slipped to 2.4 per cent. The sector especially showed strong growth of 5.9 per cent in Q4: 2019-20 on a year-on-year (y-o-y) basis. This improvement in farm sector growth is attributable to significant increase in the output of many crops as a consequence of better performance of rainfall in the monsoon as well as post monsoon season. The third Advance Estimates of agricultural output for selected crops show that food grain production in 2019-20 has touched a new record of 295.7 million tonnes. This is 3.7 per cent higher than the earlier record output of 285.2 million tonnes achieved last year (Figure 3.1). Output of both the major food grains scaled new peaks in 2019-20 – rice at 117.9 million tonnes and wheat at 107.2 million tonnes (Table 3.1).

Figure 3.1: Output of Foodgrains from 2015-16 to 2019-20 (Million Tonnes)



Source: Ministry of Agriculture and Farmers Welfare.

**Table 3.1: Estimated of Output of Selected Crops
(Million tonnes)**

Crops	2017-18	2018-19	2019-20
Rice	112.8	116.5	117.9
Wheat	99.9	103.6	107.2
Coarse cereals	47.0	43.1	47.5
Pulses	25.4	22.1	23.0
Total Food grains	285.0	285.2	295.7
Oilseeds	31.5	31.5	33.5
Cotton*	32.8	28.0	36.0
Sugarcane	379.9	405.4	358.1
Horticulture crops	310.7	310.7	313.4
Milk Output	176.3	187.7	191.0 (p)

Source: Directorate of Economics and Statistics, Government of India, Ministry of Agriculture and Farmers Welfare.

Notes: * The estimates for cotton are in million bales. (p) provisional

Among non-food grain crops, output of oilseeds in 2019-20 is estimated at 33.5 million tonnes, which is 6.3 per cent higher than 31.5 million tonnes produced in 2018-19. And, output of cotton in 2019-20 is estimated at 34.2 million bales, a very large annual increase of 28.6 per cent because of the fall in output during in 2018-19. However, sugarcane output was down by (-) 11.7 per cent in 2019-20, reflecting the market response to high stocks of sugar, which seem to have been building up over the past few years.

The output of horticultural crops in 2019-20 is estimated at 313.4 million tonnes, which is marginally higher than output in 2018-19¹. The provisional estimate of milk output in 2019-20 places it at 1.8 per cent higher than last year's output of 187.7 million tonnes.

3.2 Prospects for 2020-21

3.2.1 Output

The prospects for output of the agricultural sector in 2020-21 depend largely on monsoon rainfall. The preliminary first stage forecast just released by the India Meteorological Department (IMD) on April 15, 2020 indicates that quantitatively, the south-west monsoon season rainfall for the country as a whole is likely to be normal. The forecast further suggests that monsoon rainfall in the June to September period for

¹ The disruptions in supply chain for fruits and vegetables, livestock and fishing & aquaculture products in the last week of March 2020 may lead to somewhat lower growth in the fourth quarter of 2019-20 than what was estimated previously.

the country as a whole, is most likely to be 100 per cent of the Long Period Average (LPA)) with an error margin of ± 5 per cent.

Much will depend on the progress of the monsoon through the full season and its actual spatial distribution across various states. Data for the first fourteen days from June 1, 2020 to June 14, 2020 suggest that the nation as a whole has received 31 per cent excess rainfall compared to normal. Barring the East and Northeast India where rainfall has been 4 per cent deficient, all other regions have received excess rainfall. Central India has received as much as 94 per cent more rainfall than its normal.

The level of water storage in the country's main reservoirs on June 11, 2020 was 173 per cent of the live storage during the corresponding period of last year and 171 per cent of last 10-year's average. The availability of main inputs such as seeds and fertilisers is reported to be comfortable for the upcoming season and overall intensity of pests and diseases has remained below the Economic Threshold Level (ETL). All these indicators have led the agricultural ministry to set high targets of growth for main crops. The target of foodgrains production for the year 2020-21 has been fixed at 298 million tonnes against an estimated output of about 295.7 million tonnes in 2019-20². Though there are no firm estimates, expectations remain high for horticulture as well as dairy. Overall we are assuming agricultural growth of 3.0 per cent in 2020-21 as supply chain constraints have eased.

3.2.2 Harvesting, supply, and distribution

There is no doubt that conditions created by the lockdown due to Coronavirus pandemic has caused some disruptions in the food supply chain initially and there have also been reports of lack of buyers in some places due to scarcity of transport and labour in the distribution network.

The supply of milk has continued even during the lockdown as the dairy cooperatives as well as other suppliers of milk have ensured uninterrupted supplies. In the initial phase of lockdown, there was some decline, but gradually the sales have recovered with pro-active support from the co-operatives and the central and state governments. The supply of fruits and vegetables has also continued. Though commercial and private establishments have been closed dairy and vegetable booths have been open as these have been treated as essential services.

Therefore, with the progressive exemption of agricultural activities from the lockdown after the second half of April, there has been a steady move towards some normalcy in the agricultural supply chain, more so in areas that have been less affected.

3.2.3 Food Prices

Though last year was by and large a good year for the agricultural sector, there were a few commodities which experienced high rates of inflation due to seasonal and temporary shortages, e.g., a few vegetables, pulses, and cereals. This led to an overall

² Preliminary Report from the Ministry of Agriculture and Farmers' Welfare on 12th June, 2020 shows that area coverage under Kharif crops increased by 8.7 per cent over normal of corresponding week and 10.8 per cent over 2019-20.

food price inflation of 8.4 per cent in 2019-20 as compared to only 0.3 per cent in 2018-19 (Table 3.2). The data for April and May 2020 show moderation in WPI food inflation (Table 3.2). Milk prices have remained elevated around 5.6 per cent over the last three months of March to May 2020. However, there is a divergence between the trends in WPI and CPI (for more details see Chapter 7 on Prices).

Table A.2: Changes in Wholesale Price Indices of Food Articles in 2019-20 and April-May 2020

S. No.	Product	Increase in 2018-19 over 2017-18	Increase in 2019-20 over 2018-19	Increase in April-May 2020-21 over 2019-20
1	Food Articles	0.3	8.4	1.8
2	Cereals	5.6	7.5	2.4
3	Pulses	(-)9.5	15.9	12.1
4	Vegetables	(-)8.4	31.2	(-)5.4
5	Fruits	(-)1.7	3.5	(-)2.6
6	Milk	2.4	2.4	5.7
7	Eggs, meat and fish	1.7	6.5	0.1
8	Condiments and spices	3.5	11.1	13.2
9	Other food articles	0.2	(-)0.3	(-)4.0

Source: Computed.

The inflationary pressures experienced in 2019-20 are likely to ease in 2020-21 as the government starts liquidating foodgrain stocks through Public Distribution System shops and in the open market to increase supplies in this period of distress. As of March 2020 stocks were reckoned at 58.5 million tonnes – 27.5 million tonnes of wheat and 31.0 million tonnes of rice. This is much more than double the mandatory required stock level of 21.04 million tons at the beginning of April. The abundance of stocks and record output of many agricultural commodities in 2019-20 indicates that the short-term outlook for supply of essential food items will remain comfortable.

To mitigate the impact of the pandemic, direct income support was provided to farmers via PM-KISAN and the payments were front-loaded. In addition, the wage rates under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) were also increased simultaneously and on May 14, 2020, the Government of India announced loans and liquidity support to farmers and the rural economy. These measures would, among other things, help returnee migrants get jobs in rural areas, especially under MGNREGS.

Chapter 4: Industry

Bornali Bhandari, Saurabh Bandyopadhyay and Ajaya Sahu

Industrial GVA registered growth of 0.9 per cent in 2019-20 and (-) 0.6 per cent in Q4: 2019-20. The IIP registered (-) 55.5 per cent growth in April 2020. Electricity demand also shows a decline of nearly (-) 24 per cent in April 2020, with a more moderate decline of about (-) 17 per cent in May 2020 and the first week of June 2020. The IHS Markit Purchasers Managers' Index for April and May 2020 indicate contraction for both months. Our assessment is that industrial real GVA will decline by (-) 54.2 per cent in Q1: 2020-21 before gradually recovering to zero per cent growth by the fourth quarter. Average annual growth for 2020-21 is estimated at (-) 27.1 per cent.

4.1 Introduction

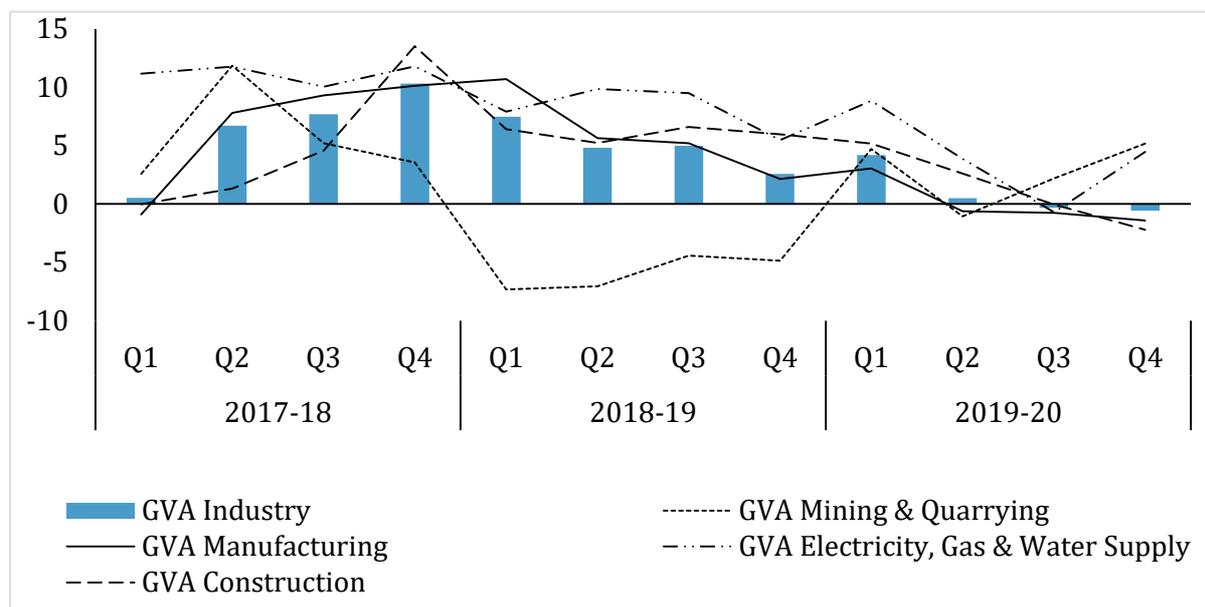
Industrial output declined in Q4:2019-20 with the pace of decline accelerating in the manufacturing sector. The maximum decline in industrial GVA is expected in the first quarter when the whole country has been under strict lockdown for most of April 2020 with phased opening up in May. The hope is that the lockdown will be completely lifted by end June 2020, when the spread of the Covid-19 virus may start receding. Our assessment is that industrial output in India will slowly recover to its pre-COVID levels by the fourth quarter of 2020-21. The presumption is that there is no second wave of COVID-19 and associated lockdown in the autumn or winter of 2020-21. Overall, the outlook for 2020-21 remains grim.

4.2 Industry: Aggregative Trends

The Provisional Estimates released on 29th May 2020 estimated industrial GVA growth to be 0.9 per cent in 2019-2020, substantially lower than the 4.9 per cent registered in 2018-19. The mining sector grew by 3.1 per cent in 2019-20; 'electricity, gas, water supply & other utility services' (EGW) by 4.1 per cent and; construction by 1.3 per cent. Manufacturing growth was weakest at 0.03 per cent in 2019-20.

The sharpness of the industrial slowdown is better captured by quarterly data (Figure 4.1). Output in manufacturing, which is the largest sub-sector within the industrial sector, has declined for three consecutive quarters in 2019-20. Output in the construction sector also declined in Q4: 2019-20. However, growth in mining and EGW improved in Q4:2019-20.

Fig. 4.1: GVA Industry and its Components (%y-o-y, Q1: 2017-18 to Q4: 2019-20)



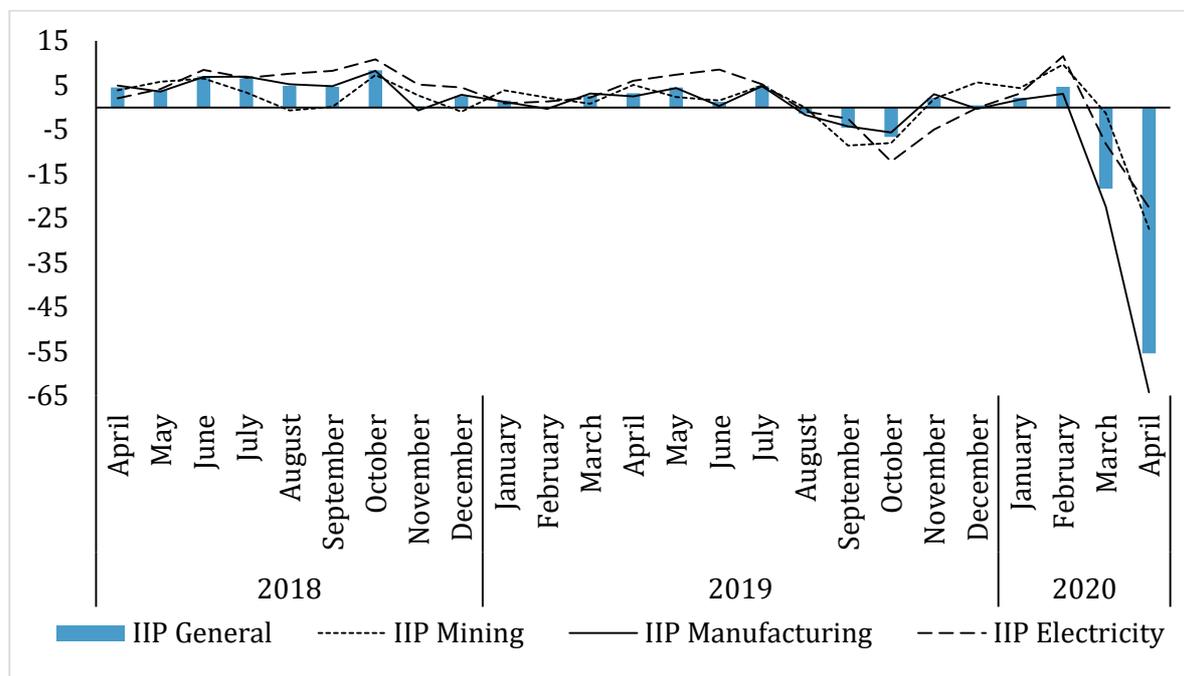
Source: NCAER Computations from MoSPI.

4.3 Trends in Industrial Activity in April: 2020-21

The Index of Industrial Production (IIP), the alternative indicator for organised sector industry, fell by (-) 55.5 per cent in April 2020 on a y-o-y basis (Figure 4.2). This was mainly driven by the sharp decline manufacturing sector output, which declined by (-) 64.3 per cent. Output in the mining and electricity sectors declined by (-) 27.6 per cent and (-) 22.6 per cent respectively in April 2020.

In the use based classification also output declined output declined in all categories in April 2020. The index for consumer durables declined the most [(-) 95.7 per cent], followed by capital goods [(-) 92 per cent], infrastructure/construction goods [(-) 83.9 per cent], intermediate goods [(-) 66 per cent], consumer non-durables [(-) 36.1 per cent] and primary goods by [(-) 26.6 per cent].

Figure 4.2: Index of Industrial Production, General, Mining, Manufacturing and Electricity (%y-o-y) April 2018 to April 2020



Source: NCAER Computations from MoSPI.

The two-digit classification of manufacturing industries indicates that all industries showed large negative y-o-y growth in April 2020. There were three industries, where the decline in growth was relatively moderate. The index for food products fell by (-) 21.4 per cent in April 2020 on a y-o-y basis, followed by 'coke and refined petroleum products' [(-) 28.3 per cent] and 'pharmaceuticals, medicinal chemical and botanical products' [(-) 29.8 per cent]. Food and 'pharmaceuticals, medicinal chemical and botanical' products would have fallen under the Essential Commodities Act 1955 and would have continued to function, albeit in a limited manner.

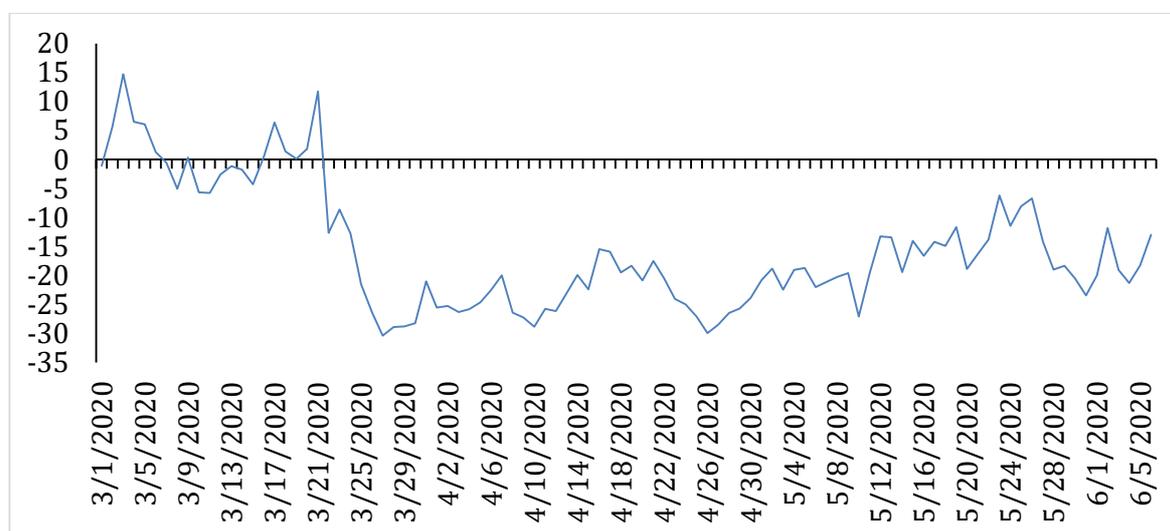
Core IIP, with a weight of 40.3 per cent in IIP fell by (-) 38.1 per cent on a y-o-y basis in April 2020. All eight sectors showed negative growth led by steel [(-) 84 per cent] and cement [(-) 84 per cent]. Output of petroleum refinery products fell by (-) 24.2 per cent followed by electricity [(-) 23 per cent], natural gas [(-) 20 per cent], coal [(-) 15.5 per cent], crude oil [(-) 6.4 per cent] and fertilisers [(-) 4.5 per cent].

4.4 Outlook for 2020-21

Any attempt to forecast industrial performance through conventional techniques under present conditions would be futile. Our assessment of industrial performance in the first quarter of 2020-21 is based on inputs from domain experts and such piecemeal data as has been available about likely performance of individual subsectors in the first quarter. The assumed impact of COVID-19 on overall industrial performance in Q1 is a

weighted aggregation of these sub-sector level assessments. It has been assumed that the sub-sectors would be worst affected in April 2020 with activity gradually recovering thereafter as the lockdown is phased out through May and June. This is reflected very clearly in the graph for electricity demand (Figure 4.3) and Markit Purchasers Managers Index (PMI) for manufacturing for April and May 2020. The PMI Manufacturing fell from 51.8 in March 2020 to 27.4 in April 2020, rising to 30.8 in May 2020. These indicate that the manufacturing sector was contracting in April and May 2020 with marginal recovery in the latter month. Industrial activity is likely to be back to output levels of 2019-20 by the end of Q4:2020-21, assuming there is no second wave of the pandemic or further lockdowns in the second quarter.

Figure 4.3: Maximum Energy Demand Met, March 1, 2020 to June 6, 2020 (% y-o-y)



Source: Authors' computations Power System Operation Corporation Ltd. <https://posoco.in/>.

The sub-sectors of the industrial sector are discussed below:

1. Mining and Quarrying: The 'mining and quarrying' sub-sector has a 9.4 per cent share in industrial GVA. It is assumed that GVA in Mining will show zero growth in Q1: 2020-21. Even though the lockdown has not stopped production in that sector, prices may come down in the near future and stay there¹. Further, the Core IIP indicators show that although output declined in the sub-sector, the magnitude of decline was relatively moderate for natural gas, coal and crude oil
2. Manufacturing: The manufacturing sub-sector accounts for 56.4 per cent of industrial GVA. We use the demand for electricity as an indicator of manufacturing activity as it is a key input. Figure 4.3 shows that there is a steep

¹ World Bank. 2020. "A shock like no other: The impact of COVID-19 on commodity markets". <https://www.worldbank.org/en/research/commodity-markets>. April 23.

y-o-y fall in the daily maximum demand post-lockdown. The average fall in energy demand between 25th March 2020 and 6th June was (-) 18.3 per cent. However, this aggregate figure hides the monthly variations. The corresponding numbers for April and May 2020 were respectively (-) 23.6 per cent and (-) 16.9 per cent. For the first six days of June 2020 it was (-) 17.2 per cent.

The impact of COVID-19 on manufacturing depends on what enterprises could stay open for producing 'essential items' under the Disaster Management Act since work-from-home is not an option for manufacturing. Further, supply chain disruption has affected both input and output flows. Finally, even in plants allowed to be open, worker absenteeism and adoption of social distancing would imply operation at sub-optimal capacity. The assessment for manufacturing sub-sectors is as follows:

- a. Food Products, Beverages and Tobacco: This sub-sector accounts for 10.1 per cent of the manufacturing sector. It is assumed that the GVA will fall by (-) 10 per cent in Q1: 2020-21. The data for April 2020 shows that manufacturing of food products fell the least. It has a weight of 5.3 per cent in the overall IIP. However, beverages and tobacco output fell by (-) 94.2 per cent and (-) 97.7 per cent respectively. Their shares in overall IIP were 1 and 0.8 respectively. Both manufacturing of food products and beverages are presumably seeing some recovery as supply chains disruption is eased and the lockdown is being gradually eased since 15 May, 2020².
- b. Textiles, Apparel and Leather Products: This sub-sector accounts for 12.5 per cent of the manufacturing sector. It is assumed that real GVA will fall by (-) 90 per cent in Q1: 2020-21 as plants were mostly closed. However, some enterprises may have been producing cloth masks, Personal Protection Equipment etc. The April 2020 IIP numbers closely match our priors with manufacturing of textiles, wearing apparel and leather & related products declining by (-)95.6 per cent, (-)96.2 per cent and (-)98.7 per cent respectively in April 2020. Their weights in the overall IIP are 3.3, 1.3 and 0.5 respectively.
- c. Metal Products: This sub-sector accounts for 14.8 per cent of the manufacturing sector. Here it is assumed that real GVA will fall by 50 per cent in Q1: 2020-21.
- d. Machinery and Equipment: This sub-sector accounts for 22.8 per cent of the manufacturing sector and includes production of computers, electronics, communication, optical products etc. and repair of computers, personal & household goods. The sub-sector has been completely closed during phases 1 and 2 of the lock down and will need time to re-open. Therefore it is assumed that the real GVA will fall by 100 per cent in Q1:2020-21 in this sub-sector compared to GVA in Q1 of 2019-20.

Times of India. 2020. "Supply Chains Jump to Life". <https://timesofindia.indiatimes.com/india/supply-chains-jump-back-to-life/articleshow/75419070.cms>

- e. Other Manufactured Goods: This sub-sector accounts for 39.8 per cent of the manufacturing sector. It is assumed that the real GVA will fall by (-) 50 per cent in Q1: 2020-21 compared to the corresponding period last year. This sub-sector includes enterprises in manufacturing of pharmaceuticals, chemicals, rubber, plastic, coke and refined petroleum products, many of which have continued to operate during the lockdown.

Taking a weighted average, it is assumed that GVA of the manufacturing sector has fallen by 62.6 per cent in Q1: 2020-21. The Markit PMI for manufacturing, fell by (-) 47.1 per cent in April 2020 but rose by 12.4 per cent in May 2020 on an m-o-m basis. It stood at 27.4 and 30.8 respectively in April and May 2020 respectively. Despite improvement in May 2020, the PMIs indicated negative growth in both the months.

3. Electricity, Gas and Water Supply: This sub-sector accounts for 7.2 per cent of the industry sector. It is assumed that the GVA has fallen by (-) 40 per cent in Q1: 2020-21. The IIP electricity fell by (-) 22.6 per cent in April 2020 and going by trends exhibited in Figure 4.3, the decline in IIP for this sector should moderate. Our assumed decline in this sub-sector may be an overestimate. However, its impact on the overall growth of the industrial sector is very small.
4. Construction: This sub-sector accounts for 27 per cent of industry. It has been under full lockdown though some rural construction has been permitted under MGNREGA since April 14th. Post May 3rd, construction activities have been allowed in Green zone districts, albeit with restrictions and this is likely to continue. We have therefore assumed a (-) 60 per cent fall in real GVA in construction in Q1: 2020-21 compared to Q1: 2019-20.

Aggregating across subsectors on a weighted average basis indicates that industry GVA will fall by (-) 54.2 per cent in Q1: 2020-21 (Table 4.1). We assume that the sector will be gradually recovering through Q2 and Q3, till it reaches 2019-20 output levels (i.e. zero growth) by Q4: 2020-21.

Table 4.1: Quarterly Assumptions about Disruptions in GVA and Key Sectors (%y-o-y)

Sector	Q1: 2020-21	Q2: 2020-21	Q3: 2020-21	Q4: 2020-21	2020-21
Industry	(-)54.2	(-)36.0	(-)18.0	0	(-)27.1
Mining	0.0	Left Blank intentionally			
Manufacturing	(-)62.4				
Electricity, Gas & Water Supply	(-)40.0				
Construction	(-)60.0				

Source: NCAER QRE Team.

The Government announced a host of measures for micro, small and medium enterprises (MSMEs) in terms of providing government guarantees for encouraging

loans and equity investment in these enterprises (see Table 8.3 on Atmanirbhar Bharat package in Chapter 8). It has streamlined the definition of MSMEs and made it common across manufacturing and services sectors. To encourage MSMEs' business, global tenders have been disallowed in government procurement tenders. The effectiveness of these recently announced measures for reviving MSME businesses and nursing them back to health remains to be seen.

Chapter 5: Services

Bornali Bhandari

Services GVA grew by 5.5 in 2019-20 and 4.4 per cent in Q4: 2019-20. The IHS Markit Purchasers Managers' Index for April and May 2020 indicate contraction for both months. Other available lead indicators from April and May 2020 suggest mixed trends in line with our expectations. GVA in the services sector is estimated to decline by (-) 16 per cent in Q1: 2020-21 and is likely to register negative growth for the whole year. Of its three sub-sectors, 'trade, hotels, transport, communication and broadcasting' would suffer maximum disruptions. However, within this sub-sector communications is likely to register high growth because of the in-creased use of e-communications for both professional and social purposes. The sub-sector 'real estate, financial services & professional services' is expected to grow by 6.7 per cent in Q1: 2020-21. Within this sub-sector value added in real estate is expected to decline most sharply. In the 'public administration, defence and other services' sub-sector, public administration itself and health services have had to perform at higher than normal levels in response to the novel coronavirus crisis and related challenges. Education services remained operational, but at a reduced pace. Other personal services mostly remain closed. Overall, the 'public administration & other services' sub-sector is expected to show positive income growth throughout 2020-21.

5.1 Introduction

The on-going slowdown in the services sector in 2019-20 was aggravated by the novel corona virus in Q4: 2019-20. The impact was particularly severe in the 'trade, hotels, transport, communication and services related to broadcasting' sub-sector. The growth of the sector, 'public administration, defence & other services' (PADOS) remained buoyant. The outlook for 2020-21 is mixed with zero growth in 'trade, hotels, transport, communication and services related to broadcasting' and positive growth in 'financial, real estate and professional services' & PADOS. Value added in the sector as a whole is expected to decline by (-) 8.2 per cent in 2020-21.

5.2 Services sector in 2019-20

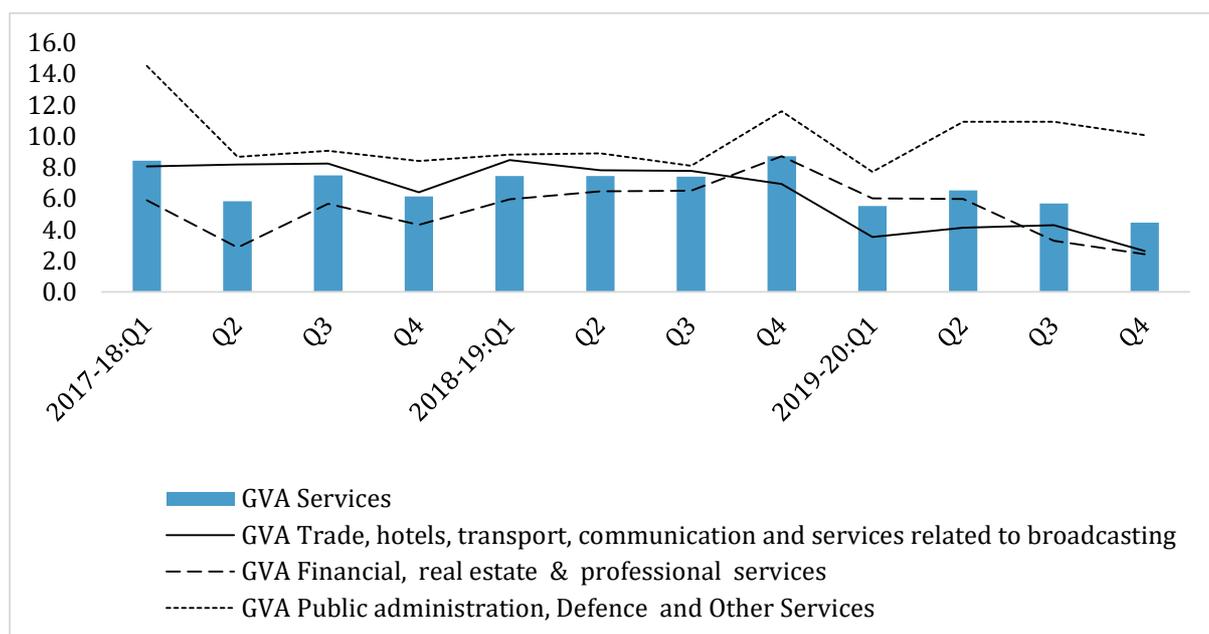
5.2.1 Gross Value Added of GVA Services and its Components

As per the Provisional Estimates released by MoSPI on 29th May, 2020, the growth rate of Services GVA fell from 7.7 per cent in 2018-19 to 5.5 per cent in 2019-20. Out of three sub-sectors, two showed subdued growth in Q4: 2019-20. The growth rate of 'trade, hotels, transport, communication and services related to broadcasting' fell from 7.7 per cent in 2018-19 to 3.6 per cent in 2019-20. The growth rate of 'financial, real estate and professional services' fell from 6.8 per cent in 2018-19 to 4.6 per cent in 2019-20. In contrast, the growth rate of PADOS increased from 9.4 per cent in 2018-19 to 10 per cent in 2019-20.

The annual aggregates hide the mixed quarterly growth pattern of the overall services growth sector and its sub-sectors. It is clear, however, that services growth came down after Q2: 2019-20 (Figure 5.1). The 'trade, hotels, transport, communication and services related to broadcasting' sector was showing increasing

growth through much of 2019-20 before it fell from 4.3 per cent in Q3: 2019-20 to 2.6 per cent in Q4: 2019-20. In contrast, the growth rate of ‘financial, real estate and professional services’ was already trending down from 6.0 per cent in Q1: 2019-20 and Q2: 2019-20 to 3.3 per cent in Q3: 2019-20 to 2.4 per cent in Q4: 2019-20. The growth rate of PADOS fell marginally from 10.9 per cent in Q2 and Q3 of 2019-20 to 10.1 per cent in Q4: 2019-20.

Figure 5.1: GVA Services and its Components
(%y-o-y, Q1: 2017-18 to Q4: 2019-20)

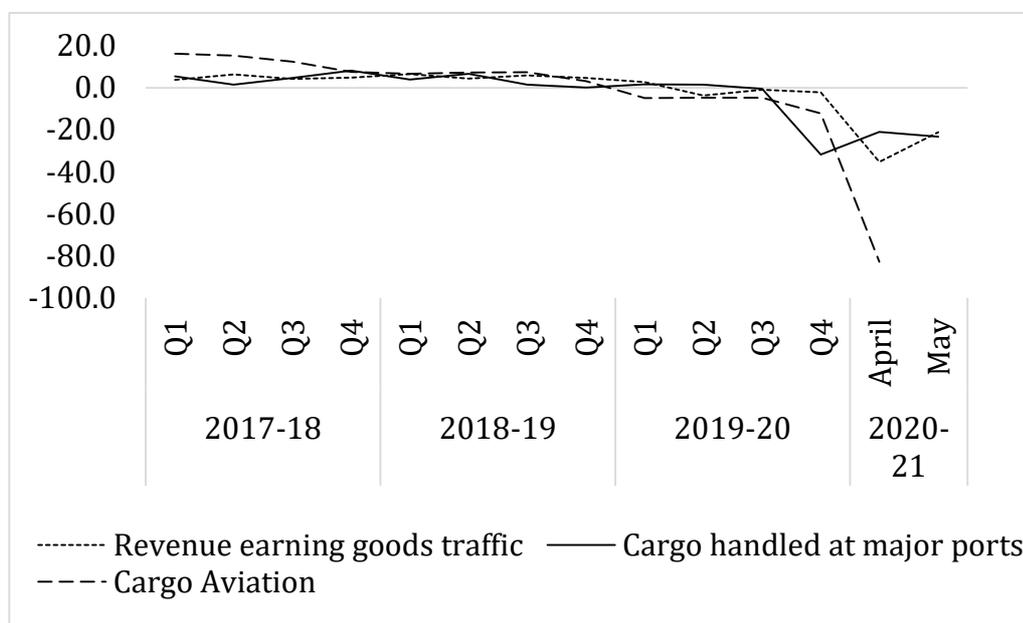


Source: NCAER Computations from MoSPI.

5.2.2 Lead Indicators for April and May, 2020-21

Within the Services sector the novel coronavirus (COVID-19) first impacted the ‘trade, tourism, hotels and restaurants’ sub-sector (Figure 5.2). Post the implementation of the lockdown on 24th March 2020, the transport sub-sector was also adversely affected with both cargo and passenger traffic being affected. Amongst the cargo traffic (Figure 5.2), while growth rate of revenue earning goods traffic show performed better in May 2020 compared to April 2020, it was still negative. The growth rate of cargo handled by major ports has been negative for three consecutive quarters and the lead indicators from April and May 2020 indicate a continuation of this trend. Growth of air cargo traffic has been negative for consecutively for 12 months (April 2019-April 2020). In April 2020, air cargo traffic declined by (-) 82.8 per cent on a y-o-y basis. Passenger air traffic fell by (-) 100 per cent in April 2020 on a y-o-y basis. This is not surprising given passenger air travel was shut down for most of the month due to the novel corona virus.

Figure 5.2: Cargo Traffic carried by Air, Rail and Ports, Q1: 2017-18 to Q4: 2019-20 and April & May (%y-o-y)



Source: Ministry of Railways, Airways Authority of India, India Ports Association and CMIE.

Trends in the financial sub-sector were mixed in April and May 2020 as indicated in the Money and Financial Markets chapter (Chapter 9). After showing positive growth in April 2020, ‘Bank credit to the commercial sector’ declined in May 2020. ‘Aggregate deposits in scheduled commercial banks’ grew by 9.8 per cent in April and by 10.7 per cent in May 2020

5.3 Outlook for 2020-21

Growth of the sub-sectors within the services sector for Q1: 2020-21 have been assessed based on such indicative information as are available as of now and inputs from domain experts. These were then aggregated on a weighted average basis to estimate the impact of COVID-19 on the Services sector as a whole. It has been assumed that the worst impact would be felt in April 2020, with some improvement during May, June as the lock down was gradually withdrawn. This assumption has confirmed by such indicative evidence as is available. The IHS Markit Purchasers Manager Index (PMI) was at 5.4 in April 2020 and 12.6 in May 2020 indicating continued contraction in the sector. It has been further assumed that as mandated restrictions on operations in the sector are being removed in a phased manner after May 17th, this will enable the sector to adjust back to the output levels of Q4, 2019-20 by Q4 of 2020-21. The sub-sectors are discussed in further detail below:

1. ‘Trade, hotels, transport, communication and services related to broadcasting’:

The share of this sector in the services sector is about 35.6 per cent. Our assessment for this sub-sector is that the GVA in this sub-sector would fall by (-) 62.4 per cent (Table 5.1). Further details are as follows:

- a. Trade and repair services: This sub-sector is adversely affected as most shops engaged in retail and wholesale trade were closed due to the lockdown in April and partially opened in May. Shopping malls were allowed to operate from June 2020 onwards and even then the footfall has been slow. Stand-alone shops, neighbourhood shops and shops in residential complexes were allowed to be opened from May 4, 2020. Repair services were completely remained closed for the first two phases of the lockdown¹. Noting that essential services were open through the lockdown and others are being allowed to open gradually through May and June, it is expected that the GVA in this sector would fall by (-) 70 per cent in Q1: 2020-21 compared to Q1, 2019-20.
- b. Hotels & Restaurants: This was the first sector to be affected directly due to the COVID-19 related lockdown. The Guidelines issued on May 1, 2020 said that all hospitality services would remain closed barring the ones that are catering to coronavirus front line workers and stranded tourists, migrants etc. Restaurants have been partially closed with food delivery allowed. The GVA in this sector is expected fall by 80 per cent. The impact of COVID-19 on the tourism sector is separately discussed in Box 5.1.

Box 5.1. Impact of COVID-19 on Tourism Sector

The Hotels & Restaurants (H&R) constitute 5.7 per cent of the sector “Trade, hotels, transport, communication and services related to broadcasting” in GVA terms (7-year average in annual series, NAS). GVA in H & R for Q1:2019-20 is estimated at Rs 36,958 crore.

As per Tourism Satellite Accounts (TSA), the tourism sector contributes about 2.8 per cent to total national GVA, which for Q1:2020-21 is estimated at Rs 93,173 crore (this takes into account the tourism components in Hotels, restaurants, transports services, recreational activities etc.). All the components in this sector have been severely affected, hence there is an estimated 90 per cent disruption in the tourism sector for Q1: 2020-21.

The number of jobs in tourism is estimated at about 35 million. Of these, about 44 per cent are self-employed and rest are employees. We can assume that self-employed continue to retain their jobs but with little work or revenue generation. If we assume that about 50 per cent of the remaining 56 per cent are laid off. That means a loss of about 10 million jobs in the tourism sector alone.

Source: Contributed by Poonam Munjal, Senior Fellow, NCAER.

- c. Transport, storage and warehousing: Passenger traffic across all modes

¹ Please see Figure 1.1 for the timeline of the lockdown.

was halted for the most part during the first two phases of the lockdown. The latest guidelines suggest that public transport may be opened in green zones but with social distancing norms. As on April 30, migrants were allowed for inter-state movement by a few special trains. Some long distance have started operated for general passengers from 12 May, 2020. Passenger traffic on trains and planes have started operating from June 2020, although on a very restricted basis. Decisions on re-opening urban public transport are being made city-wise.

Box 5.2: Lockdown, Logistics inefficiency and Impact on economy

A lockdown effectively increases the logistics cost of transporting goods in multiple ways. The shortage of labour at the origin and destination and new norms of social distancing may lead to increased time in loading/unloading activities, causing in effect lower efficiency. The restriction on movement of traffic through red zones imply that cargo may have to be transported through bypass road. The intermittent traffic barricades along the highway and multiple check points by law enforcers invariably lead to more time and thereby lower efficiency leading to higher transportation cost.

If cost efficiency in transportation falls due to the lockdown, how does it affect overall GDP? The effect will be higher in sectors which have greater forward and backward linkages. NCAER is assessing using the Global Trade Analysis Project Computable General Equilibrium model consisting of 57 sectors and 14 major trading partners of India. The policy shocks are applied only on Indian parameters of the model related to the logistics related sectors. We assume that the productivity will decline by 5 per cent due to the lockdown in the following logistics sectors: land transport, water transport, air transport and retail trade. The 5 per cent decline is purely an assumption for illustrative purposes not a robust estimate.

A 5 per cent fall in efficiency in Indian shipping translates to 1.3 per cent loss in GDP and 1.6 per cent decline in exports. At the sectoral level, effects are more pronounced on manufacturing compared to agricultural. The largest fall in output would be in the following sectors: wearing apparels (3.1 per cent), metals (3.1 per cent), leather products (2.4 per cent), transport equipment (2.2 per cent), and electronic equipment (2.1 per cent).

Source: Contributed by Sanjib Pohit, Professor and Devender Pratap, Fellow, NCAER.

The closure of cargo traffic has varied over the phases. Roads carry most of Indian freight and they faced many challenges including labour shortage, very limited road-side facilities like eateries, empty trucks on return journeys and restrictions on crossing inter-state borders etc. This has eased in the third phase with no passes required at many inter-state borders. Both ports and airports also saw restricted movement of cargo traffic in the first two phases of the lockdown. The leading indicators

confirm these trends. Therefore, the GVA of this sector is expected to fall by (-) 70 per cent in Q1:2020-21. The sub-optimal operation of the logistics sector has a further negative impact on Gross Domestic Product through input-output linkages (Box 5.2).

- d. Communication and Services related to broadcasting: The telecom sector would have a positive shock as people moved to working from home. Webinars, online educational classes etc. would have increased demand in this sector. Although private courier services were closed, postal services remained open and catered to the varied needs during this lockdown. Computers, consultancy and related activities and information service activities have remain operational in Q1: 2020-21. In sum, the GVA in this sector is expected to increase by 12.5 per cent on a y-o-y basis.
2. Financial, real estate & professional services: Overall the GVA of this sub-sector is expected rise by 6.7 per cent in Q1: 2020-21. The average share of this sub-sector in overall services sector is 40.3 per cent.
 - a. Financial services is assumed to register positive growth as banks and other financial outreach activities have remained open. Business/banking correspondents have been reaching out to provide last mile delivery of social welfare benefits via Direct Benefit Transfer. It is expected that the GVA in this sub-sector will rise by 12.5 per cent in Q1: 2020-21.
 - b. Real estate activities remained closed. It is expected that the GVA in real estate would fall by (-) 70 per cent in Q1: 2020-21.
 - c. Business services are assumed to have remained open as there was a shift to work from home. Professional, scientific and technical services have continued and some administrative and support service activities have also continued. Legal activities have continued, though at a reduced pace, as courts carried out activities via e-Courts. Accounting and book keeping activities have also continued. However, rental and leasing service activities seem to have come to a stop. Growth of 12.5 per cent growth is expected for this sub-sector in Q1: 2020-21.
 3. PADOS: On average, this group accounts for 24.1 per cent of the services sector. We expect 10 per cent growth in this sector. The sheer nature of the COVID-19 related lockdown means that there would be a higher demand for public administration. Defence, of course, remained operational. Education services remained operational, but at a reduced pace, while other personal services mostly remain closed. We are assuming that the GVA of the health sub-sector has experienced a positive shock because of the much higher level of activity in response to the COVID-19 crisis, mainly in public health services. The outlook for the sector remains grim, notwithstanding the assumption of positive growth in some sectors. Plus, as pointed out in the case of the transport sector, there is a direct impact and then there is indirect impact.

Table 4.1: Quarterly Assumptions about Disruptions in GVA and Key Sectors (%y-o-y)

Sector	Q1: 2020-21	Q2: 2020-21	Q3: 2020-21	2020-21:Q4	2020-21
Services	(-)16.3	(-)10.9	(-) 5.4	0	
Trade, hotels, transport, communication and services related to broadcasting	(-)62.4		Left intentionally blank		
Financial, real estate & professional services	6.7				
Public administration, Defence and Other Services	10				

Source: NCAER QRE Team.

The Government of India (GoI) announced a host of measures for micro, small and medium enterprises (MSMEs) under the Atmanirbhar Bharat package on May 13, 2020. The package also announced a government guaranteed credit facility for street vendors plus free rations up to two for migrant workers, with or without ration cards, on May 14, 2020 (see Table 8.3 in Chapter 8). These measures are welcome, though they fall far short of what is required. They should have a significant positive impact on economic activities in the services sector.

Chapter 6: External Sector

Sudipto Mundle, Prerna Prabhakar and Bornali Bhandari

The Coronavirus pandemic continues to take a huge toll in lives and also livelihoods throughout the world. In India, we assess it may have led to a decline of output of over (-) 25 per cent y-o-y during Q1: 2020-21 and may also lead to negative growth for the whole year 2020-21. Weak external demand and novel coronavirus triggered supply chain disruption has severely hit Indian exports, which are estimated to have contracted by (-) 33.7 per cent y-o-y in dollar terms during April-May 2020. However imports have contracted even more [(-) 48.3 per cent cumulatively during April-May 2020 in dollar terms] because of weak domestic demand and also the global oil price crash, thereby moderating the trade deficit. The pandemic has also had a severe adverse impact on remittance flows and triggered a large outflow of portfolio investments while slowing down the inflow of FDI. These developments have depreciated the Indian rupee, which in turn has exacerbated the flight of capital. Accelerated de-globalisation since the pandemic is likely to lead to a very different architecture of global trade and finance post the pandemic. India needs to actively engage with these international developments in its best interest while domestically ensuring finance and other support for key export sectors. One such business segment is the MSME sector, which has been worst hit by the pandemic. Pharmaceuticals is another export sector where India can take advantage of the disruption of old supply chains to embed itself in the new supply chains that will emerge.

6.1. Coronavirus Pandemic, World Economy & the Indian Economy

The novel coronavirus pandemic continues to take a huge toll in lives and also livelihoods in many countries across the globe. Several countries have resorted to social distancing, quarantining, lockdowns and closures of all non-essential sectors/businesses, imposing a severe adverse shock on economic activity.

The IMF is now projecting that global output will decline by about (-) 4.9 per cent in 2020 (IMF World Economic Outlook, June 2020). Output in the Advanced Economies (AEs) is projected to decline by (-) 8.0 per cent, a sharp drop from its April forecast of (-) 6.1 per cent growth. This change reflects the devastating effect of the coronavirus pandemic during Q1 of 2020 (Table 6.1). United States output is expected to decline by (-) 8.0 per cent in 2020. Output in the Euro Area's is projected to contract by 7.5 per cent, with recession in all countries, especially Italy. Output in Japan is expected to decline by (-) 10.2 per cent. In contrast, the forecasted decline in output growth in the Emerging Market and Developing Asia is (-) 0.8 per cent, mainly on account of China - though this is where the pandemic originated.

Table 6.1: Growth of Global Output and Trade (% , y-o-y)

Country	Estimated	Projections	
	2019	2020	2021
World Output	2.9	(-)4.9	5.4
Advanced Economies	1.7	(-)8.0	4.8
United States	2.3	(-)8.0	4.5
Euro Area	1.2	(-)10.2	6.0
Germany	0.6	(-)7.8	5.4
France	1.3	(-)12.5	7.3
Italy	0.3	(-)12.8	6.3
Spain	2	(-)12.8	6.3
Japan	0.7	(-)5.8	2.4
United Kingdom	1.4	(-)10.2	6.3
Emerging Market and Developing Economies	3.7	(-)3.0	5.9
Emerging and Developing Asia	5.5	(-)0.8	7.4
China	6.1	1.0	8.2
India	4.2	(-)4.5	6.0
ASEAN-5	4.8	(-)2.0	6.2
Latin America and the Caribbean	0.1	(-)9.4	3.7
Brazil	1.1	(-)9.1	3.6
Mexico	-0.1	(-)10.5	3.3
World Growth Based on Market Exchange Rates	2.4	(-)6.1	5.3
World Trade Volume (goods and services)	0.9	(-)11.9	8.0

Source: IMF. 2020. *World Economic Outlook*. <https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>. June.

The IMF projection of (-) 4.5 per cent growth for India for 2020-21 is relatively optimistic compared to NCAER estimates. Our assessment at NCAER is that Gross Value Added has probably declined by nearly 26 per cent in Q1 because of the severe lock down imposed towards the end of March, the most stringent anywhere in the world (see chapter 2). Though economic activity is likely to gradually recover during the year our model simulations suggest that in the absence of a strong macroeconomic stimulus measures GDP would have declined by about (-) 12.4 per cent in 2020-21.

However, the Reserve Bank of India (RBI) and the government have undertaken very significant measures to revive the economy, including those announced under the Atmanirbhar Bharat package¹. These measures could potentially reverse the decline in

¹ These are discussed in detail in chapters 8 and 9.

GDP, were it not for the severe supply response constraints facing the economy². Though the supply constraints are clearly severe it is not possible at present to quantify these since there is still too much uncertainty about how the pandemic will play out. Hence in this Quarterly Review of the Economy (QRE) we have used model simulations to estimate the possible impact on various macroeconomic aggregates, including the current account deficit (CAD) of varying degrees of supply constraints ranging from a best case scenario of zero GDP growth to a worst case scenario of (-) 10 per cent growth (Chapter 2 Table 2.3).

6.2 India's External Sector

India's total exports, including merchandise and services, amounted to US\$ 534.9 billion, for the period of April-March 2019-20, marking a marginal decline of (-) 0.1 per cent compared to 2018-19³. The decline was particularly sharp in March 2020, when external demand started falling on account of the pandemic. Total imports amounted to US\$ 598.6 billion, a much sharper decline of (-) 4.9 per cent compared to exports, especially on account of the exceptional fall in oil price. Consequently, the trade deficit for the period April–March 2019-20 remained moderate at US\$ 73 billion indicating a decrease of 29.8 per cent compared to 2018-19 (Table 6.2).

Table 6.2: Summary of India's Current Account Balance

Time Period	Merchandise Trade Balance		Invisibles Balance		Trade Balance Merchandise plus Services ¹		Current Account Balance	
	US\$ billion	% y-o-y	US\$ billion	% y-o-y	US\$ billion	% y-o-y	US\$ billion	% y-o-y
2017-18	(-)160	42.3	111	13.6	(-)92	110.5	(-)49	(-)437.9
2018-19	(-)180	12.7	123	10.5	(-)104	12.8	(-)57	17.5
2019-20	(-)153	-15.2	Not Available		(-)73	(-)29.8	Not Available	
April-May 2020	9.9	-67.7	Not Available		4.4	(-)124.4	Not Available	

Note: 1. Services is a sub-component of Invisibles.

Source: Ministry of Commerce & RBI.

In the current year, cumulative merchandise and services exports for the period

² For example, Box 4.2 discusses the negative impact on GDP of exacerbated inefficiencies in the logistics sector.

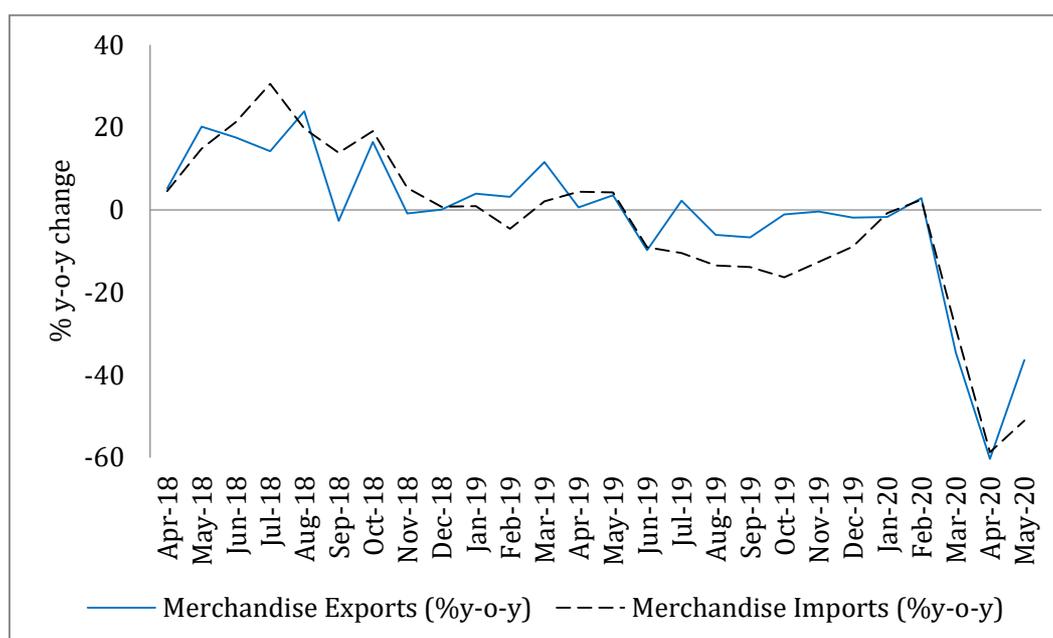
³ The balance of payments data are available till the third quarter. The current account balance had already come down to US\$(-) 22 billion cumulatively at the end of Q3: 2019-20 compared to US\$(-)53 billion cumulatively at the end of Q3: 2018-19. This means that the current account deficit by the end of December 2019 had already declined by (-) 58 per cent on a y-o-y basis before the pandemic.

April-May 2020 amounted to US\$ 61.6 billion, a decline of 33.7 per cent compared to the same period last year.⁴ This is clearly attributable to the novel coronavirus pandemic triggered global economic crisis. Total imports declined even more sharply at 48.3 per cent on a y-o-y basis, amounting to US\$ 57.2 billion, mainly due to the huge decline in oil prices. Consequently, India has enjoyed a trade surplus of US\$ 4.4 billion for this period, an unusual experience for this country.

6.2.1 Merchandise trade

Merchandise exports during the period April–March 2019-20 stood at US\$ 314.2 billion, a contraction of 4.9 per cent compared to the same period last year. Merchandise imports for the period April–March 2019-20 amounted US\$ 467.2 billion i.e. a contraction of 8.9 per cent. This fall in merchandise imports is largely attributable to the decline in value of oil imports by (-) 7 per cent during April-March 2019-20. Consequently, the trade deficit declined to US\$ 153 billion, a decline of (-) 15.2 per cent compared to 2018-19.

Figure 6.1: Merchandise Exports and Imports (%y-o-y) (April 2018 to May 2020)



Source: Computed from Ministry of Commerce.

Merchandise exports for the period April-May cumulatively amounted to US\$ 29.4 billion, a massive y-o-y contraction of 47.5 per cent, which somewhat moderated in May (Figure 6.1). The contraction was most pronounced for petroleum and gems and

⁴ Unless indicated otherwise, the statistics cited in this paragraph and the next are from the Ministry of Commerce Press Release of June 15, 2020.

jewellery. Non-petroleum, non-gems & jewellery exports in April-May 2020-21 contracted by (-) 37.89 per cent. Merchandise imports for the period April-May 2020 cumulatively amounted to US\$ 39.3 billion i.e. a contraction of 54.7 y-o-y (Figure 6.1). Oil imports during April-May 2020-21 at USD 8.15 billion was 65.8 per cent lower compared to USD 23.82 billion during the same period last year. The very sharp decline in oil imports is mainly due to the crash in oil prices. Brent crude fell to an average of US \$ 27.2 per barrel in April & May 2020, a decline of around 61.6 per cent y-o-y basis (IMF World Commodity Prices). Non-oil and non-gold imports were USD 31.10 billion in April-May 2020-21, a decline of (-) 42.6 per cent, compared to USD 54.18 billion in April-May 2019-20. The massive decline in merchandise imports in April moderated somewhat in May as the lockdown was gradually wound down. In sum, merchandise trade contracted by (-) 67.7 per cent in April-May 2020 on a y-o-y basis.

6.2.2 Services Trade

The receipts and payments for services trade amounted to US\$ 220.7 billion and US\$ 140.7 billion, respectively, yielding a surplus of US\$ 80.1 billion during April-March 2019-2020. Exports and imports grew by 7.8 per cent and 11.3 per cent respectively during this period. The impact of the pandemic shows up in the decline in services imports during March and April 2020 by (-) 2.3 per cent and (-) 18.4 per cent y-o-y respectively. Service exports decreased by (-) 8.9 per cent in April 2020 on a y-o-y basis.

6.3. Transmission Channels for Coronavirus Shock

Global economic shocks are transmitted to the economy through multiple channels. In this section the main channels through which the current global shock are being transmitted to the Indian economy are briefly reviewed.

6.3.1 Foreign Investment Flows

In India as in other Emerging Market and Developing Economies (EMDEs), rising risk aversion triggered by the Coronavirus pandemic has led to capital flight from the country. Net Foreign Direct Investment (FDI) increased by 30 per cent for the period April-February 2019-20 on a year-on-year (y-o-y) basis. However, between January and February 2020, net FDI inflows are down to half their value amounting to USD 2,873 million. In April 2020, it fell by (-) 70.6 per cent y-o-y. Foreign Institutional Investments and Foreign Portfolio Investments amounting to USD 8.3 billion were pulled out of the Indian market in March 2020 alone according to the National Securities Depository Limited (NSDL).

6.3.2 Remittances

Remittances are a major source of foreign exchange receipts for India. The pandemic has had a severe adverse effect on remittance flows. The World Bank estimates that remittances to India will fall sharply by about 23 per cent to US\$64 billion in 2020

⁵ The source for this data is the Reserve Bank of India.

while it had grown by 5.5 per cent to \$83 billion during 2019⁶.

The decline in remittance flows is not only on account of the pandemic but also because of the collapse of oil prices that has severely impacted the Gulf economies which account for a large share of remittances to India, over 50 per cent according to the Reserve Bank of India (RBI).⁷

6.3.3 Oil price shock

It will be evident from the foregoing that the oil price collapse is not an unmixed blessing for India. It has impacted the Indian economy in two ways, one positive and one negative. On the one hand it has been a major factor accounting for the decline in the value of imports, thereby containing the trade deficit. On the other hand it has both reduced the value of our oil exports and significantly disrupted the inflow of remittances.

6.3.4 Exchange Rate

The Indian rupee has been depreciating in line with the outflow of foreign capital described above. It depreciated by 6.6 per cent (vis-à-vis the US\$) in two months between February and April 2020. At the time of writing (13 June, 2020), it had further depreciated to Rs 75.9 per US\$. While this helps to reduce the imbalance between exports and imports it is also reducing the return on external portfolio investments, thereby reinforcing the outflow of capital as in other EMDEs. For Indian investors, who have borrowed in foreign exchange, often without hedging, the currency depreciation is increasing their debt burden.

6.4 Possible Roadmap Ahead for India's External Sector

The full extent of global economic shock from the Coronavirus pandemic is not yet evident. But clearly it is reminiscent of the Great Depression of 1930s and far more severe than the Great Recession of 2008. It is significantly accelerating the pace of de-globalisation which was already underway since the crisis of 2008. In all likelihood the whole architecture of global economic relations, in particular global trade and supply chains could change radically. India needs to remain alert to such changes and adjust quickly to meet its best interests. While safeguarding its key export sectors and taking advantage of new opportunities to expand their markets at the national level, India also needs to engage with other countries at the international level to help shape the post-pandemic architecture of international trade and finance in a way consistent with its national interests.

The micro, small and medium enterprises (MSME) sector which accounts for 50 per cent of India's exports has been the worst hit due to closure of the economic activity

⁶ Ratha, Dilip K.; De, Supriyo; Kim, Eung Ju; Plaza, Sonia; Seshan, Ganesh Kumar; Yameogo, Nadege Desiree. 2020. "COVID-19 Crisis Through a Migration Lens (English)". *Migration and Development Brief*. No. 32. Washington, D.C.: World Bank Group.

⁷ Jain, R., Gajbhiye, D and Tewari, S.. 2018. "Globalising People: India's Inward Remittances". *RBI Bulletin*. pp. 45-55. November.

across the country. Support by way of access to bank finance is key for reviving the sector which not only accounts for half our exports but also the bulk of our employment outside agriculture. The ANB package announced in May 2020 includes a major government credit guarantee component to incentivise lending to this sector. Another key sector for the growth for India's exports is pharmaceuticals. In the wake of the pandemic there has been a surge in the global demand for pharmaceutical products and medicines but the supply chains have been disrupted since China, where the pandemic first hit, is the global hub for manufacturing active pharmaceutical ingredients (APIs). India itself is dependent on China for 70 per cent of its API requirements. However, with the disruption of existing supply chains, India should seek to create and develop an adequate API manufacturing base and become a major player the global pharmaceutical market.

Health has now emerged as a major global public good, or collective good, requiring close international cooperation through the World Health Organization and other partnerships. The World Trade Organization has also observed in its latest report that the "pandemic has highlighted the need for greater cooperation and efforts to reduce barriers to trade, including through increased mutual recognition agreements (MRAs)."⁸ India needs to actively engage with other countries in taking these agendas forward. In particular, India can leverage its multilateral and regional ties for liberalising trade in medicines and pharmaceutical products. In two of India's existing Free Trade Agreements (FTAs), the India-Japan FTA and Indian-Singapore FTA, there are provisions for greater cooperation for generic medicines. These provisions should be replicated in other bilateral, regional and multilateral FTAs.

⁸ World Trade Organisation. 2020. The Treatment of Medical Products in Regional Trade Agreements. https://www.wto.org/english/news_e/news20_e/rta_27apr20_e.htm. April 27.

Chapter 7: Prices

Rudrani Bhattacharya¹ and Ajaya K Sahu

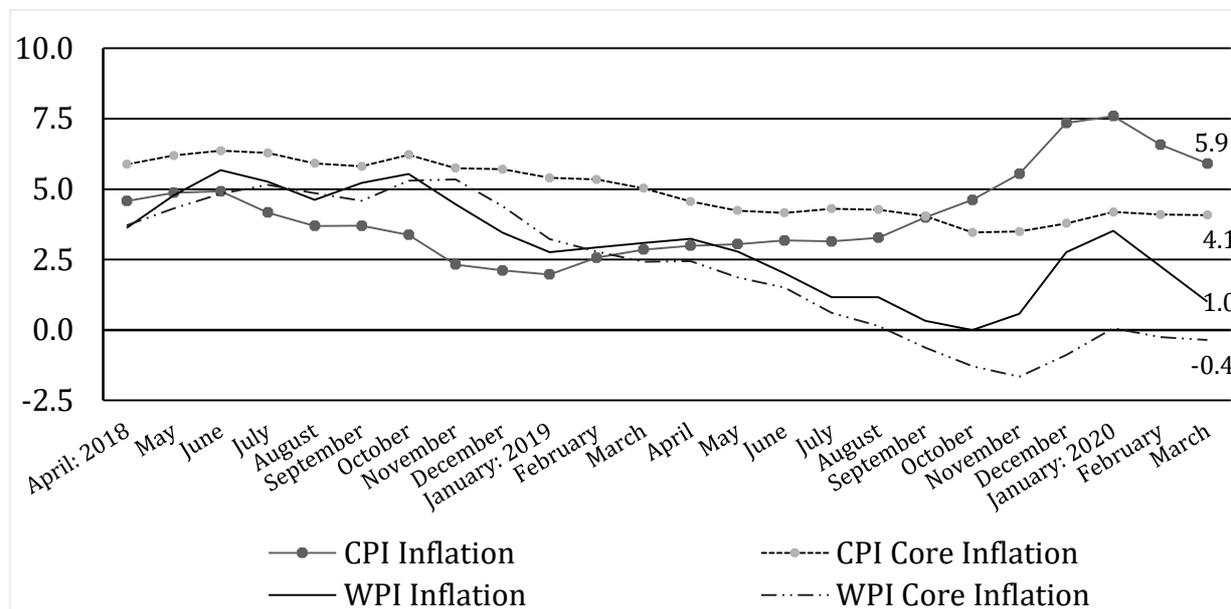
After peaking in January 2020, CPI and WPI inflation moderated in February and March 2020 because of declining food prices. However, the headline retail inflation at 6.7 per cent (for Q4: 2019-20) remained above the RBI inflation tolerance band of four to six per cent. The novel coronavirus lockdown has affected the collection of data with only food and fuel & light inflation being continuously available till May 2020. Food inflation has shown divergent trends for WPI and CPI in April and May 2020. While CPI increased in April 2020, before declining in May 2020, WPI inflation continued to decline through April and May 2020. Fuel and light inflation showed similar trends in both WPI and CPI, continuously declining through April and May 2020. Overall we expect headline inflation to be 6 per cent in Q1:2020-21 and 7 per cent for the full financial year 2020-21. However, much will depend on the pace of supply response to the fiscal and monetary policy stimuli that have been provided. Business expectations and other evidence suggests that at present the decline in demand has exceeded supply side disruptions, hence the decline in inflation. By the same token a faster recovery of demand in response to stimulus policies relative to supply responses is expected to lead to a rise in inflation later in the year as is also indicated by the policy simulations in chapter 2.

7.1 Introduction

Food price inflation continued to drive both Consumer Price Index (CPI) inflation and Wholesale Price Index (WPI) inflation and it declined in the last quarter of 2019-20 (January-March 2020). Its contribution to overall inflation has come down. Consequently, the gap between overall inflation and core inflation (without food and fuel) came down in Q4:2019-20 for both CPI and WPI (Figure 7.1). While WPI food inflation retained its declining trend in April and May 2020, the CPI food inflation rose in April 2020, followed by a decline in May, 2020. With data on inflation all components inconsistently available, one can only comment on food inflation and not on overall inflation (see Box 7.1 for details).

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Figure 7.1: CPI and WPI Inflation: Overall and Core April 2018- March 2020, (%y-o-y)



Source: Authors’ calculations from MoSPI and Office of Economic Advisor.

Box 7.1 : Release of CPI and WPI data affected by Coronavirus Crisis

The novel coronavirus has affected the collection of data on inflation. For the first quarter of the financial year 2020-21, Central Statistical Organisation (CSO) has published CPI data for the months of April and May 2020 only for food & beverages, housing (only for urban sector), and fuel & light. Within the food and beverages group, data for prepared meals are not available for April and May, 2020 and data on meat & fish is not available for the month of April, 2020.

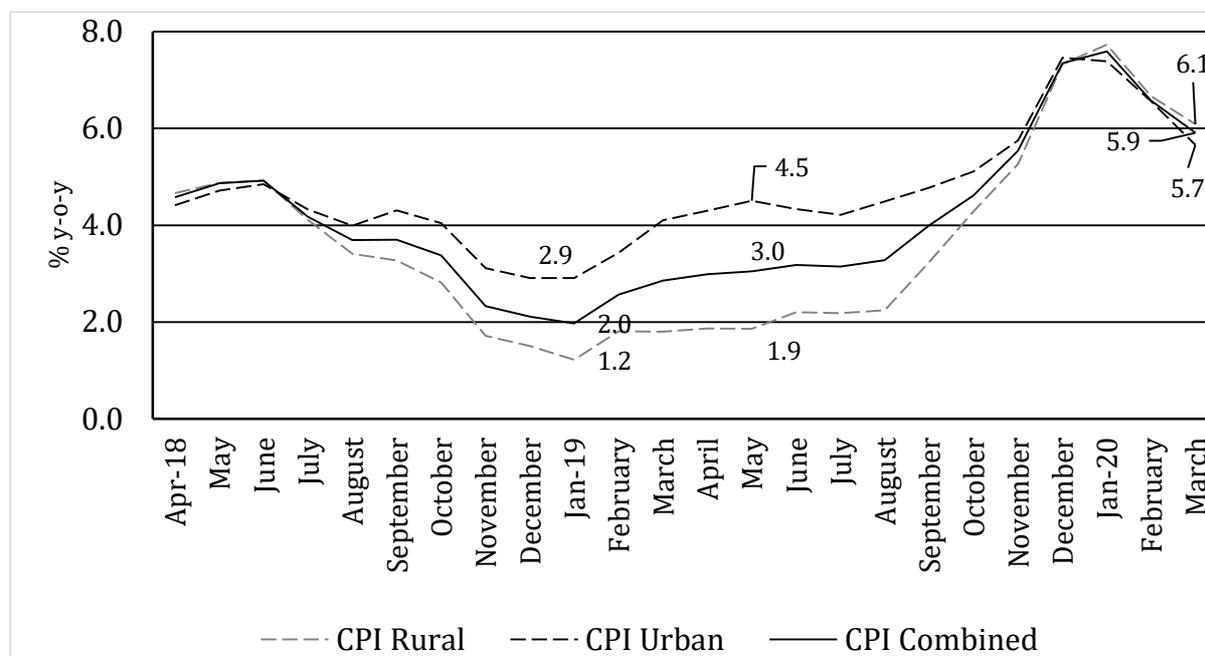
Similarly the Office of Economic Advisor released WPI data for April, 2020 with data missing on many categories. This is because of limited transactions of products in the wholesale market in the month of April, 2020. Further, overall WPI could not be computed for April-2020 due to non-availability of manufactured product group index. However, WPI data for all categories was released for May 2020. Since complete data are not available for April and May 2020, barring food and fuel & light inflation, all figures compare the dynamics of CPI and WPI inflation till March, 2020.

7.2 Retail Inflation

After bottoming out at 2 per cent in January 2019 the CPI inflation rate (headline inflation) gradually rose to 7.6 per cent in January 2020 on a year-on-year (y-o-y) basis, thus crossing the upper bound of the RBI inflation tolerance band of 4 to 6 per cent. The CPI rural inflation rate rose from 1.2 per cent in January 2019 to 7.7 per cent in January

2020 while the CPI urban inflation rate similarly rose from 2.9 per cent to 7.4 per cent over the same period. After peaking in January, the headline inflation rate had declined to 5.9 per cent by March 2020 (Figure 7.2).

Figure 7.2: CPI Inflation and Sectoral Variation, April 2018–March 2020 (% y-o-y)

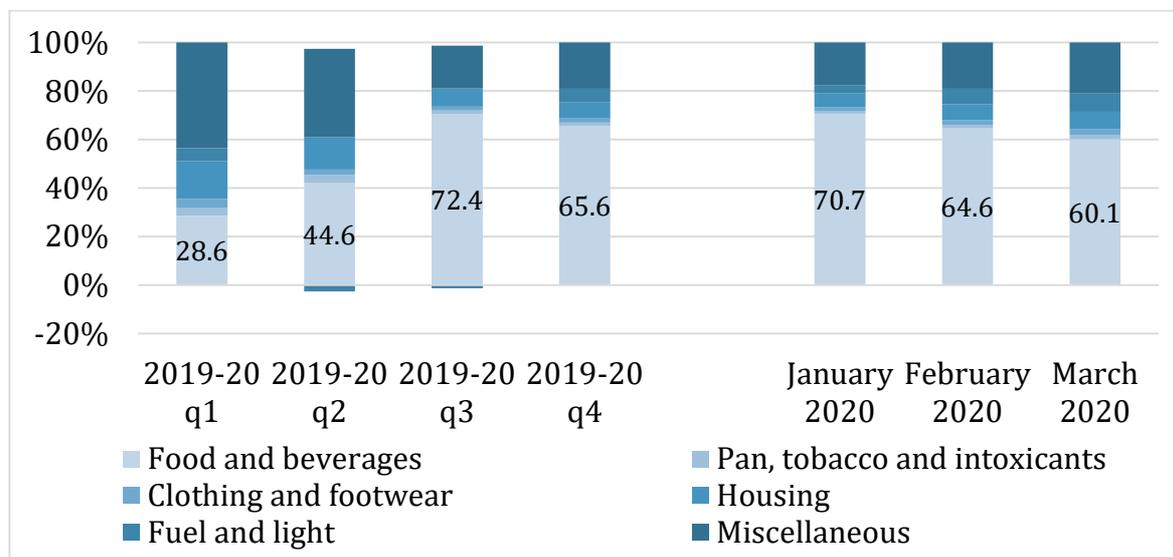


Source: Authors’ calculations from MoSPI.

Figure 7.3 shows that ‘food and beverages’ inflation was the main driver of overall inflation. Its contribution increased from 28.6 per cent of total inflation in Q1: 2019-20: to 72.4 per cent in Q3: 2019-20, then declining to 65.6 per cent in Q4: 2019-20. On a monthly basis the contribution of ‘food and beverages’ inflation in total inflation declined from 70.7 per cent in January 2020 to 64.6 per cent in February 2020 and further to 60.1 per cent in March 2020. Further decomposition of ‘food & beverages’ inflation shows that it was mainly driven by changes in vegetables’ prices. The contribution of ‘miscellaneous items’ (which includes transport, education and health items) which was very large in Q1:2019-20 (43.5 per cent) is now down to 19.1 per cent in Q4: 2019-20.

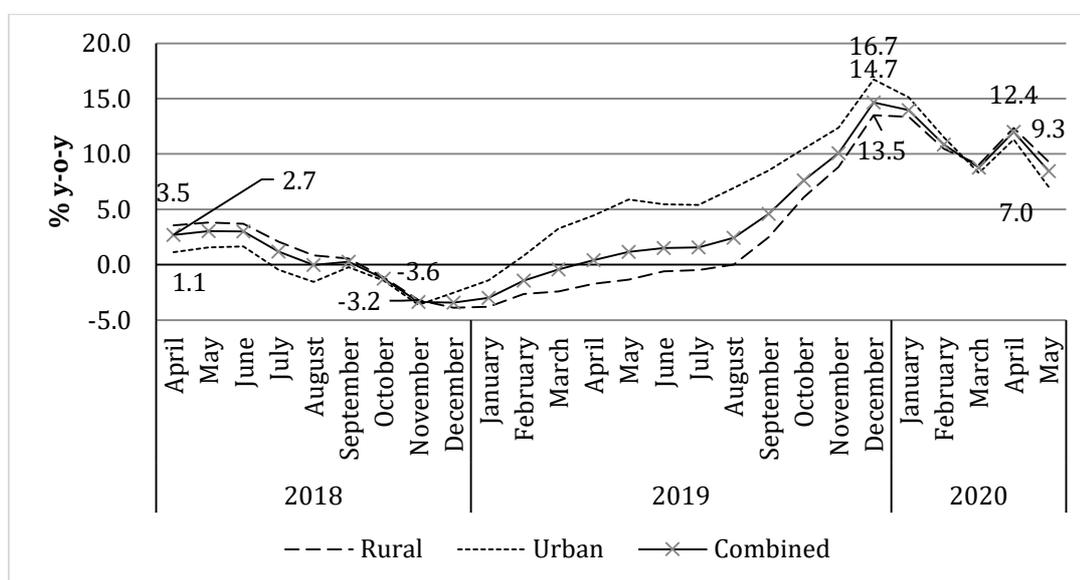
The CSO has released detailed item wise data only for CPI Food & Beverages in April and May, 2020 (see Box 7.1). All the items in food basket, except for eggs, and fruits, show an increase in April, 2020. Overall food inflation moderated in May, 2020 barring fruits and oil & fat inflation. The Consumer Food Price Index (CFPI) was modified to leave out the meat & fish category, which went unreported in April 2020 (see Box 7.1). It does not include prepared meals anyway. After rising significantly in April 2020, the modified CFPI inflation moderated in May 2020 (Figure 7.4). There were no discernible differences in trends between rural and urban modified CFPI inflation.

Figure 7.3: Contributors to overall CPI Inflation Q1-Q4: 2019-20, January- March 2020 (percentage contribution)



Source: Authors' calculations from MoSPI.

Figure 7.4: Trend in Consumer Food Price Index inflation (excluding meat & fish), April 2018-May 2020 (%y-o-y)



Source: Authors' calculations from MoSPI.

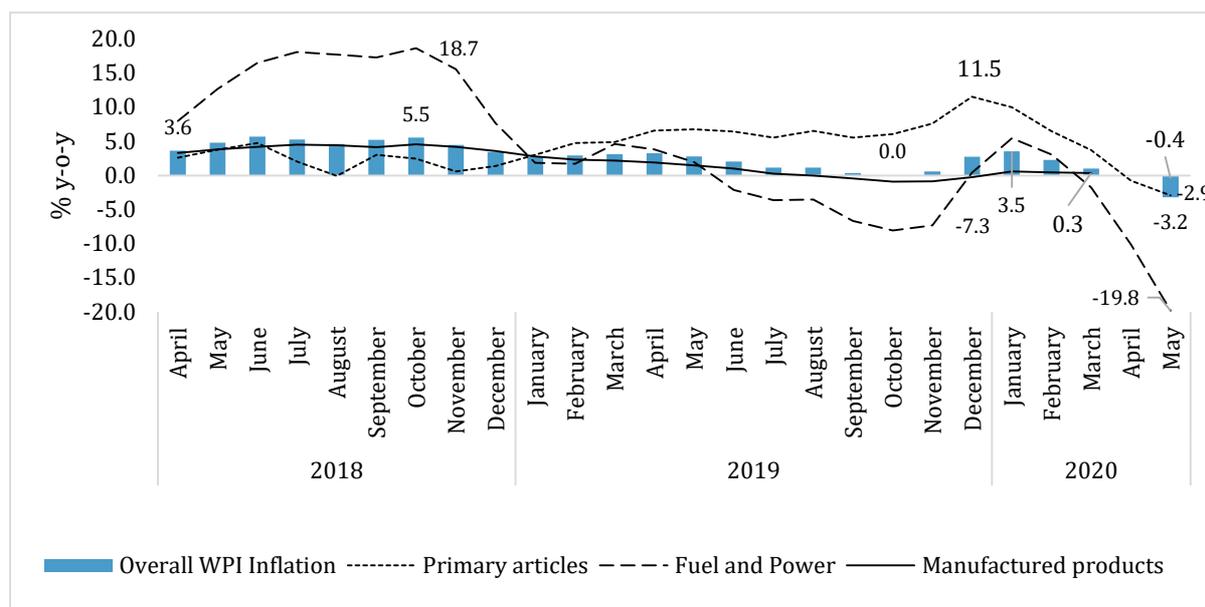
While y-o-y inflation estimates present the average inflation rate over the last twelve months, the seasonally adjusted month-on-month (m-o-m) change in inflation rates gives a more recent picture. As opposed to a sharp decline in y-o-y inflation in CPI food and headline inflation in March 2020, the m-o-m changes show a mild rebound in

these two price series in the same month. The rebound is also visible for CPI core inflation.² While the m-o-m change in seasonally adjusted CPI food prices continued to rise in April, 2020, it turned negative in May, 2020.

7.3 Wholesale Price Inflation

The y-o-y WPI inflation rate in Q4 of 2019–20 rose to 2.3 per cent, as compared to 0.9 per cent and 1.1 per cent in Q2 and Q3 respectively. Overall inflation was driven by higher inflation in all the three broad groups, namely, ‘primary articles’, ‘fuel and power’, and ‘manufactured products’ with weights of 22.6 per cent, 13.2 per cent, and 64.2 per cent, respectively. While the ‘primary articles’ WPI increased by 6.8 per cent in Q4, inflation rates in ‘fuel and power’, and ‘manufactured products’ increased by 2.3 per cent and 0.5 per cent respectively (Figure 7.5).

Figure 7.5: WPI Inflation and Its Components April 2018 to May 2020 (% y-o-y)



Note: In view of the limited transactions of products in the wholesale market in the month of April, 2020, only price movement of selected Sub-groups/Groups were released. Further, all Commodities WPI could not be computed for April-2020 due to non-availability of manufactured product group index.

Source: Authors’ calculations based on data from Office of Economic Advisor.

As mentioned earlier, WPI inflation data are available for the month of April 2020 only for primary articles, fuel & light and manufactured food products (See Box 7.1). However, data for May 2020 were made available for all groups. In April 2020, WPI primary articles inflation recorded a negative rate of (-) 0.8 per cent and it further went

² CPI core and aggregate CPI are not adjusted for seasonality as we do not find significant seasonal fluctuations in these price indicators.

down to (-) 2.9 per cent in May 2020 (Figure 7.5). This was due to negative inflation rates in non-food articles and minerals, although food articles recorded a positive rate of 2.6 per cent and 1.1 per cent in April and May 2020 respectively. Manufactured products inflation, which was not available for April 2020, saw a marginal decline of (-) 0.4 per cent in May 2020. This was despite a sizeable rise in manufactured food products inflation of 4.5 per cent in May 2020. Fuel and power inflation rate registered the steepest fall of (-) 10.1 per cent and (-) 19.8 per cent respectively in April and May 2020 respectively. Further WPI core inflation (non-food and non-fuel and power) continued to remain in negative territory and remained at (-) 1.3 per cent in May 2020.

Food inflation, which includes both primary food items as well as manufactured food items, declined to 7.6 per cent in Q4 of 2019-20 as compared to 9.3 per cent in Q3. This declining trend continued in April, 2020. Within the food group, the inflation rate for fruits & vegetables declined sharply from 29.9 per cent in Q3 of 2019-20 to 17.1 per cent in Q4, but which was still quite high. It continued to decline in April, 2020. As with retail inflation, WPI inflation has also been primarily driven by food prices, in particular the prices of fruits and vegetables. However, the relative contribution of this group had declined in the fourth quarter of 2019-20.

For WPI, the annualised m-o-m inflation in primary and aggregate WPI (seasonally adjusted) and WPI Energy (Fuel and Power) continuously declined in March, April, and May 2020. However, WPI for manufacturing showed a rebound in March, 2020, after declining between January and February, 2020.

7.4 Energy Price Inflation

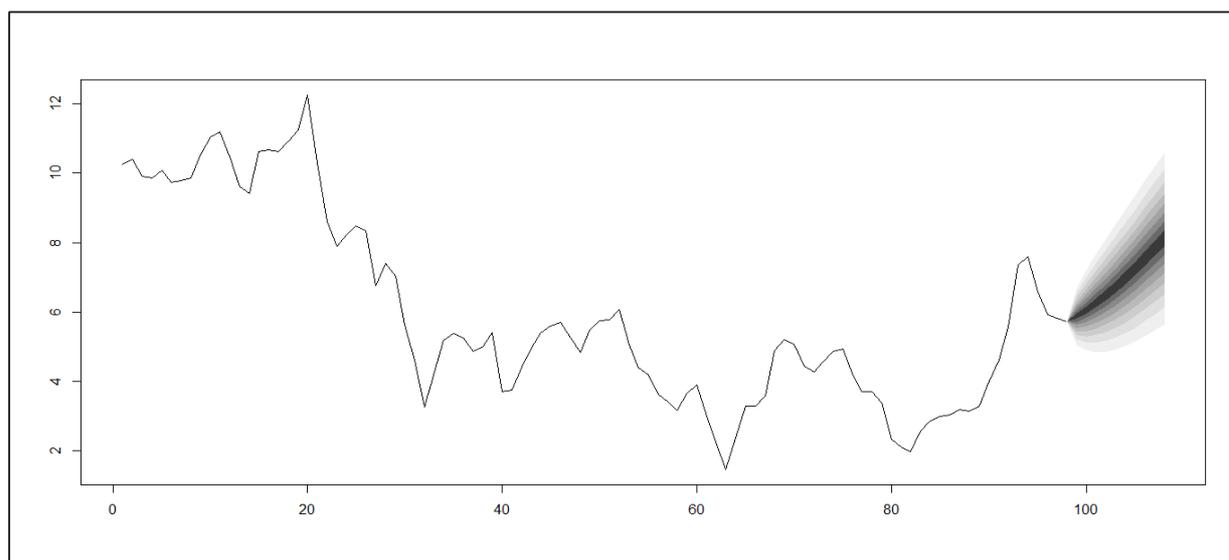
Crude oil price halved from US\$63/barrel in January, 2020 to US\$33/barrel in March 2020. It further declined to US\$23/barrel in April, 2020, before rebounding to US\$31/barrel in May, 2020. In rupee terms crude oil prices declined by 14 per cent in February, 2020 and by 52 per cent in May 2020, despite the depreciation of the rupee. This is marginally reflected in the WPI for Fuel and Power, which decreased by 2 per cent in March 2020, followed by a sharp decline by 10 per cent in April 2020 and 20% in May. Initially the decline in crude oil prices had not shown a transmission to CPI energy inflation rate, which rose from 4 per cent in January, 2020 to 6 per cent in February and further to 7 per cent in March 2020. This is because the decline in border prices has been mopped up through higher revenues and not passed on to the market. However the pass-through effect becomes visible in recent months as CPI energy inflation declined to 3 per cent in April, 2020 and further to 1.4 per cent in May, 2020.

7.5 Expected Behaviour of Inflation in 2020-21 Q1 and rest of the financial year 2020-21

To project the expected headline inflation in Q1: 2020-21 and for the financial year 2020-21, we have estimated a Vector Auto Regression (VAR) model using a data set consisting of monthly y-o-y inflation rates from April 2012 to March 2020 for CPI headline and CPI core; and April 202 to May, 2020 for WPI oil, WPI food, CPI food and energy. The data set also includes changes in the exchange rate, repo rate and bank

credit to the commercial sector as a proxy for the current level of economic activities. The model predicts that CPI headline inflation will increase over the next twelve months. (Figure 7.6). The effect of declining demand on prices is expected to be outweighed by the expected cost-push on the supply side due to disruption of input supply chain as well as high mortality of MSMEs in the manufacturing sector. This predicted trend is consistent with the trend of average inflation expectations reported by RBI Household Surveys of Inflation Expectations, showing rebound after a declining trend in the last quarter of the financial year 2019-2020. Our model further predicts that the CPI headline inflation will be 6 per cent in Q1: 2020-21 Q1 and 7 per cent during the financial year 2020-21. However, much will depend on how supply responds to the fiscal and monetary policy measures that have been taken to stimulate demand as demonstrated by alternative supply constraint scenarios presented in the policy simulations in chapter 2.

Figure 7.6: Outlook for CPI inflation (%y-o-y), April 2012 to March 2021



Source: Contributed by Rudrani Bhattacharya, Assistant Professor, NIPFP.

Note: The X axis of the figure represents the time period from June, 2012 to March, 2021. The shaded part shows the confidence band of forecasted inflation rate from June 2020 to March 2021 with various levels of significance.

Chapter 8: Fiscal outlook: Dealing with the Coronavirus shock¹

Sudipto Mundle, Ajaya K Sahu, and Pallavi Choudhuri

India is grappling with three crises at the same time: the pandemic itself, a humanitarian crisis for migrant and daily wage workers, and a strong negative shock to both employment and incomes, hence also government revenues, as a consequence of the sudden countrywide lockdown, the most stringent in the whole world, for over two months. The expected revenue shortfall, combined with the large increase in expenditure required to cope with the triple crises will lead to a large increase in central and state government fiscal deficits, requiring a revision of their budgets.

Revenue projections in the central budget, remarkably optimistic in view of the large shortfall in revenues in 2019-20, are now largely only of academic interest. Model based simulations of possible scenarios suggest that revenue growth (Centre plus States) could vary from (-) 2.2 per cent to 7.3 per cent corresponding to variations in aggregate supply response from (-) 10 per cent GDP growth to 0 per cent GDP growth.

On the expenditure side what is most urgently required is a large increase in public health expenditure and provision of humanitarian relief in the form of free food and income support. While various policies have been announced which include these components, they fall far short of what is required. As against an estimated requirement of around 5 per cent of GDP, the current spending on these items is about 2.5 per cent.

The expected revenue shortfall combined with the required increase in expenditure will entail a large increase in the combined fiscal deficit of the Central and State governments. In fact the fiscal stimulus already announced amounts to a very substantial 9.7 per cent of GDP, including 6.3 per cent budgeted deficits (Centre plus States), 2.1 per cent additional post-budget central borrowing to offset the expected revenue shortfall and 1.3 per cent additional fiscal spending under Atmanirbhar Bharat package. If we also count the 2 per cent additional borrowing headroom for states, which they may or may not use because of the stringent conditionality, the fiscal stimulus would add up to 11.7 per cent of GDP. Together with the liquidity infusion amounting to about 8 per cent of GDP on the monetary side, this should lead to a very significant recovery of aggregate demand.

How that translates into a change in GDP growth and in inflation will depend on how aggregate supply responds to the restoration of demand. Our model simulations of different supply constraint scenarios suggest that with output allowed to vary from (-) 10 per cent of GDP to zero growth, inflation will remain between 6 per cent and 8 per cent, the current account deficit will remain below 3 per cent of GDP. The combined fiscal deficit will be contained below 8 per cent of GDP, implying a total public sector borrowing requirement of around 9-10 per cent of GDP. However, these scenarios do not factor in the risk of any sudden rise in withdrawal of foreign portfolio investments due to rising risk aversion and the potential destabilising impact of such an event.

8.1 Introduction

The Coronavirus pandemic is like a tsunami that has hit the whole world. India is grappling with three crises at the same time: the pandemic itself especially in high density slums and chawls with no possibility of social distancing, a humanitarian crisis especially for migrant workers and daily wage workers following the lock down, and a very sharp, negative macroeconomic shock to both employment and incomes, hence also government revenues. If adequate extra spending is provided for the medical response, increased testing, contact tracing and treatment, and on increased delivery of free food and income support for those who have lost

¹ We would like to acknowledge the very helpful comments of Shankar Acharya on an earlier draft of this chapter. However, the authors alone are responsible for the errors that remain.

their livelihoods, this will lead to a large increase in government expenditure. The sharp revenue decline and large increase in expenditure will in turn lead to a huge increase in the combined fiscal deficit of Central and State Governments. Thus, the budget estimates prepared prior to the coronavirus shock have been completely undermined by the shock and will need quick revisions through interim budgets.

8.2 Revenue Outlook

On the revenue side the assumed Rs 20.2 trillion of total revenues assumed in the 2020-21 budget entailed an increase of 20.1 per cent over the previous year as against an actual increase of only 8.3 per cent in 2019-20 (provisional actuals, henceforth PA) as shown in Table 8.1. This unwarranted optimism was based on highly unrealistic growth assumptions about all the major components of tax revenue (net to Centre), which together account for over 80 per cent of total Central Government revenue as shown in the table. Non-tax revenue, on the other hand, was assumed to grow to rise by only 18 per cent to Rs 3.9 trillion in 2020-21. This is quite modest compared to the increase of over 38 per cent in 2019-20. The exceptionally large increase in non-tax revenues in 2019-20 was mainly on account of the large one time transfer of Reserve Bank of India (RBI) surpluses to the government based on recommendations of the Jalan Committee. On the capital account, non-debt capital receipts, which actually declined by over 39 per cent in 2019-20, were assumed to grow by an incredible 228 per cent, supposedly due to postponed Public Sector Units (PSU) equity sales of 2019-20 in addition to the new sales of PSU equity planned for 2020-21.

In any case, these comparisons are now only of academic interest in view of the complete disruption of economic activity and, consequently, revenue flows to the government². As explained in the simulations in chapter 2, our base case assessment is that the fiscal and monetary stimulus announced so far would generate real growth of about 1.3 per cent in 2020-21 *in the absence of any supply response constraints*. Allowing for an inflation rate of 6 per cent³ and an observed buoyancy of about 1 per cent, nominal GDP and total revenue (Centre and States) would both have risen by about 7.3 per cent. However, we know that, in fact, the economy is experiencing severe supply constraints due to the extra mortality of businesses during the lock down period, especially micro, small & medium enterprises (MSMEs), the massive reverse migration of workers, and large scale disruption of supply chains. The severity of the supply constraints cannot be quantified at present. However, the scenarios presented in chapter 2 imply that revenue growth could vary from (-) 2 per cent in a worst case scenario of 10 per cent decline in real GDP to 7.3 per cent in a best case scenario of zero real GDP growth.

8.3 Expenditure Outlook

Total Central Government spending was set to rise by 13.2 per cent to Rs 30.4 trillion in

² On Friday 8th May the Central Government announced an additional COVID-19 related borrowing programme of Rs 4.2 trillion and it had earlier announced additional borrowing of Rs 1.7 trillion. This additional borrowing of Rs 5.9 trillion was on top of the Rs 7.8 trillion announced in the budget. It would help to offset the likely shortfall in revenue compared to that targeted in the 2020-21 Central Government budget. The central government has subsequently announced further additional borrowing of Rs 2.6 trillion under the AB package. This is discussed further below.

³ Given the scale of uncertainty about the extent of the current shock, forecasting of the likely inflation rate is challenging. The assumed inflation rate of 6 per cent is only our best guess at present.

the budget estimate for 2020-21 (Table 8.2). However, these too are now only of academic interest following the coronavirus shock. Dealing with the health crisis and the humanitarian crisis will require large increases in expenditure under the relevant budget heads (Table A8.1). However, the room for meeting such increases through reallocation is limited because of committed expenditures, thus implying a sharp increase in total expenditure. This increase, taken along with the large expected shortfall in revenues, compared to the budget, will entail a very large increase in the fiscal deficit.

Dealing with the pandemic itself will require a massive increase in health expenditure to deal with the requirements of testing, contact tracing and treatment. This will be partly on account of acquiring more equipment like testing kits, ventilators, etc., and drugs but also the expansion of hospital beds and temporary low-skill health workers to support skilled medical workers who are in short supply. Though some reputed private hospitals and laboratories have been included in the campaign against the novel coronavirus, the bulk of the effort is being borne by the public healthcare system, especially by the State Governments.

The same applies to relief food distribution and income support. There have been proposals to make this available free for a few months. This can be targeted to consumers through the Public Distribution System (PDS), expanded if possible, or universally to all who those who ask for it, possibly about 80 per cent of the population. Without getting into questions of how such delivery of food support can be best managed, it needs to be noted that the delivery, whatever be the selected mechanism, will again have to be managed by the State Governments. Similarly, proposals are on the table for providing income support, whether through existing targeted channels such as PM-Kisan and Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) or as universal basic income, in which case, again, probably about 80 per cent of the population would actually access it.

At present, the total public expenditure on health services, food subsidy, and income support such as MGNREGS and PM-KISAN, together add up to approximately 2.5 per cent of GDP, mostly spent by the Centre⁴. The additional spending on ramping up medical services to cope with the pandemic plus supply of free food plus income support will probably require an extra 2.5 per cent of GDP.

8.4 Fiscal Stimulus

Whether it is medical care or food support or income support, all of these will have to be delivered by State Governments, even if they are coordinated by the Central Government. The State Governments are severely resource constrained since their revenues have also fallen due to the lock down, reportedly by as much as 90 per cent in some cases⁵. Further, the room for reallocation of existing expenditure is limited because of the large share of committed expenditures, especially interest payments, wages and salaries. So their support activities will mainly have to be financed through additional coronavirus related special transfers from the Central Government or through additional borrowing by the States, or through some combination of the two. In the Central Budget, the room for additional central transfers to the states through re-allocation of central expenditure is quite limited because here too the large bulk of Central Government spending is on committed expenditures such as interest payments, pensions and wages and salaries of civilian and defence personnel under General Services as well

⁴ We would like to thank Dr Satadru Sikdar of NIPFP for this computation.

⁵ Details of revenue shortfall for all the states is not yet available.

as under different sectoral heads (Appendix Table 8.1). Some of this extra expenditure, say about 1-2 per cent of GDP, could be financed by reallocation of current expenditure on non-merit subsidies or reduction of capital spending. On the other hand, there will also be a significant shortfall in revenue receipts as already noted. So on balance, our assessment is that the entire coronavirus related extra spending will have to be financed through additional borrowing.

Thus, off-setting the revenue shortfall discussed earlier and additional coronavirus related expenditure will entail large increases in Central and State government deficits. This will require suspension of the Central and State Government fiscal deficit limits set down under their respective Fiscal Responsibility and Budget Management (FRBM) Acts. Further, the 15th Finance Commission's (FC) award for 2020-21 will need to be revisited to take account of the COVID-19 disruption. Finally, the budgets of the Central and State Governments will also have to be revised through interim budgets to take into account the sharp drop in revenues, the additional expenditure liabilities, and the revised award of the 15th FC on tax devolution and grant transfers to the States.

Regarding State Governments, the Central Government has now allowed an additional borrowing headroom for States amounting to 2 per cent of GDP. However, this additional borrowing headroom has been provided with strong conditions attached, most of which relate to structural reforms. It is quite amazing that while the country is facing an unprecedented crisis situation, the Central Government is constraining the ability of the State Governments to deal with the coronavirus crisis by tying their additional borrowing headroom to such medium to long term structural reform goals. Such goal congestion could potentially undermine the entire crisis management effort, given the crucial role of the states in this effort.

As for the Central Government itself, by 8th May it had announced an additional coronavirus related borrowing program of Rs 4.2 trillion, mainly to offset the expected revenue shortfall of the Central Government in 2020-21. That does not include coronavirus related additional expenditure of the kind described in section 8.3 above. The central government has subsequently announced the Rs 20 trillion Atmanirbhar Bharat (AB) package. The main component of this package is in the form of liquidity infusion amounting to Rs 16.1 trillion, including RBI operations and government guaranteed credit lines through banks and other financial institutions (Table 8.3). The package also counts a few items already included in the 2020-21 budget. Apart from the future contingent liability of government credit guarantees, the actual fiscal component in this package, i.e., current additional central government spending, amounts to only Rs 2.6 trillion or approximately 1.3 per cent of an assumed GDP of Rs 200 trillion.

Important among these from a humanitarian relief perspective are additional free food supply for 3 months including 5 kg per head of food grains plus some other rations for ration card holders as well as migrant workers without ration cards, the provision of Rs 1,52,620 crores as income support under the Pradhan Mantri Garib Kalyan Yojana (PMGKY), an additional provision of Rs 40,000 crores for MNREGA, and the provision of Rs 10,000 working capital to each of 50 lakh street vendors. These provisions are welcome. However, they are nowhere near the scale of income support required to compensate for the massive loss of livelihoods and human distress resulting from a nationwide lockdown, the most stringent anywhere in the world that lasted for over 2 months and has not yet been fully withdrawn. This has been discussed in section 8.3 above. Our assessment, based on an aggregation of sub-sector level expectations, is that output has declined by nearly 26 per cent during Q1, 2020-21 compared to

the same period last year.⁶ This will have led to a massive increase in unemployment. The weekly surveys of the Centre for Monitoring the Indian Economy (CMIE) confirm that the unemployment rate has indeed risen very sharply to around 23-24 per cent, and had gone up to as much as 27.1 per cent during the week ended May 3, the highest on record⁷.

However, these severe macro-economic effects should be considerably moderated during the year on the demand side by the strong fiscal-monetary stimulus measures announced, including in the budgets, even though they do not adequately address the health and humanitarian relief requirements as has been explained. On the monetary side the liquidity infusion amounts to Rs 16.1 trillion, about 8 per cent of an assumed GDP of Rs 200 trillion, as indicated in Table 8.3. The fiscal stimulus amounts to a very substantial 9.7 per cent of GDP, including 6.3 per cent budgeted deficits (Centre plus States), 2.1 per cent additional post-budget central borrowing to offset the expected revenue shortfall and 1.3 per cent additional fiscal spending under the AB package. If we also count the additional borrowing headroom of nearly 2 per cent of GDP provided for the states, the total fiscal stimulus would go up to almost 11.7 per cent of GDP⁸.

In the model simulations presented in Chapter 2, the base case indicates that in the absence of any supply side constraints, the fiscal and monetary measures already undertaken, or announced, would yield a positive growth of 1.3 per cent during 2020-21, accompanied by an inflation rate of close 6 per cent, a current account deficit of 2.8 per cent of GDP, and a combined fiscal deficit (Centre plus States) of 7.6 per cent of GDP. However, as explained above, we actually expect severe supply response constraints which are estimated to have shrunk real GDP by nearly 26 per cent in Q1 of 2020-21. How quickly supply will respond as demand is revived by the macroeconomic stimulus policies is not quantifiable at present. Consequently, the simulation exercises have assessed the macroeconomic implications of varying degrees of supply response ranging from a worst case scenario where GDP shrinks by 10 per cent in 2020-21 (Scenario 4) to a best case scenario where GDP in 2020-21 is at the same level as in 2019-20 (scenario 1: zero growth).

Inflation varies from around 6 per cent in the best case scenario to 8 per cent in the worst case scenario. Though above the RBI's tolerance band, this is still moderate. The current account deficit varies from 2.8 per cent in the best case scenario to only 1 per cent in the worst case scenario. The fiscal deficit is fairly stable between 7.4 per cent and 7.8 per cent of GDP. Why is that? As indicated in Table 2 of chapter 2, as real growth is varied from (-) 10 per cent to 0 per cent, factoring in the monetary stimulus in addition to the fiscal stimulus, and a corresponding inflation rate, nominal GDP grows at more or less the same pace as the absolute fiscal deficit, leaving the deficit to GDP ratio largely unchanged.

So the main take away from these simulation exercises is that the large fiscal stimulus, added to a large liquidity infusion, will considerably moderate the adverse demand effects of the Coronavirus lockdown. However, how this will impact output growth and inflation depends on how the supply response plays out as the lock down is wound down. The whole range of

⁶ Reported in Table 2.1 of Chapter 2 above.

⁷ See Mahesh Vyas, The jobs bloodbath, April 2020, Business Standard 5 May 2020; Expect recovery in June, Business Standard 16 June 2020 and his other weekly columns in the same newspaper. He also points out in his 9 June column that the high frequency CMIE unemployment estimates closely match the official unemployment estimates available up to 2018-19 in the Periodic Labour Force Surveys.

⁸ The Fiscal deficit is primarily financed through market borrowing. However, this is supplemented by additional sources such as the National Small Savings Fund.

scenarios considered indicate that inflation, the fiscal deficit and the current account deficit will all remain moderate even if somewhat elevated in some scenarios. However, as a note of caution, it should be pointed out that model simulations do not factor in the risk of rising risk aversion and any sudden withdrawal of foreign portfolio investments in response to continuing depreciation of the rupee⁹. If that were to happen, leading to further depreciation, we could see a destabilising cycle of declining reserves, rising (imported) inflation, and a rising current account deficit.

⁹ This possibility has been noted in chapter 6 on the external sector, and chapter 9 below on monetary policy and financial markets.

Table 8. 1: Receipts and Percentage Changes

	Rs crores			%age changes		%age share in Total*		
	2018-19 (actual)	2019-20 (PA)	2020-21 (BE)	2019-20 (PA) over 2018-19 (Actuals)	2020-21 (BE) over 2019-20 (PA)	2018- 19 (ac- tual)	2019- 20 (PA)	2020- 21 (BE)
1 Revenue receipts (3+10)	1563170 (8.2)	1850101 (9.1)	2020926 (9.7)	8.3	20.1	93.2	96.1	90.0
2 Tax revenue (gross)	2080203 (11.0)	2163423 (10.6)	2423020 (11.6)	(-) 3.4	20.6			
3 Tax revenue (net to centre)	1316951 (6.9)	1504587 (7.4)	1635909 (7.8)	2.9	20.7	84.8	80.6	80.9
4 Direct tax	1125226 (5.9)	1170000 (5.7)	1319000 (6.3)	(-)7.8	27.2	54.1	51.6	54.4
5 Indirect tax	954977 (5.0)	993423 (4.9)	1104020 (5.3)	1.8	13.5	45.9	48.4	45.6
6 Central GST	457535 (2.4)	514000 (2.5)	580000 (2.8)	8.0	17.4	47.9	50.8	52.5
7 UT GST	2407 (0.01)	2704 (0.01)	3000 (0.01)	(-)5.4	14.1	0.3	0.3	0.3
8 Integrated GST	28947 (0.2)	9204 (0.01)		(-)68.2		3.0	0.9	0.0
9 GST compensation cess	95081 (0.5)	98327 (0.5)	110500 (0.5)	0.5	15.6	10.0	9.8	10.0
10 Non-tax revenue	246219 (1.3)	345514 (1.7)	385017 (1.8)	38.3	18.0	15.2	19.4	19.1
11 Non-debt capital receipts	102885 (0.5)	81605 (0.4)	224967 (1.1)	(-)39.1	227.8	6.8	3.9	10.0

Figures in brackets show %age of GDP. *Share of revenue receipts and non-debt capital receipts: share of total receipts, tax (net to center) and non-tax revenue: share of total revenue receipts, direct and indirect tax: share of gross tax revenue, various GSTs: share of indirect tax. PA Provisional Actuals, BE Budget Estimates

Source: 2018-19 and 2019-20 (PE) figures are taken from CGA Monthly publications. 2020-21 (BE) are taken from Receipt Budget 2020-21

Table 8. 2: Receipts, Expenditure and Deficits

		Rs crores			%age changes		%age share in Total*		
		2018-19 (actual)	2019-20 (PA)	2020-21 (BE)	2019-20 (PA) over 2018-19 (Actuals)	2020-21 (BE) over 2019-20 (PA)	2018- 19 (ac- tual)	2019- 20 (PA)	2020- 21 (BE)
1	Revenue receipts	1553011 (8.2)	1682107 (8.3)	2020926 (9.0)	8.3	20.1	93.2	96.1	90.0
2	Tax revenue (net to Centre)	1317211 (6.9)	1355886 (6.7)	1635909 (7.3)	2.9	20.7	84.8	80.6	80.9
3	Non- tax revenue	235800 (1.2)	326221 (1.6)	385017 (1.7)	38.3	18.0	15.2	19.4	19.1
4	Non-debt capital receipts	112684 (0.6)	68620 (0.3)	224967 (1.0)	(-)39.1	227.8	6.8	3.9	10.0
5	Total receipts (1+4)	1665695 (8.8)	1750727 (8.6)	2245893 (10.0)	5.1	28.3	100	100	100
6	Total Expenditure	2315113 (12.2)	2686362 (13.2)	3042230 (13.5)	16.0	13.2			
7	Revenue expenditure	2008024 (10.6)	2349618 (11.6)	2630145 (11.7)	17.0	11.9	86.7	87.5	86.5
8	Revenue deficit	455013 (2.4)	667511 (3.3)	609219 (2.7)	46.7	(-)8.7			
9	Fiscal deficit (6-5)	649418 (3.4)	935635 (4.6)	796337 (3.5)	44.1	(-)14.9			
10	Primary deficits	66770 (0.4)	324599 (1.6)	88134 (0.4)	386.1	(-)72.8			

Figures in brackets show %age of GDP. *Share of revenue receipts and non-debt capital receipts: share of total receipts, tax and non-tax revenue: share of total revenue receipts, revenue expenditure: share of total expenditure. PA Provisional Actuals, BE Budget Estimates.

Source: 2018-19 and 2019-20 figures are taken from CGA Monthly publications. 2020-21 (BE) are taken from Budget at a glance 2020-21.

Table 8.3: Rs 20 trillion Atmanirbhar Bharat (AB) Package

Items	Total in Rs crores	Additional fiscal cost (post-budget)	Contingent liability (CL)/ fiscal outgo	Liquidity / financial support through banks	Remarks	
	I	II	III	IV		
<i>Economic Measures introduced prior to AB package</i>						
26.03.20	Pradhan Mantri Garib Kalyan Yojana (PMGKY)	1,70,000 (0.85)	1,52,620 (0.76)		subtract PM-Kisan allocation (budgeted amount)	
	Revenue loss due to tax concessions from March 22, 2020	7,800 (0.4)	7,800 (0.04)		Ref: Government of India	
	PM's announcement for anti-Covid health facilities	15,000 (0.08)	15,000 (0.08)		Ref: PM's announcement, Government of India	
March-April 2020	RBI's liquidity injection	8,01,603 (4.00)		8,01,603 (4.0)	Actuals (Ref: Government of India)	
<i>Atmanirbhar Bharat (AB) Package</i>						
13.05.20	<i>Tranche 1 of AB package (Rs 5,94,550 crores)</i>					
	Collateral free automatic loans to MSMEs	3,00,000 (1.50)		60,000 (0.30)	3,00,000 (1.50)	100% guaranteed by Govt.; assumed 20% contingent liability
	Subordinate Debt for stressed MSMEs*	20,000 (0.10)		4,000 (0.02)		Ref: Government of India; Government support extended to Credit Guarantee Trust for MSME (CGTMSE). CGTMSE to provide partial credit guarantee support to banks
	Fund of Funds for Equity infusion into MSMEs	50,000 (0.25)		10,000 (0.05)		Ref: Government of India
	Special liquidity scheme for NBFCs/ HFCs/ MFIs	30,000 (0.15)		6,000 (0.03)	30,000 (0.15)	securities fully guaranteed by govt.; assumed 20% contingent liability
	Partial Credit Guarantee Scheme 2.0 for NBFCs	45,000 (0.23)		9,000 (0.05)	45,000 (0.23)	first 20% loss to be borne by govt.; assumed 20% contingent liability
	Liquidity injection for Discoms by PFC & REC	90,000 (0.45)			90,000 (0.45)	Guaranteed by States, liquidity infusion to be made by PFC/REC
	EPF support for business and workers for 3 months	2,800 (0.01)	2,800 (0.01)			
	EPF rates reduced for Employers and Employees for 3 months*	6,750 (0.03)				Policy change - reduction in rate from 12% to 10%
	25% reduction in TDS/ TCS rate*	50,000 (0.25)				Policy Change
14.05.20	<i>Tranche 2 of the AB Package (Rs 3,10,000 crores)</i>					
	Free food grain supply to migrants for two months	3,500 (0.02)	3,500 (0.02)			
	Interest subvention of 2% for prompt-payees of MUDRA-Shishu loans	1,500 (0.01)	1,500 (0.01)			
	Special liquidity scheme to provide Rs 10,000 working capital to 50 lakh street vendors	5,000 (0.03)	5,000 (0.03)			

Table 8.3: Rs 20 trillion Atmanirbhar Bharat (AB) Package

Items	Total in Rs crores	Additional fiscal cost (post-budget)	Contingent liability (CL)/ fiscal outgo	Liquidity / financial support through banks	Remarks
	I	II	III	IV	
Housing for Middle Income Group (Rs 6-18 lakh a year) - Credit-linked subsidy scheme	70,000 (0.35)	6,000 (0.03)			Estimated based on targeted 2.5 lakh households, using data from MHUA, Govt. of India
Emergency working capital funding for farmers through NABARD	30,000 (0.15)			30,000 (0.15)	
Concessional credit through Kisan Credit Cards	2,00,000 (1.00)			2,00,000 (1.00)	
15.05.20 <i>Tranche 3 of AB package (₹1,50,000)</i>					
Financing facility for Agri-infrastructure projects	1,00,000 (0.50)			1,00,000 (0.50)	
Scheme for formalisation of Micro Food Enterprises	10,000 (0.05)	6,000 (0.03)			Ref: PIB - The expenditure will be shared by GOI and the States in ratio of 60:40.
Funding for fishermen through PM Matsya Sampada Yojana	20,050 (0.10)	9,407 (0.05)			Ref: PIB - Central govt. share Rs9,407 crores state's share: Rs 4,880 crores, beneficiaries contribution: Rs 5,763 crores
Animal Husbandry Infrastructure Development Fund	15,000 (0.08)			15,000 (0.08)	Interest subvention scheme to be implemented through NABARD - Ref: Notes on Demands for Grants, 2020-2021 (Demand No. 40), Govt. of India
Promotion of Herbal Cultivation*	4,000 (0.02)				Announced in budget - excess allocation for package not clear.
Beekeeping initiatives*	500 (0.003)				Budgeted amount of Rs 2400 crores (not clear whether Rs 500 is subsumed under this)
Operation Green to be extended to all vegetables	500 (0.003)	500 (0.003)			
16.05.20 <i>Tranche 4 of AB package (Rs 8,100)</i>					
Viability gap funding	8,100 (0.04)	8,100 (0.04)			
17.05.20 <i>Tranche 5 of AB package (Rs 40,000)</i>					
Increase in MGNREGA budgetary allocations	40,000 (0.20)	40,000 (0.20)			
Grand Total	20,97,103 (10.49)	2,58,227 (1.29)	89,000* (0.45)	16,11,603 (8.05)	

Source: Mundle and Choudhuri (2020). Quarterly Review of the Economy, 2020:1Q, In Coronavirus times, Ch. VIII. NCAER. New Delhi.

Notes: (A) Data based on PIB, Govt. of India. (B) figures in parentheses reflect % of GDP, assuming GDP of 200 trillion rupees. (C) In addition to actual fiscal cost (col II), and financial support (col IV), Grand Total (col I) also includes government credit guarantee, of which only CL (col III) is shown, and also few items, which were already in the 2020-21 budget.

* These are not part of the fiscal/financial stimulus. Total stimulus amounts to Rs 18,69,830 crores, which is 9.34% of GDP.

Appendix table 8. 1: Expenditure and Allocations

Heads	2018-19 (Actual)	2019-20 (RE)	2020-21 (BE)	2020-21 (BE) over 2019-20 (RE) (%age change)	Per cent of total expenditure		
					2018- 19 (Ac- tual)	2019-20 (RE)	2020-21 (BE)
1 Total expenditure (excluding loans and advances; debt repayments)#	2661094 (14.0)	3052196 (14.9)	3332061 (14.8)	9.2	100.0	100.0	100.0
2 General services*	1213204 (6.4)	1345202 (6.6)	1453790 (6.5)	8.1	45.6	44.1	43.6
2.1 Interest payment and servicing of debt	595552 (3.1)	663297 (3.2)	733203 (3.3)	10.5	22.4	21.7	22.0
2.2 Defence services	299113 (1.6)	325591 (1.6)	332102 (1.5)	2.0	11.2	10.7	10.0
3 Social services*	112826 (0.6)	146408 (0.7)	163670 (0.7)	11.8	4.2	4.8	4.9
3.1 Education, sports, art and culture	43901 (0.2)	53334 (0.3)	55512 (0.2)	4.1	1.6	1.7	1.7
3.2 Medical and public health	23170 (0.1)	27351 (0.1)	30770 (0.1)	12.5	0.9	0.9	0.9
4 Economic services*	940666 (5.0)	1065170 (5.2)	1125779 (5.0)	5.7	35.3	34.9	33.8
4.1 Agriculture and allied activities	179388 (0.9)	238308 (1.2)	267796 (1.2)	12.4	6.7	7.8	8.0
4.2 Rural development	63928 (0.3)	74115 (0.4)	64223 (0.3)	-13.3	2.4	2.4	1.9
4.3 Infrastructure Services	432763 (2.3)	459597 (2.2)	539997 (2.4)	17.5	16.3	15.1	16.2
4.3.1 Irrigation and flood control	2946 (0.0)	3549 (0.0)	4579 (0.0)	29.0	0.1	0.1	0.1
4.3.2 Energy	51704 (0.3)	62162 (0.3)	66206 (0.3)	6.5	1.9	2.0	2.0

Appendix table 8. 1: Expenditure and Allocations

Heads	2018-19 (Actual)	2019-20 (RE)	2020-21 (BE)	2020-21 (BE) over 2019-20 (RE) (%age change)	Per cent of total expenditure		
					2018- 19 (Ac- tual)	2019-20 (RE)	2020-21 (BE)
4.3.3 Transport	341336 (1.8)	354033 (1.7)	384987 (1.7)	8.7	12.8	11.6	11.6
4.3.4 Communications	36777 (0.2)	39852 (0.2)	84225 (0.4)	111.3	1.4	1.3	2.5
5 Grants-in-aid and contributions	382712 (2.0)	483030 (2.4)	569534 (2.5)	17.9	14.4	15.8	17.1
6 Capital expenditure outside revenue account	399523 (2.1)	398432 (1.9)	391322 (1.7)	-1.8	15.0	13.1	11.7

Figures in parenthesis indicate percentage of GDP. Expenditure data for row numbers 2 to 4.6 and 6 are net expenditure of the Centre.

The budget documents remain fairly opaque because of financing of large amounts of expenditure through off budget borrowing and other reasons. Thus, there is a difference between 'Total expenditure through budget' reported in 'The Budget at a Glance' (reported in Table 8.2, Row 6) and 'Total expenditure excluding loans, advances and debt repayments' reported in the Annual Financial Statement (reported in Appendix Table 8.1, Row 1).

BE: Budget estimates. **RE:** Revised estimates. *Subcategories under the item head are not exhaustive.

Source: Based on the annual financial statement.

Chapter 9: Money and Financial Markets

Sudipto Mundle and Pallavi Choudhuri

With the economy put under great strain in the midst of a global pandemic and a nationwide lockdown, the RBI rolled out a host of relief measures in a bid to soften the blow to the industry and services and stimulate the flow of credit. While well intended, transmission of monetary policy has been somewhat ineffective, with the banking and financial sector under strain even prior to the COVID-19 scenario. With banks unwilling to extend credit to the MSMEs, credit guarantees for loans to, this group of businesses are necessary to offset rising risk aversion. So are partial credit guarantees for investing in NBFCs, particularly small and mid-sized NBFCs, which are the main providers of credit to the MSMEs.

NCAER simulations indicate that output for 2020-21 would contract by nearly 13 per cent in the absence of a strong macroeconomic stimulus. A massive stimulus is necessary for moderating the negative shocks to the economy. The government announced the Atmanirbhar Bharat (AB) stimulus package on 12 May 2020, cumulatively adding up to over 10 per cent of GDP, with further details provided on 13 May. Most of the package is designed to stimulate credit flows to private business, especially MSMEs and NBFCs. The fiscal component adds up to 1.3 per cent of GDP, with another 0.4 per cent provided for as contingent liabilities for credit guarantees.

The total government borrowing programme could now add up to as much as Rs.17-21 trillion (8.8-10.8 per cent of GDP). This includes the announced Central government borrowing programme amounting to 6 per cent of GDP, including the 1.3 per cent of GDP additional borrowing to finance the fiscal component of AB package. It also includes the budgeted State government borrowing of about 2.8 per cent of GDP, which could go up to 4.8 per cent if we also count the additional borrowing headroom of 2 per cent of GDP recently provided to them. Sovereign borrowing of this scale is unprecedented. It poses exceptional challenges for the RBI and a financial sector that is already under considerable stress. No single channel could finance government borrowing on such a huge scale. What is required is a combination of multiple options. Financing by commercial banks, indirect monetization of a part of this through RBI acquisition of government debt in the secondary market, further easing of the 'ways and means' allowance and, as a last resort, RBI acquisition of government debt through private placements, i.e., direct monetisation, of a part of the fiscal deficit.

9.1 Introduction

As the coronavirus pandemic continues to wreak havoc across nations, it's not just the health systems and public health infrastructure that are under great strain but also economies. In India the stringent lockdown enforced since late March to contain the pandemic has dealt a severe blow to an economy that was already ailing. This economic review assesses that GDP is likely to have declined by around 26 per cent in Q1 of 2020-21 (see chapter 2). Consequently, NCAER's quarterly Business Confidence Index has also dropped very significantly in recent months, as has the Nikkei Composite PMI.

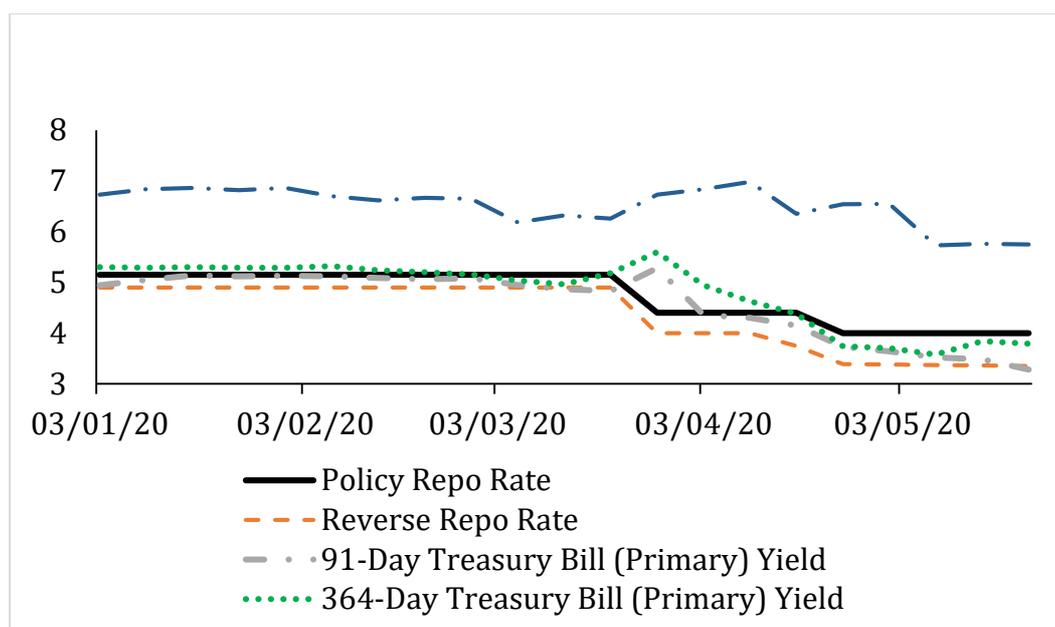
9.2 Policy Rate Cuts and Inflation

To cushion the blow to industry and services and stimulate the flow of credit the Reserve Bank of India (RBI) rolled out a host of relief measures which included, among others, (i) reducing the repo rate by 75 and 40 basis points (bps) on March 27, and May 22, 2020 respectively to 4 per cent, (ii) cutting the cash reserve ratio (CRR) by 100 bps

to 3.0 per cent, (iii) announcing targeted long term repo operations (TLTRO) worth one trillion rupees, and (iv) reducing the reverse repo rate in three subsequent steps on March 27, April 17, and May 22, by 90 bps, 25 bps, and 40 bps respectively to 3.35 per cent (see Figure 9.1). The RBI's cut in interest rates and liquidity injections till April 2020 amounts to approximately Rs.8 trillion as mentioned in the RBI Governor's statement on April 17, 2020, which is about 4 per cent of GDP (see Chapter 8 Table 8.3)¹. These include liquidity injections of Rs.2.8 trillion since the February 2020 bi-monthly meeting, with another Rs.3.74 trillion package announced on March 27, 2020 (comprising TLTRO operations in April, 2020, along with adjustments under CRR and MSF), and subsequent measures: (a) Rs.50,000 crore for TLTRO 2, (b) Rs.50,000 crore earmarked for refinancing of SIDBI, NABARD, and NHB, and (c) liquidity facility of Rs.50,000 crore for mutual funds.

Lowering the repo rate was aimed at reducing the cost of borrowing, while the cut in the reverse repo rate was aimed at dis-incentivizing banks from parking their surplus funds with the RBI. The RBI also rolled out a support facility for mutual funds following the closure of several funds by Franklin Templeton, one of the largest mutual fund operators.

Figure 9.1: Rates and Yields, % (January to May 2020)



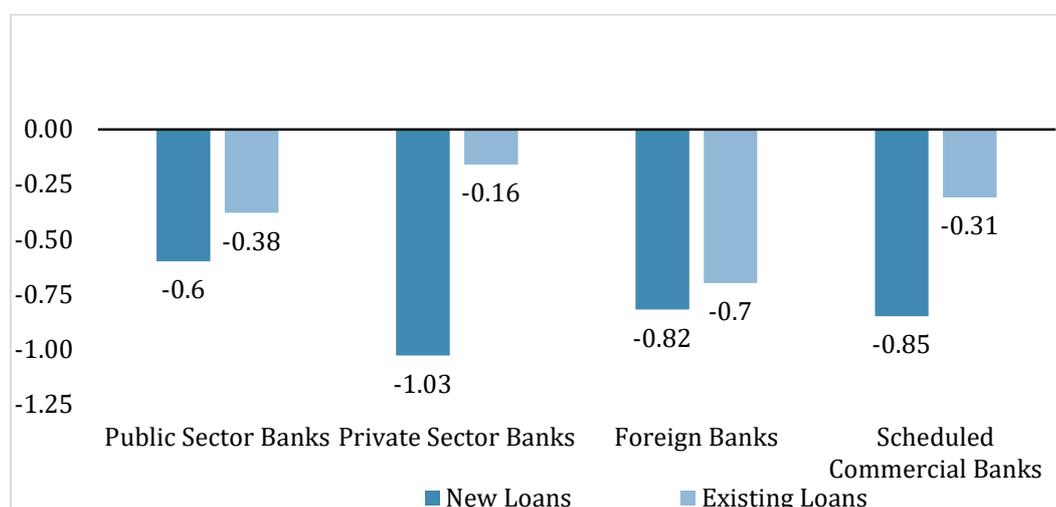
Source: RBI.

Though the repo rate went down by 160 bps between June 2019 and March 2020, the weighted Average Lending Rate (WALR) on fresh rupee loans of commercial banks declined by only 60 basis points (bps) for public sector banks, and by 103 bps for private banks, settling at 8.65 per cent and 9.29 per cent respectively by the end of

¹ For details on RBI's Covid-19 operations, see RBI Governor's statement dated April 17, 2020 and March 27, 2020: The RBI governor announced a Covid-19 package of ₹3.7 trillion.
https://www.rbi.org.in/Scripts/bs_viewcontent.aspx?Id=3853
https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=49582

March 2020, indicating weak transmission channel for banks during the period (see figure 9.2).

Figure 9.2: Change in Weighted Average Lending Rate (WALR) between June 2019 and March 2020



Source: RBI

On April 17, and subsequently on May 22, 2020, the RBI announced a further reduction in the reverse repo rate, by 25 bps and 40 bps respectively to 3.35 per cent, in a tacit admission that the earlier provision for enhancing liquidity, using tools such as LTROs and TLTROs, did not have the desired effect. However, it appears that banks have continued to park funds with the RBI even at the reduced reverse repo rate, instead of lending or investing in the bonds market in the desired segments. RBI data on money market operations show that net liquidity absorption as on April 30, 2020 was Rs.4.9 trillion, with banks parking Rs.7.35 trillion at the reverse repo rate.

Headline inflation based on the consumer price index (CPI) started easing from February 2020. NCAER has assessed headline inflation to be 6 per cent in Q1:2020-21 and 5 per cent for the full financial year 2020-21, though much will depend on the nature of any fiscal stimulus and other policy interventions in response to the Coronavirus crisis (see Chapters 2 on Policy Simulations). The Indian rupee depreciated by 5.17 per cent during the last quarter of fiscal 2019-20, and fell by another 2.27 per cent on April 17, 2020, hitting an all-time low of INR 76.54 against the US Dollar (spot rate). Rising risk aversion and capital flight from EMEs during this period of great uncertainty in the global trade and macroeconomic environment could exert further pressure on the Indian rupee. Continuing depreciation could raise the risk of imported inflation, leaving less room for further rate cuts.

9.3 Risk aversion and NBFCs

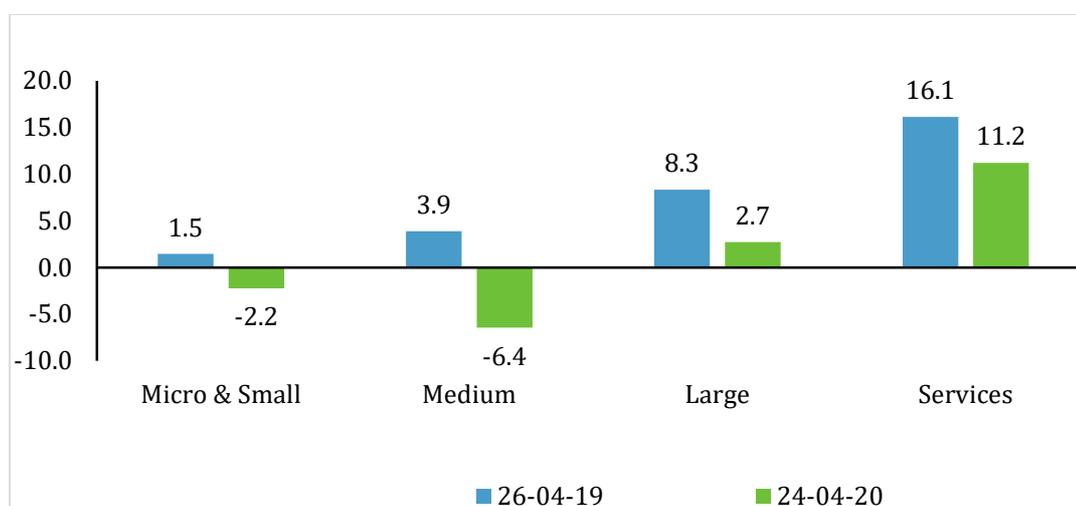
As financial markets, including the banking sector, exhibit high levels of risk aversion, bank credit is unlikely to take off in the prevailing scenario. Banks have been unwilling to lend, especially to Non-banking financial companies (NBFCs), which remain the main sources of credit for micro, small, and medium enterprises (MSMEs). The RBI

received bids for only Rs.12,850 crores, about half the Rs.25,000 crore it was offering under its revised Targeted Long-Term Repo Operation (TLTRO) on April 17, 2020. Quite likely this is a consequence of high risk aversion triggered by the IL&FS crisis of September 2018 and other similar fiascos that followed. In the light of such trends, the government or the RBI need to provide some form of at least partial credit guarantees for NBFCs, especially the small and medium sized NBFCs. Such support was in fact announced by the Finance Minister on 13 May, 2020, in relation to the Prime Minister's Rs.20 trillion stimulus package announced on 12 May, 2020.

9.4 MSMEs and stalled bank lending

The growth of credit to industry (comprising both MSME and large industries), came down to 1.73 per cent, y-o-y, as on April 27, 2020 compared to 7.21 per cent during the previous year (April 26, 2019). While large industries fared better (2.72 per cent) than other industry segments, the growth of credit to micro and small industries and medium industries was negative at (-) 2.25 per cent and (-) 6.42 per cent respectively (See Figure 9.3). Data from the RBI also indicates that, in absolute terms, while lending to large industries has picked up since March, 2020, credit to micro and small industries has collapsed during the same time period, indicating that the MSME segment has continued to suffer.

Figure 9.3: Growth Rate of Credit Across Industry (% , y-o-y)



Source: RBI

On the supply side of the credit market, lending has fallen on account of risk-aversion on the part of banks. On the demand side, the drop in business sentiments and fall in economic activity resulting from the lockdown seems to have moderated the demand for loans. MSMEs are facing a particularly severe crisis as their cash flows have dried up while their wage bills and operating costs have piled up, significantly raising their need for working capital. However, even prior to the COVID-19 scenario banks were turning towards low yield safer government securities using the SLR (statutory liquidity ratio) window instead of extending credit to the MSME sector. Responding to

this challenge, on 13 May 2020, the Finance Minister announced a large credit guarantee arrangement for MSMEs totaling Rs.3 trillion as part of the Rs.20 trillion package announced on 12 May, 2020 [see Table 8.3 from Chapter 8 on Fiscal Policy]. The Finance Minister (FM) also announced partial credit guarantee schemes for NBFCs in an effort to ease liquidity in this segment. The effectiveness of these credit guarantees in reviving lending to the MSME sector can be gauged only when the data for May 2020 and subsequent months become available.

9.5 Bond yields

On March 18, the RBI indicated that it would be buying short-term notes and government bonds to ease bond yields, which had shot up due to risk inversion. While the yields on 91-day treasury bills (T-bills) had fallen below the policy repo rate, to 4.3 per cent and further to 4.15 per cent on April 10 and 17, respectively, the high yields on long-dated bonds persisted, probably because of the fear of high macroeconomic uncertainty, impending recession and potential stagflation.

The yield on the ten-year benchmark government security (G-sec) had spiked to over 6.9 per cent on April 10, increasing the term premia² on bonds. The cut in the reverse repo rate on April 17 led to stronger monetary transmission at the shorter end of the bond market. The yield on the ten-year G-sec fell by 9 bps to 6.35 per cent compared to the previous day yield, while that on the T-bill fell by as much as 17 bps to 4.15 per cent. To cool off the yields on the longer dated securities, the RBI relaunched its bond swapping program, termed as India's version of Operation Twist, with a view to aiding monetary transmission at the longer-end of the bond market, and softening the yield on corporate bonds.

Though the yield has come down in May, the spread between the repo and the 10-year G-sec is still high at nearly 175 bps as on May 22, 2020, with the yield at 5.75 per cent. While the RBI has halved the repo rate from 8 per cent March 2015 to 4 per cent now, the yield on the 10-year G-sec only came down from 7.88 per cent to 5.75 per cent during the same period.

9.6 Financing Government Borrowing

NCAER model simulations indicate that output for 2020-21 would contract by close to 13 per cent, with nominal GDP going down by about 6 per cent, in the absence of any macroeconomic stimulus. The fiscal and monetary policy stimulus actually provided so far could generate positive growth of over 1 per cent, provided there were no binding supply response constraints on growth. In fact, there are major supply response constraints because of the high mortality among MSMEs both before and after the Coronavirus shock, the large scale withdrawal of migrant labour from urban areas in their desperate struggle to survive, and the huge disruption of supply chains. The severity of these supply constraints will determine to what extent the stimulus will contain the decline in growth and to what extent it will translate into higher inflation or a larger current account deficit.

² Term premium is the difference between short term policy rate and long term bond yields.

The Prime Minister, on May 12, 2020, announced an economic package, 'Atmanirbhar Bharat Abhiyan', which includes previous stimulus announcements made by the government relating to COVID-19, liquidity management operations by the RBI, and further measures, amounting to a total of over Rs 20 trillion (see Chapter 8 Table 8.3). After netting out RBI's liquidity stimulus to the tune of Rs 8 trillion and prior announcements by the Government, our assessment indicates that the announced stimulus package will require further Central Government borrowing to the tune of 1.3 per cent of GDP, with another 0.4 per cent of the GDP provided for contingent liabilities.

So far, the Central Government has announced that it has decided to borrow Rs.12 trillion or about 6 per cent of GDP i.e. an extra Rs.4.2 trillion compared to its original budgeted amount. Much of this additional borrowing is to offset the revenue loss arising from the lock-down of economic activities. In addition, there is the budgeted borrowing program of state governments amounting to about 2.8 per cent of GDP, which could go up to 4.8 per cent of GDP if we factor in the 2 per cent additional borrowing headroom for states announced by the Finance Minister.³ Thus, the total government borrowing programme could go up to Rs.17-21 trillion (8.8-10.8 per cent of GDP). Sovereign borrowing on this scale is unprecedented in India. So the policy challenge here is how to best manage government borrowing on this scale.

The first option⁴ is for both Central and State governments to borrow from commercial banks. To this end, the Central Government has allowed additional borrowing by states up to 2 per cent of GDP, though this is subject to some strong conditions. Since there is an additional risk premium for states' borrowing it would have been better for the central government to do the additional borrowing on behalf of the states and on-lend the money to the states at the same interest rate. This is what is being done now for States loans from multilateral institutions. But the commercial banks will only be able to absorb a part of such huge additional borrowing and yields are bound to go up. To offset this RBI can also indirectly monetize much of this additional borrowing by acquiring government bonds in the secondary market.

Another option would be to further liberalize the Ways and Means Advances (WMA), which is a credit facility extended by the RBI to the Centre and States to provide short-term liquidity. While the RBI has raised the limit for the WMA by 60 per cent over its previous level on March 31, 2020, state governments have been reluctant to use this window, given that the tenor of such borrowing is limited to a 90-day period. States have continued to borrow from the primary market at a higher rate instead. These advances can be provided at the repo rate. At the end of the advance period, such advances can be converted to dated securities of varying maturities to spread out the debt repayment burden.

³ Market borrowing is the main source of financing the combined fiscal deficit. However, it is supplemented by financing from other sources, e.g. the National Small Savings scheme in the case of the Central Government deficit.

⁴ In writing this section, we have benefitted a great deal from discussions with C. Rangarajan, Venugopla Reddy and, especially, Usha Thorat. However, the authors are responsible for the views expressed and any remaining errors.

The final option is for the RBI, the debt manager of the government, to directly monetize a part of the deficit, i.e., directly acquire the government bonds through private placements. While this will probably be necessary as a last resort, it should be in combination with the other two options, which should be considered first.

Such an extra-ordinary combination of measures has not been adopted previously, but nor has the Indian economy faced a crisis of such severity as now. Exceptional challenges call for exceptional measures.



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