FIPI

Federation of Indian Petroleum Industry

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POLICY & ECONOMIC REPORT

OIL & GAS MARKET

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Executive Summary

The shock of shuttering the economy is real and very large. But this is not a normal recession because we decided to shut the economy down. Many countries across the world are under varied degrees of lockdown since early March 2020. The prolonged non-activity has already started taking a toll on the Global economy. In May, the International Monetary Fund (IMF) has already warned of a worse contraction of the global economy than its prediction of 3 per cent in April this year. The International Labor Organization has estimated that nearly half the world's workers are at immediate threat of losing their livelihoods. Faced with such grim circumstances, many countries across the world are now forced to open up their economies amid worsening pandemic situation.

Taking stock of the ailing economies, many Governments are offering economic stimulus packages to jump start their economies. These huge spending programmes are likely to be once-in-a-generation in scale and will shape countries' infrastructure for decades to come. Economists feel that the Governments will see a significant shortfall in revenues and taxes in the times to comes, hence it get even more important to ensure that the stimulus packages are more nuanced and well-targeted. India announced a USD 270 billion stimulus package during the month. The package amounting to almost 10-per cent of the country's GDP sets out bold measures to revive the country's economy. The package focuses on reviving businesses, supporting workers and promoting the idea of Self-reliant India.

In its annual World Energy Investment report IEA has warned that the unparalleled decline in worldwide energy investment had been staggering in both its scale and swiftness. The Agency expects global investment to tumble by 20 per cent compared to last year. It has further underlined that falling demand, lower energy prices and a rise in cases of non-payment of bills may lead to fall by well over USD 1 trillion energy revenues going to governments in 2020.

Global crude benchmarks saw some significant recovery in the month of May after going through a rough patch in the month of April. Though lockdown was prevailing across several nations globally, there were some relaxations, which led in demand recovery. Restarting of industrial activity in China, Europe triggered the demand for crude oil. On the supply side, OPEC producers and their allies implemented the production cut from 1st of May to stabilize the market. Removal of close to 10 million barrels of oil from the market led to price recovery in the month of May and crude benchmarks reached 2-month high. Average Brent, WTI and Dubai basket crude prices went up by 16.11 %, 31.81 % and 17.27 % respectively from their April prices. Indian crude basket price averaged $28.89 per barrel in May, up by 13.61 % on Month on Month (M-o-M) but down by 58.74 % on a year on year (Y-o-Y) basis, respectively.

Based on the prevailing lockdowns and considering the recovery time for nations, revised demand forecast for crude oil in Q2 2020 is 81.30 mbpd down by 5.40 mbpd. Demand is likely to recover in Q3 2020 to reach 92.28 mbpd down by 2 mbpd from last month's revision. While in Q4 2020, demand forecast is 96.30 mbpd, 1 mbpd down from last month's forecast. As a result of plunge in demand and prevailing lower oil price, OPEC and other major oil producers arrived at a deal to cut the production. From 1st of May, there has been a production cut of 9.7 mbpd which will be applicable till June 2020. Followed by which there will be a production cut of 7.7 mbpd until the end of year and then a production cut of 5.8 mbpd until 30th April 2022.

Upstream activity took a severe blow in the month of April. In April, global drilling rig count declined by 450 to reach 1,514. Onshore rig count decreased by 431 and offshore rig count went down by 19. Lower oil price and poor demand impacted the cash flow of shale producers in the US and in a bid to keep the cash flow intact, Shale producers suspended all the drilling activity leading to cancellation of drilling contracts. A similar trend was also reflected in other regions too. In India, active rig count came down by 27 companies suspended drilling activities citing lower oil price.

Global petroleum products saw a decline in the month of April impacting the refinery margins. Refinery utilization rates in April averaged 85.0 % in selected Asian markets comprising Japan, China, India and Singapore. Indian petroleum product market saw a decline in consumption of petroleum products for the second straight month. Overall consumption was down by 38.3% in the month of April as compared to March.

Natural gas price at major hubs like Henry hub – US, Europe saw a decline due to warmer weather. Spot LNG market in Asia saw a further decline and reached below USD 2 /MMBtu mark. Flooding of markets with LNG cargoes led to decline in the spot market as the demand remained subdued as the extended lockdown impacted the consumption.

Policy & Economic report – Oil & Gas market

Economy in Focus

1. COVID Impact – Global energy sector investment to fall by 20 per cent: IEA

The International Energy Agency (IEA) believes the ongoing COVID-19 pandemic will lead to a historic decline in global energy investment, with spending in every major sector set to fall in 2020. IEA's World Energy Investment report highlighted that the unparalleled decline in worldwide energy investment had been staggering in both its scale and swiftness. It warned the economic impact of the crisis could have lasting implications for energy security and transition towards clean energy. Dr. Fatih Birol, Executive Director, IEA, highlighted that the sharp fall in global energy will result lost jobs and economic opportunities. It will also lead to lost energy supply that the world will require as the economy recovers. Dr. Birol further added that the slowdown in spending on key clean energy technologies also risks delaying the shift towards sustainable fuels.

Global investment to fall by 20 per cent in 2020

The pandemic and the resulting containment measures lead to effective closure of the global economy. AT the beginning of the year IEA had predicted that the global energy investments will see an increase of around 2 per cent, the largest annual rise in spending in six years. However, the COVID crisis the IEA expects the global investments to tumble by 20 per cent compared to last year, a fall of nearly USD 400 billion year-on-year.

The IEA has predicted that a combination of falling demand, lower energy prices and a rise in cases of non-payment of bills may lead to a revenue loss of USD 1 trillion in 2020. Oil accounts for most of this decline and the overall spending on oil is poised to fall to a level below electricity in 2020.

Energy transition pushed to the back seat

The report pointed out that the overall share of global energy spending towards clean energy technologies such as renewables, efficiency, nuclear and carbon capture, utilization and storage, has remained stagnant in the recent years. In 2020, while the share of energy sector investments in expected to rise to 40 per cent, in absolute terms it is expected to remain far below the levels required to accelerate the energy transition. To achieve a lasting reduction in emissions, the world will require a faster adoption of renewable technologies. In this direction, the response of policy makers and extent to which concerns over energy and sustainability concerns are integrated in the recovery strategies.

2. Five major social risks arising due to COVID-19

The coronavirus pandemic might have extended further than expected. Beyond the human and economic costs of the crisis, there are some other major concerns that may get exacerbated by the outbreak.

a. Life vs Livelihood

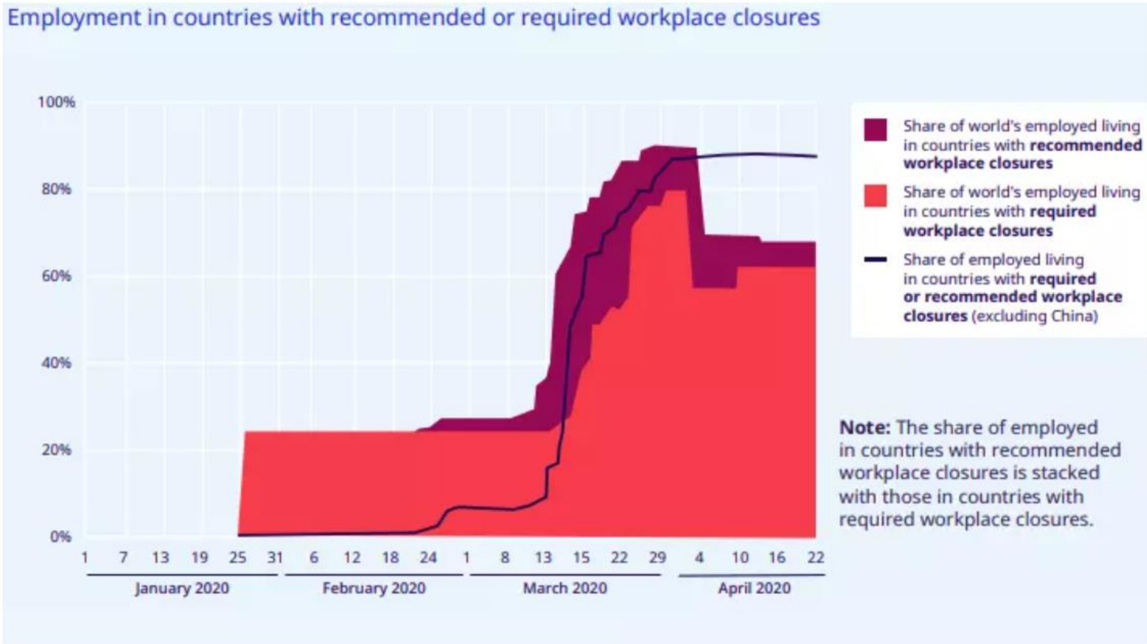
According to Food and Agriculture Organization of the United Nations COVID-19 will leave some of the most world's most vulnerable communities facing "a crisis within a crisis". The economic downturn and rising unemployment will further reduce people's purchasing power, exacerbating concerns over rise in global hunger. According to Global Report on Food Crises 2020, more than 55 countries, in urgent need for humanitarian food and nutrition assistance, may face a choice between life and livelihood. This could further worsen the situation as saving people from coronavirus may lead them to dying from hunger. Mr. António Guterres, Secretary-General, United Nations pointed out "And the upheaval that has been set in motion by the COVID-19 pandemic may push even more families and communities into deeper distress."

b. Climate change pushed to back seat

The climate change was expected to be top priority in all policy agendas in 2020. At the World Economic Forum's 2020, saving the planet was one of the key agenda items. However, in light of the pandemic, climate emergency has been pushed back as policy makers are focusing on dealing with the wide spread breakout. While the reduction in pollution and greenhouse gas emissions due to lockdowns illustrates of what can be achieved, concrete plans to take action are being shelved. Significant improvement in air quality has been recorded across the world during the lock down. COVI-19 has certainly shown us the scale of the response needed to fight the climate crisis.

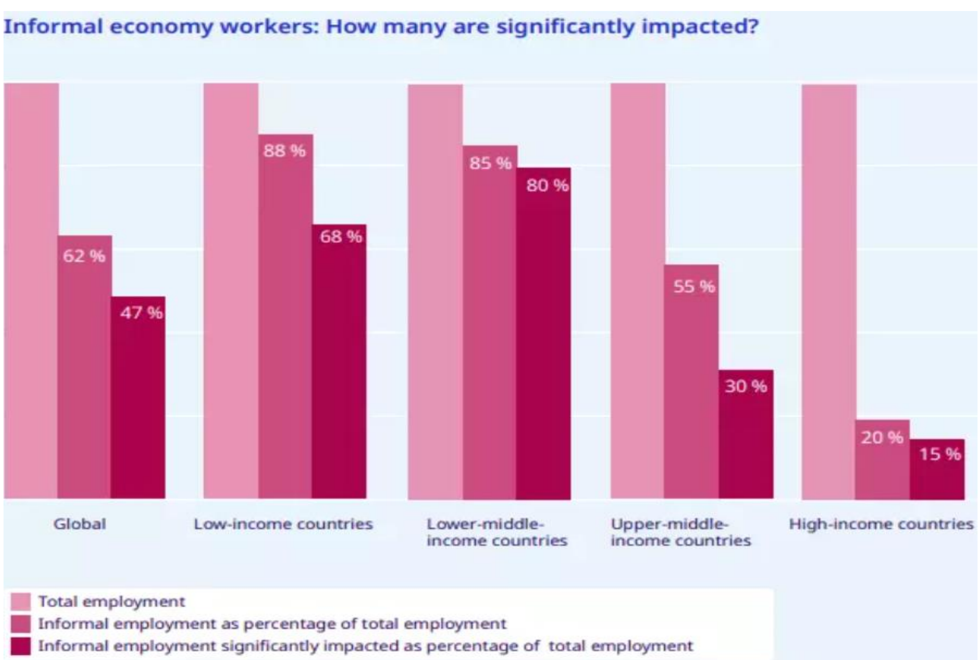
c. Rising unemployment

According to a recent report by International Monetary Fund (IMF), Global economy is set to contract by over 3 per cent in 2020, recording a deeper down-turn than the financial crisis of 2008–09. Such sharp contraction of the global economy is set to result in a spike in unemployment across the world. IMF has predicted that the global unemployment will rise by 10.4 per cent this year against 3.7 per cent in 2019. Unemployment in advanced European economies will rise to 9.2 per cent from 6.6 per cent last year.



Source: International Labour Organization (ILO)

The International Labour Organization (ILO) suggests that more than 2 billion people worldwide working in the informal economy are among the most vulnerable to global economic downturn. A recent ILO report pointed out that workers in informal sector often have poor access to health-care services and have no income replacement in case of sickness or lockdown. Most of these people have little to no possibility to work remotely from home. For them staying at home means losing their jobs, and without wages, they cannot eat.



Source: International Labour Organization (ILO)

With ILO estimates showing the income of people employed in the informal sector falling by as much as 60 per cent globally in the first month of the crisis, the organization expects massive income losses for these workers.

d. Vaccination programmes

Amid fears that the contact needed to deliver vaccines could spread coronavirus, Measles and polio vaccine programmes are being postponed. World Health Organization (WHO), in its recently issued guidance to help countries sustain immunization services, has recommended to temporarily suspend mass vaccination campaigns. London School of Hygiene and Tropical Medicine (LSHTM) has forecasted that routine immunization in Africa could prevent between 29 to 347 future child deaths for every COVID related infection acquired during the campaign. Without vaccination these deaths could result from a range of diseases including measles, yellow fever, pertussis, meningitis, pneumonia and diarrhea. Researchers have suggested that routine childhood immunization in Africa heavily outweigh COVID-19 deaths associated with vaccination clinic visits

e. Impact on women

The UN has warned that a lack of access to family planning due to lockdowns and the resulting disruptions to health services, could lead to 7 million unintended pregnancies in the coming months. Many women are forced to skip medical appointments due to the fear of catching the virus and access to the contraceptives is getting more difficult due to the nationwide lockdowns. Should health services remain disrupted for the coming six months, UN Population Fund report expects that over 47 million people will not have access to modern contraceptives. The report further predicts there could also be a rise in gender-based violence, female genital mutilation and child marriages, as the lockdown holds back preventative programmes. Dr Natalia Kanem, executive director of UNFPA pointed out “this new data shows the catastrophic impact that COVID-19 could soon have on women and girls globally. The pandemic is deepening inequalities.”

3. Trade protectionist policies may further exacerbate trade war

As governments, around the world, offer subsidies to fight the COVID inflicted recession, there's a risk they're sowing the seeds for a tariff fights and economic headwinds in the future. A key question after recovery kicks in is whether World Trade Organization (WTO) member nations will impose duties on imported goods to counter any market distortion, resulting from state support in countries where the goods are produced.

Such levies have traditionally been used much less than the WTO-sanctioned trade curb - duties to stop save domestic manufacturers as a result of below-cost or “dumped”- imports made by foreign competitors. According to WTO, anti-dumping measures have been almost 13 times more frequent over the past quarter century. In the future, we can expect countries to resort to countervailing duties a lot more often because of all the subsidies being handed out during the pandemic. The European Union may become a barometer given that many governments elsewhere look at the EU and copy its actions in subsidy and dumping cases. The prospect of new tariffs around the globe on manufactured goods as a result of massive governmental aid to industries has implications not only for the global economic recovery from the health scare. Also potentially affected is the arduous push for a political truce among the U.S., China, Europe and others over the global trading order.

The ongoing trade war between the US and China has shaken the foundations of the WTO and has forced European countries to take a middle path meant to bring about a general de-escalation of tensions. Many of the disagreements between the two super powers stem from years of generous Chinese government subsidies offered to key exporting industries. The EU has echoed American criticism of aggressive Chinese export practices and stepped up its own commercial defenses against China. EU has also requested the US to work within the framework of the Geneva-based WTO to give it more teeth.

In this direction, the EU along with the U.S. and Japan is pushing for stronger WTO rules against market-distorting subsidies. Four months on, the EU's top trade officials have become alarmed about the extent to which pandemic-induced state aid has made many countries look more like China. The bloc has urged an internationally coordinated way out of emergency aid and back to market-based conditions. As Mr. Sabine Weyand, Director General for trade in the European Commission, the EU's executive arm recently pointed out "At the moment we are all becoming a little bit like China by supporting and subsidizing. That is why it is so important that we manage a joint exit from these support measures but also that we update the rulebook of the WTO".

4. COVID-19 pandemic set to change the global education sector for good

While countries are still at different stages in their COVID-19 infection rates, 1.2 billion children in 186 countries across the world are affected by school closures due to the pandemic. At this time of global pandemic when containment measures and social distancing is evolving as the new normal, many students taking to the online platform to continue their studies uninterrupted.

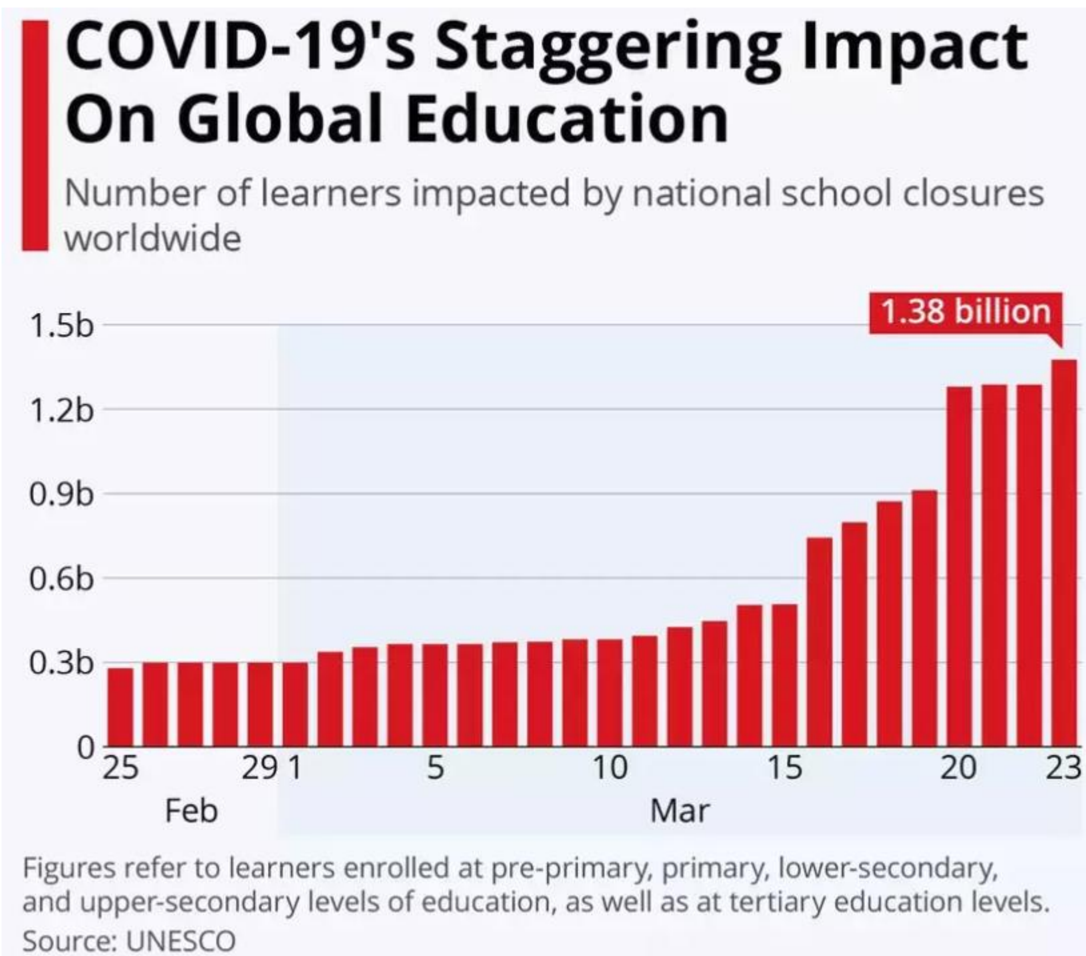
With this sudden shift away from the classroom in many parts of the globe, some are wondering whether the online learning is here to stay after the pandemic, and the impact such online education will have on worldwide education market. Even before COVID-19, there was already high growth and adoption in education technology. In 2019, global edtech investments reached USD 18.66 billion and the overall market for online education is set to surpass USD 350 Billion by 2025. Since the COVID-19 outbreak, there has been a significant surge in language apps, virtual tutoring, video conferencing tools and online learning software.

Changing education sector

In response to significant demand, many online learning platforms are offering free access to their services. BYJU'S, an educational technology and online tutoring firm based out of Bangaluru, has now turned into the world's most highly valued edtech company after it witnessed a 200 per cent surge in the number of new students after it announced live classes on its Think and Learn app. In China, after the Chinese government instructed a quarter of a billion full-time students to resume their studies through online platforms, Tencent classroom has seen an unprecedented increase in the number of users. In the largest online movement in the history of education with approximately 730,000 (81 per cent) of K-12 students attending classes via the Tencent K-12 Online School in Wuhan.

Other companies are also increasing offerings to provide a one-stop shop for teachers and students. Lark, a Singapore-based collaboration suite, began offering features such as unlimited video conferencing time for teachers and students e, auto-translation capabilities, real-time co-editing of project work, and smart calendar scheduling, amongst other features. To achieve this quickly and in a time of crisis, Lark increased its global server infrastructure and engineering capabilities to ensure reliable connectivity.

Some school districts are forming unique partnerships, like the one between The Los Angeles Unified School District and PBS SoCal/KCET to offer local educational broadcasts, with separate channels focused on different ages, and a range of digital options. Many Media organizations, such as the BBC, are also shaping up the future of virtual learning. Bitesize Daily is offering curriculum-based 14 weeks learning for students across the UK. Some of the content on this course are taught by celebrities like Manchester City footballer Sergio Aguero.



New possibilities of learning

While some believe that unplanned shift to online platforms, in terms of training, bandwidth and preparation, may result in poor user experience and restrict the growth of the segment, there are others who expect a new hybrid model of education, with significant benefits, will emerge out of this digital revolution in the education sector. As Mr Wang Tao, Vice President, Tencent Cloud and Vice President of Tencent Education points out “I believe that the integration of information technology in education will be further accelerated and that online education will eventually become an integral component of school education.“

There are some universities that have already presented an example for successful transition. Zhejiang University managed to get more than 5,000 courses online within just two weeks into the transition using “DingTalk ZJU”. The Imperial College London has also started a new course on Coursera on the science of coronavirus. The new course is among the most enrolled classes launched in 2020 on the platform.

The challenges

While the courses are gaining popularity, there are still considerable challenges to overcome. Some students without reliable internet access or technology, struggle to participate in digital learning. Such gap has been noticed across countries and between income brackets within countries. For instance, according to OECD data, whilst 95 per cent of students in Switzerland, Norway, and Austria have access to computer for schoolwork, only 34 per cent of the students have computers in Indonesia. Even in the US, there is a significant gap between those from privileged and disadvantaged backgrounds. While virtually all 15-year-olds from a privileged backgrounds have a computer to work on, almost 25 per cent from disadvantaged backgrounds did not.

How effective is online learning?

For those who do have access to the right technology, online learning has proven more effective than other means. Recent research claims that students retain 25-60 per cent more material when learning online compared to only 8-10 per cent in a classroom. Since students learn faster online, e-learning requires 40-60 per cent less time to learn than in a traditional classroom setting as students can learn at their own pace - re-reading, skipping, or accelerating through concepts as they choose

However, the usefulness of online learning varies amongst age groups. There is a general consensus that the younger children require structured environment as they are more easily distracted. To get the full benefit of online learning, there needs to for a concerted effort to provide this structure and go beyond replicating physical lecture through video capabilities. Using a range of collaboration tools and engagement methods that promote inclusion, personalization and intelligence, online platforms can deliver greater value for this age group.

It is crucial to make learning fun and effective through use of technology as it is well established through research that children extensively use their senses to learn. According to BYJU's Mrinal Mohit. “Over a period, we have observed that clever integration of games has demonstrated higher engagement and increased motivation towards learning especially among younger students, making them truly fall in love with learning".

A changing education imperative

It is clear that this pandemic has profoundly disrupted an education system that was increasingly losing its relevance. Scholar Yuval Noah Harari, in his book - 21 Lessons for the 21st Century, points out how schools continue to focus on traditional academic skills and rote learning, instead of critical thinking and adaptability. Could the move to e-learning prove to be the catalyst to create a new, more effective method of educating students? While there are some concerns over the hasty nature of the transition online may have hindered this goal, most students are ready to make e-learning part of their 'new normal'

Is e-learning the future of education?

Often major world events prove to be an inflection point for rapid innovation. In this direction, rise of e-commerce post-SARS presents an ideal example. While we have yet to see whether this will apply to e-learning post-COVID-19, it is one of the few sectors where investment has not dried up. Ongoing pandemic has proved the importance of disseminating knowledge across borders, companies, and all parts of society.

5. Economic activity in the US plummeted to a 50 year low in April: Federal Reserve Bank of Chicago

According to Federal Reserve Bank of Chicago, the nationwide lockdown in the US has brought the country to a sudden stand still and its economic activity has plummeted to a level not seen since 1967. Based on clues from production and employment-related indicators, the Chicago Fed National Activity Index reached minus 16.74 last April, down from a downwardly revised minus 4.97 level in March.

The index, constituting of 85 economic indicators, derived from four main categories, all of which fell sharply from March. The four categories are production and income; employment, unemployment and hours; personal consumption and housing; and sales, orders and inventories. A positive reading on the index aligns to growth above trend while a negative reading indicates a below-growth trend.

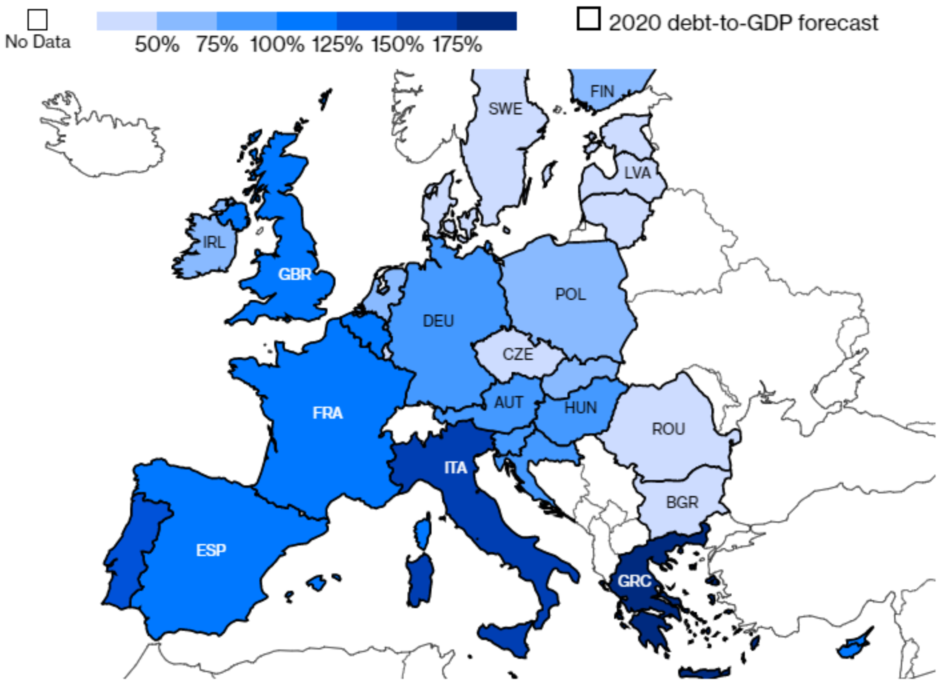
In April, The index's three-month moving average fell to minus 7.22 from minus 1.69 in March. After a period of prolonged economic expansion, a greater likelihood of a recession is historically tied to the three-month average falling below minus 0.70, according to the Chicago Fed. According to the US Labor Department, one in four American workers has filed for jobless benefits in the last 10 weeks. And while economic activity has increased in the later half of May, the return to economic normality is likely to be a slow and bumpy process. Pre-virus levels of GDP are unlikely to be reached until mid-2022 in the U.S., recovery is expected to be significantly slower in Europe.

6. European governments face the predicament of whom to tax for economic recovery

European leaders may be united on the need for an economic stimulus during the COVID crisis, but they are yet to decide on how to pay for it all. The Governments across the region are faced with the tough choices about where to lay the burden among voters as most of them are already disillusioned with political establishments.

Debt Load

Euro-area debt is predicted to increase to 102.5% of economic output



Source: European Commission

Austerity experiments in the Europe since 2009 financial crisis, from Greece to the U.K., provide warnings that spending cuts can either cause economic damage or electoral fatigue. With those bitter experiences in mind, politicians are already considering tax hikes on either wealth or income – although an increase in any of these could hurt growth. Alternatives include tolerating higher debts such as Japan does, or perhaps trying to inflict a dose of inflation to erode them away - itself a tax of sorts. In light of historically low sovereign borrowing cost, such approaches may look attractive as the bills rack up fast. Debt ratios in the EU and U.K. may surpass the 100 per cent milestone this year. There are very few easy or politically attractive ways to deal with the situation. The ideal way to pay for this is to generate growth that's higher than cost of funding. However, that's going to be very difficult.

As European governments increase borrowing to support economies, the region's experience of austerity has raised the critical question of how to tackle debt. Applying such medicine too forcefully in Greece in 2010 led the International Monetary Fund to conclude that it had caused more harm than good to public finances and growth. In the UK, where 2010 deficit has now ballooned to a Greece like situation, austerity measures taken under former Prime Minister David Cameron, have led to years negligible growth. This fueled discontent which lead to the political demise of the Prime Minister when the country voted to leave EU.

Former IMF Chief Economist Mr. Olivier Blanchard highlighted "European governments got worried about the large increase in debt and shifted to fiscal austerity, probably excessively slowing the recovery" One discussion in Europe is whether taxes should rise when the recovery takes starts. Switzerland's Social Democrats want higher income taxes, and the U.K. media is also expects an increase in taxes.

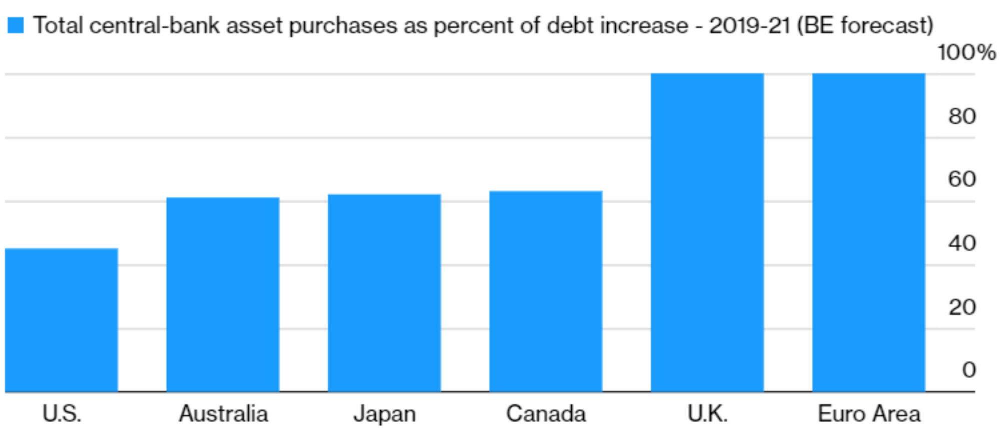
A further argument focuses on wealth taxes. The minority partner in Spain's coalition is considering such a proposal, while in France, where the government recently reduced wealth tax, economist Thomas Piketty says that such measures are the best way of bringing down huge public debt. French Budget Minister Gerald Darmanin has called for revival of mechanisms created in the 1960s to distribute more capital and profits to workers. He expects such measures will help them gain both influence and spending power.

German Chancellor Angela Merkel has already denied any plans for higher taxes for now, while French Finance Minister Bruno Le Maire has made it clear that he doesn't want to reapply the country's levy on wealth. The crisis may also reignite calls to change the mindset in the euro zone at least, where German-stipulated limits on deficits and debt were cemented into its monetary union. In the U.S. and Japan, higher debt loads are accepted for longer while governments stabilize spending and curb borrowings through economic growth, conveniently shifting some of the burden to future generations of politicians too.

Actions of central banks help Governments to keep debt costs under control. Their hovering up of bonds has largely removed concerns over spiraling borrowing costs which dominated the early 2010s, and provide a foundation for public finances to start fixing themselves. As Mr Marcel Fratzscher, President, DIW German Institute for Economic Research points out "The only sensible way out of over-indebtedness or high debts is more economic dynamism. That's the lesson after the global financial crisis."

Absorbing Extra Debt

Central bank asset purchases as a share of government debt issuance, 2020-21



Source: Bloomberg Economics
Note: total asset purchases includes corporate bonds and other instruments

Central banks will also face pressure from governments to keep monetary policy loose for longer, tolerating inflation that erodes the value of government debts -- a tactic that helped the U.K. to bring its borrowings under control in the era after World War II. However, Inflation would also hurt savings and evoke painful memories for some countries, from Germany in the 1930s to the U.K. in the 1970s. Many economists are of the opinion that policy to reduce debt may prove extremely damaging.

7. Things to consider for Germany's proposed stimulus package

German Chancellor Angela Merkel's government is putting together a bundle of measures to bring the economy back on track as the country emerges from the COVID induced lockdown. With the long-standing balanced-budget target scrapped and the constitutional debt brake suspended, it is expected to be a bigger public stimulus program than the Marshall Plan following World War II. Not surprisingly, the debate surrounding its size and use is only as big.

Some want aid to focus on a few, key industries, others argue for the broadest possible approach. Criteria range from preventing bankruptcies and saving jobs to forging a new economy by promoting innovation and environmentally sustainable practices. Included below are the speculations coming from economists, business leaders, environmentalists, and politicians.

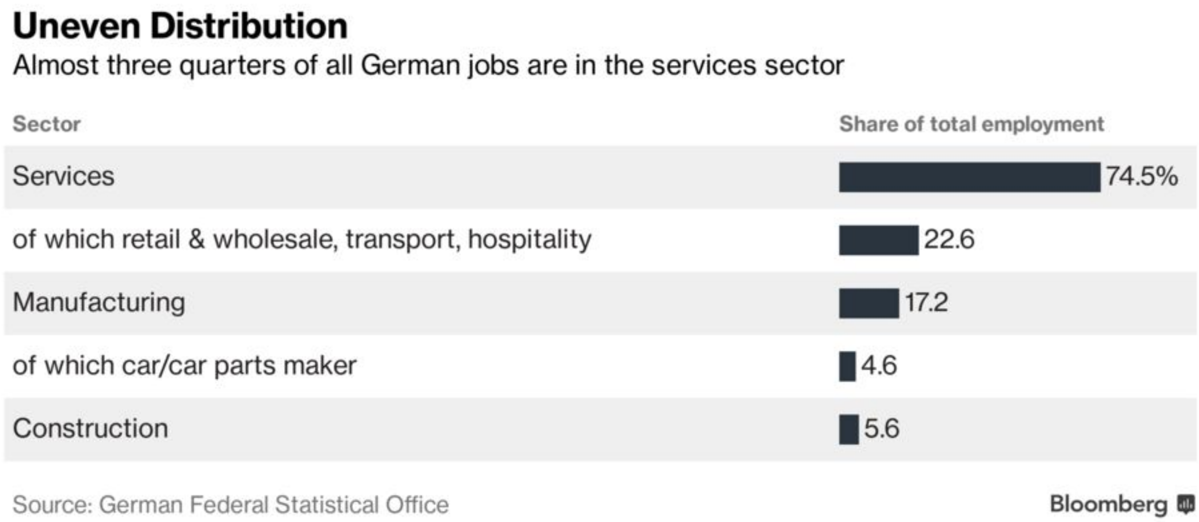
Size of stimulus

Germany is already spending big to contain the pandemic's economic fallout. Measures ranging from furloughs for workers to loans and guarantees for businesses is set to push up debt by almost 156 billion euros, nearly 4.5 per cent of last year's GDP. Experts believe at least as much would be needed for the recovery phase. They claim that Germany can continue to borrow at negative rates for as long as 30 years, the economy, turbocharged by spending, will simply grow its way out of the debt.

On the other hand, skeptics believe Germany should return its focus to budgetary integrity as soon as the worst of the crisis is over. That will lead to reinstating the debt brake, returning to running surpluses and cashing out investments in some of most crisis-stricken companies. The government has recently offered Lufthansa a 9 billion-euro bailout in exchange for a 20 per cent stake. Speculations are already ripe in the German media for a new 150 billion-euro package containing payments to families as well as eased rules on investment subsidies.

Targeted spending

With nearly the entire economy affected by the crisis, all sectors have asked for immediate Government support. German carmakers have been pushing for a revival of a generous scheme that provided the much needed fillip to sales in the aftermath of the Great Recession. However, the Government has indicated that it is working on a much wider package.



Some of the worst consequences of the coronavirus lockdown have been suffered by services providers. These are employment-heavy companies that tend to be less likely to survive sudden shocks. Government has already signaled that more aid will soon be provided to such companies.

Where to Spend?

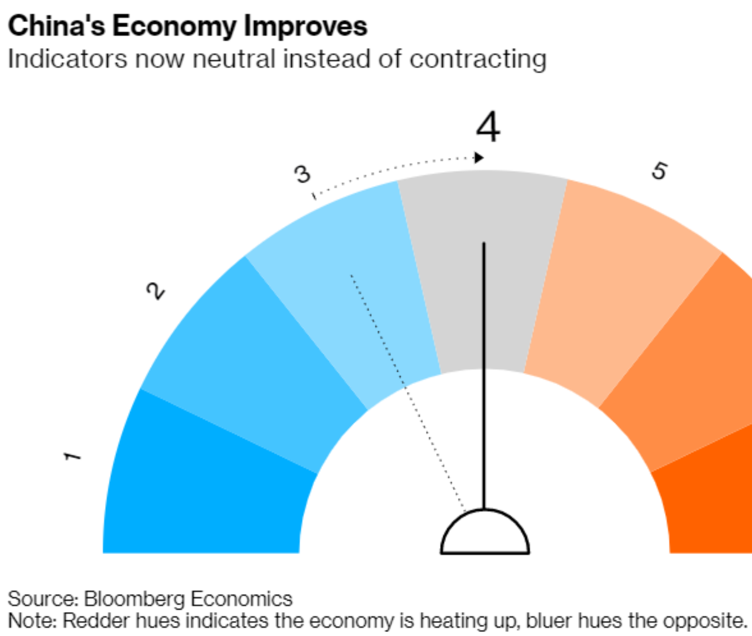
Economists, lobbyists and politicians have maintained that measures should be targeted to ensure money is deployed in the most-effective way. Increasing consumption is likely to be in the focus of the stimulus package. Household spending plummeted after containment measures came into effect, and hasn't picked up since, with people focusing more on savings light of continued uncertainty. Success in dealing with that would have the added benefit of shifting the economy away from its strong reliance on exports at a time of rising protectionism. To boost in the future, infrastructure investment is needed. In 2019, many municipalities in the country complained of a EUR 138 billion spending shortfall on basic amenities as schools and streets. German industry associations have already identified a long list of fixes that would support company spending.

Greening the economy

Before the pandemic, shifting to low carbon economy was the priority for the public policy agendas in Germany. Ms Merkel along with many of her allies and even business leaders have assured that any government stimulus will reinforce not diminish such targets. However, there is still considerable disagreement as to what qualifies as green spending, and pressure to save jobs and businesses in the short-term.

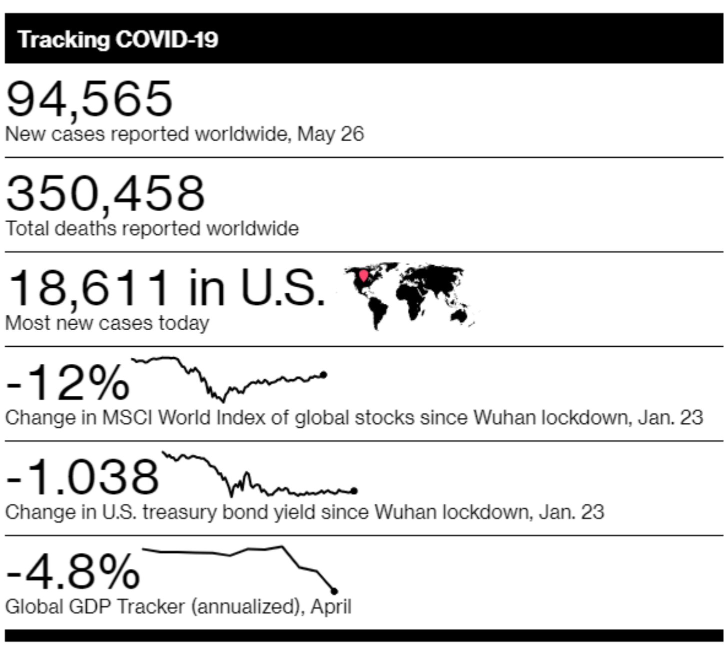
8. China's recovery speeds up in May, still far from pre-COVID levels

In May, Chinese economy continued its slow recovery from the coronavirus slump, with better sentiment among companies toughened by the grim global outlook.



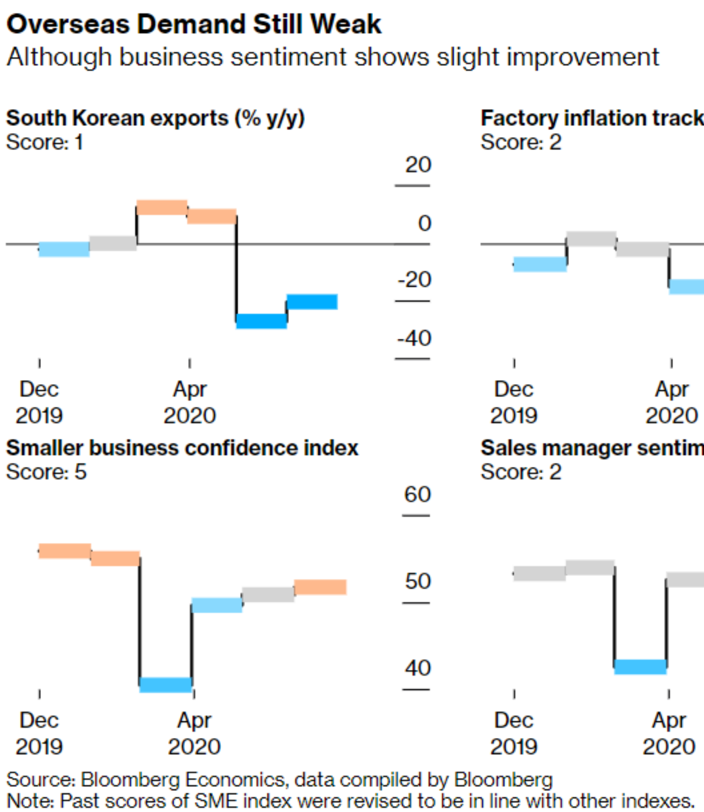
Earliest available indicators show a faster recovery in the month of May compared to that in April. However, global demand still remains weak and many financial markets fall in the last week of May due to wide spread disappointment over modest stimulus plans offered by the Governments.

According to a Standard Chartered Plc survey of companies, smaller firms were more confident in May than they have been since the outbreak of the coronavirus, with rise in production and new orders up. Industrial output expanded in April, while consumption and imports continued to shrink. How those factors play out will be key, as China continues to rely heavily on exports for growth.



Source: Bloomberg

Production continued to drive the recovery, and domestic demand has gained significant momentum in May. As capacity utilization continues to rise, the strength of the recovery in domestic demand will determine if the current production acceleration can be sustained. However, overseas demand is still sluggish, weighing on any desire to expand.

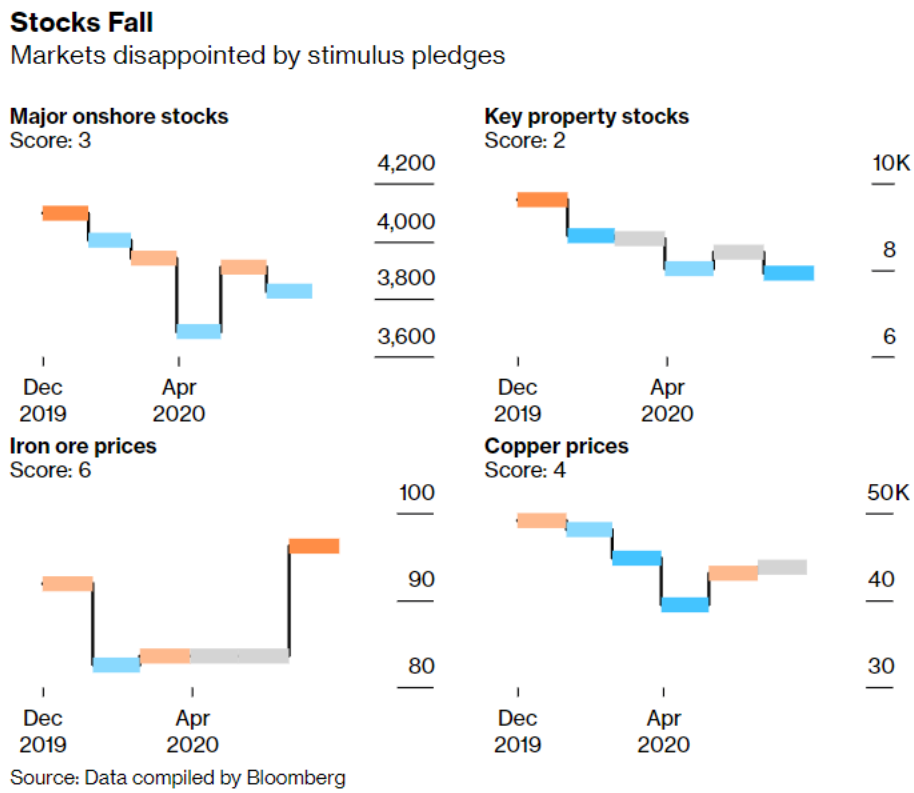


Exports from South Korea shrank by over 20 per cent for a second month in a row in the first 20 days of May, with shipments to China falling by 1.7 per cent compared to the same period a year ago.

According to economists, sudden rise in Chinese exports in April was likely due to manufacturers catching up on orders placed before the pandemic. In the coming few months, trade from China is expected to remain soft. Though some marginal improvement may emerge in the months ahead, a quick rebound to pre-pandemic levels is highly unlikely. According to the Standard Chartered survey, new export orders to smaller firms are still contracting, although at a slower pace. The index improved to 47.4 from 41 in April. Any number under 50 indicates a contraction. While the overall index was still in contraction territory, sales managers are now more confident than the last month.

Weakening Markets

Stock and commodity markets have weakened over the last month, as both were underwhelmed with the economic targets and stimulus measures and the ratcheting up of geo-political tensions between the U.S. and China.



While the expected rise on infrastructure will offer a material boost to demand for copper and steel, it may not be enough to offset weaker conditions in other key sectors like manufacturing, property and exports.

9. Singapore's fiscal stimulus targets jobs to revive economy

To counter the economic fallout of the coronavirus, Singapore's Finance Minister Mr Heng Swee Keat delivered a fourth fiscal package of S$33 billion ($23 billion), providing specific support to saving jobs. The latest measures will help businesses and workers affected by border closures and movement restrictions, Heng said in the Parliament. These steps will increase the year's budget deficit to 15.4 per cent of GDP, the largest recorded gap in the country's history.

Making it clear jobs are the central focus of the budget, Mr Heng said "Large parts of the last three budgets were directed at protecting the livelihoods of our workers. In this budget, we will do even more." The latest package takes Singapore's total fiscal stimulus to S$92.9 billion, or 19.2 per cent of GDP. Through these fiscal support measures, the government is trying to ease an economy possibly headed for its worst contraction since Singapore's independence.

SINGAPORE'S STIMULUS PACKAGES

Feb. 18	S$6.4B	Health Ministry funds; targeted aid for sectors like tourism, aviation, food; household cash handouts
March 26	S$48B	Scrapping of property tax for hard-hit sectors; wage support for businesses; freezing of government fees; fiscal 2020 deficit estimated 7.9% of GDP
April 6	S$5.1B	Extends wage subsidies and foreign-worker levy waiver; raises cash handouts; raises fiscal 2020 deficit estimate to 8.9% of GDP. On April 21 the 75% wage subsidy was extended to all businesses, foreign worker levy was waived for May and S$750 employer rebate per worker was announced
May 26	S$33B	Extends foreign-worker levy waiver and rebate for two months; extends wage subsidy until August for some firms; raises wage support for severely hit sectors to 50% or 75%

Source: Bloomberg

The Government has already highlighted that the stimulus spending is close to 20 per cent of GDP, placing Singapore in the same league as Germany and Japan. Experts felt that the measures struck a delicate balance between supporting individuals and industries suffering after COVID. The package will go a log way in preparing the country for a post-Covid world where digital transformation and more disruptions will be the norm.

The Singapore dollar, which rose earlier in the day on first-quarter GDP data that wasn't as bad as feared, was up 0.40 per cent to 1.4191 per U.S. dollar. The benchmark stock index gained 1.3 per cent after the announcement of the new virus relief package.

10. The hits and misses of India's stimulus package

The Indian Government announced a mega stimulus package of INT 20 lakh crores in May to save the country's economy after an almost two months long COVID induced lockdown. The combined package amounts to nearly 10 per cent of the GDP, making it among the most substantial in the world after the financial packages announced by the United States (13 per cent of GDP) and Japan (21 per cent).

Experts believe that, to make the stimulus more effective, the government needs to deliver its policy response in multiple phases. In the present survival phase, the cash flow shock must be addressed to prevent permanent damage to the economy. As the infection curve is brought under control, the government should step in via a demand stimulus for consumption and investment to rejuvenate growth. Fixing the financial plumbing will require recapitalization of PSBs, and a comprehensive one-time solution to deal with the bad debt situation. Though the structural reforms do not address the near term challenges, they will play a crucial role in turbocharging the economy in the long run.

The government has tried to ensure survival of firms, vulnerable segments of the society, and address the resource constraints faced by states. To support the MSMEs, the stimulus package provides for 100 per cent guaranteed loans (Rs 3 lakh crore), subordinated debt, and equity infusion to provide liquidity. Raising the minimum threshold for insolvency proceedings will go a long way in insulating MSMEs during these difficult times. Relief has also been provided to small businesses via a 2 per cent interest subvention (MUDRA-Shishu loans) and to street vendors to enable them to restart their businesses.

For more vulnerable segments in the society, the increased MGNREGA allocations will provide jobs and income support to returning migrant workers. For farmers, additional credit worth Rs 2 lakh crore (via Kisan credit card), and an emergency working capital funding for crop loans (via NABARD) have also been provided. However, the support for the formal sector has been limited to EPF contribution. An estimated total support of 1.9 per cent of GDP has been allocated for MSMEs, similarly a support of 0.4 per cent of GDP has been extended to shadow banks. The most vulnerable part of the population has received 1.2 per cent of GDP. For farmers, while the actual fiscal outgo is limited, the overall size of the intervention is quite large and will bring about the much needed reforms for the sector.

Safeguarding against bankruptcies

The Government has suspended any fresh initiation of insolvency proceedings for a year. The stimulus also includes exclusion of Covid-19-related debt from the definition of 'default' under IBC

Taking stock of credit risk

Rising risk aversion among banks and MFs has resulted in a liquidity pinch for high-risk borrowers. Guaranteed MSME loans, a special liquidity scheme for shadow banks, and the partial credit guarantee scheme for NBFCs will help address this issue. The success of the loan disbursal to MSME will depend, to a large extent, on banks' appetite for risk. The scheme for shadow banks is expected to witness higher take-off, and would benefit from more allocation.

What they missed?

Sectors such as aviation, hospitality, travel & tourism will continue to suffer from lower revenues for much longer as they will be required to operate at lower capacity. These sectors have not received any Government support in the form of tax relief, interest subvention, or wage subsidy from the stimulus package. Further, the package does not address the banking sector's immediate need for recapitalization or the mounting NPA crisis. Support for the banks will be essential to fuel growth in the medium term. Lastly, except for the one-year extension of credit-linked subsidies for affordable housing, demand stimulus measures are missing. This will disappoint investors looking for a growth booster for the infrastructure segment.

Interventions

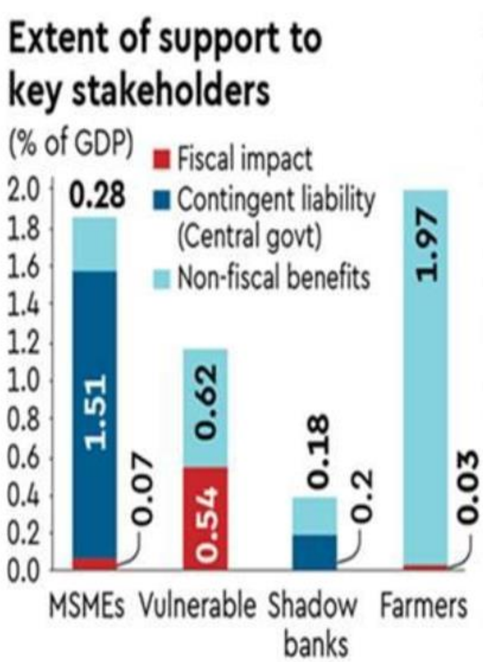
The Centre's announcement of longer-term reforms are focused mainly on agriculture and the industrial sectors. These include:

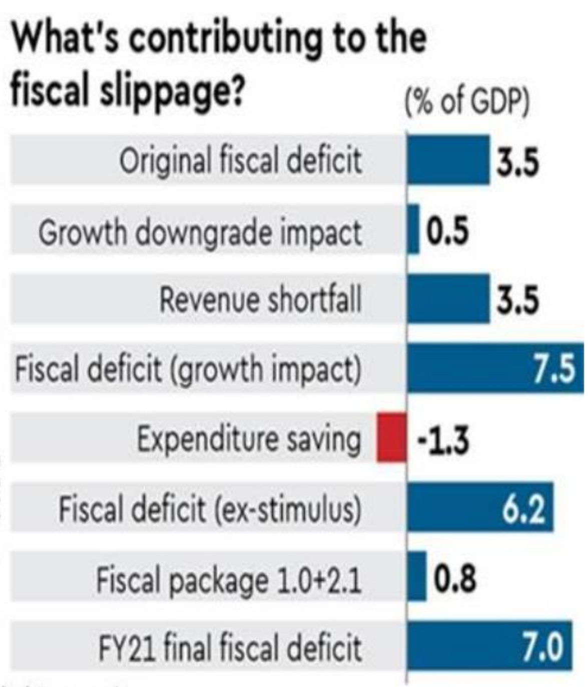
- Increasing infrastructure investments in agriculture value chains, attracting private investments, enabling higher price realization for farmers, etc.
- Allowing commercial mining for coal, and transferring of mineral mining leases
- Allowing for higher FDI in defence manufacturing i.e. from present 49 per cent to 74 per cent)
- Privatization of discoms in union territories

Growth projections remain unchanged

Of the Covid-19 support package of 10 per cent of GDP, RBI liquidity measures account for 4 per cent of GDP, while fiscal/financial/other measures amount to 6.5 per cent of GDP. Of the latter, the bulk emanates from higher financial support via higher contingent liabilities at 2.15 per cent of GDP, while net cash outgoings from the Centre's budget amounts to only 0.8 per cent of GDP. The government has aimed for maximum bang with minimum buck.

The Centre's FY21 fiscal deficit is expected to slip to 7 per cent of GDP, double the budget estimate, taking into account the impact of weak nominal GDP growth lower net revenue receipts disinvestment proceeds and the fiscal measures announced, which should more than offset measures to save expenditure. The net fiscal impulse to growth will remain low. State governments' deficit has been allowed to widen from around 3 per cent of GSDP to 5 per cent, assuming reform conditions are met. The general government deficit will likely widen to 10.5-11.0 per cent of GDP in FY21.





Source: CEIC, Ministry of Finance and Nomura Global Economics

The Centre has raised its borrowing ceiling by 2 per cent of GDP from Rs 7.8 lakh cr to Rs 12 lakh cr, while state governments' borrowing ceiling has been revised higher by 2 per cent of their GSDP, from Rs 6.41 lakh cr to Rs 10.69 lakh cr. Overall government borrowing will rise by 4 per cent of GDP (Rs 8.5 lakh cr) in FY21. We continue to believe the Centre will announce additional borrowings, but in H2FY21.

The package largely meets our expectations. However, we believe the government will need to step in again to revive growth through demand stimulus, as well as measures to support the financial sector. In terms of the economic outlook, we expect a slow and uneven restarting of the economy. We expect real GDP growth in 2020 to contract -5 per cent y-o-y from -0.5 per cent, with growth to remain negative for three consecutive quarters. Our quarterly profile has growth faltering to 1.5 per cent y-o-y in 1Q2020, before plunging to -14.5 per cent in 2Q, and then weakly recovering to -6 per cent in 3Q, and -1.5 per cent in 4Q.

11. As the economy opens up, India to face severe structural challenges

Amid the ever increasing number of COVID infections, PM Modi is forced to lift the lockdown. In an effort to open up the economy while continuing to maintain strict restrictions on Covid-19 hotspots, the Indian government is working towards alleviating the economic impact of the world's largest lockdown that has brought all economic activity to a standstill.

In a bid to ease travel restrictions, Government has opened up domestic flights from 25 May. However, over 630 flights were cancelled as many states withdrew from accepting flights after initially agreeing. This came on the heels of nearly 7,000 new virus infections reported on 24 May, the country's largest single-day increase till date. Since the Prime Minister advised 1.4 billion Indians to stay-at-home on March 24, the country has seen more than 150,000 infections, with active cases numbering close to 78,000 and still steadily rising. The pandemic related death toll has already surpassed 4,300 people. The devastating consequences of cyclone Amphan have only made things worse for the country.

While the Indian economy had been slowing even before the pandemic struck, lockdown-induced measures have hammered it to the brink of depression. Most forecasts point toward prolonged cycles of economic contraction. As the country emerges from a stringent two-month long lockdown, the government faces a pressing dilemma: can it reduce transmission of the virus and simultaneously bring its staggering economy back on track?

Challenges to public health infrastructure

The rise in cases only puts further strain on the country's underfunded health infrastructure. India presently spends 1.5 percent of its GDP on public health, one of the lowest in the world. With public hospitals routinely overstrained, private hospitals have picked up the slack, but they too are at risk of being under-resourced and overrun with cases.

According to Organization for Economic Co-operation and Development (OECD), India has only 0.5 beds per 1,000 people. Along with shortage in beds, the medical staff is in critical shortage too. Medical staffs treating patients are increasingly overburdened and are often without necessary protective gear. As Dr. Adarsh Pratap Singh, the head at New Delhi's top public hospital, the All India Institute of Medical

Sciences (AIIMS) points out "In our country, healthcare has never gotten priority", he further underlines "The government is now realizing the reality, but it's already too late."

Tumultuous times ahead

While India's nationwide lockdown has not succeeded in flattening the infection curve, it has made a considerable dent on the economic growth curve. Imposed with a short notice, the lockdown immediately resulted in millions of migrant workers walking back to their native places. The Centre for Monitoring Indian Economy (CMIE) pointed out that the months of March and April saw a loss of over 122 million job. Some 120 million people are estimated to be on the verge of being pushed back into poverty.

Most economic indicators followed suit: consumer demand evaporated, investment dried up, exports collapsed, trade shrunk, the aviation industry and automakers slumped. Ms. Yamini Aiyar, CEO of the Centre for Policy Research, mentioned "the lockdown has exposed fault lines in society, and the extreme vulnerabilities of most Indians." With the country facing an economic distress, PM Modi unveiled a relief package of USD 265 billion on May 12 to provide a fillip to the ailing economy. With a stimulus package, amounting to 10 percent of GDP, the government aims to revive the economy with a slew of fiscal stimulus directives and sectorial reforms.

Ms. Aiyar has further cautioned that "reforms are necessary but, first, India needs to repair as an economy, a society and a democracy." According to a recent report by CRISIL, India, Asia's third-largest economy, is set to shrink by 5 percent in the 2020. The report further added that India must prepare for its "worst recession to date" whereby about 10 percent of GDP in real terms is at the risk of being permanently lost. It's not only the first quarter that will be a washout for the non-agricultural economy, services such as education, and travel and tourism among but a big hit could well be predicted in the quarters to follow. The report said that jobs and incomes will see extended losses as these sectors are also large scale employers

12. COVID could raise fiscal deficit of states to as much as 50 per cent

Revenue contraction due to COVID-19 linked lockdown and the resulting economic slowdown would force many state governments to borrow more and hence will have a higher fiscal deficit. According to India Ratings aggressive borrowing by States may increase the country's fiscal deficit to 4.5 per cent of GDP, from an earlier estimated 3 per cent. India Ratings has revised upward its estimate of gross market borrowings by states to Rs 8.25 lakh crore in FY'21 from its earlier estimate of Rs 6.09 lakh crore. This is because the agency expects states to resort to higher market borrowings to fund the fiscal deficit. The State Governments will be under immense pressure to provide support to households and businesses through fiscal stimulus measures. Gross and net market borrowings of states in aggregate would account for 4.1 per cent and 3.3 per cent of GDP, respectively, according to India Ratings.

Many states across the country are likely to face significant slippages from the FY'21 Budget estimates. To a large extent, the extent of slippage by individual states would vary depending on the pace at which economic activity recovers back to normal. Despite considerable relaxation in COVID-19 related restrictions by mid-May 2020, the revenue balance of states in FY'21 is expected to worsen. The situation will be even worse for states which are already running sizeable revenue deficits.

The ratings firm studied 20 states which together account for 86 per cent of the states' budgeted aggregate revenue receipts for FY'20. The aggregate revenue receipts of these states were lower by 4.2 per cent than budgeted at Rs 24.79 lakh crore, primarily led by a 16.2 per cent reduction in the devolution of central taxes against what was budgeted. States' own tax revenue receipts was lower by 2.2 per cent in FY20 than Rs 12.04 lakh crore budgeted in FY'20.

The extended nation-wide lockdown would worsen the economic downturn as the agency's estimate projects the nominal GDP growth at 0.9 per cent for FY'21 and 6.8 per cent in FY'20. When the 21 days economic lockdown was imposed from 24 March 2020 in India, many State governments were already faced with a lower share in central taxes and subdued own revenue growth,

Oil & Gas Market

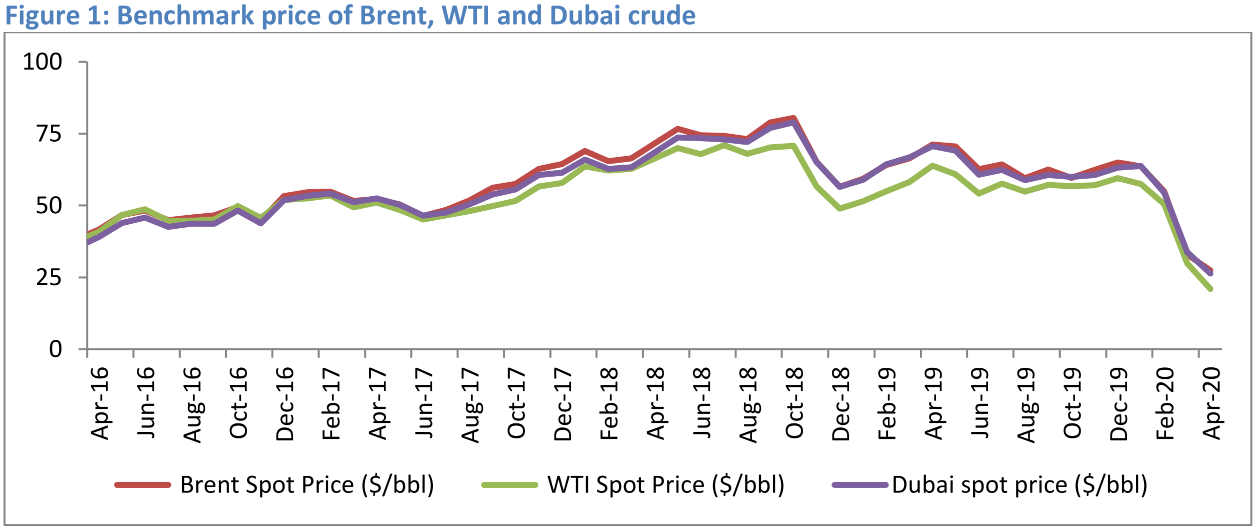
Crude oil price

Following the sudden shock faced by the oil market on the outbreak of coronavirus and market being oversupplied with cheaper crudes, crude price started with decline in the month of April. With supply overweighing the demand, there was call from all oil producers to balance the market equilibrium. By April, OPEC nations and other big producers arrived at a solution to cut production by 9.8 mbpd of crude oil per day from 1st of May for an initial period of two months, followed by an adjustment of 7.7 mbpd until the end of year and 5.8 mbpd until 30th April 2022 to stabilize the market. However, it had little impact and oil price declined further.

By third week of April, Brent crude benchmark fell below USD 20 per barrel, its lowest in twenty years. WTI spot prices fell below zero in the third week of April for the first time due to the oil glut as the contracts were expiring and the storages were close to full. Future Brent Oil contracts for June and July stood at USD 18.6 per bbl and USD 23.2 per bbl respectively. Future WTI contracts for June and July at USD 12.7 per bbl and USD 20.4 per bbl respectively. Though future contracts stayed positive, spot WTI hit negative territory for the first time on 21st of April. With crude storages close to full, buyers denied to source more crude oil. With no takers, crude nose-dived and entered the negative territory.

Average Brent, WTI and Dubai basket crude prices went down by 16.9 %, 29.9% and 22.0 % respectively in the month of April.

Figure 1: Benchmark price of Brent, WTI and Dubai crude



Source: WORLD BANK

- Brent crude price averaged $ 27.43 per bbl in April 2020, and was down by 16.9 % and 61.5 % on a month on month (MoM) and year on year (YoY) basis, respectively.

- WTI crude price averaged $ 20.97 per bbl in April 2020, and was down by 29.9 % and 67.2 % on a month on month (MoM) and year on year (YoY) basis, respectively.
- Dubai crude price averaged $ 26.35 per bbl in April 2020, and was down by 22.0 % and 62.7% on a month on month (MoM) and year on year (YoY) basis, respectively.

Table 1: Crude oil price in April, 2020

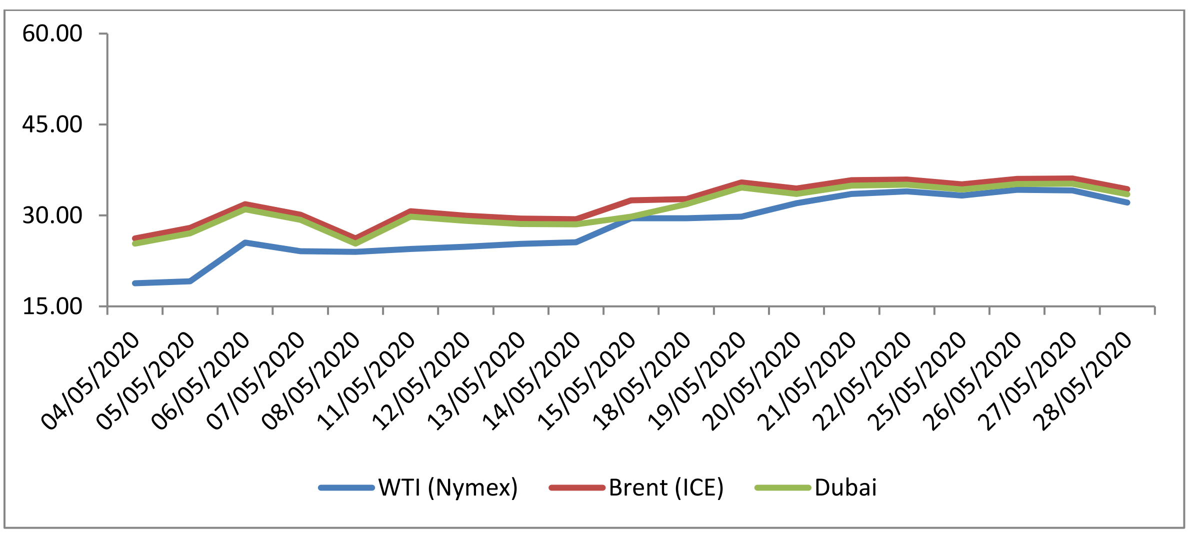
Crude oil	Price ($/bbl) in April 2020	MoM (%) change	YoY (%) change
Brent	27.43	-16.9%	-61.5%
WTI	20.97	-29.9%	-67.2%
Dubai	26.35	-22.0%	-62.7%

- *Source: WORLD BANK*

Oil Market rebounds in May and at 2-month high

Crude prices recovered in the month of May as all major benchmarks almost doubled from their price in the month of March. OPEC and major producers started their production cuts from 1st of May and over the time, millions of barrels of oil was slashed to tighten the supply market. As expected from the producers, the production cut started showing results as the price started rebounding. The deal between the OPEC nations and their allies has resulted in removal of close to 10 million barrels of surplus oil from the market.

Figure 2: Crude oil price in May 2020



- *Source: EIA, Oilprice.com, PPAC*

On the demand side, China is leading the recovery of oil demand, while European nations are reopening their business. With several countries bringing some relaxations to restart the economic and industrial activity, the demand for crude is set rebound in coming days.

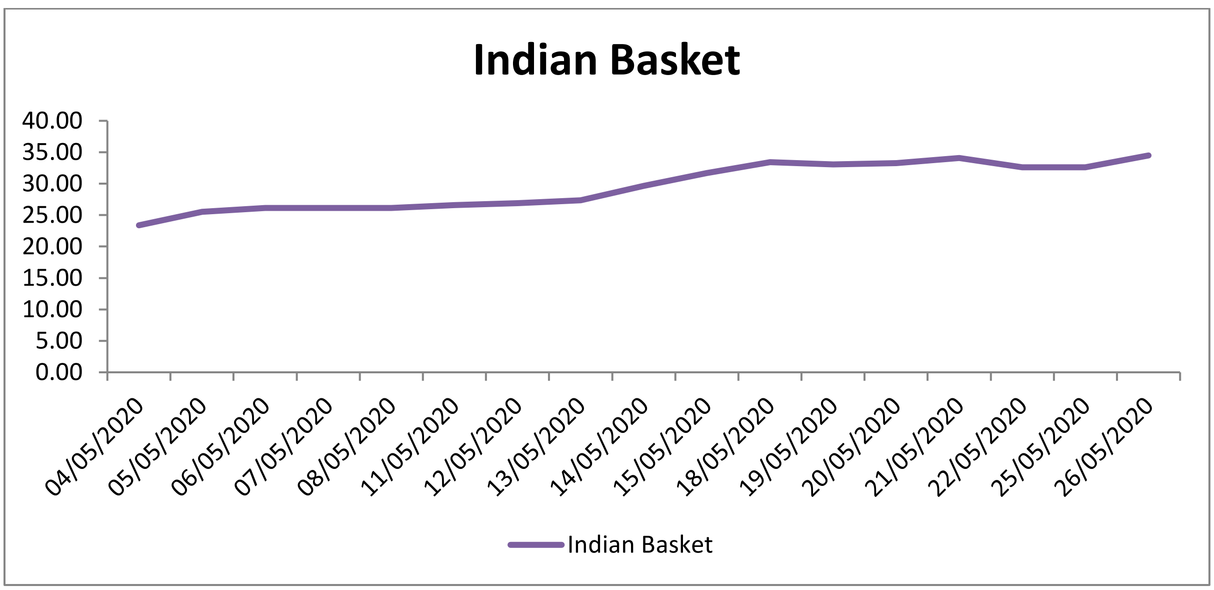
WTI crude saw a strong rebound in the month of May as WTI index reached a 2-month high. Rising demand and fall in US crude inventories due to higher withdrawal lead to the surge in WTI benchmark. Though 1.2 million barrel was added to the inventory, withdrawal from the inventory stood at 5 million barrels leading to better balancing.

Average Brent, WTI and Dubai basket crude prices went up by 16.11 %, 31.81 % and 17.27 % respectively from their April prices.

Indian Basket Crude oil price

- The Indian basket of Crude Oil represents a derived basket comprising of Sour grade (Oman & Dubai average) and Sweet grade (Brent Dated) of Crude oil processed in Indian refineries in the ratio of 74.77:25.23 during 2017-18.

Figure 3: Indian crude oil basket price in $ per bbl



Source: Petroleum Planning & Analysis Cell

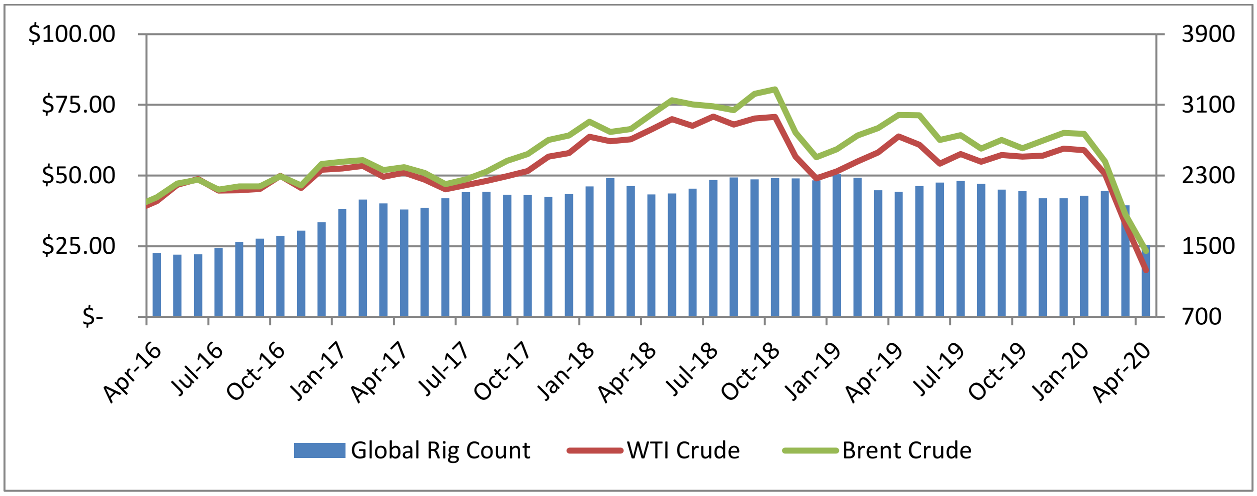
- Indian crude oil benchmark prices saw an increase as the global benchmarks used as its reference went up.
- Indian crude basket price averaged $28.89 per barrel in May, up by 13.61 % on Month on Month (M-o-M) but down by 58.74 % on a year on year (Y-o-Y) basis, respectively.

Upstream activity & Rig count

Global rig count

Rig count represents the total number of active drilling rigs in the world. Demand for drilling rig is highly dependent on crude oil price. When the oil price increases, demand for exploration activity increases, resulting in the increase in rig count. A lower oil price could trim the exploration budget of the oil companies, thereby reducing the demand for drilling rig.

Figure 4 Global Rig Count vs. Crude Prices



Source: Baker Hughes

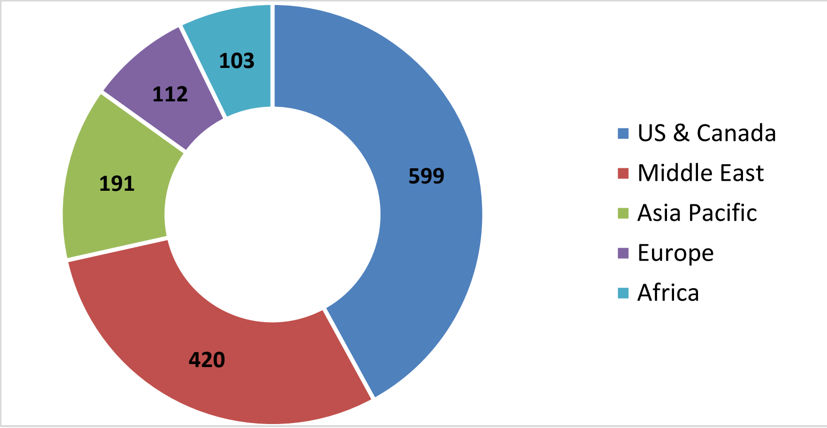
In April 2020, global drilling rig count declined by 450 from March 2020 and stood at 1,514. Onshore rig count decreased by 431 and offshore rig count went down by 19. Major chunk of the reduction in rig counts came from the United States as the rig count went down by 206 rigs due to the new oil price. With spot crude oil trading at negative and future contracts selling less than USD 20 per barrel, most of the Shale player abandoned their drilling programs to keep the cash flow intact. A similar trend was reflected across all the regions namely Latin America, Asia Pacific, Europe, Africa and in Middle East as the companies suspended drilling activities due to non-viability at low oil price environment.

Table 2 : Global Drilling Rig Count

Rig Type	Count in April 2020	MoM (%) change	YoY (%) change
Land	1,267	-25.38 %	-32.06%
Offshore	247	-7.14 %	-10.18%
Total	1,514	-22.91%	-29.25%

Source: Baker Hughes

Figure 5 Geography-wise Rig count -April 2020



Source: Baker Hughes

Indian Drilling Rig Count

Indian rig count decreased in the month of April 2020 by 27 to reach 90. Low oil price forced few E&P operators to suspend the drilling operations completely as the crude oil price was seen unviable. Onshore drilling rigs declined by 28, while offshore rig count increased by 1. On Y-O-Y basis, Indian rig count declined by 25.62 % in 2020 as compared to April 2019. 52 were onshore rigs and the rest 38 were offshore rigs.

Figure 6 Indian Rig Count vs. Indian Basket Crude Price

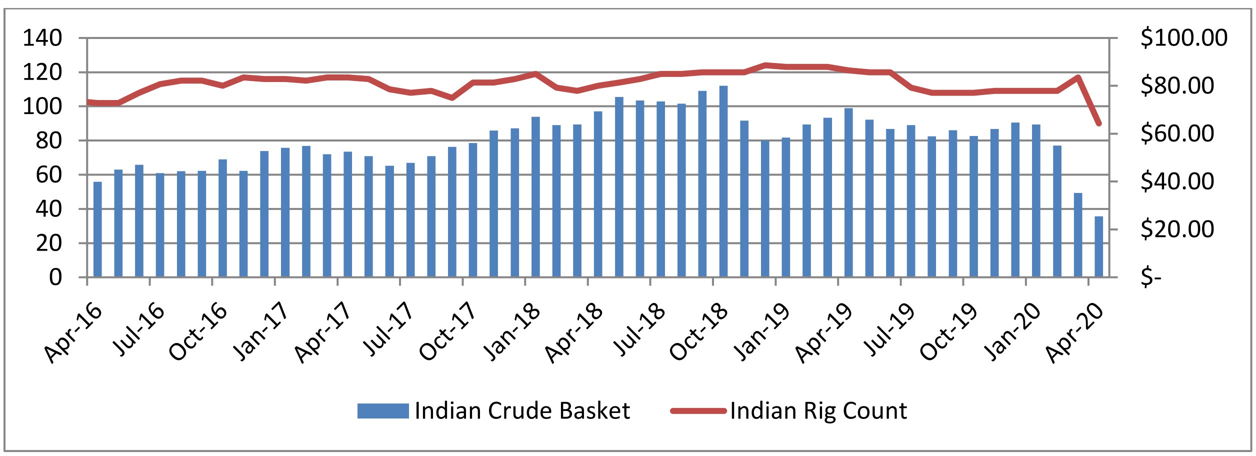


Table 3 : Indian Rig Count

Rig Type	Count in April 2020	MoM (%) change	YoY (%) change
Land	52	-35.00 %	-38.82 %
Offshore	38	2.70 %	5.56 %
Total	90	-23.08 %	-25.62 %

Source: Baker Hughes

Oil demand & supply

Preliminary data indicates that global oil supply decreased by 0.18 mb/d m-o-m to average 99.46 mb/d in April 2020, compared with the previous month. Non-OPEC supply (including OPEC NGLs) fell by 1.98 mb/d m-o-m to average 69.05 mb/d in April. The share of OPEC crude oil in total global production increased by 1.9 % to reach 30.6% in April 2020 compared with the previous month. Estimates are based on preliminary data from direct communication for non-OPEC supply, OPEC NGLs and non-conventional oil, while estimates for OPEC crude production are based on secondary sources.

Non-OPEC oil supply growth in 2020 is also revised down by 3.5 mb/d from last month's assessment and the forecast is at 1.50 mb/d. The production decline comes from the US, Russia and Canada while the growth comes from Norway, Brazil, Guyana and Australia.

World oil demand in 2020 is projected to decline significantly by 9.07 mb/d, which is 2.23 mb/d lower than the last month's estimate to average 91.10 mb/d. The Covid-19 pandemic has created an economic recession and eroded oil demand growth in many countries around the world. Major oil consumers like US, Europe India and the Middle East saw huge decline in demand for crude oil. Travel restriction and reduced air travel activities have negatively affected gasoline and jet fuel demand growth in 2Q 2020 and 2020 as a whole. Industrial fuels are also facing a negative growth due to reduced manufacturing activity compared with last year, affecting the demand for diesel and residual fuel demand.

Based on the prevailing lockdowns and considering the recovery time for nations, revised demand forecast for crude oil in Q2 2020 is 81.30 down by 5.40 mbpd. Demand is likely to recover in Q3 2020 to reach 92.28 mbpd down by 2 mbpd from last month's revision. While in Q4 2020, demand forecast is 96.30 mbpd, 1 mbpd down from last month's forecast. As a result of plunge in demand and prevailing lower oil price, OPEC and other major oil producers arrived at a deal to cut the production. From 1st of May, there has been a production cut of 9.7 mbpd which will be applicable till June 2020. Followed by which there will be an production cut of 7.7 mbpd until the end of year and then a production cut of 5.8 mbpd until 30th April 2022.

Table 4: World Oil demand in mbpd	2019	1Q2020	2Q2020	3Q2020	4Q2020	2020	Growth	%
Total OECD	**47.91**	**45.30**	**34.87**	**44.37**	**46.25**	**42.71**	**-5.19**	**-10.84**
Dev. Countries	**33.08**	**31.62**	**29.46**	**30.62**	**31.60**	**30.83**	**-2.25**	**-4.84**
~ of which India	*4.84*	*4.74*	*3.90*	*3.94*	*4.83*	*4.35*	*-0.49*	*-10.07*
Other regions	**18.68**	**15.47**	**16.97**	**17.29**	**18.45**	**17.05**	**-1.63**	**-6.71**
~ of which China	13.07	10.27	12.55	12.37	13.28	12.12	-0.95	-7.29
Total world	**99.67**	**92.40**	**81.30**	**92.28**	**96.30**	**90.59**	**-9.07**	**-9.10**

Source: OPEC monthly report, May 2020

*Note: *2019 = Estimate and 2020 Forecast*

Global petroleum product prices

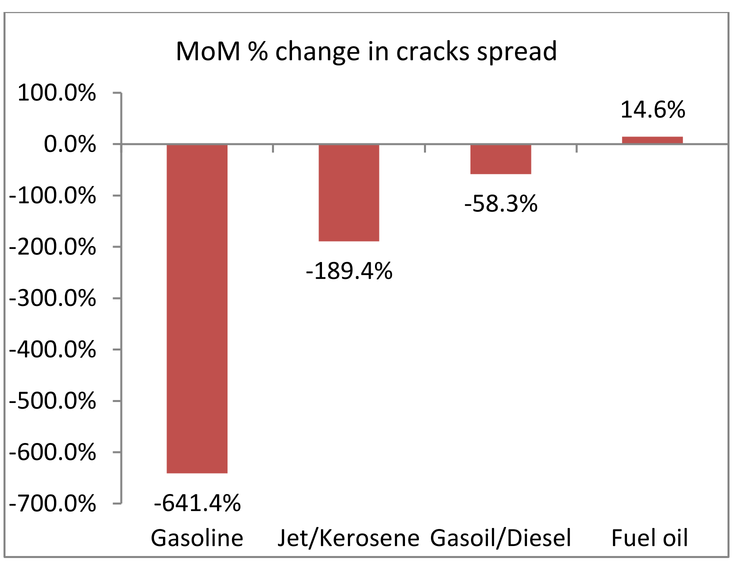
Refinery margins plunged in the Asian market during the month of April and went deeper into negative territory due to regional surplus regional products and lack of overseas outlets to accommodate extra volume amid high freight rates. With independent refiners in China ramping back their operations which was earlier lower due to the lockdown. The rise in utilization from 59% to 70.6% led to higher product availability and weighed on product markets. Refinery margins for Oman in Asia lost $1.80 on m-o-m to average minus 2¢/b in April and were lower by $7.49 on y-o-y basis. Refinery utilization rates in April averaged 85.0 % in selected Asian markets comprising of Japan, China, India and Singapore

Prices in the Asian Gasoline-92 market saw a decline in price by 44.6 % in the month of April. Asian gasoline 92 cracks continued to fall as the pressure exerted by expectations of stronger gasoline availability as economic activity and refinery activity picked up in China. Cancellation of gasoline import orders from other regions weighed further. Singapore Gasoline cracks averaged $1.91/b against Oman, down by $ 3.21 m-o-m and by $9.75 y-o-y in April.

Jet/Kerosene prices went down by $18/b in April due to the plunge in global jet demand which lead to stock builds. This was further aggravated by bearish signals triggered by rising refinery intakes in Asia. The Singapore jet/kerosene crack spread against Oman averaged 2¢/b, down by $5.59 m-o-m and by $11.66 y-o-y.

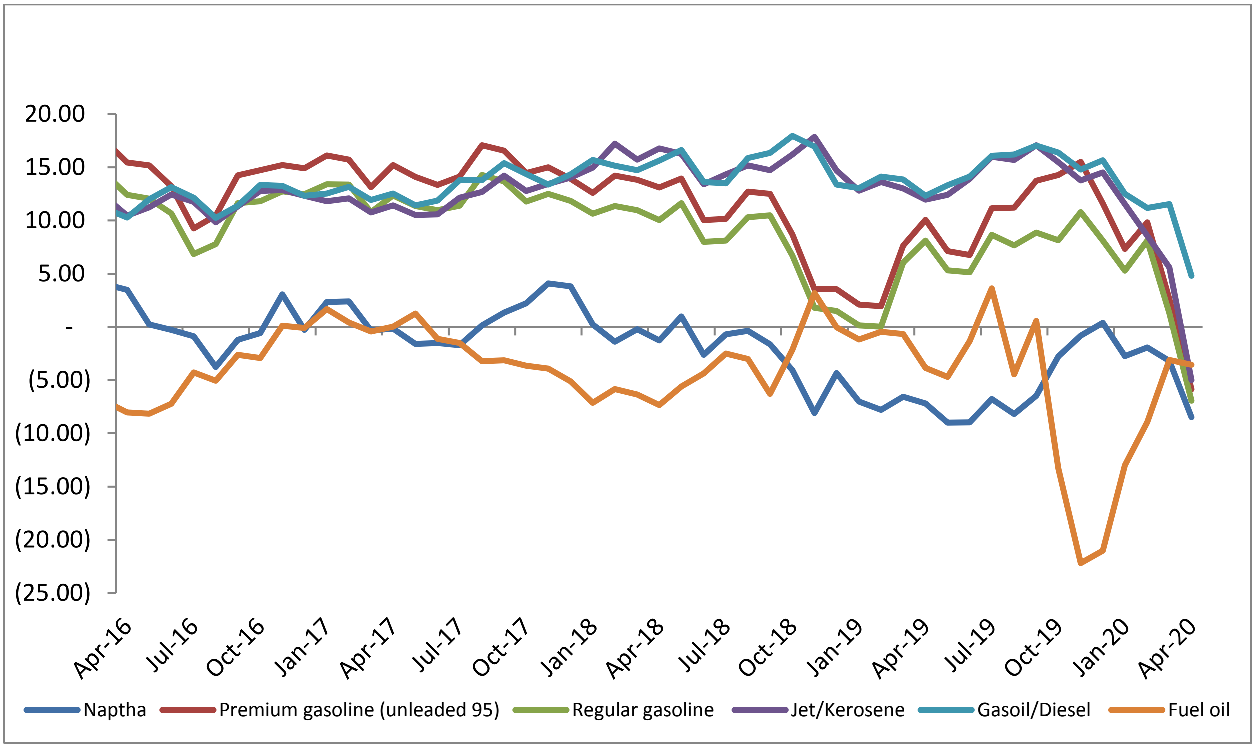
The Singapore gasoil crack decreased due to poor industrial activity and travel restrictions on the account of extended lockdowns and disruptions due to global supply chains. Singapore gasoil crack spread against Oman averaged $7.52/b down by $3.12 m-o-m and by $4.54 y-o-y.

The Singapore fuel oil crack spread jumped due to strong demand from the bunker sector. With limited outputs and strong demand, fuel oil showed a positive performance and saw considerable gains. Singapore fuel oil cracks against Oman averaged $1.48, up by $4.55 m-o-m and by $5.60 y-o-y.



Source: OPEC monthly report

Figure 7: Product crack spreads vs. Dubai crude



Source: OPEC, FIPI

Table 5: Singapore FOB, refined product prices ($/bbl)

Products	Price ($/b) in April 2020	MoM (%) change	YoY (%) change
Naptha	**17.86**	-41.6%	-71.9%
Premium gasoline (unleaded 95)	**20.49**	-43.7%	-74.6%
Regular gasoline (unleaded 92)	**19.42**	-44.6%	-75.3%
Jet/Kerosene	**21.35**	-45.8%	-74.2%
Gasoil/Diesel (50 ppm)	**31.16**	-31.3%	-62.5%
Fuel oil (180 cst 2.0% S)	**22.81**	-25.7%	-65.9%
Fuel oil (380 cst 3.5% S)	**22.23**	-26.0%	-66.2%

Source: OPEC

Petroleum products consumption in India

- In April 2020, overall consumption of petroleum products declined for second straight month by due to the extended lockdown to contain the spread of Covid-19.
- Overall consumption was down by 38.3% in the month of April as compared to March.
- LPG consumption decreased by 7.6 % on M-o-M basis in April 2020.

- Consumption of gasoline decreased by 54.9% on M-o-M and by 60.4% on Y-o-Y due to severe restriction on the road transportation.
- Diesel consumption declined by 42.5% on M-o-M basis in the month of April as long distance trucking was restricted apart from the essential goods transportation.
- On yearly basis, petroleum product consumption was down by 44.3%,

Table 6: Petroleum products consumption in India, April 2020

Petroleum products	Consumption in '000 MT April 2020	MoM (%) change	YoY (%) change
LPG	2,132	-7.6%	11.8%
Naphtha	859	-38.0%	-23.1%
MS	973	-54.9%	-60.4%
ATF	56	-88.3%	-91.6%
HSD	3,250	-42.5%	-55.6%
LDO	28	-43.3%	-38.5%
Lubricants & Greases	212	-28.5%	-29.4%
FO & LSHS	297	-38.3%	-41.6%
Bitumen	196	-62.7%	-69.8%
Petroleum coke	1,135	-32.4%	-27.8%
Others	662	-27.7%	-36.3%
TOTAL	9,929	-38.3%	-44.3%

Source: PPAC

Natural Gas Price

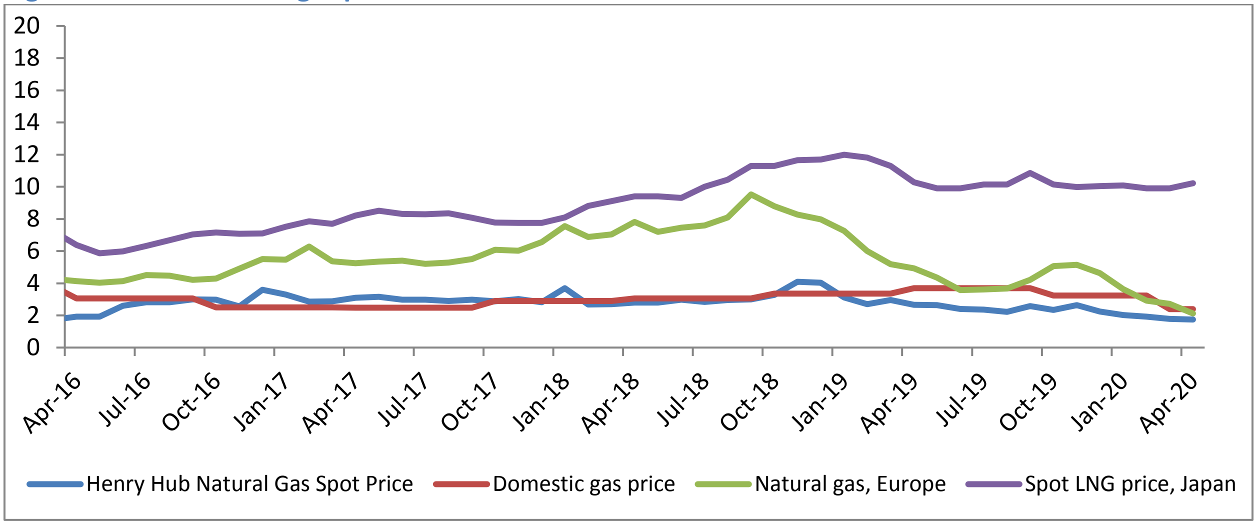
Globally, decline in oil price and demand reduction for natural gas in several nations due to lockdown has led to the decline in natural gas price globally.

In April, natural gas price at the Henry Hub decreased by 2.8 % to reach $1.74/MMBtu. Market continued to reel under the impact caused by Covid-19 outbreak Apart from the decline due to warmer weather, there was no additional impact in the demand.

Natural gas prices in Europe fell by around 22.1% in April 2020 following a 6% fall in the previous month. Demand for gas fell below the five-year average in Europe’s three largest gas markets namely Italy, the UK and Germany. Decline in demand for electricity in Italy, UK, Germany, Netherlands, France, Belgium due to average increase in temperature led to decline in gas demand for power generation. If the current containment measures are to continue for three more months, the gas demand decline in estimated to be 16.9 BCM.

Asian spot LNG price crashed below $2 per MMBtu in April as the sellers across the globe flooded the market with LNG cargoes, however demand remained subdued. Covid-19 related lockdown kept the industrial activity low in major Asian markets throughout April leading to decline in demand. Future LNG contracts for June delivery stood as $1.95 per MMBtu in the last week of April.

Figure 8: Global natural gas price trends



Source: EIA, WORLD BANK

Table 7: Gas price

Natural Gas	Price ($/MMBTU) in April 2020	MoM (%) change	YoY (%) change
India, Domestic gas price (Apr 20)	2.39	00.00 %	-35.23%
India, Gas price ceiling – difficult areas (Apr 20)	5.61	00.00 %	-39.8%
Henry Hub	1.74	-2.8%	-34.3%
Natural Gas, Europe	2.12	-22.1%	-56.9%
Liquefied Natural Gas, Japan	10.21	3.1%	-0.6%

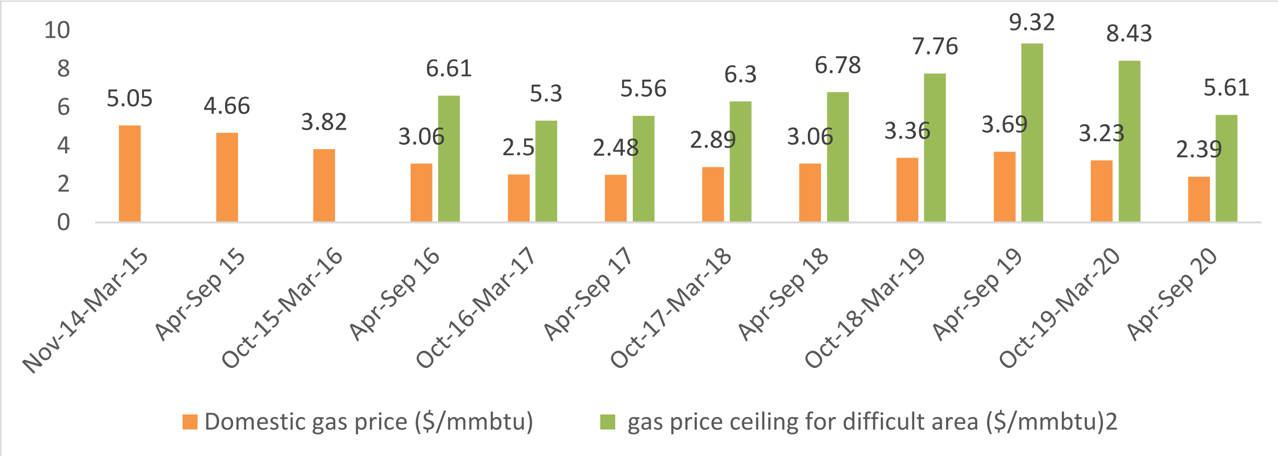
Source: EIA, PPAC, World Bank

Indian Gas market-

Domestic natural gas price which takes into account international benchmarks including Henry Hub, Alberta hub, Russia and UK National Balancing Point. With global gas price declining, India's latest gas price revision saw significant decline, thus capturing the international gas price trends. Domestic gas price for April 2020 to September 2020 is $2.39 per MMBTU has decreased around 35.23 % as compared to 2019. Gas price for difficult area has declined by 33.45 % on M-o-M basis and by 39.8% on Y-o-Y basis.

A notification was issued by MoP&NG on 21st March 2016, for marketing including pricing freedom for gas to be produced from discoveries in deep water, ultra-deep water, and high-pressure high temperature areas. For the April 2020 to September 2020 period, the price of gas from such areas has been notified at $5.61 per MMBTU, 33.45% down as compared to the last year.

Figure 9: Domestic natural gas price

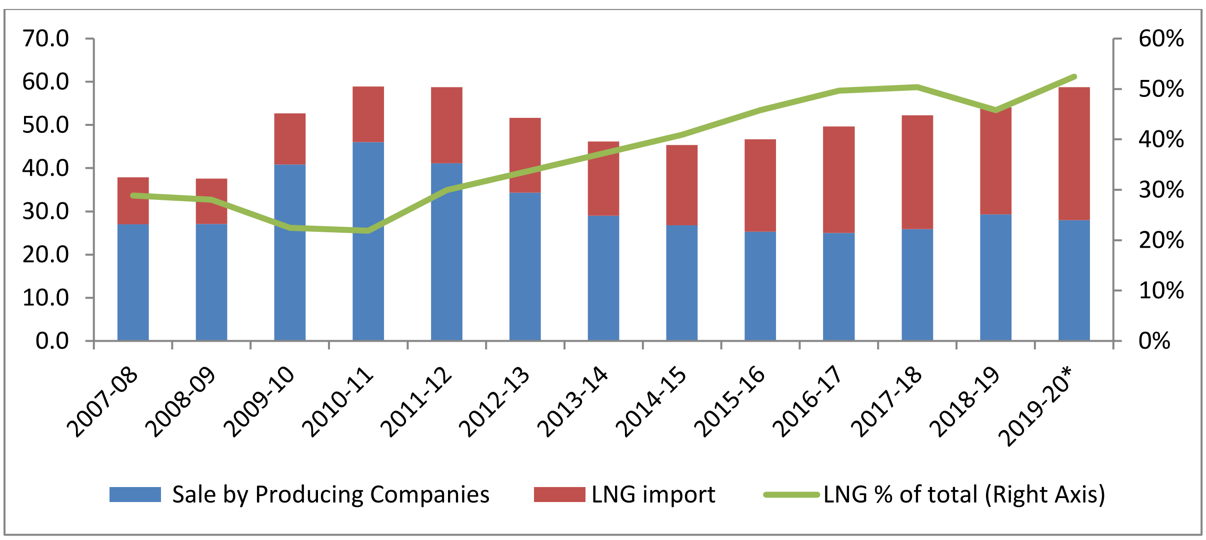


Source: PPAC

Natural gas production, consumption and import in India

- Natural gas constitutes for 5.8% of total energy primary mix of India
- Natural gas consumption in India has increased consistently over last five years.
- LNG imports have gone by up by 34.37 % over last five years.

Figure 10: Domestic natural gas consumption, domestic production and LNG import in BCM



Source: PPAC

1. Sale by producing companies includes internal consumption 2. 2019-20 data up to Feb 2020

Key developments in Oil & Gas sector during May 2020

- **Monthly Production Report for April, 2020**

Crude oil production during April 2020 was 2545.81 TMT which is 1.44% lower than monthly target and 6.35% lower than the production achieved in April 2019.

Natural gas production during April, 2020 was 2161.33 MMSCM which is 10.88% lower than the target for the month and 18.62% lower when compared with actual production in April, 2019.

Refinery production during April, 2020 was 14745.18 TMT which is 22.01% lower than the target for the month and 28.78% lower when compared with actual production in April, 201

- **Shri Dharmendra Pradhan pitches for making Aatmanirbhar Bharat a cornerstone in pipeline projects; Reviews projects worth approx. Rs. 8000 Cr**

Minister of Petroleum and Natural Gas & Steel Shri Dharmendra Pradhan on 22nd May, reviewed pipeline projects worth approx. Rs. 8000 Crore, under various stages of implementation by oil and gas companies. Pitching for Aatmanirbhar Bharat, Minister Pradhan called for complete indigenization in these projects.

GAIL is processing line pipe tenders of more than Rs. 1000 crore for around 1 Lakh MT steel procurement by September 2020 for progressive supply of 800 Km line pipe from domestic bidders. This quantity is expected to be doubled by the end of current financial year to boost Make in India initiatives and further the goal of a self-reliant India.

Project work along the Pradhan Mantri Urja Ganga, JHBDPL pipeline, has resumed in full swing post lockdown and is gearing up to connect Eastern India with the West to Central natural gas pipeline corridor for boosting gas-based economy in the country.

Indian Oil is implementing 1450 km long natural gas pipeline project in southern India, with a project cost of Rs.6025 crore. It has an approximate 1.65 Lakh MT steel pipes manufacturing potential in India at a cost of Rs. 2060 crore, in line with the Atmanirbhar Bharat Abhiyan.

The Indradhanush Gas Grid Ltd., natural gas pipeline grid being developed in the north-east, will ensure uninterrupted supply of natural gas to all the 8 north-eastern states, accelerate their economic growth and help usher a gas-based economy in India. IGGL is processing line pipe tenders of more than ₹950 cr for around 73000 MT steel procurement by July, 2020 for progressive supply of 550 Km line pipe from domestic bidders. This quantity is expected to be doubled by the end of current FY.

- **Discussions between Shri Dharmendra Pradhan, Minister of Petroleum and Natural Gas and Steel with Mr Alexander Novak, Minister of Energy of Russia through Video Conferencing**

Shri Dharmendra Pradhan, Minister of Petroleum and Natural Gas and Steel held discussion with Mr Alexander Novak, Minister of Energy of Russia through Video Conferencing on 6 May 2020.The discussions encompassed the global oil and gas scenario and review of bilateral cooperation in the sectors of oil and gas sector and coking coal.

Minister Novak briefed the Indian Minister on the recently signed OPEC+ agreement. Minister Pradhan welcomed the agreement as an important step in providing stability and predictability to the global energy markets, which is important for India as a consuming nation. The Russian Minister recognized and appreciated the role India plays as a major bilateral partner but also as a major demand driver of hydrocarbon consumption. Minister Pradhan emphasized that Indian economy will continue to be the demand centre for hydrocarbons.

The two Ministers also reviewed the ongoing projects between the two countries including the participation with Rosneft in the Vostok Project, Novatek supplies of LNG, cooperation between Gail and Gazprom, joint projects with Gazpromneft, supply of crude oil by Rosneft to Indian Oil etc. Russian side appreciated India's continued cooperation despite the unforeseen circumstances arising on account of Covid 19. Minister Novak reaffirmed their desire to support Indian energy needs.

During the meeting, particular emphasis was laid on the cooperation in the coking coal sector in which considerable headway has been made since the Indian Prime Minister's visit to Russia in September 2019. In this context the Russian Minister welcomed Shri Pradhan's suggestion of an early convening of a meeting of a high level WG to strengthen cooperation in coking coal with the aim of a conclusion of a MoU.

The Indian side welcomed long term cooperation with the Russian side and Minister Pradhan reiterated his request for Minister Novak to visit India at a convenient time when situation stabilizes. In the interim both Ministers instructed their officials to carry out discussions through VC.

Both sides agreed on the assessment of the current challenges to the global energy scenario and the important role India will play as a driver of a resurgence in demand which will be pivotal in global economic revival.

- **6.8 Crore free LPG cylinders distributed among the PMUY beneficiaries so far**

As part of the economic response to COVID-19, the Government of India has launched a pro-poor scheme "Pradhan Mnatri Garib Kalyan Package" (PMGKP), Under this scheme, Ministry of Petroleum and Natural Gas is providing free of cost LPG cylinders to over 8 crore PMUY beneficiaries for 3 months w.e.f 1.4.20. During April, 2020, Oil Marketing Companies(OMCs) have delivered 453.02 lakh cylinders to PMUY beneficiaries under PMGKP. As on 20.5.20, OMCs have delivered total 679.92 cylinders to PMUY beneficiaries under the package. The beneficiries were given funds in advance through Direct Benefit Transfer (DBT) in their accounts, so that there was no difficulty in availing this facility. The Corona Warriors- personnel working in the supply chain of LPG cylinder delivery- have not only been ensuring timely supply of cylinders, but also creating awareness amongst the beneficiaries about the hygiene and various health guidelines.

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