

## Whither India's Economy Post-COVID?

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### Abstract

India's economy was weak in 2019, but appeared to be near a trough. A protracted slide in growth had continued since 2016. The continued challenges in implementation of the 2017 national Goods and Services Tax, and credit stresses in the domestic financial sector beginning in 2018 weighed on growth and sentiment. Sectors such as construction, housing, and autos reflected extremely low levels of activity. The Reserve Bank of India eased monetary policy and pledged to stabilize the financial sector, while the government introduced a large corporate tax cut to attract manufacturing activity, among other measures. While we did not believe any of these measures represented a forceful cyclical policy stimulus that would result in a sharp rebound, we thought that, together, they would help put a floor under the deceleration in growth, and combined with better external conditions, we would see India's growth climbing back towards its long-term trend by early 2021.

However, just as the Indian economy was starting to look up at the beginning of this year, the rising tide gave way to the COVID-19 shock. Against this backdrop, this paper presents a synthesis of our research on the macroeconomic and fiscal implications of the COVID-19 crisis for India, and lays out the challenges in setting and implementing policy.

Discretionary fiscal policy support – defined as targeted support to households and businesses, the kind of policy support that can revive any economy quickly in times of an unprecedented shock – has been tepid so far, in our view. Monetary policy has been the main “game in town”, and has eased significantly, combined with large injections of banking system liquidity. The transmission of conventional monetary policy, however, continues to pose challenges. In addition, the exchange rate has remained remarkably stable during this crisis; the real effective exchange rate has, in fact, strengthened, and will likely be a drag on growth. Therefore, while pent-up demand, favorable base effects, and massive policy support in advanced economies driving a global recovery could help lift India's economy, we struggle to see any domestic fundamental forces to drive India's growth forward in the medium run. In particular, the accelerating spread of the virus, continued risk aversion and confidence concerns in the domestic financial sector, and deteriorating fiscal and debt positions are the three key risks to India's recovery in the medium term.

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## I. Introduction

2019 was a difficult year for the Indian economy, which slowed significantly and sharply, with some market participants worried about India being on an inescapable path to a hard landing. Just when the Indian economy was starting to look up after a continued and significant slowdown, the rising tide gave way to the COVID-19 shock (GS, India: Rising Tide Gives Way To Coronavirus Shock). In India, the spread of the virus, announcements on shutdown of important sectors, social distancing measures, and fears among consumers and businesses, have all escalated sharply since early March.

There were five pillars underlying our relatively optimistic view on growth late last year – improvement in global growth, easing of domestic financial conditions, fiscal support, positive sentiment, and high frequency indicators turning favorable. In fact, all these five pillars dramatically turned around since early March. Our global team sharply downgraded its 2020 global growth forecasts, and we are now forecasting a global recession (GS, The World in Recession). The softening of domestic financial conditions since early 2018 had reversed by end March. Although policies are clearly evolving, fiscal impulse so far is at best moderate, and fell short of market expectations. The uplift in sentiment that was beginning to play out early in the year also reversed, driven by both domestic and global factors. Finally, the early signs of economic stabilization that had been evident from late last year also turned around.

Against this setting, this paper provides an overview of the evolving macroeconomic situation in India. Section II discusses the global backdrop, Section III presents facts on spread of the virus, Section IV analyzes the economic impact, Section V goes over the fiscal implications, and Section VI discusses some of the challenges with the economy's restart underway. We finally conclude with some policy implications.

## II. World in recession; global recovery has begun but risks remain

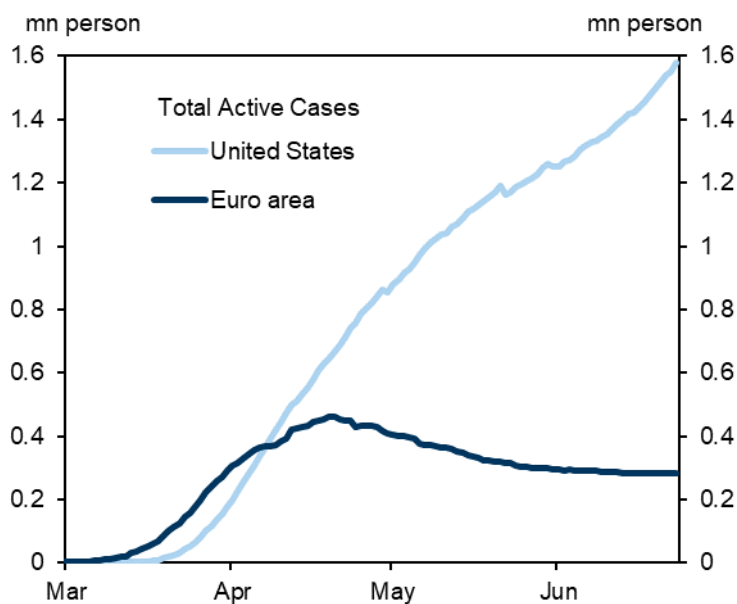
Back in March we sharply downgraded our growth forecasts across most of the world's major economies. Our global team estimates that global real GDP fell 16% (not annualized) in the three months from mid-January to mid-April, and now forecasts growth to be at -3.4% in 2020, with risks remaining on the downside. This is almost certainly the deepest recession since at least World War 2.

Global recovery has now begun, and global GDP is rising (GS: Global Views: The Deepest and Shortest Recession). The most striking piece of evidence that the global recovery has begun was the 2.5 million

US payroll gain in May and the drop in the unemployment rate from 14.7% to 13.3% (GS, How High Is the Unemployment Rate?). Europe has seen active virus cases decline consistently since mid-April, despite a gradual loosening of restrictions. The policy support, especially in advanced economies has been massive, leading to stabilization in disposable incomes.

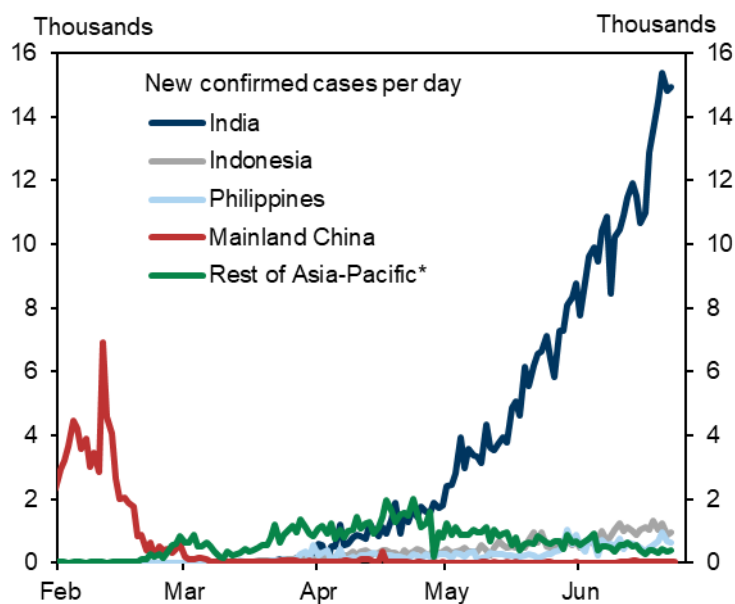
The key risk to the global sequential recovery is the fact that the virus has not been brought under control in the United States, and several emerging economies. The US has not managed to control the virus as effectively as in the Euro area (Figure 1a). Compared to rest of Asia, the situation is strikingly worse in India too (Figure 1b), where new cases have accelerated, especially since the reopening started, and now stands at 16,000 per day. This compares with less than 1000 new daily adds on average in rest of region (GS: A staggered rebound). The situation in India and the US, along with localized outbreaks in several parts of the world, raises the risk of a rise in infections as economies open up further, which might trigger renewed government restrictions or voluntary changes in behavior that could weigh on growth.

**Figure 1a: US Underperforms in Virus Control**



Source: JHU CSSE, Goldman Sachs Global Investment Research

**Figure 1b: India an exception in virus control in Asia**



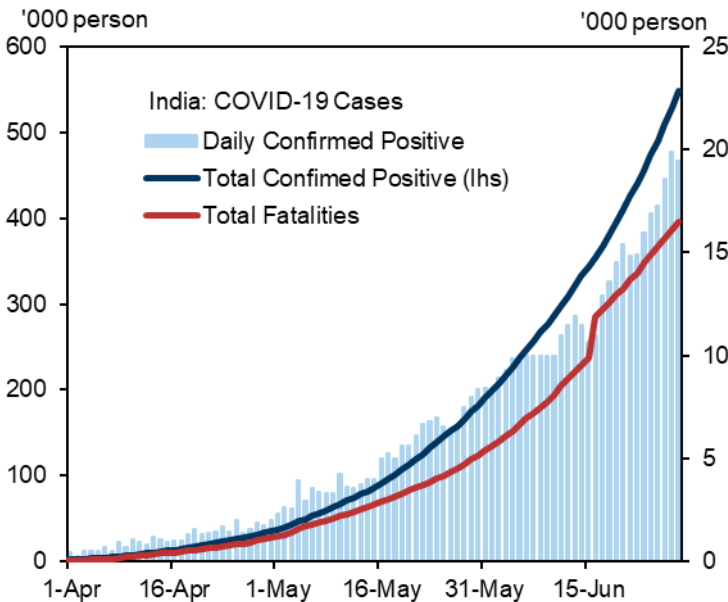
\* Economies in GS coverage.

Source: CEIC, Goldman Sachs Global Investment Research

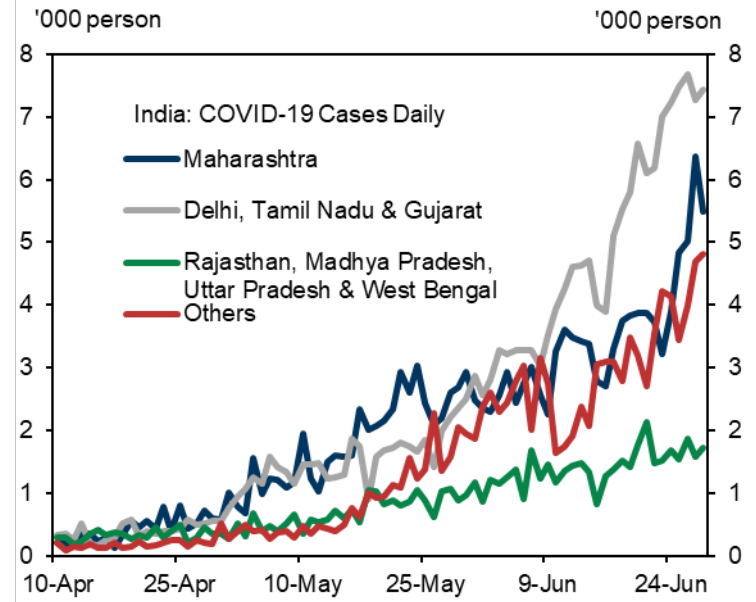
### III. The spread of COVID-19 has accelerated in India

The total number of COVID-19 cases in India crossed 500,000 mark on June 26. Daily new positive cases also continue to increase, with a record ~20,000 cases added on June 27 (Figure 2).

**Figure 2: India added ~20,000 cases on June 27, total number nearing 550,000 mark**



**Figure 3: 8 states account for 80% of the total cases**



*Note: Data as of June 28, 2020. Source: Ministry of Health and Family Welfare*

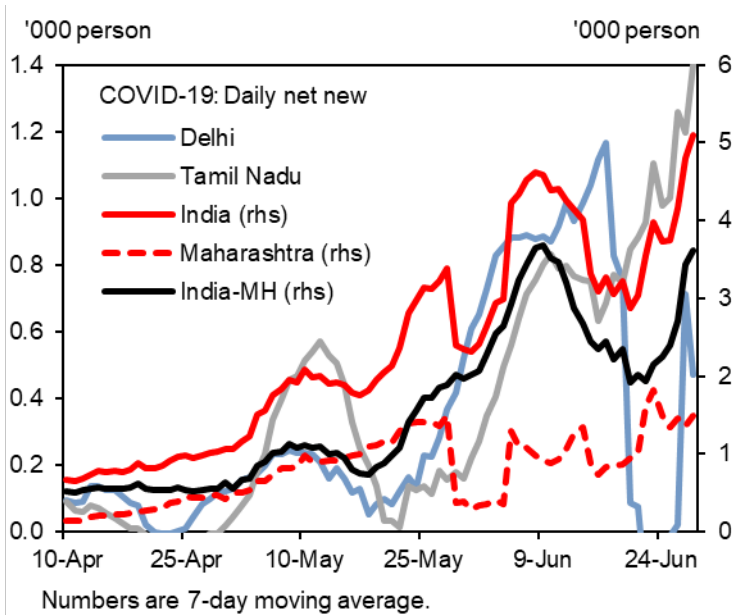
The silver lining may be that the cases appear to be concentrated in certain states. Maharashtra continues to be the most impacted state, with total confirmed cases above 160,000, followed by Tamil Nadu, Delhi and Gujarat. Together, these four states still account for nearly 65% of the total cases in the country. In total, 80% of the cases are concentrated in only eight states (Figure 3).

Next, we look at the total number of "active" cases (i.e. subtracting the recoveries and deaths from the total positive cases). While these reported a declining trend at the nationwide level in the first week of June, driven by higher recoveries (Figure 4a), they have begun to rise once again. The number of active cases in Maharashtra, and in particular, Mumbai, were a key driver of the nation-wide trends until May, but reported cases in Tamil Nadu and Delhi have risen rapidly since then, and appear to be leading India-level trends in active cases now.

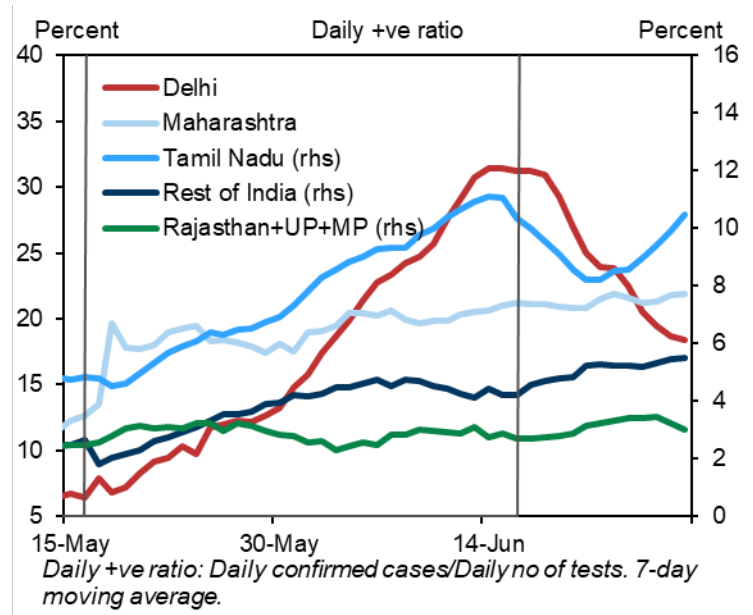
As the virus spread accelerated, testing for COVID has been ramped up sharply. Therefore, we also look at the cases, adjusted for testing, i.e. the "positive ratio" defined as the number of confirmed cases as

percentage of total tests. Except for certain states such as Rajasthan, Uttar Pradesh, and Madhya Pradesh, the positive ratio has increased since mid-May. In particular, we note that for Delhi and Tamil Nadu, the positive ratio rose sharply from mid-May until mid-June, even though there was no change in testing strategy during this period (Exhibit 4b). This could be attributed to the relaxation of lockdown restrictions since May 18th, as also confirmed by increased mobility in these states measured by Google mobility indices (see more on this below). Testing, on the other hand, was ramped up only after 17th June, after which the positive ratio declined as tests rose at a faster pace than reported cases. For Tamil Nadu, however, the positive ratio has started to rise once again, which has been followed by re-imposition of lockdown restrictions in the four hardest hit districts including Chennai.

**Figure 4a: The number of active cases was driven by Maharashtra till May, now being led by Delhi & Tamil Nadu**



**Figure 4b: Positive ratio rose sharply in mid-May though testing numbers remain unchanged**



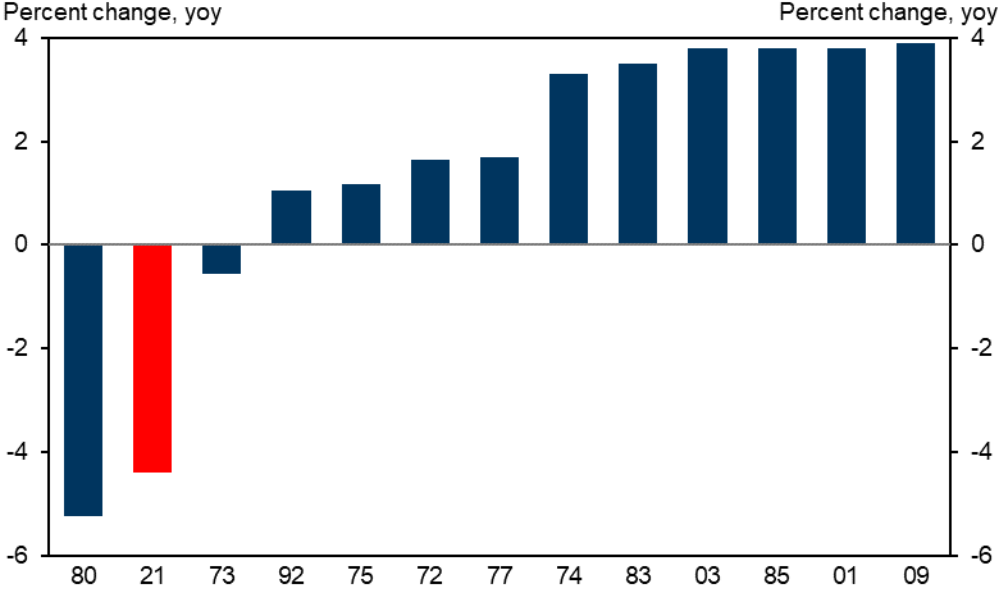
Note: Data as of June 28, 2020. Source: Ministry of Health and Family Welfare, COVID19India.org

#### IV. Severe economic impact of COVID19 in India, expect sequential recovery but risks remain

Our baseline assumption is that after the deep contraction in Q2 of calendar year 2020 (-45% qoq annualized rates), activity will rebound sharply, and mechanically in Q3. For Q4 and Q1 of next year, we expect a step-down to a more normal, and lower sequential growth pace. The main reason is that different parts of the economy are likely to recover from the virus hit at different speeds. By the end of

Q3, industrial activity could possibly normalize especially in manufacturing where virus control might be easier, with limited room for big further gains. In contrast, industries in which virus control is harder—travel or entertainment, for example, —will still be in a gradual normalization process, and probably won't rebound fully until a vaccine or another comprehensive medical solution is available. Our quarterly estimates imply that real GDP would contract by 4.4% in FY21. Our forecast -4.4% growth in FY21 would be close to the deepest recession India has witnessed, in 1980 (Figure 5).

**Figure 5: Our forecast of -4.4% growth in FY21 is very close to deepest recession India witnessed in 1980.**



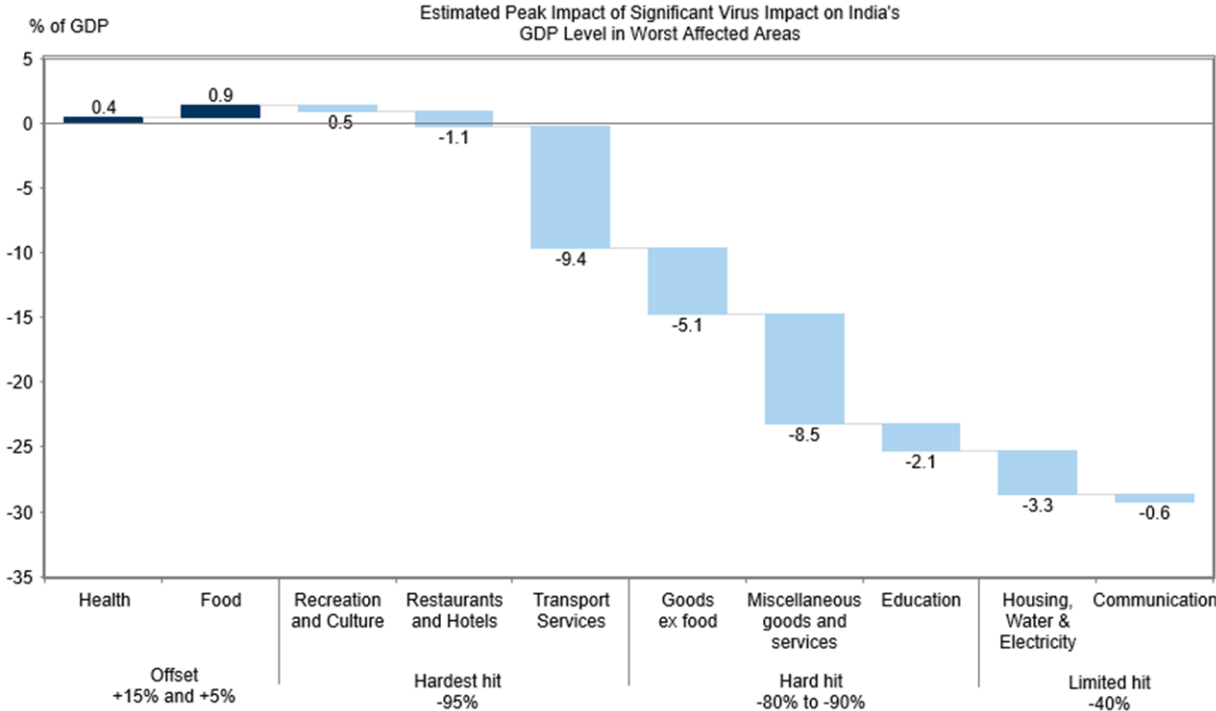
Source: Haver Analytics, Goldman Sachs Global Investment Research

Next, we dig into the components of the sharp downgrade in growth compared to our pre-virus previous base line. We expect the impact of the virus to work through three channels – decline in India’s exports from a slowdown in global demand, and domestic supply chain bottlenecks; a hit to services consumption arising from the shutdowns, virus fears, and social distancing measures; and a slowdown in investment from factory closures, the dip in demand, and supply chain disruptions.

Let us start with our estimates of the effect of the virus on consumption. Figure 6 provides illustrative estimates of how large the GDP impact of these consumption cutbacks could be for India. The bottom of the chart shows our assumptions about the peak magnitude of cutbacks—for example, we assume an 95% decline in spending on "recreation and culture", and in "restaurants and hotels", and an 80-90% decline in "education" services. Overall, consumption contributes 60% to Indian GDP. The bars in the chart multiply these assumed cutbacks by the GDP share of each category to estimate the annualized

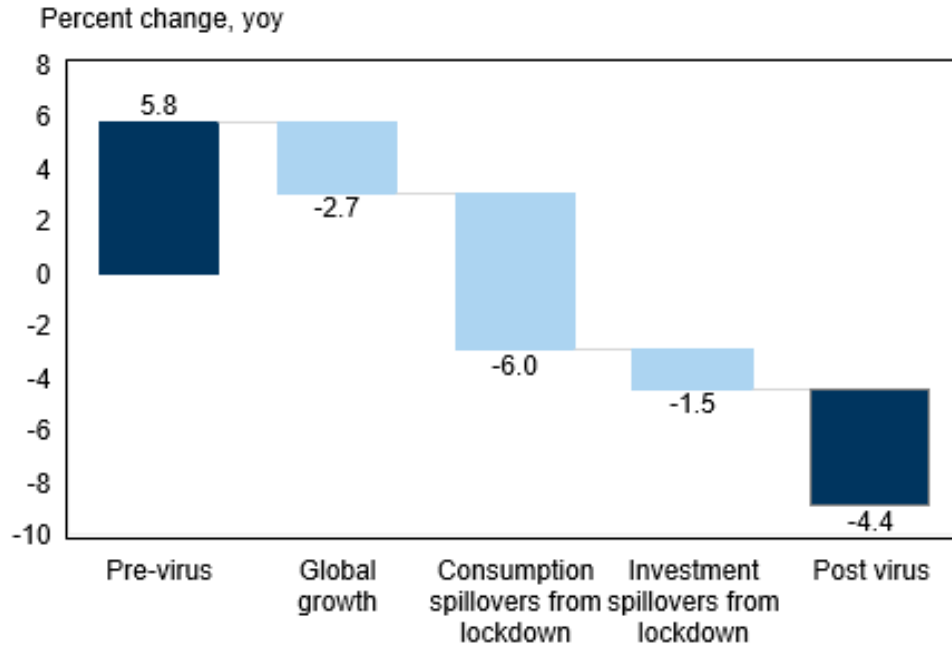
impact on the level of GDP (relative to a no virus counterfactual). In total, our assumptions about consumption cutbacks imply a peak hit of 30% to the monthly GDP level through consumption spillovers. We assume these peak consumption effects would last for more than half of Q2. Even if we assume everything had become fully normalized in mid-May, that would still imply that Q2 GDP would be roughly 15% below the norm (half of the quarter 30% below the norm). Against our trend growth assumption of 6%, 15% below the norm for the quarter would imply Q2 growth of -9% on a year-on-year basis. This is with an assumption of immediate and total recovery, which obviously would not happen; therefore, we expect Q2 to report a decline of more than 9% in yoy terms.

**Figure 6: We estimate a peak impact of 30% on monthly GDP through consumption spillovers**



We assume roughly two months of peak shutdown, and translate the monthly hit to consumption in annualized terms. To the consumption hit, we add the impact on India’s exports and investment. Figure 7 summarizes the components of the downgrade in growth compared to our pre-virus baseline.

**Figure 7: Lower global growth, hit to consumption from the lockdown, and investment spillovers explain the ~ 10 pp lower GDP growth compared to pre-virus situation**



Source: Haver Analytics, Goldman Sachs Global Investment Research

*Stronger mechanical rebound in Q3, but gradual recovery thereafter*

We do not believe the latter half of the fiscal year will see any more rapid sequential growth than we thought previously. While macroeconomic policies have clearly eased, and we expect them to ease further, we believe that policy support - in particular discretionary fiscal policy support (defined as direct support to households and businesses) which can minimize second-round effects of the pandemic, and make any economy quickly rebound in times of an unprecedented shock - has been tepid so far. Our calculations suggest that in aggregate, the discretionary component of fiscal support across the seven phases of announcements by the Finance Ministry, including a INR 1.7 trn package announced in March, five rounds of announcements from 13-17 May and extension of free provision of food grains announced on 30th June, stands at 1.8% of GDP (INR 3.6 trn) (Figure 8), much smaller than the aggregate figure of 10% of GDP (INR 20 trn) economic package announced by the government.



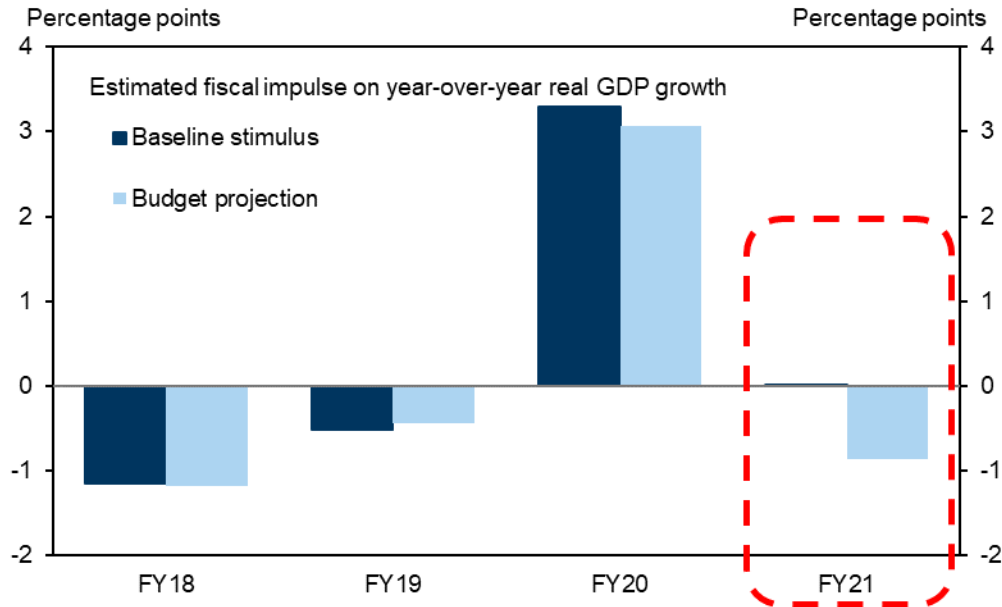
**Figure 8: Total discretionary spending stands at 1.8% of GDP since Mar'20**

| Stimulus Package  | Relief amount<br>(INR bn) | Relief amount<br>(% of GDP) |
|---|---------------------------|-----------------------------|
| Revenue loss due to tax concessions since 22nd March          | 78                        | 0.04                        |
| Health Infrastructure fund announced on 24th March            | 150                       | 0.07                        |
| Stimulus amount announced in :                                |                           | 0.00                        |
| Phase 1, 26th March   | 1,700                     | 0.84                        |
| Phase 2, 13th May   | 5,946                     | 2.95                        |
| Phase 3, 14th May   | 3,100                     | 1.54                        |
| Phase 4, 15th May   | 1,500                     | 0.74                        |
| Phase 5, 16th May   | 81                        | 0.04                        |
| Phase 6, 17th May   | 400                       | 0.20                        |
| Phase 7, 30th June  | 900                       | 0.45                        |
| <b>Total fiscal stimulus announced till date</b>              | <b>13,855</b>             | <b>6.87</b>                 |
| Amount infused by RBI between February and April              | 7,985                     | 3.96                        |
| <b>Total fiscal and monetary stimulus announced till date</b> | <b>21,840</b>             | <b>10.83</b>                |
| <hr/>   |                           |                             |
| Health infrastructure   | 150                       | 0.07                        |
| Discretionary Spending in:                                    |                           | 0.00                        |
| Phase 1   | 980                       | 0.49                        |
| Phase 2   | 596                       | 0.30                        |
| Phase 3   | 50                        | 0.02                        |
| Phase 4   | 500                       | 0.25                        |
| Phase 5   | 0                         | 0.00                        |
| Phase 6   | 400                       | 0.20                        |
| Phase 7   | 900                       | 0.45                        |
| <b>Total Discretionary Spending till date</b>                 | <b>3,576</b>              | <b>1.77</b>                 |

Source: Ministry of Finance, Goldman Sachs Global Investment Research

Further, our “fiscal impulse” calculation (see GS, India: Fiscal policy –Budget points to drag on growth in FY21, likely to be mitigated by the stimulus package), which captures a complete set of seasonally adjusted quarterly tax and spending flows, at the center and state levels, combined with our assumption on multipliers that vary across different tax and spending items, estimate only a neutral fiscal impulse (of +1.1bp, Figure 9), even after including the central government's stimulus package announced so far.

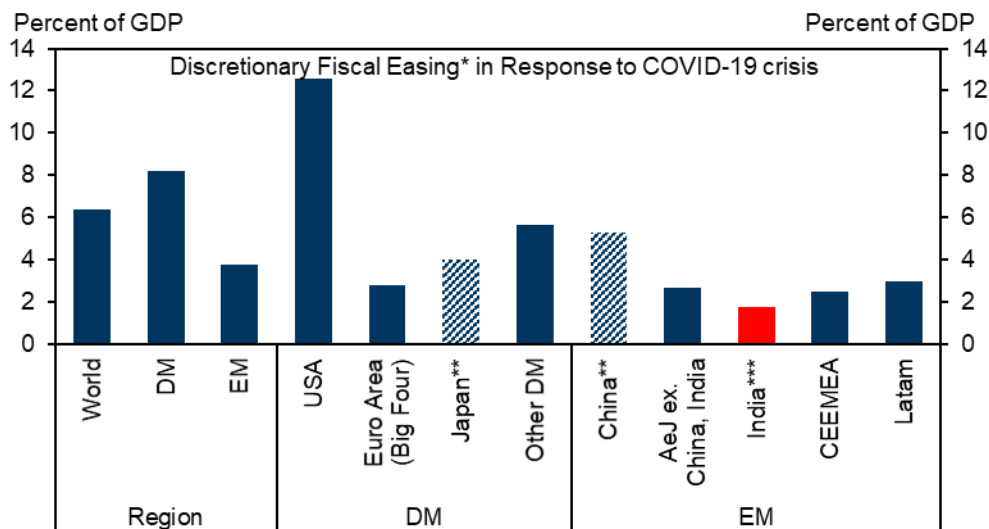
**Figure 9: Discretionary spending of 1.8% GDP would lead to a fiscal impulse of only 1.1 bp**



Source: Union Budget FY21, Ministry of Finance, Goldman Sachs Global Investment Research

Importantly, the discretionary component of India's fiscal policy support remains small compared with other emerging economies, and far less compared with advanced economies (Figure 10).

**Figure 10: India's discretionary fiscal stimulus of 1.8% GDP is much lower as compared with other EM and DM**

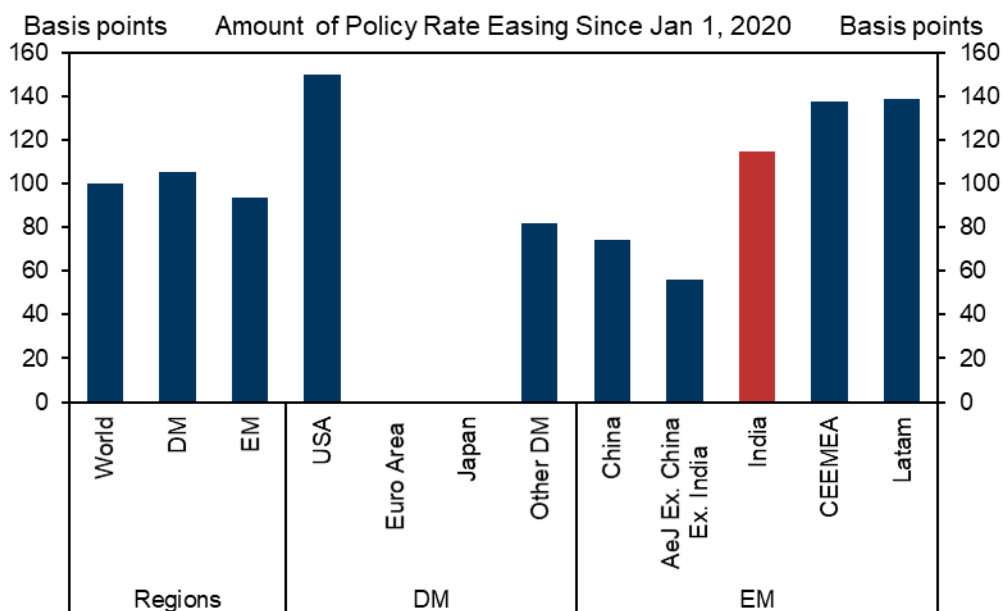


\* Discretionary policy actions taken since the outbreak that lead to higher government expenditures or lower tax receipts. \*\* GS expected easing  
 \*\*\*Doesn't include stimulus announced by various states

Source: Ministry of Finance, Government of India, Goldman Sachs Global Investment Research

On the monetary side, markets have perceived the Indian central bank as the main “game in town”. The RBI has reduced policy rates by 115 bp since the COVID crisis hit, and combined policy rate changes, with other tools like liquidity injection, long-term repo operations, and regulatory measures. India's policy rate easing, in fact, remains comparable with the "average" conventional monetary policy support we have seen across emerging and advanced economies (though lower than CEEMEA and Latam) (Figure 11).

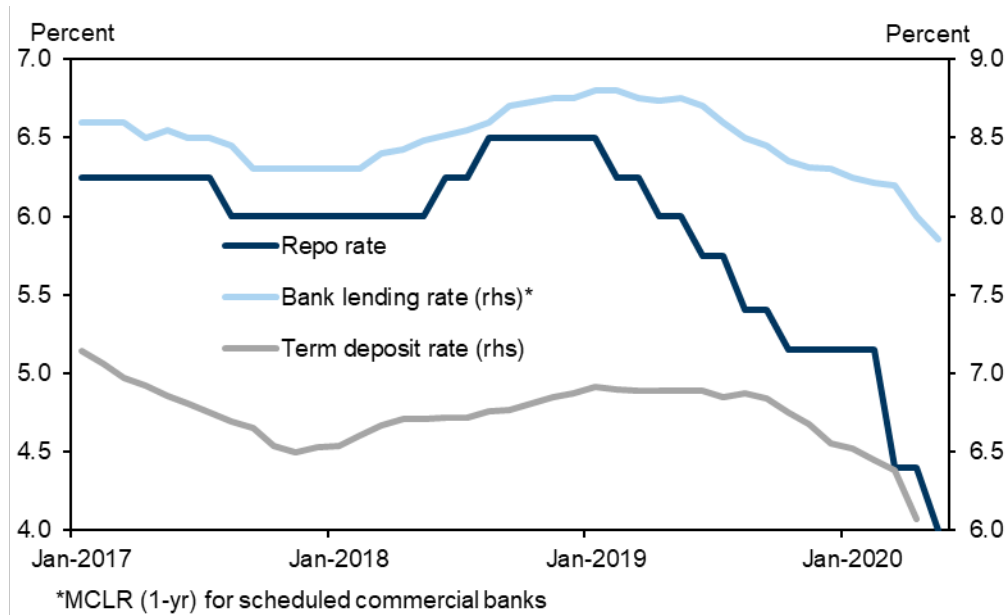
**Figure 11: RBI has cut policy rate by 115 bps since Mar'20**



Source: RBI, Goldman Sachs Global Investment Research

Transmission of conventional monetary policy, however, remains a challenge. Indian banks have transmitted RBI's prior policy actions, but only to a limited extent (based on RBI data for scheduled commercial banks, since January, the average pass-through of policy rates into bank lending rates and deposit rates is around 40bp) (Figure 12). The transmission of policy rate cuts has been a longstanding issue, and continues to be delayed and muted in magnitude. Banks have essentially not been willing to cut rates as deposits and household financial savings are at historical lows. Even while policy rates are down, the rates paid by the government on small savings are significantly higher than bank deposit rates. Transmission has continued to be weak, despite the nudges by the RBI in moving from a base rate to a marginal cost of lending rate (MCLR) to more accurately reflect the marginal costs of funds, and more recently to introduction of external benchmarks on the asset side.

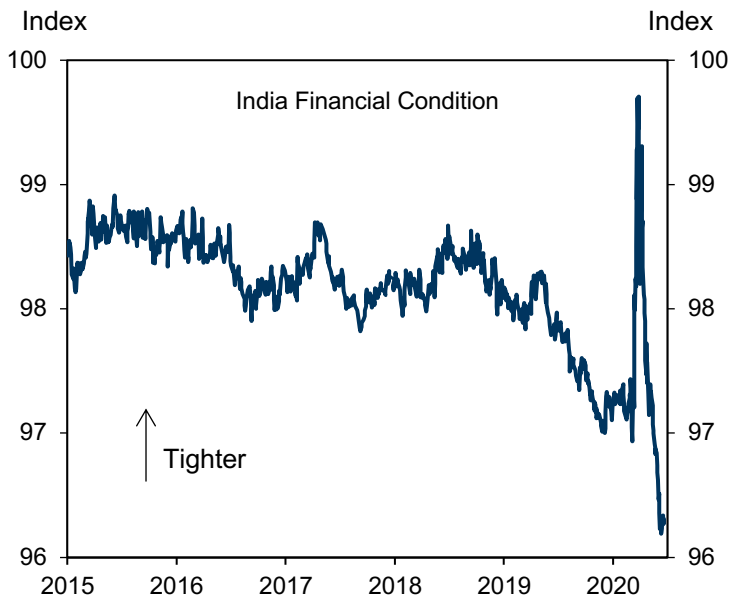
**Figure 12: Bank lending rates have reduced only by 40 bp between Jan'20 and May'20**



Source: RBI, Goldman Sachs Global Investment Research

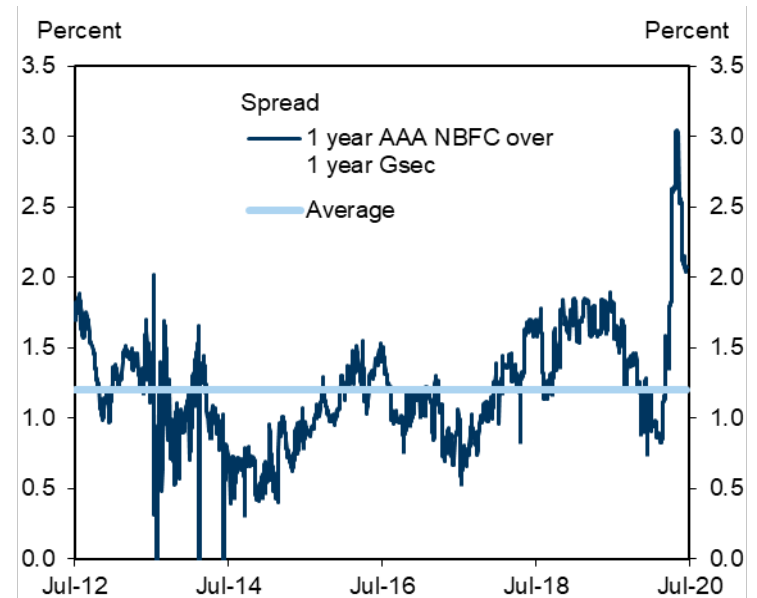
Domestic financial conditions have softened considerably following the measures taken by the central bank since the end of March. Figure 13a shows our GS India Financial Conditions Index (FCI) – which is a weighted average of short-term and long-term interest rates, equity prices, credit spreads, and trade-weighted exchange rate. The FCI has eased by roughly 200 bp since early April. The spreads for NBFCs have declined too by ~100 bps from mid-May, but still remain elevated compared to previous years.

**Figure 13a: Financial conditions have eased by 200 bps since early April**



Source: Goldman Sachs Global Investment Research

**Figure 13b: NBFC spreads have reduced by 100 bps since mid-May, but remain historically high**



Source: Bloomberg

Despite the easing of financial conditions, our overall sense so far is of a less aggressive policy stimulus by Indian policymakers even compared to 2009 (for example), where the shock was different in nature and less severe (when monetary and discretionary fiscal policy was each eased by more than 400 bps). Despite stronger initial conditions and positive output gaps pre-Global Financial Crisis, and a liquid and well capitalized domestic financial sector, the direct policy support was larger in magnitude. This time around, the initial conditions were weaker in India - a negative output gap, and a weak financial sector - when the COVID-19 crisis hit the economy; yet the direct support from macro policies so far has been strikingly smaller in magnitude (Figure 14).

**Figure 14: Current slowdown has been very deep, yet the monetary response has been relatively modest.**

| Recent Episodes of Slowdown   | Period           | Duration (# Months) | Decline in CAI (pp) | Policy Response              |           |           |
|-------------------------------|------------------|---------------------|---------------------|------------------------------|-----------|-----------|
|                               |                  |                     |                     | Monetary                     | Fiscal    | FX        |
| Global Financial Crisis (GFC) | Jun-08 to Jan-09 | 8                   | -7.0                | -425 bps                     | +4.3 pp   | Unchanged |
| Post GFC                      | Feb-11 to Oct-11 | 9                   | -3.3                | +200 bps                     | +1 pp     | -3.3%     |
|                               | Feb-12 to Sep-12 | 8                   | -2.6                | -50 bps                      | -1 pp     | -4.3%     |
| Demonetisation                | Oct-16 to Jan-17 | 4                   | -2.0                | No Action                    | No Action | -0.7%     |
| Pre-covid slowdown            | Jan-18 to Dec-19 | 24                  | -2.6                | +50 bps followed by -135 bps | No Action | -2.1%     |
| COVID outbreak                | Mar-20 onwards   | 4                   | -11.7               | -115 bps                     | +1.8pp*   | -4.1%     |

Note: Monetary policy response is measured by the change in repo rate during the episode; fiscal policy response is measured by the change in general government fiscal deficit (as a percentage of GDP); FX policy response is measured by change in Real Effective Exchange Rate (REER). \*Based on our calculation of discretionary fiscal spending.

Source: CEIC, Haver Analytics, Goldman Sachs Global Investment Research

## V. Fiscal uncertainty at a high; FY21 budget framework loses relevance in the light of COVID-19 shock

We expect nominal GDP to contract in FY21 (vis-à-vis government budget expectations of 10% growth). This would obviously have dramatic implications for the fiscal outlook for 2020 and 2021. On the tax side, even assuming similar buoyancy in tax collections as originally budgeted for, we expect a sharp shortfall in total receipts. While some shortfall in direct tax collections and Goods and Services tax (GST) would be offset by the recently announced higher excise duties on petrol and diesel, it would at best be partial. On top of the risk to tax revenue collections, the execution of the privatization program – the key linchpin of government’s budget framework – would pose serious challenges this year too. The

execution of privatization plans was weak in FY20, as has historically been so, with the government resorting to sales within public sector entities in order to achieve budget targets, rather than to private buyers. Asset sales underperformed significantly in FY20 in comparison with what was originally envisaged, yet were pegged at even more ambitious levels for FY21 (0.9% of GDP). While the intent to undertake privatization is clear, and we think the plan to sell part of the government's holding in Life Insurance Corporation (LIC) is a welcome move – the COVID-19 crisis, as well as the weak global and domestic market sentiment would obviously make it even harder to achieve progress on implementation. On the spending side – the usual strategies to achieve budget targets – lower spending on subsidies, lower transfers to states, and squeezing capital spending – would, and perhaps should be limited this year, given the contraction in economic activity, and the need for fiscal policy support.

We form our baseline scenario, where we build in the impact of COVID shock on tax, non-tax and privatization receipts, and a discretionary fiscal stimulus of 1.8% of GDP. With revenue collections falling short, and the government unable to squeeze spending by as much, we project a central government deficit of 7.1% of GDP in this scenario (Figure 15, 360 bp above the original budget projections).

**Figure 15: Fiscal Budget targets for FY21 seem unrealistic post COVID-19 outbreak**

| % of GDP                      | FY20        | FY21BE      | FY21F                                |
|-------------------------------|-------------|-------------|--------------------------------------|
|                               |             |             | Fiscal response equal to 1.8% of GDP |
| <b>Fiscal deficit</b>         | <b>4.6</b>  | <b>3.5</b>  | <b>7.1</b>                           |
| <b>Expenditure</b>            | <b>13.2</b> | <b>13.5</b> | <b>16.1</b>                          |
| Capital                       | 1.7         | 1.8         | 1.6                                  |
| Revenue                       | 11.6        | 11.7        | 14.5                                 |
| <b>Revenue</b>                | <b>8.3</b>  | <b>9.0</b>  | <b>8.3</b>                           |
| Tax                           | 6.7         | 10.8        | 7.2                                  |
| Non-tax                       | 1.6         | 1.7         | 1.0                                  |
| <b>Recovery of loans</b>      | <b>0.1</b>  | <b>0.1</b>  | <b>0.1</b>                           |
| <b>Privatization receipts</b> | <b>0.2</b>  | <b>0.9</b>  | <b>0.7</b>                           |

-- F: GS Forecasts, BE: Budget Estimates

--FY20 is actual data

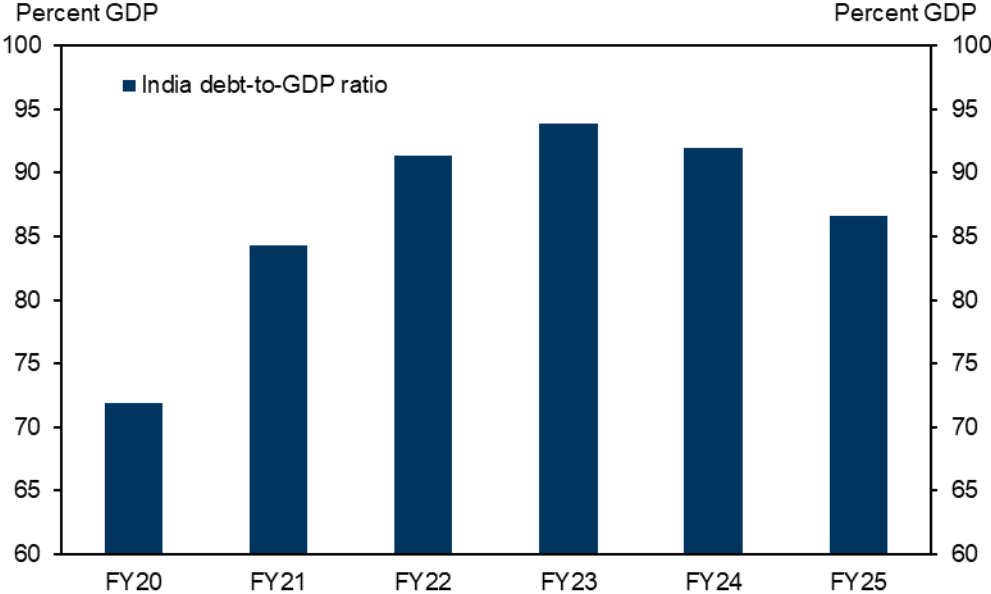
--Total discretionary spending, as per our calculations is 1.8% of GDP or INR 3.6 tm. Assumed INR 600 bn is spent in FY20, rest is/will be spent in FY21.

--Nominal GDP level in FY21BE and FY21F are different.

Source: Union Budget FY21, Haver Analytics, Goldman Sachs Global Investment Research

Assuming states use their enhanced borrowing limits recently allowed by the central government, and net borrowing of public sector enterprises follow historical patterns, we forecast that the consolidated deficit for FY21 could reach close to ~15% of GDP. This would lead to a sharp increase in the government’s debt to GDP from an estimated 72% of GDP in FY20 to as high as 85% of GDP. Going forward, how the debt dynamics evolve, will depend on the evolution of real and nominal GDP growth, and government’s fiscal plan. Under a scenario of gradual economic recovery, even with a sharp consolidation in the primary deficit, growth-interest differential would remain positive, and debt as a share of GDP would continue on an upward path for the next few years. The debt-to-GDP ratios could start to decline from FY24 assuming interest-growth differential turns negative putting a downward pressure on the debt dynamics, and with continued consolidation of primary deficit by the government (Figure 16). Moreover, even when debt starts to decline, it would likely be at significantly higher levels than it is currently.

**Figure 16: Debt-to-GDP ratio might increase to 85% in FY21**

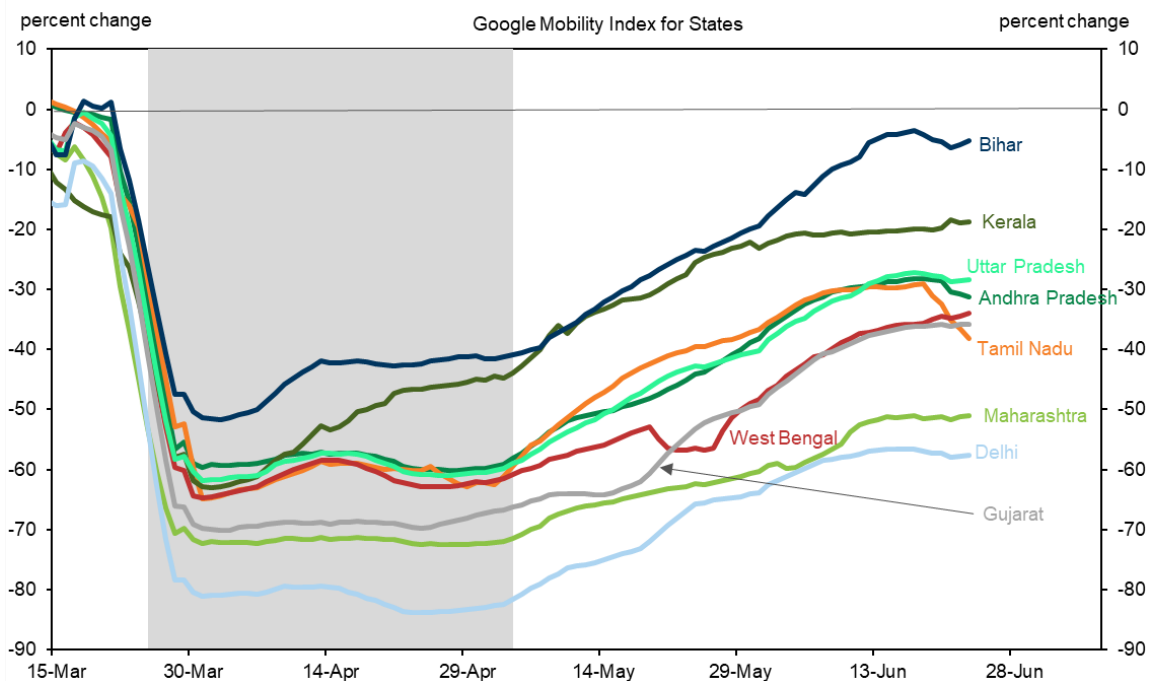


Source: Goldman Sachs Global Investment Research

## VI. The restart and the challenges

Restart of the Indian economy is underway. In this section, we explore how mobility is normalizing, how the virus is spreading, and how economic outcomes are evolving across states with different degrees of reopening. Based on Google mobility data, movement has picked up nationwide since early May, but remained significantly below normal levels in all states through June 23 (Figure 17).

**Figure 17: Mobility has improved in all major states since early May, but remains significantly below normal**



*Note: Google Mobility Index compares mobility on various days of the week with median day-value from the 5-week period between Jan 3 and Feb 6, 2020. Mobility index reported in the chart above is average of grocery/pharmacy, parks, retail & recreation, transit and workplace mobility.*

*Data as of June 23, 2020. 7-day moving average. Shaded portion highlights lockdown period.*

*Source: Google LLC "Google COVID-19 Community Mobility Reports"*

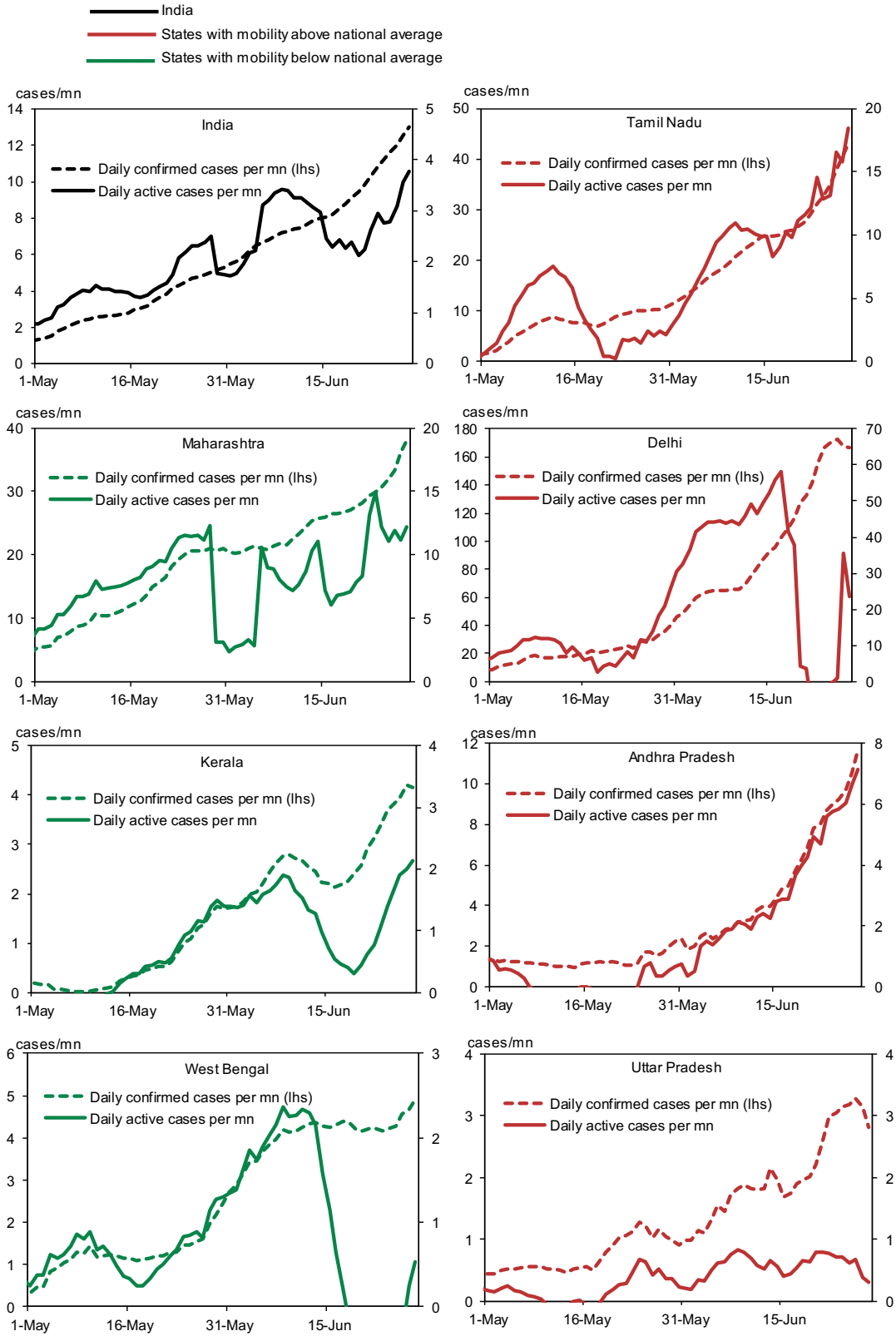
The “de facto” restart of the economy exhibits significant variation across sectors, and across states. While visits to grocery stores have increased the most, those to parks have risen the least (not shown). Across states, Tamil Nadu reported the highest increase in mobility, while Maharashtra reopened the least within a month of relaxation of restrictions since early to mid-May. Mobility, however, plateaued nationwide, more recently as the cases rose, and in certain states like Tamil Nadu due to re-imposition of lockdown restrictions.



But is the increase in mobility causing the virus to spread? In order to explore this, we define the degree of restart (or reopening) at the state-sector level by measuring the change (percentage point difference) in the five mobility sub-indices and the aggregate mobility index between two points in time. (i) Peak of the lockdown, just before the lockdown rules started to be relaxed. We take a 7-day moving average ending May 3. The first wave of lockdown relaxations started on May 4. (ii) Mobility data as of June 12 (last week before lockdown restrictions were re-imposed in several states and mobility began to decrease).

Unlike in several advanced economies, we find net new cases to have risen sharply immediately following the relaxation of restrictions in states which reopened the most (Figure 18). Notably, even adjusting for testing, the positive ratio rose sharply for Delhi and Tamil Nadu between mid-May and mid-June, coincident with the relaxation of lockdown rules in these two states (Exhibit 4b). Testing was ramped up only after 17<sup>th</sup> June, post which we did observe a further spike in cases, especially in Delhi. Delhi also exhibited a sharp fall in active cases after mid-June due to a large number of recoveries (likely cumulated over a short period), but active cases are once again on a rising trajectory in Delhi.

**Figure 18: Net new virus cases are on a rising trend in states which have reopened the most**



Source: Data as of June 28, 2020. Ministry of Health and Family Welfare, COVID19India.org

Finally, we fit a model for the daily growth rate in the number of active cases, drawing from the cross-country analysis by our global team (see: Projecting the Outbreak in the Short Run). The model includes the change in mobility index, in addition to lags in the growth rate of the virus and the age of the virus. Figure 19 shows the regressions results. Our model can explain 66% of the variation in new active cases. The results further strengthen our finding that states which reopened to a greater extent show higher growth in active virus cases. The magnitude of the estimates coefficient on the mobility index suggests that every 1% increase in aggregate mobility increases the growth rate of daily active cases by 0.4pp, which is economically and statistically significant. For example, mobility in Maharashtra increased by 3.84% on June 10, which is estimated to have lifted growth rate of new active cases by 1.45pp on June 12 (this is also evident from spike in cases on June 12 before declining, for the state of Maharashtra, in Figure 18).

**Figure 19: Every 1% increase in aggregate mobility increases growth rate of active cases by 0.4pp**

|  | Daily Growth Rate of Active Cases Per Million <sup>^</sup> |
|--|--|
| 1-Day Lagged Growth Rate                               | 0.209***<br>[3.838]  |
| 2-Day Lagged Growth Rate                               | 0.182***<br>[3.321]  |
| Avg of 3-7 Day Lagged Growth Rates                     | 0.187**<br>[2.514]   |
| Days since start of outbreak                           | -0.061**<br>[-2.194]                                       |
| 2- Day Lagged Growth Rate in aggregate mobility (7dma) | 0.378***<br>[2.717]  |
| Num. of States   | 12   |
| Observations   | 316  |
| R-squared  | 0.663  |

Note: T-statistics in brackets

<sup>^</sup>Natural log difference of active cases per million\*100

States Fixed Effects have been included in this regression

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Note: Model built on data from 17-May to 12- June.

Source: Goldman Sachs Global Investment Research, Google LLC "Google COVID-19 Community Mobility Reports", COVID19India.org

## Conclusion and policy implications

Policymakers are usually focused on short-run economic management issues. But the short run has to be a bridge to the medium and long run. The central medium-run questions facing India is where will growth come from? What will be the key macroeconomic drivers of growth going forward?

Discretionary fiscal policy support – defined as targeted support to households and businesses, the kind of policy support that can revive any economy quickly in times of an unprecedented shock like we have seen – is tepid in our view. Monetary policy has been the main “game in town”; however, transmission of conventional monetary policy continues to pose challenges; exchange rate has been remained remarkably stable in this crisis, and the RBI’s real effective exchange rate has actually strengthened by 4% since pre-COVID, and would actually be a drag on growth. Therefore, while pent up demand, favorable base effects, and massive policy support in advanced economies driving the global recovery could lift India’s economy in 2021, we struggle to see any domestic fundamental forces to drive India’s growth forward in the medium run.

That said, the uncertainty around the medium term outlook continues to be very high. There are several unknowns –how the virus will evolve globally and domestically, how successful government actions will be in limiting the spread of the virus, how quickly potential vaccines globally will develop, how strongly and for how long people will choose to cautiously avoid normal activities, and how effective macroeconomic policies will be in supporting the economy.

Overall, we see three key risks to the medium term outlook. The key risk to sequential recovery is that of the pandemic not being brought under control over the next few months, leading to another round of shutdowns. The second key risk to watch out for would be domestic financial sector risks. There was a high degree of risk aversion in the financial sector even pre COVID. State-owned banks, which form 60-70% of the India’s banking system assets, reported a growth in credit of ~0 yoy pre-COVID; non-bank financial companies were struggling with their own problems after the failure of ILFS in September 2018, and growing loans at low single digits; private banks were supporting credit growth, ever since the crisis in a domestic Indian bank, even private sector bankers went risk averse (see GS, Crisis of Confidence to 'Crisis of Growth'; Navigating a recessionary phase, Navigating a recessionary phase III: Liquidity stress scenarios). Post-COVID, the government has announced a series of credit guarantee schemes, and several regulatory measures with moratoriums around principal and interest payments. All these pose a host of implementation challenges, this is true not only in India, but across the world. The key risk we see is a lack a significant credit offtake from these programs, and at the same time building up a host of

medium terms risks in the system, with regulatory forbearance leading to moral hazard, higher non-performing loans in the future, or risks related to fraudulent practices.

Finally, the third risk to watch for is fiscal risks from the crisis. As discussed above, with nominal GDP contracting, revenues will likely contract, and that would put sharp upward pressure on the government's fiscal and debt positions. With interest-growth differential turning positive, debt dynamics are likely to turn adverse. Market participants and credit rating agencies appear to be less worried about the worsening of fiscal and debt positions in the short-term – in fact, it is the reverse. They appear to be more concerned about the fact that India may not have the administrative and fiscal capacity to implement a large fiscal support, and that would be a headwind to growth. What would reassure markets and avoid further credit rating downgrades is not lower fiscal spending in the short-run as many perceive, but most importantly a strategy to revive growth, combined with a credible fiscal plan for the medium term.

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