

THE POWER OF VACCINATION

STAY SAFE: DON'T CONFUSE BETWEEN PROBABILITY & POSSIBILITY OF GETTING INFECTED

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SBI business activity Index which has been declining in April'21 has now dipped to a new low of 75.7, the level it had attained in August 2020 and now a clear 24.3% down from pre-pandemic level. This indicates the disruption caused by increased lockdowns/restrictions imposed in various States is now having a meaningful impact on economic activity. All the indicators, except for labour participation and electricity consumption have declined significantly during April, indicating that labour market disruptions are still manageable unlike the first wave.

India managed the first wave of pandemic well. However, the country is now facing an unprecedented second wave. There is no doubt that India could have done better. However, it must be emphasized that the ferocity of second wave had even exposed the developed countries' health infrastructure. In order to fight with second wave of Covid-19, most of the European and other nations imposed nation-wide lockdown in the range of one week to six months.

However, there is a good news amidst all the gloom. It may be noted that India's recovery rate that was at 97% at the beginning of the second wave, is now at 82.5%. This 14.5% reduction in recovery rate has happened over a period of 69 days. Based on other countries' experience we believe India might reach its second peak when the recovery rate will be at 77.8%. Given that every 1% reduction in recovery rate takes around 4.5 days, it translates into around 20 days from now. Also our estimate shows that every 1% reduction in recovery rate increases active cases by 1.85 lakhs. Thus we believe peak of second wave would come around mid-May with active cases reaching around 36 lakhs at that point of time.

Meanwhile, the current COVID crisis reveals many interesting facets.

First, 7-Day Moving Average of daily tests and daily new cases in India are both increasing at a rapid pace. However, last year from late Dec'20 to mid-Feb'21 our daily new cases reduced significantly but at the same time daily tests also declined. Thus it should not be the case that India becomes complacent again and reduce its tests just to show lower infection rate as this could lead to widespread increase in infection as has happened in the current wave.

Second, it is believed that elections and/ or public congregations are one of the major factors behind the record cases in election states. In contrast, in some states like Maharashtra, Delhi and Chhattisgarh, even as mobility has declined significantly, cases have increased and only recently have shown some stabilisation, but no meaningful decline even though in a state like Maharashtra is in a lockdown mode since the last 3 weeks (7 day moving average of daily cases at 60,000) indicating the transmission may not be possibly only through humans, but it is air borne. This makes a strong case of mass sanitization of public places for disinfection.

Third, the share of death (from Mumbai) of below 50 years in cumulative deaths is quite high at 13.6% and if we look at the increase in share of age of deaths for those below 50 years between 12 Apr'21 and 25 Apr'21, it has increased marginally to 13.8%. Is this a clear sign that the mutant is actually having a significant impact on India's Covid cases and in that class of population which has not been vaccinated till date?

Fourth, Maharashtra is estimated to have 9.5 lakh active cases at the time of second peak from its current level of 6.7 lakh, contributing to around 26% in total active cases estimated at country's second peak. Next will be Karnataka which is expected to have 3.5 lakh active cases compared to its current level of 3.0 lakh. Major 16 states will account for 95.7% of the total active cases estimated for the country. Various states on an average are expected to reach their peak around the national peak date, indicating the worst would be hopefully over by 3rd week of May.

Fifth, pricing of vaccination is important. Two factors determine the price of vaccine. The first is the volume of production. As most of the costs of vaccine production are fixed, cost per dose to produce larger batches is less than smaller batches. The second factor is the stage of the product lifecycle. When a product is new, the price tends to be high to pay off investments in research and development and production facilities and to generate profit while there is a monopoly position. Later in the product cycle there may be competitors, leading to surplus production capacity, and investments may have been paid off, so prices come down. We believe that in case of India, a differential pricing is an important caveat to lure foreign vaccine manufacturers to India and companies like Pfizer have already responded favourably.

Sixth, With augmenting production capacity of vaccines and new vaccines getting imported, we believe a total of 1048 million doses can be given in India by Oct'21 in which 15% of the population can be fully vaccinated and 63% can get their first shot. Experience of other countries show infections stabilise after 15% of population receive second dose. Lastly, with several states now going for partial/local/weekend lockdowns, we have revised our FY22 growth projection at 10.4% real GDP and 14.2% nominal GDP.

Finally, adopting a cluster based approach for immunisation is advisable in initial stages. This could also be a good opportunity to incentivise local production of vaccine intermediate inputs / API under Production Linked Incentive Scheme. Door-to-door vaccination of the elderly and disabled residents may be encouraged. In a country like India, where the demographics change from state to state, city to city, and even from one neighbourhood to another, a highly decentralised approach — seems most logical.

THE GOOD NEWS

- ◆ India managed the first wave of pandemic well. However, The country is now facing an unprecedented second wave. There is no doubt that India could have done better. However, it must be emphasized that the ferocity of second wave even exposed the developed countries' health infrastructure. In order to fight with second wave of Covid-19, most of the European and other nations imposed nation-wide lockdown in the range of one week to six months. Some of the countries imposed city-wise, region-wise and state-wise lockdowns also (like Australia, New Zealand, etc.). However, most of the industrial activities remained open during the lockdown. Also at that time there was no vaccine for Covid-19 and hence countries were obliged to impose nation-wide second lockdown.
- ◆ More than 1000 million people world-wide have at least received one dose of Covid-19 vaccine. Top 10 countries have accounted for 76% of total vaccination indicating huge unevenness. Only 3.0% of global population is fully vaccinated in the world, though some of the countries have fully vaccinated more than 25% of the population.
- ◆ India being one of the most affected nations has completed 100 days of world's largest vaccination drive and inoculated 14.2 crore citizens. However, 1.7% of population or 2.26 crore is fully vaccinated in India. Eight states account for 58.8% of the cumulative doses given so far in the country.
- ◆ Certain States like Rajasthan, Jammu & Kashmir, Haryana, Madhya Pradesh though have lower percentage of their population above 45 years have already given vaccine shots to larger percentage of population above 45 years. Even Himachal Pradesh, Gujarat and Uttarakhand have performed well. However, Tamil Nadu, Punjab, Andhra Pradesh, West Bengal, Haryana and Maharashtra have higher percentage of population above 45 years but have inoculated less proportion of those above 45 years: These states need to pick up pace.

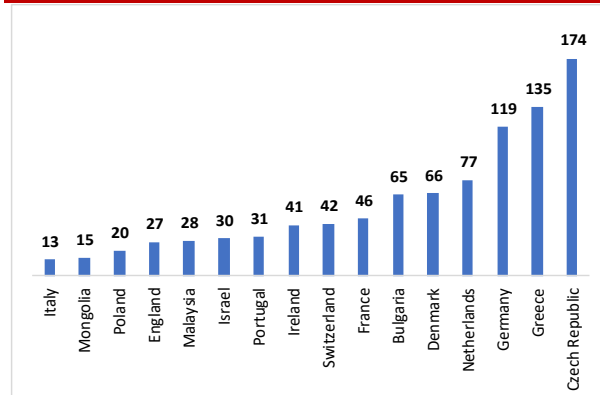
DAILY TESTS AND DAILY CASES

- ◆ 7-Day Moving Average of Daily tests and Daily new cases in India are both increasing at a rapid pace. However, last year from late Dec'20 to Mid-Feb'21 our daily new cases reduced significantly but at the same time daily tests also declined. **Thus it should not be the case that India becomes complacent again and reduce its tests just to show lower infection rate as this could lead to widespread increase in infection as has happened in the current wave.**

ESTIMATING PEAK FOR INDIA THROUGH RECOVERY RATE

- ◆ Certain countries, including Indonesia, Brazil, Iran, Malaysia and Mexico had similar recovery rate at first peak like India. Based on these countries' recovery rate at second peak, we believe that India might reach its second peak when the recovery rate will cross 77.8%, the average across these countries.
- ◆ Also our estimate shows that every 1% reduction in recovery rate (which happen in 4.5 days) increases active cases by 1.85 lakhs. Thus we believe peak of second wave would come around mid-May with active cases reaching around 36 lakhs.

Country-wise Nation-wide Second Lockdown (in days)



Source: SBI Research

Country-wise Vaccination Status			
Country	Total Vaccination (in Million)	Fully Vaccinated (% of population)	Doses administered per 100 people
US	225.6	28.1%	68.2
China	220.3	-	15.3
India	141.9	1.7%	10.5
UK	45.6	17.8%	67.1
Brazil	37.7	5.2%	17.8
Germany	24.8	7.0%	29.6
Turkey	21.1	9.4%	25.0
France	19.2	7.9%	28.2
Indonesia	18.3	2.4%	6.7
Russia	18.1	4.6%	12.4
Top 10	772.7	-	-
World	1012.0	3.0%	13.0

Source: SBI Research, Ourworldindata, MOFWH

Age-wise population & vaccine doses				
State	45-59*		Above 60	
	% share of State's Population	% share of population vaccinated	% share of Total Population	% share of population vaccinated
KERALA	18.0	31.5	16.2	50.0
TAMIL NADU	16.0	16.7	13.3	15.2
HIMACHAL PRADESH	14.5	56.4	12.2	61.8
WEST BENGAL	14.1	25.9	11.1	31.3
PUNJAB	13.7	27.3	12.3	25.6
KARNATAKA	13.7	34.1	11.1	42.6
ODISHA	13.5	33.0	10.8	43.5
GUJARAT	13.3	48.4	9.9	56.5
ANDHRA PRADESH	13.3	26.9	12.0	25.2
MAHARASHTRA	13.2	33.3	11.5	35.0
DELHI	12.6	47.8	9.7	45.0
CHHATTISGARH	12.2	74.8	8.9	62.9
UTTARAKHAND	11.9	46.4	9.7	56.9
ASSAM	11.7	17.9	7.9	17.6
HARYANA	11.7	37.0	9.5	52.2
MADHYA PRADESH	11.4	35.5	8.3	41.9
JHARKHAND	11.2	26.6	8.4	34.4
JAMMU & KASHMIR	11.2	48.6	9.1	44.9
RAJASTHAN	11.0	49.1	8.2	75.8
UTTAR PRADESH	10.3	18.5	7.9	22.0
BIHAR	10.0	17.1	7.7	27.8
INDIA	12.4	30.3	9.7	36.4

*People vaccinated in 45-59 group also includes some frontline and healthcare workers in 40-44 age group who have received vaccination

Recovery rate of Select Countries			
Countries	At the time of 1st peak	At the time of 2nd peak	Current
Indonesia	72.79	80.89	91.16
Brazil	69.94	87.15	89.32
Iran	77.61	69.39	78.35
Malaysia	79.53	77.04	93.39
Mexico	63.39	74.89	79.48
India	78.64		82.62

- ◆ Furthermore, Maharashtra is estimated to have 9.5 lakh active cases at the time of second peak from its current level of 6.7 lakh, contributing to around 26% in total active cases estimated at country's second peak.
- ◆ Next will be Karnataka which is expected to have 3.5 lakh active cases compared to its current level of 3.0 lakh.
- ◆ Major 16 states will account for 95.7% of the total active cases estimated for the country.
- ◆ Various states on an average are expected to reach their peak around the national peak date, indicating the worst would be over by 3rd week of May.

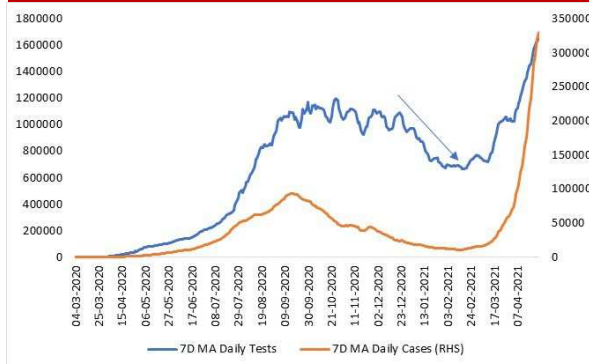
VACCINE IS THE ONLY TOOL TO CONTROL NEW INFECTIONS

- ◆ We believe, only vaccination can save us from this catastrophe. While it may be a little premature to conclude, but it seems that states which have till date aggressively vaccinated like Rajasthan, Gujarat are actually witnessing a manageable increase in cases. Even Maharashtra that has been vaccinating its population in large numbers is possibly witnessing a plateau of cases.
- ◆ There has also been vaccine hesitancy on the part of some states that initially slowed the momentum. We believe, once we start vaccinating the population from 18 onwards, cases should take a dip, as in the second wave 62% of the cases are from people below the age of 40 (all India), who had not received vaccination.
- ◆ The death rate (from Mumbai) is maximum in the 60-69 age-group. However, if we look at below 50 years their share in cumulative deaths is also quite high at 13.6% and if we look at the share of deaths for those below 50 years between 12 Apr'21 and 25 Apr'21, it has increased marginally to 13.8%.

CAN WE BLAME ELECTIONS ALONE FOR RECORD CASES?

- ◆ It is believed that elections are one of the major factors behind the record cases in election states. In some states like Maharashtra, Delhi and Chhattisgarh, even as mobility has declined significantly, cases increased and only recently they have shown some stabilisation, indicating the transmission may not be possibly only through humans, but it is air borne. This makes a strong case mass sanitization of public places for disinfection.

7 Day Moving average daily tests and cases



Source: SBI Research

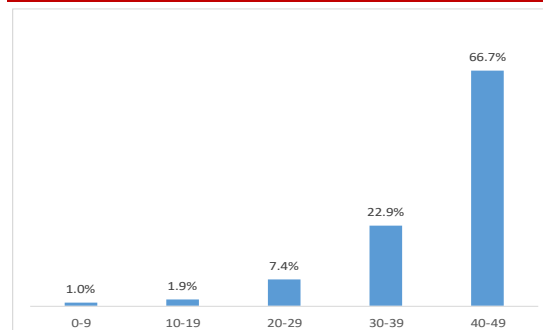
Date	% Change in daily new cases							
	Maharashtra	Gujarat	Rajasthan	Uttar Pradesh	Haryana	Himachal Pradesh	Madhya Pradesh	Andhra Pradesh
18-04-2021	2%	8%	13%	11.8%	-7%	-43%	8.7%	-8.9%
19-04-2021	-14%	10%	17%	-7.7%	-5%	115%	5.3%	-9.4%
20-04-2021	5%	7%	2%	4.8%	14%	-21%	-1.3%	50.7%
21-04-2021	9%	3%	20%	11.9%	23%	26%	3.0%	8.1%
22-04-2021	-1%	4%	-1%	3.5%	1%	5%	-5.5%	10.7%
23-04-2021	0%	5%	6%	6.9%	22%	-33%	9.7%	9.4%
24-04-2021	0%	2%	0%	3.7%	-11%	74%	-4.9%	-0.6%
25-04-2021	-1%	1%	3%	-6.9%	5%	-34%	5.3%	8.0%
26-04-2021	-26%	0%	4%	-5.0%	5%	24%	-6.7%	-21.8%
Memo: % Share in Vaccination								
As of 26 Apr	10%	8%	9%	8%	2%	1%	6%	4%

Source: SBI Research

State wise Peak And Active cases

State	2nd Peak Active Cases	% share in Active Cases
Maharashtra	957808	26.4
Karnataka	353146	9.7
Uttar Pradesh	324787	9.0
Kerala	282323	7.8
Tamil Nadu	182531	5.0
Delhi	178757	4.9
Rajasthan	167714	4.6
Andhra Pradesh	155867	4.3
Gujarat	142921	3.9
Bihar	132422	3.7
West Bengal	131960	3.6
Madhya Pradesh	118151	3.3
Haryana	100422	2.8
Telangana	86991	2.4
Odisha	77328	2.1
Punjab	74826	2.1
Total of 16 States	3467954	95.7
India	3625601	100.0

COVID Deaths below 50 years age (Mumbai)



Source: SBI Research

Covid-19 Cases in Election and Lockdown States									
		18-04-2021	19-04-2021	20-04-2021	21-04-2021	22-04-2021	23-04-2021	24-04-2021	25-04-2021
Election States	Assam	639	1367	1651	1665	1931	2384	2236	1844
	Kerala	18257	13644	19577	22414	26995	28447	26685	28469
	Tamil Nadu	10723	10941	10986	11681	12652	13776	14842	15659
	West Bengal	8419	8426	9819	10784	11948	12876	14281	15889
Lockdown States	Delhi	25462	23686	28395	24638	26169	24331	24103	22933
	Maharashtra	68631	58924	62097	67468	67013	66836	67160	66191
India		275063	257003	294365	315735	332518	345281	348979	354653

Source: SBI Research

VACCINE: DIFFERENTIAL PRICING

- ◆ In Jan'21, India had given emergency use authorisation to two vaccines - Covishield, manufactured by the Serum Institute of India (SII), and Covaxin, which is being manufactured by Bharat Biotech (BB). The Government has also liberalized the vaccination policy and decided to provide vaccination to all above 18 years of age from May 1 and allow States to purchase vaccine directly from the manufactures on pre-decided prices. SII announced that it will sell Covishield at Rs 300 per dose and BB will sale at Rs 600 per dose, while Centre still receives vaccine at Rs 150 per dose. This differential pricing is creating a lot of hue and cry among States.
- ◆ Two factors influence vaccine costs and prices. The first is the volume of production. As most of the costs of vaccine production are fixed, cost per dose to produce larger batches is less than smaller batches. The second factor is the stage of the product lifecycle. When a product is new, the price tends to be high to pay off investments in research and development and production facilities and to generate profit while there is a monopoly position. Later in the product cycle there may be competitors, leading to surplus production capacity, and investments may have been paid off, so prices come down.
- ◆ We believe that in case of India, a differential pricing is an important caveat to lure foreign vaccine manufacturers to India and companies like Pfizer have already responded favourably. The States and Centre must cooperate to win this battle!

STRATEGY FOR VACCINATION

- ◆ India will start the 3rd Phase of Vaccination from 01 May 2021.
- ◆ In this phase, maximum number of people will be eligible. To meet the demand, Government has liberalised the vaccination policy and allowed States Government, hospitals to procure vaccine directly from the companies.

- ◆ Government also suggested the States/UTs to coordinate with corporate entities/PSUs/Government departments for their CSR funds to facilitate setting up makeshift hospitals and temporary covid care facilities.
- ◆ We believe to vaccinate maximum number of people, Government should keep in mind the following points while making policy of the vaccination.
 - * The rapid immunisation will require augmenting production capacity and strategy incentivise production and FDI
 - * Adopting a cluster based approach for immunisation is advisable in initial stages.
 - * Giving priority to vaccine that offers protection against multiple strain is advisable.
 - * Good opportunity to incentivise local production of vaccine intermediate inputs / API under Production Linked Incentive Scheme.
 - * Door-to-door vaccination of the elderly and disabled residents may be encouraged.
- ◆ In a country like India, where the demographics change from state to state, city to city, and even from one neighbourhood to another, a highly decentralised approach — where local governments can decide how to vaccinate the people they govern-seems most logical.
- ◆ We should go for universalisation of vaccination. We should systematically vaccinate everyone - and we have to do it fast, like Israel, where over 57% of the population has been vaccinated already.

VACCINE PATH

- ◆ The Government announcement of all people above 18 years now eligible to take vaccine from 1 May'21 is a good move and will certainly help in combating the rising infection in 2nd wave.
- ◆ However, India needs to increase its vaccination production.
- ◆ Serum institute is expected to increase its production capacity to 110 million doses per month by Jul'21, Bharat Biotech is expected to increase its production capacity to 12 million doses per month by Jul'21. Also Sputnik vaccine will be imported from May onwards.

- ◆ Taking these into account we believe a total of 1048 million doses can be given by Oct'21 in which 15% of the population can be fully vaccinated and 63% can get their first shot. Experience of other countries show infections stabilise after 15% of population receive second dose.

VACCINE COST

- ◆ From 01 May, states are free to buy vaccine from manufacturers. As per our estimate for 20 states, the cost of vaccine is almost 10-15% of states' health expenditure budget (assuming half of the population in these states will get vaccinated by Central Government). This cost is, however, only 0.1% of GDP and it is much lower than the economic loss if lockdown/restrictions occur to control the spread of pandemic which is already around 0.8% of GDP.

Vaccine doses required to achieve stabilisation based on production capacity (in Million)

	Daily Average	Doses Administered (Per Month)	Doses Administered (Cumulative)	Single Dose Administered	Single Dose (as % of Population)	Fully Vaccinated	Fully Vaccinated (as % of Population)	Production Capacity
Till 25 Apr	-	-	142	119	9%	22.6	1.7%	-
Apr	3.2	16	158	133	10%	25.3	1.9%	75
May	3.8	118	276	230	17%	45.5	3.4%	85
Jun	4.0	120	396	329	25%	67.3	5.0%	105
Jul	5.0	155	551	454	34%	96.4	7.2%	155
Aug	5.2	161	712	584	44%	128.2	9.6%	155
Sep	5.5	165	877	715	53%	162.2	12.1%	155
Oct	5.5	171	1048	848	63%	199.0	14.9%	155

Serum 70 mn per month in April and expected to increase to 90 from July, Bharat 5 mn per month in April and expected to increase to 8 by July, Sputnik vaccine to be available from May

Expenditure of Vaccination for States

State	2021-22 (BE)	Growth (FY22 BE/ FY21 RE)	Vaccinated till Now	18+ Population	Remaining population need to inoculate	Expected Cost	Vaccine cost as % of total Health Exp
	Rs crore	%	crore	crore	crore	Rs crore	%
Bihar	13012	16.5	0.7	7.0	6.3	1890	15%
Chhattisgarh	5902	-9.5	0.5	1.8	1.3	399	7%
Gujarat	11304	0.6	1.2	4.5	3.3	996	9%
Jharkhand	4445	2.5	0.3	2.3	2.0	600	13%
Karnataka	11157	13.3	0.9	4.6	3.7	1119	10%
Kerala	8782	10.2	0.7	2.6	1.9	567	6%
Madhya Pradesh	11619	22.7	0.8	5.1	4.3	1299	11%
Maharashtra	26432	22.1	1.5	8.5	7.0	2103	8%
Odisha	9340	6.4	0.6	3.1	2.5	750	8%
Rajasthan	16269	21.5	1.3	4.9	3.6	1080	7%
Uttar Pradesh	32009	55.5	1.2	13.9	12.7	3813	12%
West Bengal	12756	0.2	1.0	6.9	5.9	1773	14%
Uttarakhand	3189	49.9	0.2	0.7	0.6	165	5%
Tamil Nadu	15773		0.5	5.6	5.0	1506	10%
Telangana	5666		0.4	2.7	2.2	672	12%
Assam	6496		0.2	2.2	2.0	585	9%
Punjab	4532	-	0.3	2.1	1.8	552	12%
Haryana	6512		0.4	1.9	1.5	456	7%
Andhra Pradesh	-		0.6	3.8	3.2	951	-
Delhi	-		0.3	1.3	1.0	303	-
Total of 20 States	205195	-	13.4	85.3	71.9	21579	11%

Source: SBI Research; For some of the states we took FY21 Health Expenditure

VACCINE AS PUBLIC GOOD

- ◆ We believe the only way to fight this dreadful pandemic is to declare vaccine as a public good and make it compulsory for all to be inoculated. In economic parlance, public goods are defined as non-excludable and non-rival in nature, as law enforcement, and as RBI Governor says, even yield curve is a public good. The primary idea of a public good is that agents must cooperate (and not be combative) well and then only all the players will have the opportunity to get a better payoff. In fact, agents will always have the tendency to defect as they believe it will give them a better payoff. Unfortunately, since the situation is same for everyone, all agents ultimately defect and receive a minimal payoff. In our case, the agents are typically the States and the Centre.
- ◆ We have created a hypothetical payoff scenario accruing to player 1 (here Central Government) and player 2 (here State Government) separately when they are deciding on either of the options: cooperating or non-cooperating. When both Centre and State Government cooperate with each other, both will receive benefit in the form of more vaccination, better medical facilities, and less number of cases. When both non-cooperate/defect, the payoffs will be zero for both.

A CASE STUDY OF UK

- ◆ The case of UK is quite impressive in the matter of procurement of vaccine. Although almost every country is struggling for enough supply of vaccine, the UK's Vaccine Taskforce (VTF) has secured deals for 407 million doses of Covid-19 vaccine from several companies, despite limited buying power. Under the guidance of venture capitalist, VTF is successfully trying to achieve three objectives: To get the UK access to the most promising vaccines, shore up global vaccine distribution, and develop the country's long-term vaccine strategy.

OXYGEN CRISIS IN INDIA

- ◆ Since the second wave began, India has been facing medical oxygen shortage and it has created chaos in major cities.
- ◆ Officially, India's daily oxygen production capacity is 7,287 MT and its medical oxygen requirement has increased by 76 per cent in 10 days — from 3,842 MT on April 12 to 6,785 MT on April 22. On paper, that leaves the country with a few hundred metric tonnes still to spare, but state after state has been complaining of acute shortage. Until 2019, before the pandemic hit the country, India required just 750 -800 MT liquid medical oxygen (LMO), the rest was for industrial use.

Payoff Matrix for Governments

Central Government↓ State Government→	Cooperate	Not-Cooperate
Cooperate	2, 2	3, -1
Not-Cooperate	-1, 3	-1, -1

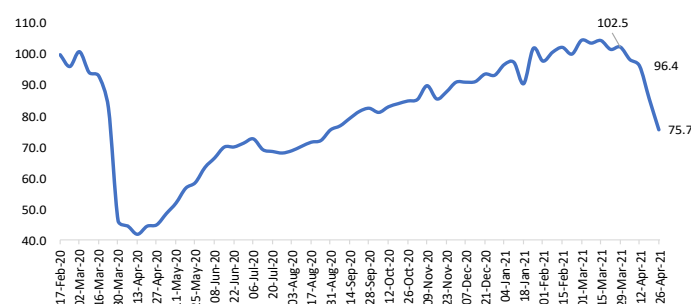
Source: SBI Research

- ◆ The maximum consumption of medical oxygen in the country is by states of Maharashtra, Gujarat, Madhya Pradesh, Uttar Pradesh, Karnataka, Tamil Nadu, Delhi, followed by Chhattisgarh, Punjab, Rajasthan. While the excess oxygen is available in other Eastern regions like Andhra Pradesh, Jharkhand and Odisha. So, the challenge is logistics (storage and distribution system).
- ◆ To meet the demand & ease of transportation, Government has taken a number of steps like increase production capacity, import of oxygen, 551 PSA plants in hospitals for self sufficiency, utilization of surplus available with steel plants & ramp up transportation through train etc.
- ◆ With several states reaching full utilisation of their oxygen production capacity, they have been relying on the Centre to divert oxygen from states that have surplus. To speed up oxygen delivery, trains/aircrafts have also been pressed into service to ferry tankers from surplus states to deficit states.
- ◆ However, we believe if the cases continue to increase and cross 4-5 lakh per day, then undoubtedly the situation might be difficult, (assuming 10% needs oxygen support).
- ◆ Further to address the transportation issues, we believe all the states should allow ambulance status to the tankers so that they move faster, which will certainly help and reduce the transit time.

IMPACT OF STATES' LOCKDOWN ON GDP

- ◆ Our business activity Index which has been declining in April, has dipped to a new low level of 75.7, the level attained in Aug-end. This indicates the disruption caused by increased lockdowns/ restrictions imposed in various States.
- ◆ All the indicators, except for labour participation and electricity consumption have declined significantly during April.
- ◆ We had projected real GDP for FY22 at 11% (RBI: 10.5%) and nominal GDP at 15% (Union Budget: 14.4%) on the back of low base effect and renewed economic momentum. However, given the current circumstances of partial/local/weekend lockdowns in almost all states, our growth forecast is now revised downwards. Revised SBI FY22 growth projection is now at 10.4% real GDP and 14.2% nominal GDP. Total loss is estimated at Rs 1.86 lakh crore, of which Maharashtra, Madhya Pradesh, Karnataka and Rajasthan account for 75%. Maharashtra's loss alone stands at 43%.

Business Activity Index



Source: SBI Research

Probable Monetary Impact of Current Lockdowns in Various States

States	FY22 Nominal GSDP (Rs lakh crore)	Type of Restrictions	Probable Impact (Rs crore)
Bihar	7.6	Night Curfew/Partial Lockdown	6222
Chhattisgarh	3.8	Lockdown in 20 districts till 26 April	7347
Gujarat	18.8	Night Curfew	-
Haryana	8.9	Night Curfew	-
Jharkhand	3.6	Lockdown for 8 days	2768
Karnataka	17.0	Lockdown for 14 days	22852
Kerala	8.8	Night Curfew	-
Madhya Pradesh	11.3	Lockdown in 15 districts	21712
Maharashtra	29.8	Lockdown till 30 April	81672
Odisha	5.9	Weekend lockdown in Urban areas	1927
Punjab	6.1	Night Curfew/Partial Lockdown	4994
Rajasthan	12.0	Lockdown till 03 May	17237
Telangana	11.5	Night Curfew	-
Uttar Pradesh	21.7	Night Curfew/Weekend Lockdown	7145
West Bengal	15.1	No Restrictions	-
Himachal Pradesh	1.7	No Restrictions	-
Uttarakhand	2.8	Weekend lockdown in 12 districts	914
Delhi	9.0	Lockdown for 13 days	11219
India	222.9	-	186008

Source: SBI Research

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