FIPI

Federation of Indian Petroleum Industry

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POLICY & ECONOMIC REPORT

OIL & GAS MARKET

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Executive Summary

The global number of COVID-19 cases continued to surge through the month of October. As on 26 November, 2020, there were 43.45 Million COVID cases and the pandemic had already claimed 1.16 Million lives.

As the pandemic continues in the fourth quarter of the year, several noticeable trends in the global economy are now apparent. First, those countries that implemented effective COVID-19 containment measures in 1H20, in combination with the ability of strong stimulus measures have performed better. This outcome has resulted in the 2020 GDP growth upward revisions in the OECD economies and China, while selective emerging and developing economies, were revised down. Second, those economies that are dependent on the services sector, especially on the contact-intensive sub-sectors of travel and transportation, tourism, hospitality and leisure are most likely to face challenges in 2021. This led to downward revisions in 2021 GDP growth in OECD economies and those emerging and developing countries that are heavily dependent on the income from tourism. Third, even in the case of a rapidly marketable vaccine, the impact of COVID-19 will be felt on a larger scale than previously envisaged in 2021, since the global economy continues to adapt to the 'new normal.'

Economists have warned that while the worst of the pandemic now behind us, there are still many parts of the world, where the numbers are still going up. Even in areas where the numbers are today on the decline, there is a good chance for the numbers to flare up again and again. While the Chinese, South Korean and Taiwanese economy came out of the pandemic almost unscathed, US, Brazil and Indian economies are among the worst hit due to the pandemic. In terms of economic performance, Europe has taken a severe hit. Recession in Europe is much deeper than the US, Canada and Japanese recession. So Europe along with emerging economies have fallen the worst victims to the pandemic.

Number of COVID-19 cases in the country have seen a sharp decline over the last month. The new COVID cases that touched the one lakh mark in early October has now dropped to below 40,000 in the country towards the end of the month. In September 2020, inflation rose to 7.34 per cent in the country. Food inflation went up to 10.68 per cent from 9.05 per cent, the highest since February and ahead of the festival season. Prices of vegetables jumped 20.73 percent, meat and fish 17.6 percent and pulses 14.67 percent. In September, employment rate fall to 6.7 per cent compared to 8.4 per cent in August. In a recent report World Bank predicts that India economy will contract by 9.6 per cent in financial year 2020-21. The silver lining remained a report by brokerage firm Motilal Oswal that indicates a sudden spurt in economic activity in the festive season. However, the brokerage has warned that this sudden increase may prove temporary. The firm is positive that India will start posting positive quarterly growth from the H@, 2020.

In the month of October, crude oil benchmarks stood stabilized apart from the minor changes. Crude prices fell in the first week of October due to reduction in forecasted demand , however it recovered later in the second week and stood in the range of USD 40-42/bbl. For the month, crude benchmarks saw a minor decline. Average Brent and Dubai basket crude prices in October declined by 1.53 % and 1.56 % respectively from their September prices, while WTI crude went up by 0.91%.

Global rig count for the month of September declined by 31. From August's rig count of 1,050, it declined to 1,019. Seasonality, budget cuts from E&P operators are the key reasons behind the decline in rig count fort the month of September. Indian drilling market saw a decline by 29. Onshore rig count went down by 8 and offshore rig count declined by 21 primarily due to seasonality.

World oil demand in 2020 is estimated to decline by 9.5 mb/d in 2020, unchanged from last month's assessment of 90.3 mb/d. In the OECD, demand forecast was adjusted by a reduction of 0.06 mb/d in 2020. The downward revision accounts for lower expectation for transportation fuel consumptions in parts of Europe and in the US in second half of 2020 following a weak summer driving season.

In Asia refinery margin declined in September, while the other regions saw the upward trend. Weakness from the middle section of the barrel impacted the positive performances in Asian product markets. Refinery margins for Oman in Asia lost 21¢ on m-o-m to average 65¢/b in September and were lower by $6.18 on y-o-y basis. Refinery utilization rates in September averaged 86.12 % in selected Asian markets comprising of Japan, China, India and Singapore.

Natural gas price in the Henry hub went declined by 16.2% to reach $1.92/MMBtu, erasing all the gains made in the month of August. Lower demand for natural gas from the U.S electric power sector due to cooler-than normal temperature in the second half of September and lower US LNG exports led to the decline in price of the Natural gas. Natural gas price in Europe increased by up by 38% in the month of September posting a second straight increase in last two months. Demand for natural gas from factories where gas in burn for heat has picked up as region's economy is back in the path of recovery. November delivery LNG price for the North East Asia market was estimated to be USD 4.90 /MMBtu. The region saw significant purchases of new LNG cargoes from India, Taiwan and South Korea. Japan LNG benchmark declined by 18.6%, due to prevailing market surplus situation in the country.

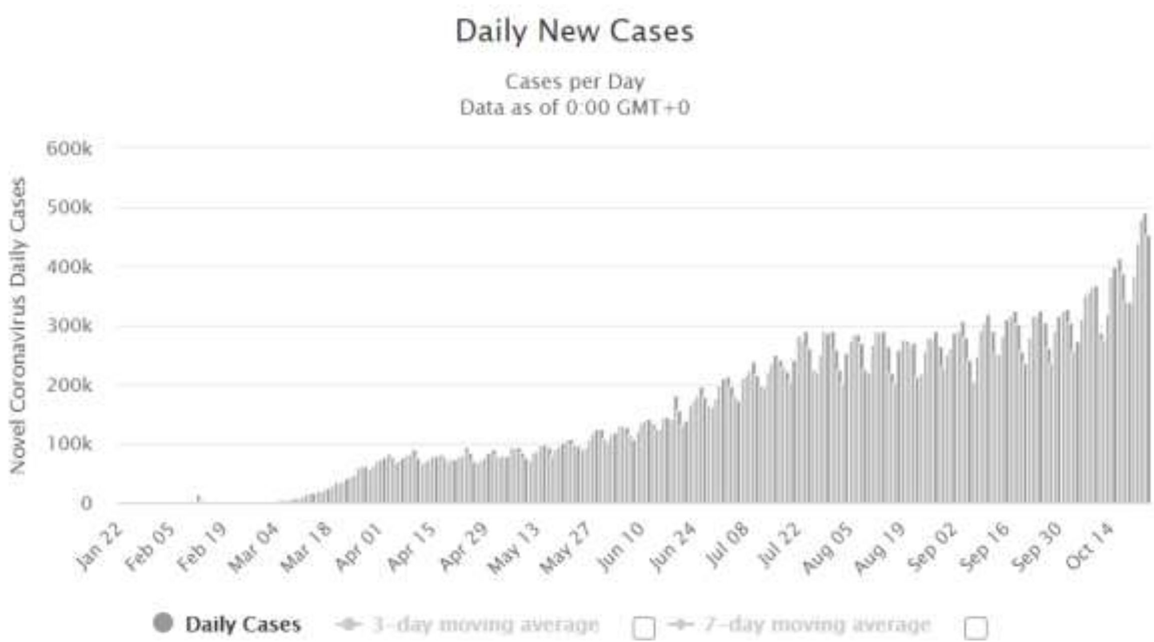
In India, Domestic gas price for October 2020 to March 2021 has been notified as $1.79 per MMBTU and it has decreased by 25.10 % as compared to last revision and down by 44.58 % on Y-o-Y basis. Gas price for the gas produced from deep water, ultra-deep water, and high-pressure high temperature areas has been notified at $4.06 per MMBTU, 27.62 % down from last revision and 51.8% down from last year.

Policy & Economic report – Oil & Gas market

Economy in Focus

1. A Snapshot of the Global Economy: Uneven recovery continues; downside risk still exists due to re-emergence of virus in some countries

The global number of COVID-19 cases continued to surge through the month of October. As on 26 November, 2020, there were 43.45 Million COVID cases and the pandemic had already claimed 1.16 Million lives.

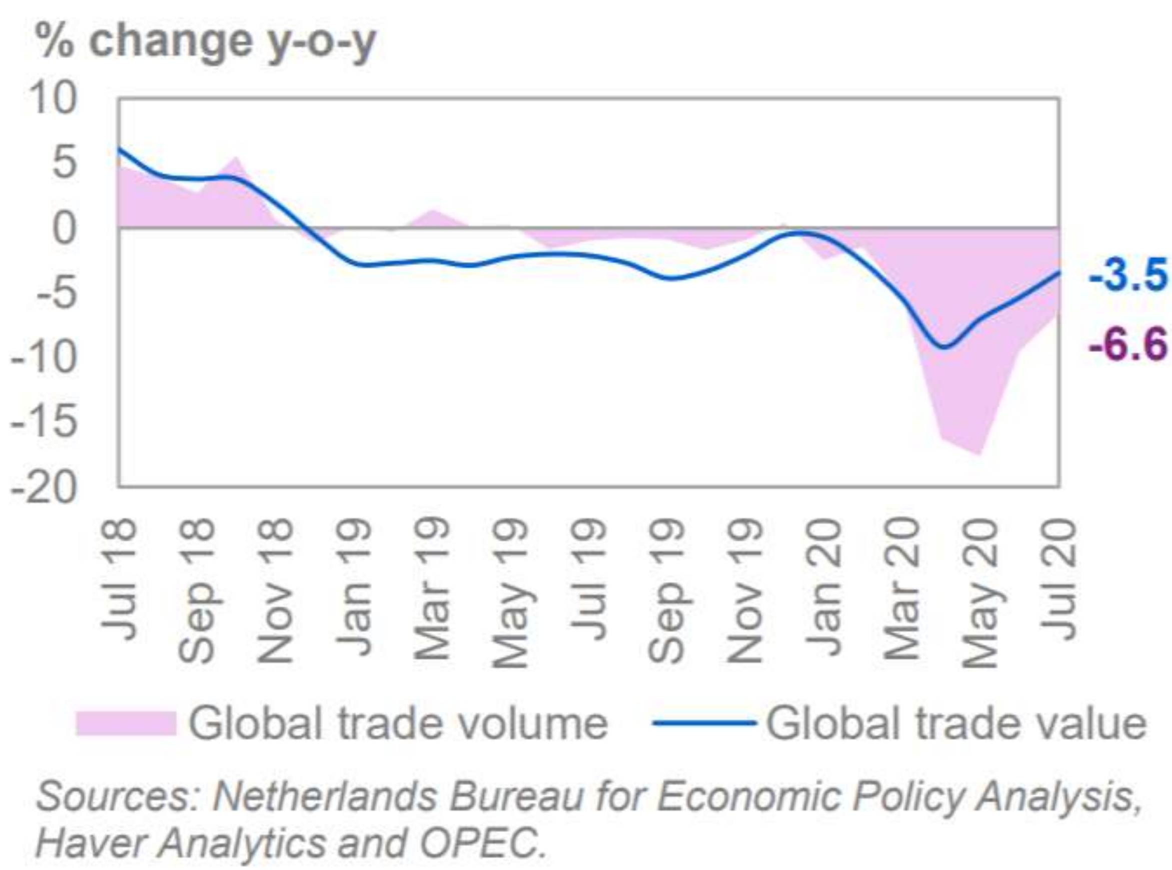


As the pandemic continues in the fourth quarter of the year, several noticeable trends in the global economy are now apparent. First, those countries that implemented effective COVID-19 containment measures in 1H20, in combination with the ability of strong stimulus measures have performed better. This outcome has resulted in the 2020 GDP growth upward revisions in the OECD economies and China, while selective emerging and developing economies, were revised down. Second, those economies that are dependent on the services sector, especially on the contact-intensive sub-sectors of travel and transportation, tourism, hospitality and leisure are most likely to face challenges in 2021. This led to downward revisions in 2021 GDP growth in OECD economies and those emerging and developing countries that are heavily dependent on the income from tourism. Third, even in the case of a rapidly marketable vaccine, the impact of COVID-19 will be felt on a larger scale than previously envisaged in 2021, since the global economy continues to adapt to the 'new normal.'

Global Trade

While the global trade is starting to show signs of recovery from the lows it has seen earlier this year, the ongoing disputes between the US and China, other US-centered trade challenges as well as Brexit, world trade will remain impacted and is not expected to fuel the global recovery. Available data up to July shows that trade started to recover from a very low level. World trade volume levels declined by 6.6 per cent y-o-y in July, compared with a fall of 9.5 per cent y-o-y in June and a decline of 17.6 per cent yoy in May, based on the CPB World Trade Index. Global trade has improved on the value terms as well recording a fall of 3.5 per cent in July compared to 5.4 per cent YoY in May.

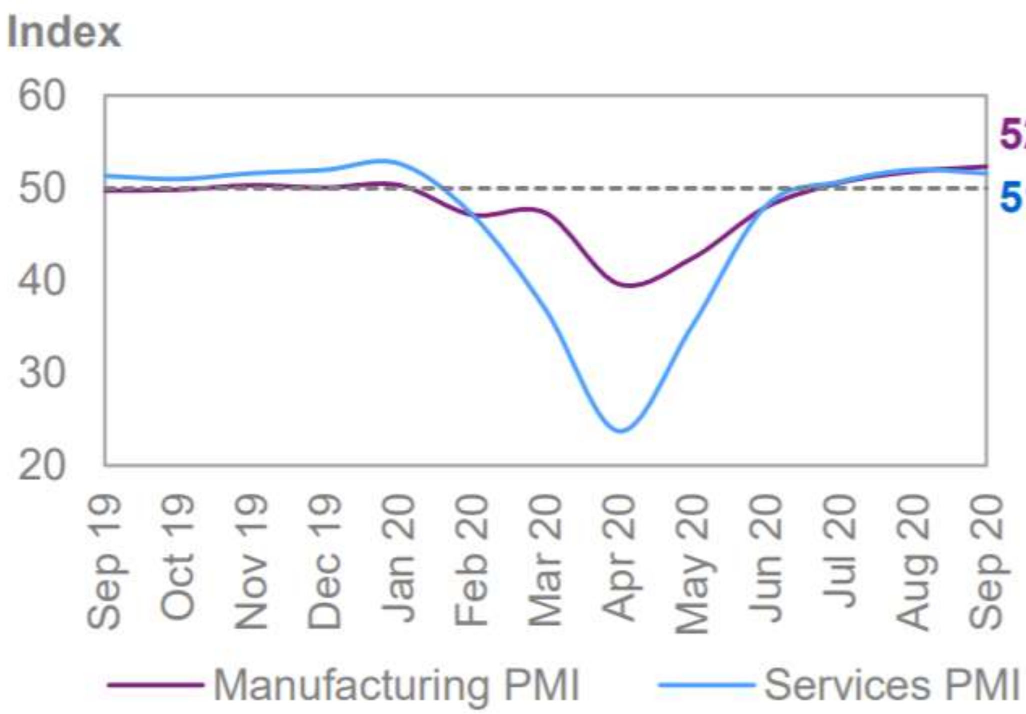
Global Trade



Global Purchasing Manager's Index (PMI)

The world saw a fragile recovery in the services sector in August while that of manufacturing has recovered better. The global manufacturing PMI rose to 52.3 in September, compared with 51.8 in August. The global services sector PMI retracted to a level of 51.6 in September, compared with 52 in August.

Global PMI



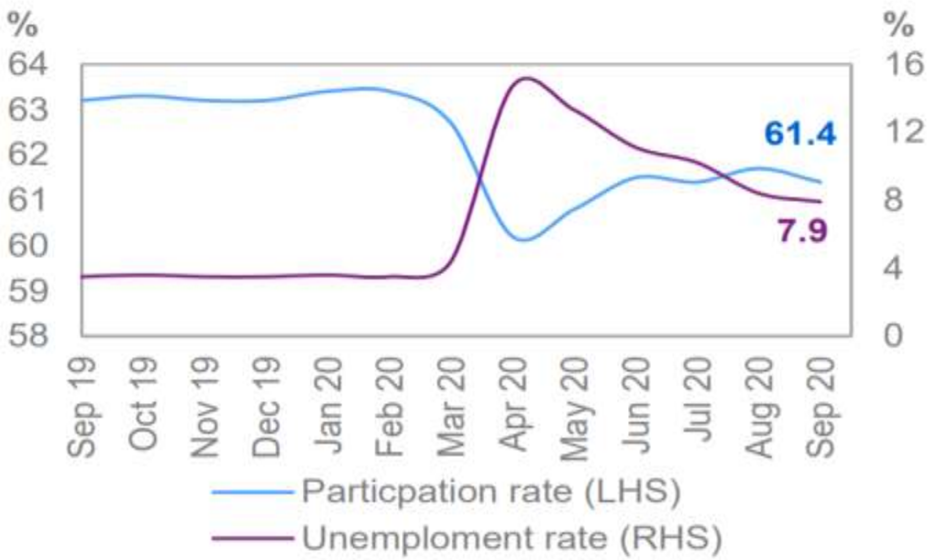
Sources: JP Morgan, IHS Markit, Haver Analytics and OPEC.

The US

Industrial activity in the US industrial sector retracted again and fall by a non-seasonally adjusted rate of 7.9 per cent YoY compared to -7.6 per cent in July. While exports from the country improved they remained 18.3 per cent lower than last year.

Labour market in the country showed continued signs of recovery. Unemployment rate in the country stood at 7.9 per cent in September, recording continuous improvement since it saw its peak in April when it reached 14.7 per cent.

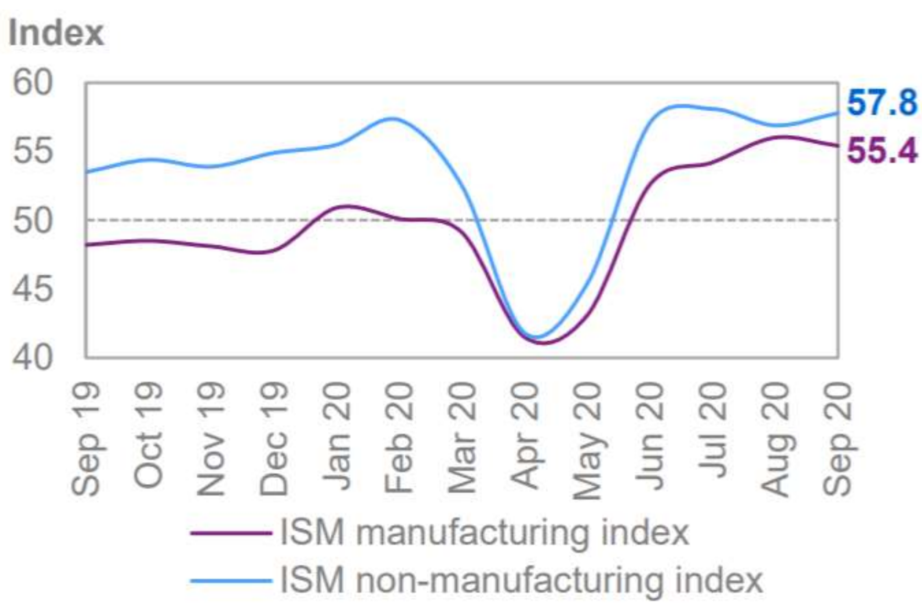
US Monthly Labour Market



Sources: Bureau of Labor Statistics and Haver Analytics.

The rebound in the US economy is clearly visible September's PMI levels published by Institute of Supply Management (ISM). The manufacturing PMI fell slightly to reach 55.4 in September, compared with 56.0 in August, 54.2 in July and 52.6 in June. Hence, the September index level is holding up very well. The services sector index rose to 57.8 in September, compared with 56.9 in August and 58.1 in July.

US Manufacturing and Non-Manufacturing PMI



Sources: Institute for Supply Management and Haver Analytics.

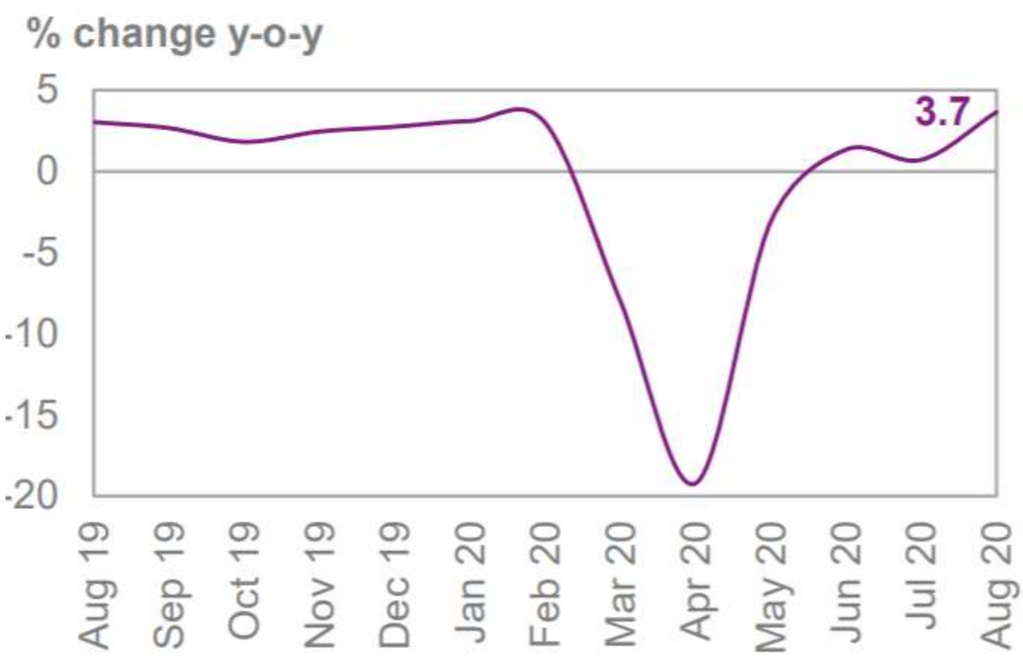
Euro Zone

The Eurozone has seen strong recovery in the third quarter after the seeing a difficult 1H’20. Those economies that are less services sector sensitive and are more manufacturing dependent have benefitted more from the recovery. The worst affected were the economies that are more reliant on contact-intensive areas, like travel and leisure.

The unemployment rate in the labour market has remained at modest levels. In August, the region saw a modest increase in unemployment from 8.0 per cent in July to 8.1 per cent in August.

Retail sales in the region saw significant improvement in August recovering further in value terms, up by 3.7 per cent y-o-y compared with 0.7 per cent y-o-y in July. Industrial production (IP) recovered in July as well, declining by 7.8 per cent y-o-y, after a decline of 11.7 per cent y-o-y was seen in June.

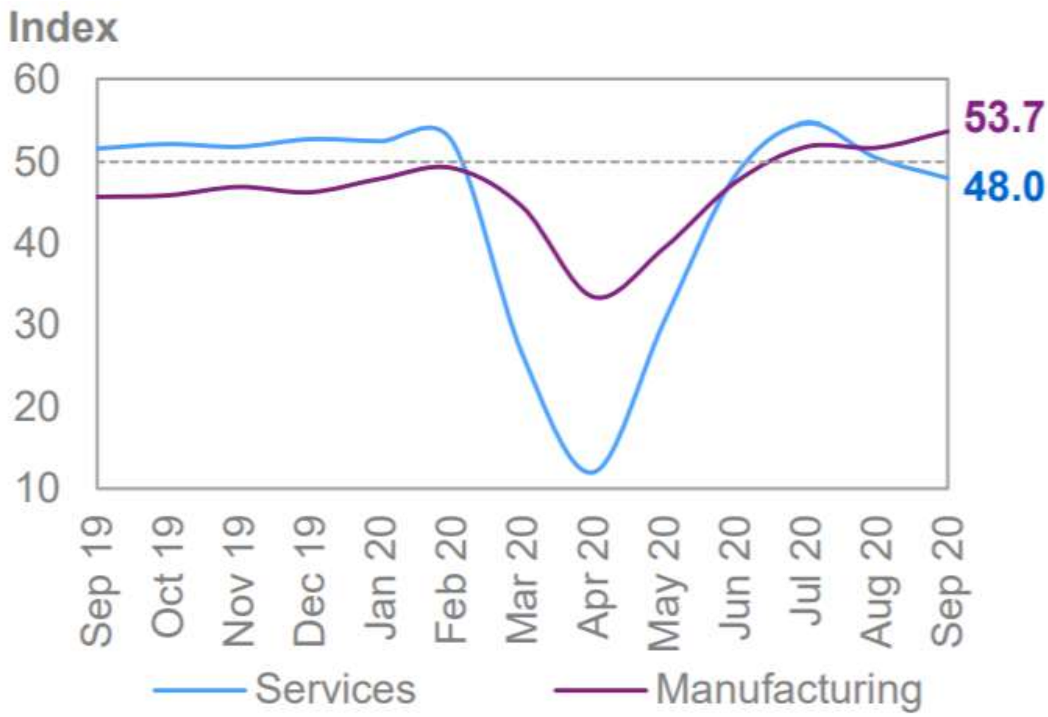
Retail sales in Euro Zone



Sources: Statistical Office of the European Communities and Haver Analytics.

The PMI for the Euro zone clearly indicate a surge in momentum in manufacturing, while the services sector has remained fragile during this period. The manufacturing PMI improved to 53.7 in September, compared with 51.7 in July. The PMI for services, the largest sector in the Euro-zone, fell strongly to a level of 48 in September, compared with 50.5 in August, and 54.7 in July.

Euro Zone PMI



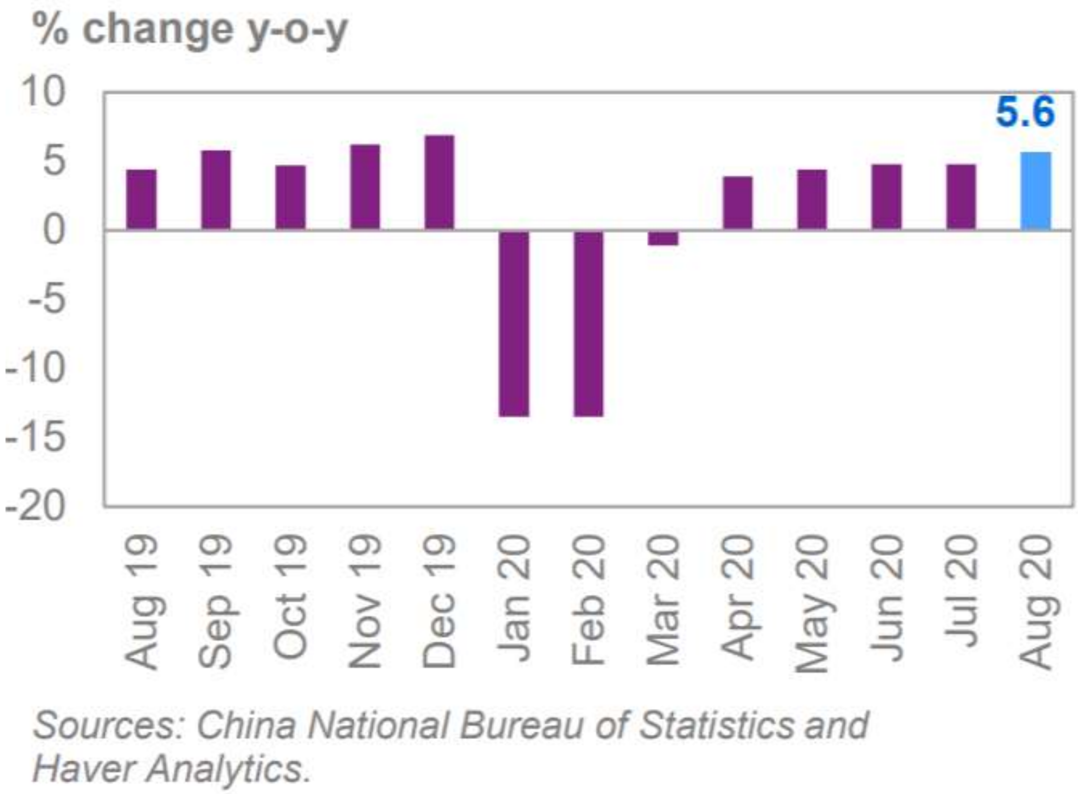
Sources: IHS Markit and Haver Analytics.

China

Over the last two months, the investment and industrial production continued to drive the economic recovery in the country. Private consumption remained lower than the previous year, due to the weak demand for services and external demand due to the slow recovery that several other major economies around the globe are facing.

Industrial production in China continued its momentum and surged by 5.6 per cent from a year earlier in August 2020, the highest since December 2019 as the country is still recovering form the COVID-19 shock.

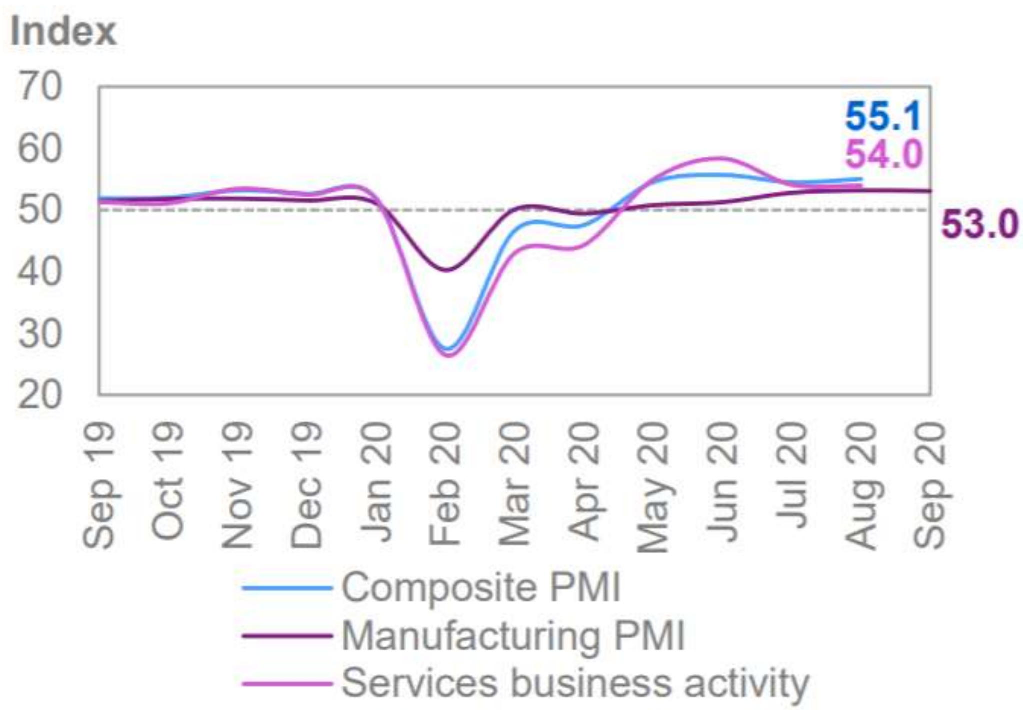
China's Industrial Production



The overall business confidence in the country has increased as the future expectations index rose to 58.7 in August 2020, the highest reading recorded in over last three years.

The Chinese economy is expected to continue its recovery and further expand in the third and the fourth quarter of 2020. The uneven recovery in the demand and the supply side of the economy is expected to pose major challenges in the future. The increased levels of production without an equivalent private demand most likely would translate into higher inventories levels which in turn would hold back future output. The Chinese general manufacturing PMI remained unchanged in September at 53.0, pointing to a steady recovery in the sector.

Chinese PMI



Sources: Caixin, IHS Markit and Haver Analytics.

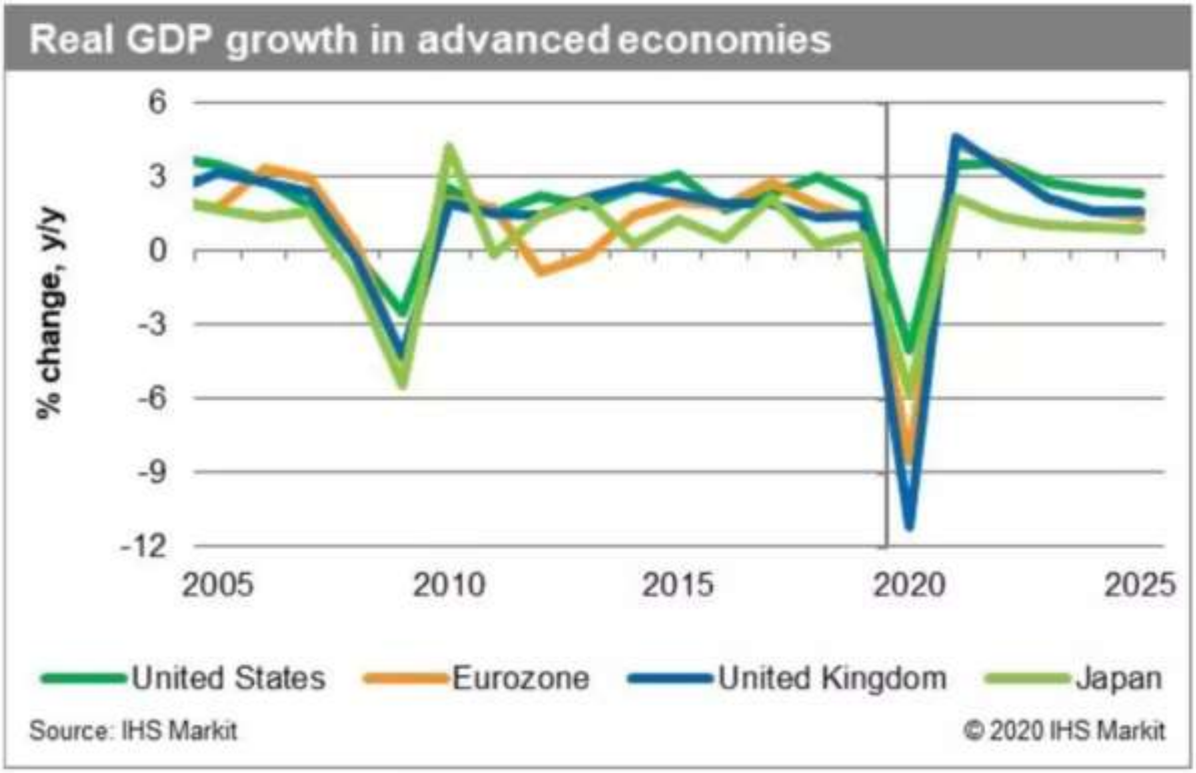
2. The world to recover from the COVID induced recession only by Q3-Q4 of 2021

The COVID-19 outbreak borders and putting half of humanity under some form of lockdown during the spring of 2020. The pandemic is still not over and the worldwide death toll keeps on increasing. To find out more about the damage done COVID-19 pandemic below are the responses from some of the key economists across the world

Impact on the economy

The spread of the pandemic has taken a heavy toll on the global economy. Nobody has been spared from its effects, it's a combination of fear, uncertainty and the reaction to the lockdowns. Its not a fair assessment to blame the recession entirely on the lockdowns. A country like Sweden, even though they didn't do a lockdown, their economy still suffered pretty severely. It is the uncertainty over the spread of the virus that has stopped the consumers to go out and that has caused the real damage to the economies.

The economists are of the opinion that the present crisis is almost three times as bad as the financial crisis of 2008 in terms of the GDP impact. However, its still not as bad as the great recessions of 1930s when the output drop was sustained over a three to four-year period, and the unemployment rate went up to 25% in the US. This time so far it only went up to 13 per cent in the US, but it's the worst downturn we've had globally since the 30s.



Has the global economy past the worst?

In some senses the world seems to have past the worst. In many countries across the world, the numbers of cases are now seeing a sharp fall. However, there are still many parts of the world, where the numbers are still going up. Even in areas where the numbers are today on the decline, there is a good chance for the numbers to flare up again and again. So while many countries now feel that they are out of the grip of the pandemic, they are probably wrong. It probably won't be as bad as it was last round, in part because the healthcare systems are prepared, but we're not done with this.

Which regions are the worst hit?

Among the countries that have tackled the pandemic well, China occupies the top spot. China technically never went into a recession. It had one quarter of negative growth and then it came right out the other side. Other countries that have done relatively well are South Korea and Taiwan, which did a lot of testing and tracing so they managed to keep things under wraps compared to the countries that have done the worst in terms of the virus, such as the US, Brazil and India.

In terms of economic performance, Europe has taken a severe hit. Recession in Europe is much deeper than the US, Canada and Japanese recession. So Europe along with emerging economies have fallen the worst victims to the pandemic.

Image: IHS Markit

How will things evolve after COVID-19?

As the world is coming out of a deep recession, it is set to see a technical bounce. Growth in the US for example will look remarkably strong in the third quarter, but then it will fade. The world is most likely to see a bounce and fade pattern of growth throughout the world. But the bounce is because it went so far it had to come up – but it won't continue at that strong rate.

What kind of shape is expected out of the global recovery?

The world will most likely see a growth in the third and the fourth quarter of 2021. The growth may not be very robust and a lot will depend on the timing of the vaccine. The sooner a vaccine is available and widely distributed, the better the chances of growth, but we don't really see that happening until the second half of 2021. A vaccine may get developed, but in terms of its pervasive availability, it's going to take a while.

Looking at the present growth patterns it appears that manufacturing might see a V-shaped recovery, at least for some period to come. Services, however, which are among the highest hits especially airlines, travel and entertainment, will; only see U shaped recovery.

How are the sectors performing?

The hardest hit sectors are clearly any activities or any industries that depend on large groups of people coming together in a spot. Air traffic worldwide is operating barely at 25 per cent compared to the end of 2019. It is expected to remain this way for some years to come. Hotel industry is another victim of the pandemic. Anything to do with conferences has also taken a significant hit.

Among the industries that have done well during this period, the high-tech industries top the list. The pandemic seems to have accelerated the digital revolution that was already in process. The healthcare sector has also benefitted from the outbreak.

3. Two weeks before the US presidential elections, economic indicators show a gloomy picture

The consumer confidence in the US dropped to a seven year low due to a significant decline in attitude towards the economy and the buying climate. It is more alarming as the drop has come only two weeks before the Presidential elections.

The Bloomberg Consumer Comfort Index recorded a fall of 1.6 points reaching 46.6 points towards the end of the month. The country's optimism about its personal finances fell by 1.3 points to reach 60.3, the lowest it has recorded since August. The measure of comfort in the buying climate decreased 2.1 points. Such a decline means that American's may be growing cautious about their spending.

The measure of confidence in the economy dropped by 1.5 points from its six month high in September. October proved to be the seventh month in a row where four in 10 Americans or more said the economy is getting worse, the longest since a two-year streak during the Great Recession.

Expectations of the economy are largely divided right ahead of the US presidential elections. Among Democrats, 60 per cent say the economy is getting worse compared to 39 per cent of independents and 22 per cent of Republicans.

4. Investment in care may help create three times more jobs in the UK than any other sector: Report

A recently published report by the Women's Budget Group claims that the UK economy requires radical transformation, equal to those seen in the post Second World War era, including the creation of a universal care service providing free full-time childcare and elderly care.

The report claims that the service that will be free at the point if delivery, will help the Government create more jobs than equivalent investment in transport and construction sectors. This move will provide secure jobs for thousands of people who have lost their livelihood in retail and hospitality sectors. Mary-Ann Stephenson, director of the Women's Budget Group (WBG) pointed out that the UK needs a change that is as fundamental to the economy as the creation of the welfare state was in 1945. She further added that the country is facing similar circumstances at the moment and cannot really go back to business as usual.

It comes as government advisers warn that low carer wages are likely to put huge pressure on social care when freedom of movement ends. The Migration Advisory Committee, which briefs the government on immigration, has warned that wages must increase to attract British workers to care roles.

The COVID-19 crisis has both worsened and exposed inequalities and has brought to light the shaky foundations of the care structure in the UK and under which ill-paid agency care workers moved between care homes, often without adequate PPE. The pandemic has brought a deep shift in the electorate, forcing people to reevaluate the value of care and making them more supportive of higher taxation to fund a more comprehensive care system.

A poll published alongside the report highlights that 75 per cent of the respondents are willing to pay more tax to support investment in free social care for all over-65s and disabled people, while 79 per cent agreed a better balance is needed between paid work, caring responsibilities and free time. Caroline Nokes, Conservative MP and chair of the women and equalities committee, has requested the Government to consider the proposals of the commission. She further emphasized that the COVID-19 crisis has highlighted the inequalities in the society and high time that the Government takes note of it. The failure of the Government policies over a prolonged period has left women worse off than men in more than one ways.

Chair of the Commission, Diane Elson mentioned that the report also underlines that the existing economic model has been failing men in terms of "health, quality of life, and time to care for their families. With interest rates at historic lows, the report proposes that it is the time to shift to a system of care seen in some Scandinavian countries, where it employs as many as 10 per cent of the population in some countries. The Group argues that a similar shift in the UK would produce 2 million jobs, increasing the overall employment by 5 per cent and reducing the gender employment gap by 4 per cent.

The report claims that investment in care will create nearly three times as many jobs as the same investment in construction and will also be welcome step towards reducing impacts on the environment.

5. COVID crisis and new administration push for push for digitization in Japan

Rapid development of digital infrastructure may help double Japan's economic growth rate and features as one of the major items in Prime Minister Yoshihide Suga's reform agenda. The ongoing coronavirus pandemic has clearly shown that Japan significantly lags behind other developed countries in adoption of digital technologies. Economists expect to see fast paced adoption of digital technologies in the country which may accelerate the country's growth rate from present 1 per cent to 2 per cent, through enhanced innovation and productivity.

Many economists feel that suddenly accelerating Japan's economy to a growth rate of 3 per cent or 4 per cent may be difficult but if the ongoing crisis is not used for pushing forward digitization, the country might just miss the train.

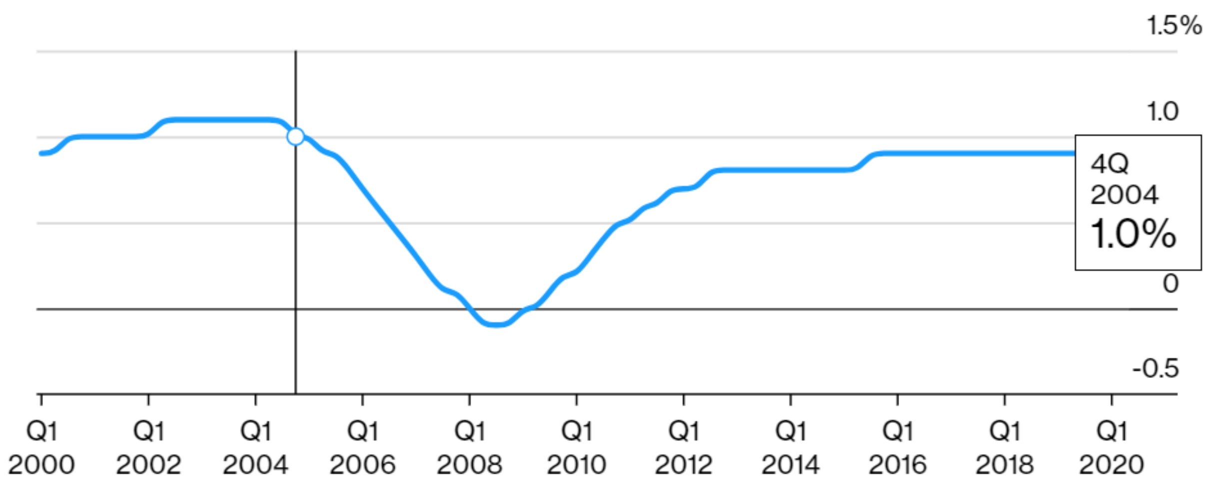
The reported delays in delivering cash hand-outs to the population at the peak of COVID crisis has highlighted how out of date Japan's administrative systems have become, with attempts to facilitate online applications running into trouble and in some cases being scrapped in favour of paperwork.

Lack of digital technologies and use of name seals in some crucial government documentation have been the major reason hampering Japan's efforts to attract foreign banks and brokerages and better establish itself as an international finance hub.

Prime Minister Suga has made reforms the buzzword for his administration and is looking to make a quick mark before the general elections scheduled next year in autumn. Most economist feel that things are moving at a higher pace now. Its not only the prime Minister who is pushing for faster results but he has also directed his ministers to act swiftly.

Low Trajectory

Japan's potential growth rate has been below 1% for more than 5 years



Source: Cabinet Office

The annual growth rate of Japan is presently 0.7 per cent, while the Bank of Japan sees it even lower. None of the estimates for the country has reached anywhere close to the 2 per cent mark in almost half a decade.

6. Riding on Government's infrastructure investments and sudden rise in exports, China to emerge as the only major economy to post positive growth in 2020: IMF

After taking a severe hit due to the COVID-19 outbreak, the Chinese economy is now well on track and expected to see a complete recovery this year. A recent report published by the International Monetary Fund (IMF) suggests that Chinese economy is expected to grow at a rate of 1.9 per cent this year. IMF report further claimed that China will be the only major economy to post a positive growth this year.

The IMF report has predicted that for the other countries and crucial markets that are struggling due to the pandemic, will continue to see a difficult time in the foreseeable future. It underlined that a standoff with the US on various issues posed a threat to the global recovery. Updating its World Economic Outlook, the IMF said that it now sees annual growth of 1.9 percent, compared with its earlier prediction of one percent in June.

The report highlighted that the Chinese exports have now recovered from the deep fall seen earlier this year due to an early restart of the economic activity. The recovery has been further supported by strong pickup in external demand for medical equipment and for equipment to support the shift to remote working. In September, Chinese exports recorded an increase of 9.9 per cent year on year, initially spurred by worldwide demand for Made-In-China personal protective equipment but now widening to household appliances and plastics.

The report mentioned that China will be the only major economy to register a positive growth in 2020. The report says "While recovery in China has been faster than expected, the global economy's long ascent back to pre-pandemic levels of activity remains prone to setbacks,"

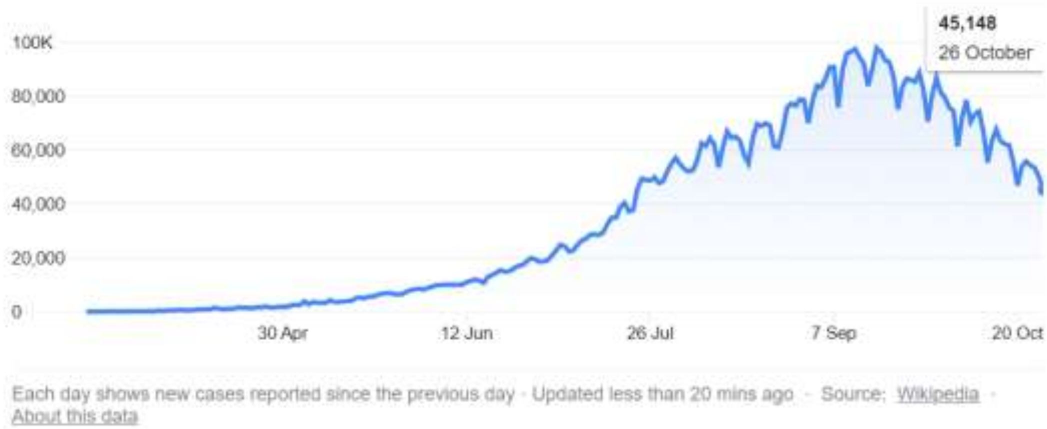
Warning that the world has faced a "long, hard, dire" path in recovery after COVID-19, the fund predicted that the global economy is set to contract by 5.2 per cent in 2020, an increase from its earlier prediction of 4.9 per cent. The prolonged US-China trade war that has tipped into a bitter battle for global tech supremacy also threatened to undermine global recovery.

The report mentions that the rivalry between the world’s two largest economies remain elevated on numerous fronts as China and the US are at loggerheads over the Chinese treatment of ethnic minorities in Xinjiang and Beijing's security clampdown in Hong Kong

While China is still battling very localized COVID spreads, it has largely been successful in controlling the spread and has allowed businesses including cinemas and hotels to reopen and domestic tourists to travel. The report expects the Chinese Government to continue its infrastructure investments to fuel the growth in 2021.

7. Snapshot of Indian Economy: A 6 per cent YoY increase in exports in September sets stage for a fast paced recovery in India

Number of COVID-19 cases in the country have seen a sharp decline over the last month. The new COVID cases that touched the one lakh mark in early October has now dropped to below 40,000 in the country towards the end of the month. The pandemic has already claimed over 1.19 lakh lives in the country.

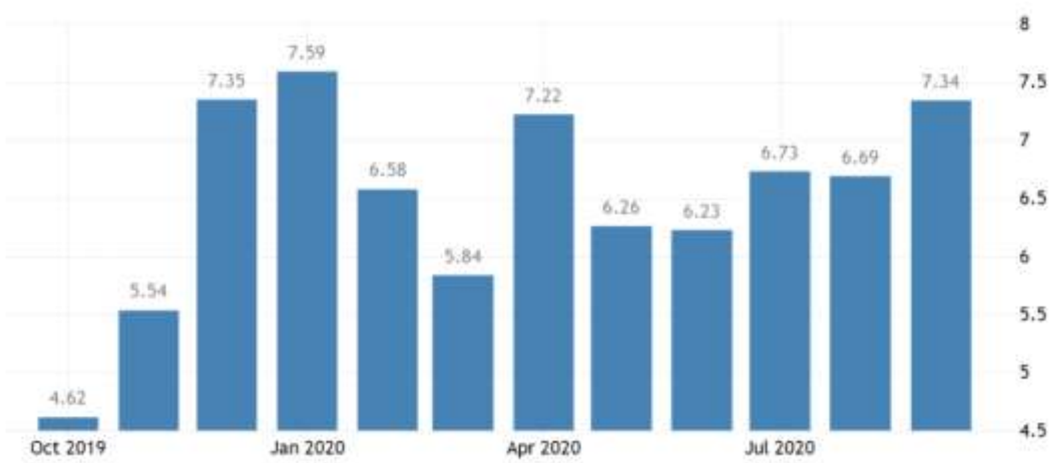


The Indian economy is faced with a crucial phase in its fight against COVID-19 as the lock down and the subordinate fiscal support in comparison to other major economies has resulted in a double digit decline in the second quarter of 2020. The rising COVID cases through September has dampened the investment climate and consumer confidence. Both investment and household demand remained weak despite the COVID-19 restrictions easing. According to the Monitoring Indian Economy database (CMIE), y-o-y the new investment announcements in terms of value contracted by 82 per cent in the fiscal quarter ending September, which was the sharpest decline since 2Q96.

Inflation rate

Annual consumer price inflation in India rose to 7.34 per cent in September, 2020 from 6.69 per cent in the last month. It is the highest rate since January. The inflation remained above the RBI 2 percent-6 percent target range for the sixth straight month, and it is expected to average 6.8 percent in October 2020-March 2021. Food inflation went up to 10.68 per cent from 9.05 per cent, the highest since February and ahead of the festival season. Prices of vegetables jumped 20.73 percent, meat and fish 17.6 percent and pulses 14.67 percent.

Inflation in India

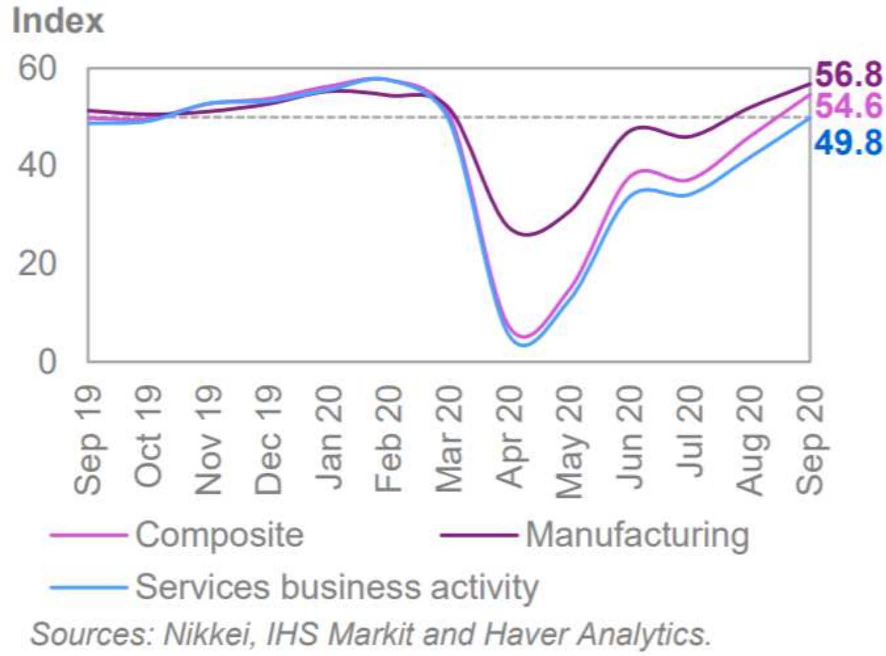


Source: Ministry of Statistics and Programme Implementation

PMI

The Manufacturing PMI increased to 56.8 in September 2020, from 52.0 in August, and Services PMI increased to 49.8 in September 2020 from 41.8 in the previous month signaling a stabilization in both sector.

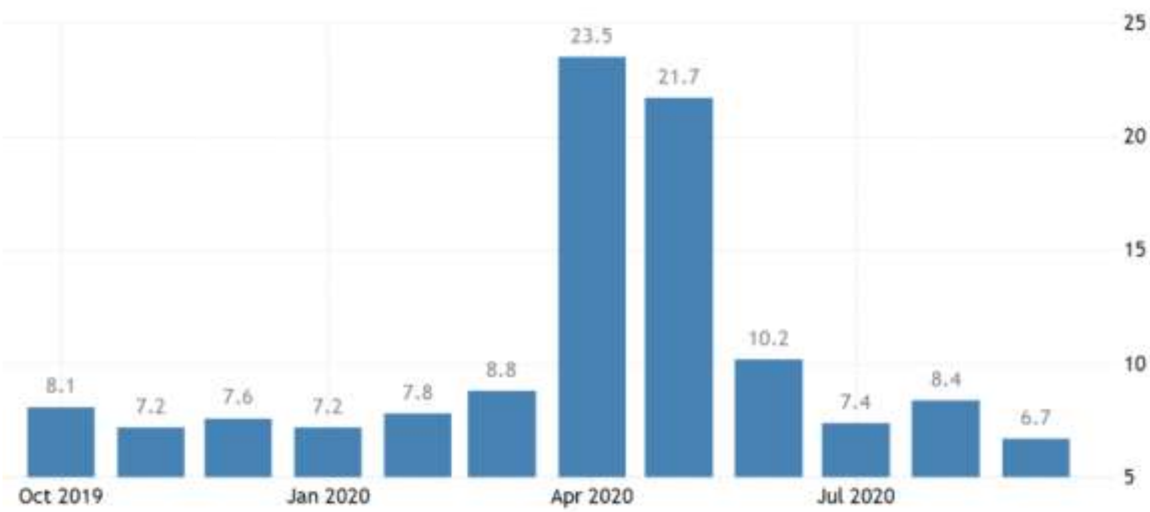
India's PMI



Unemployment

The unemployment rate in India dropped to 6.7 per cent in September compared to 8.4 per cent in August 2020.

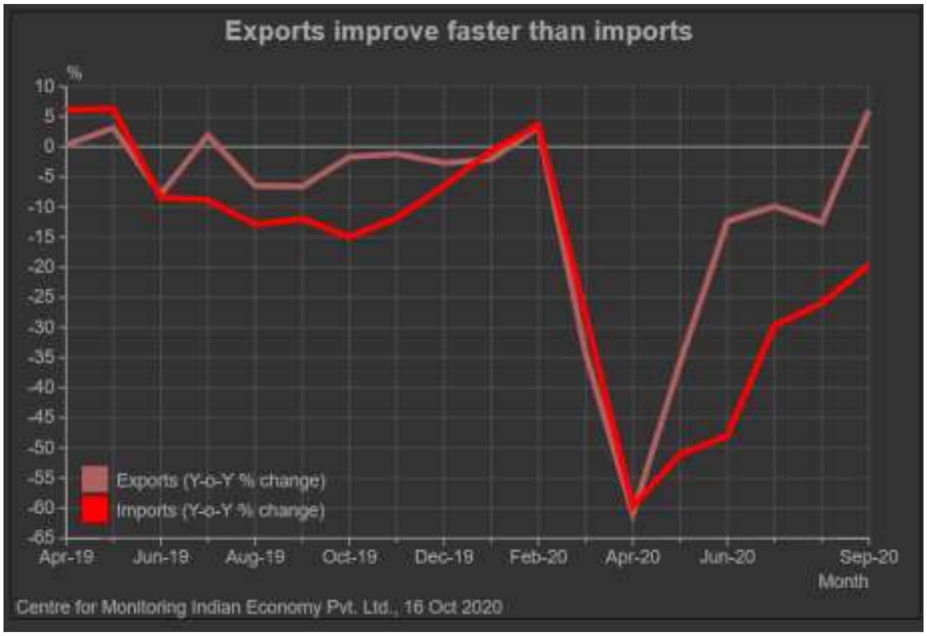
India unemployment rate



Source: Centre for Monitoring Indian Economy

Exports

India's trade deficit shrank from USD 6.8 billion in August 2020 to USD 2.7 billion in September 2020. Exports from the country improved at a much faster pace than imports which resulting in narrowing of the trade gap. Exports increased from USD 22.7 billion in August to USD 27.6 billion in September. Exports recorded year-on-year (y-o-y) growth of 6 per cent in September, after falling for six straight months. In contrast, imports inched up rather sluggishly from USD 29.5 billion in August to USD 30.3 billion in September 2020.



8. Despite Government efforts to fuel growth, Indian economy to contract by 9.6 per cent in 2020-21 fiscal: World Bank

A recent report by the World Bank expects Indian GDP to contract by 9.6 per cent in this fiscal year as result of the national lockdowns and the income shock experienced by households and firms due to the COVID-19 pandemic.

In it's recently released South Asia Economic Focus report World Bank forecasts for sharper than expected economic slump across the region, with regional growth expected to contract by 7.7 per cent in 2020, after topping 6 per cent annually in the past five years. The bank predicted that the country GDP is set to contract by 9.6 per cent in the 2020-21 fiscal year. Taking into account the population growth, however, income-per-capita in the region will remain 6 per cent below 2019 estimates.

The Indian economy saw a 25 per cent drop in the GDP in the second quarter of the years that was also the first quarter of the fiscal year. The report mentioned that the spread of the coronavirus and containment measures have severely disrupted supply and demand situation in India.

The nationwide lockdown that came into effect on March 25 has brought as much as 70 per cent of economic activity, investment, exports and discretionary consumption to a standstill. Only essential goods and services such as agriculture, mining, utility services, some financial and IT services and public services were allowed to operate. The lockdown in India, that was called the world's biggest lockdown, had shut majority of factories, businesses, flights, trains and general movement of people in the country.

The report claims that monetary policy has been deployed aggressively and fiscal resources have been channeled to public health and social protection, but additional counter-cyclical measures will be needed, within a revised medium-term fiscal framework.

The report highlights that the COVID induced lockdowns happened at a time when the Indian economy was already slowing down before the pandemic. Consequently many people in the country have lost jobs. During this period, there was also a noticeable rise in non-performing loans. To tackle the situation, the Government has also loosened the monetary policy and has increased credit to the private sector to help a company survive. This is in addition to some big efforts in the health sector and expansion of a social safety net.

In its report, the World Bank said that the response of the government of India to the COVID-19 outbreak was swift and comprehensive. A strict lockdown was implemented to contain the health emergency. To shield the poorest from the impacts of the pandemic, it was complemented by social protection measures; to ensure that businesses could maintain their operations, the Reserve Bank of India and the government also provided liquidity and other regulatory support.

Despite the Government's efforts there was still a massive contraction in output and poor and vulnerable households experienced significant social hardships. Since 2017, when the Indian economy grew at a rate of 8.3 per cent, every subsequent year the growth rate has dropped to 7.0, 6.1 and 4.2 per cent. The fall in growth of the economy was chiefly contributed by two factors - weaknesses in non-bank financial companies and slowing private consumption growth

9. Festive season to spur a temporary recovery for the Indian economy: Report

A recently published report by brokerage major Motilal Oswal Financial Services forecasts that the upcoming festive season is expect to provide a temporary boost to the Indian economy. The report mentioned that favourable base effect, pent-up demand and strong inventory re-building in the hope of a grand festive season have led to the better-than-expected economic growth. The report hopes that these factors will push the growth even higher in Oct'20, which is also expected to mark the peak.

However, the report goes on to reveal that this spike will be short lives than sustained in nature. The report underlines that a higher growth can be sustained only if household income grow faster, government receipts or payments for households are exceptionally high or low to offset low income, and credit growth is much higher-than-usual.

The report further predicts that the country's real GDP could contract by 7.1 per cent YoY in 2QFY21 and 6.5 per cent for the full-year FY21. The report is hopeful that a better-than-expected incoming data since August 2020 indicates for a positive surprise in the second quarter of 2020.

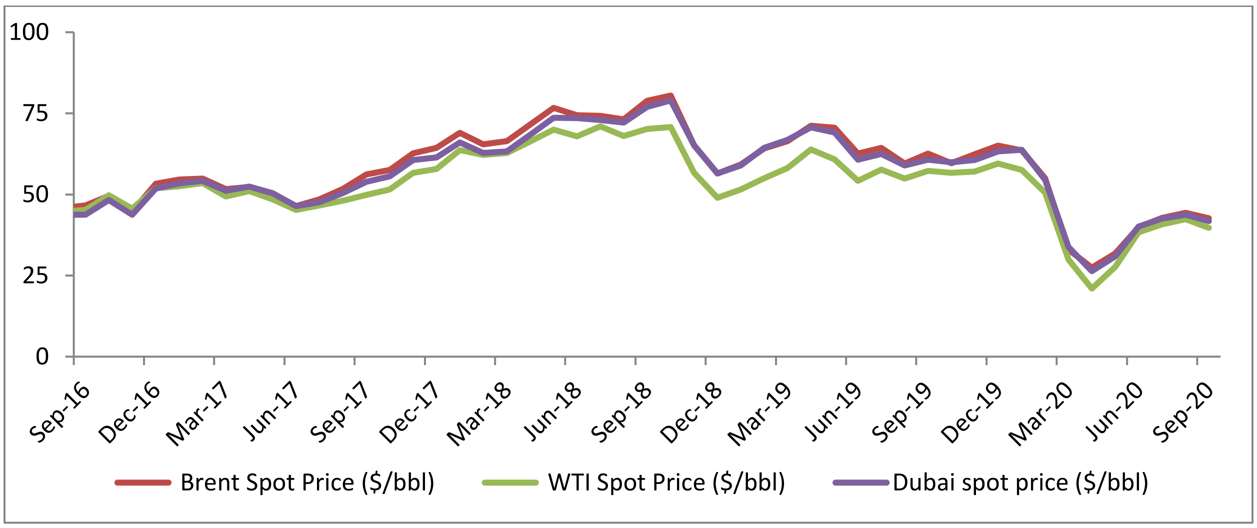
Oil Market

Crude oil price

September month had two different phases for the crude oil benchmarks. First fortnight of the month saw a decline in crude benchmarks due to decline in demand for crude oil. Second half saw a minor recovery in the crude prices as the crude inventory draw went up. While demand recovery fared better against the estimated decline in OECD Americas and OECD Europe, it performed below expectations in other region. Slowdown in economic and industrial activity across the major markets led to downward assessment for crude demand forecast.

Recovery of demand for crude in Asian nations like India, Thailand, and Indonesia was poorer than the forecasted recovery. Average Brent, WTI and Dubai basket crude prices in September declined by 3.81 %, 6.44 % and 4.46 % respectively from their August prices.

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



Source: WORLD BANK

- Brent crude price averaged $ 42.61 per bbl in September 2020, down by 3.8 % on a month on month (MoM) and by 31.9 % on year on year (YoY) basis, respectively.
- WTI crude price averaged $ 39.67 per bbl in September 2020, down by 6.4 % on a month on month (MoM) and by 30.7 % on year on year (YoY) basis, respectively.
- Dubai crude price averaged $ 41.75 per bbl in September 2020, down by 4.5 % on a month on month (MoM) and by 31.2 % on year on year (YoY) basis, respectively.

Table 1: Crude oil price in September, 2020

Crude oil	Price ($/bbl) in September 2020	MoM (%) change	YoY (%) change
Brent	42.61	-3.8%	-31.9%
WTI	39.67	-6.4%	-30.7%
Dubai	41.75	-4.5%	-31.2%

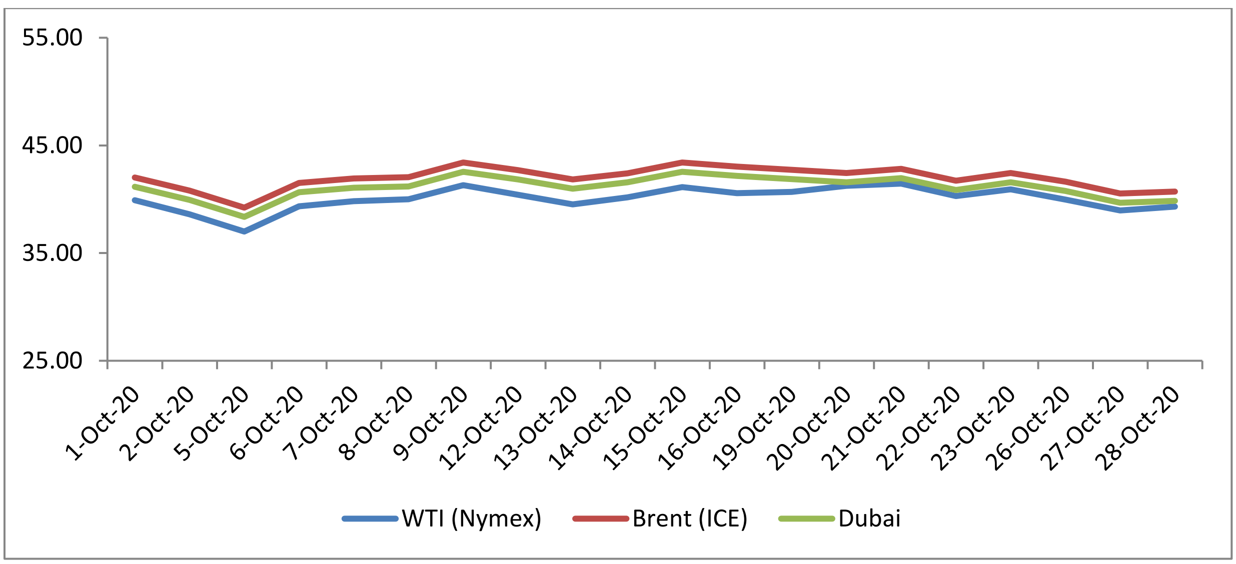
Source: WORLD BANK

Oil Prices holds in the month of October sans the minor decline

Crude benchmarks stood stabilized in the month of October after dropping down in the first week and recovering later. While recovery has gone beyond the expected range in China, it stood lower than the expected recovery in the Europe. Withdrawal of crude stocks led to some ups and downs in the month. In the US, higher gasoline stock builds up let to decline in WTI benchmarks in the third week of October.

For the month, crude benchmarks saw a minor decline. Average Brent and Dubai basket crude prices in October declined by 1.53 % and 1.56 % respectively from their September prices, while WTI crude went up by 0.91%.

Figure 2: Crude oil price in October 2020

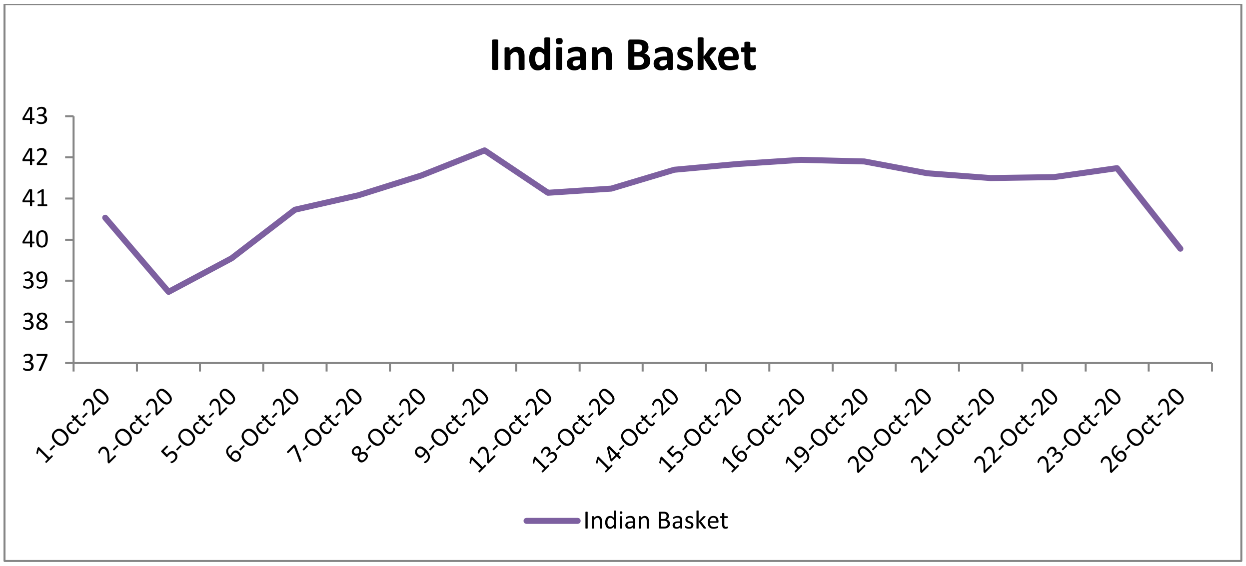


Source: EIA, Oilprice.com, PPAC

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 declined as the reference crude benchmarks declined.

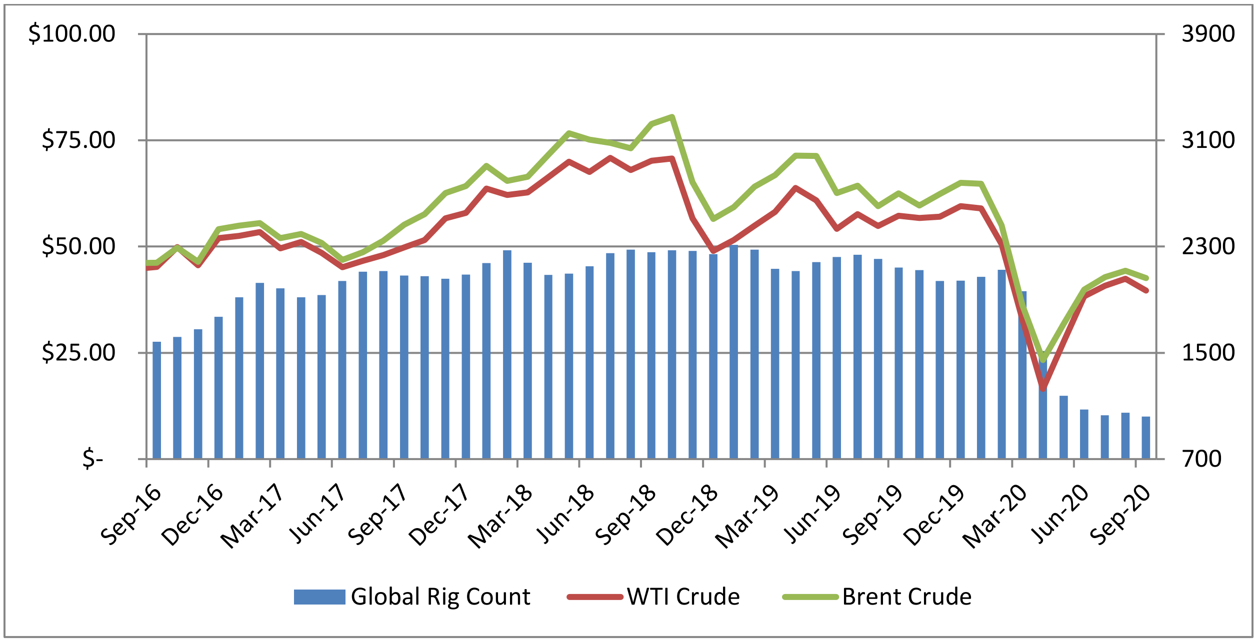
- Indian crude basket price averaged $41.12 per barrel in October, down by 0.60 % on Month on Month (M-o-M) and 30.40 % on a year on year (Y-o-Y) basis, respectively.

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

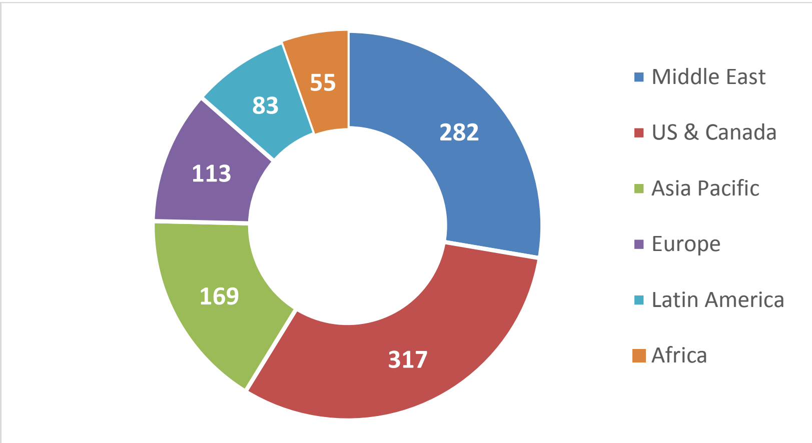
Global rig count for the month of September declined by 31. From August's rig count of 1,050, it declined to 1,019. Seasonality, budget cuts from E&P operators are the key reasons behind the decline in rig count fort the month of September. In September, rig count went up in regions namely Latin America, Europe, North America, while rig count went down in regions Asia Pacific, Middle East and Africa. US rig count up by 7 from 250 to reach 257 as the optimism of recovery. Onshore rig went down by 25 and offshore rigs went down by 6.

Table 2 : Global Drilling Rig Count

Rig Type	Count in September 2020	MoM (%) change	YoY (%) change
Land	826	-2.94%	-55.76
Offshore	193	-3.02%	-29.56
Total	1,050	-2.95%	-52.41%

Source: Baker Hughes

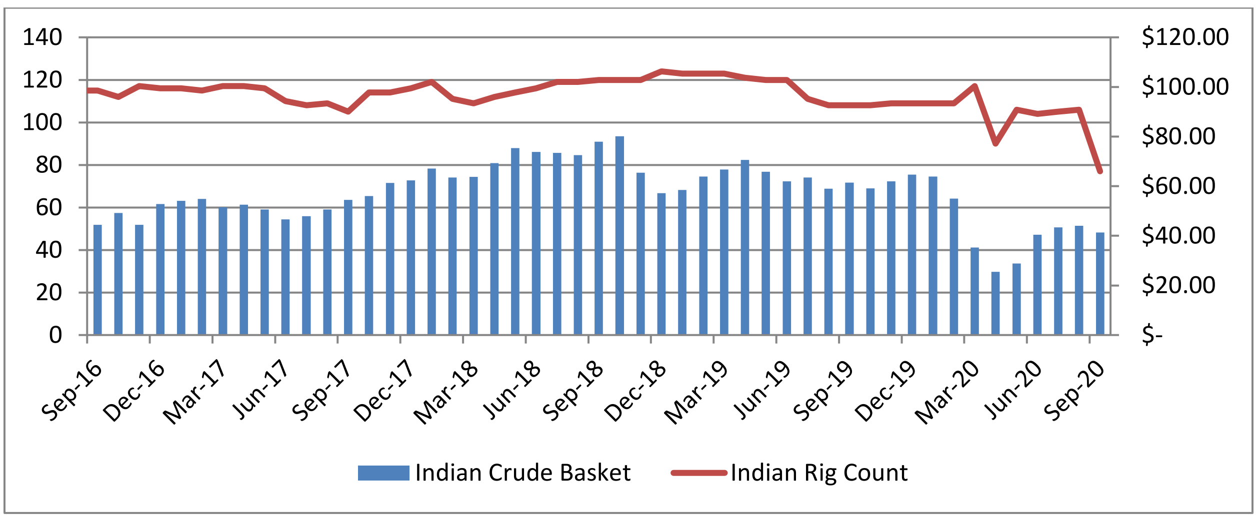
Figure 5 Geography-wise Rig count -September 2020



Source: Baker Hughes

Indian Drilling Rig Count

Figure 6 Indian Rig Count vs. Indian Basket Crude Price



Indian drilling market saw a decline by 29. Onshore rig count went down by 8 and offshore rig count declined by 21 primarily due to seasonality. Indian rig count decreased by 27.36 % on M-o-M basis and by 28.70% on Y-O-Y basis. 64 were onshore rigs and the rest 13 were offshore rigs.

Table 3 : Indian Rig Count

Rig Type	Count in September 2020	MoM (%) change	YoY (%) change
Land	64	-11.11%	-16.88%
Offshore	13	-61.76%	-58.06%
Total	77	-27.36%	-28.70%

Source: Baker Hughes

Oil demand & supply

Preliminary data indicates that global oil supply in September decreased by 0.06 mb/d m-o-m to average 90.71 mb/d, down by 7.83 mb/d Y-o-Y. Non-OPEC supply (including OPEC NGLs) saw a minor decrease by 0.01 mb/d m-o-m to average 66.60 mb/d in September 2020. On Y-o-Y basis, it was lower by 3.75 mb/d. The preliminary decrease in production came mainly from Brazil and Kazakhstan. In September, share of OPEC crude oil in total global production remained unchanged 26.6%.

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.

World oil demand in 2020 is estimated to decline by 9.5 mb/d in 2020, unchanged from last month's assessment of 90.3 mb/d. In the OECD, demand forecast was adjusted by a reduction of 0.06 mb/d in 2020. The downward revision accounts for lower expectation for transportation fuel consumptions in parts of Europe and in the US in second half of 2020 following a weak summer driving season. This has offset the less-than-expected decline in first half of 2020 due to steady petrochemical feedstock demand in the US and increased heating oil restocking in Europe.

In non-OECD, oil demand for 2020 was adjusted with an upward revision by 0.05 mb/d m-o-m due to better than expected demand from China. Gains in industrial fuel requirements in China as the economy is moving towards the road to recovery has offset the losses seen in the other region , thereby leading to upwards revision.

Total global oil demand is estimated to be 90.29 mb/d in 2020. Oil demand forecast for Q3 2020 was revised to 90.99 mb/d, with a downward revision of 0.46 mb/d. Similarly forecast for Q4 2020 is estimated to be 94.86 mb/d with a downward revision of 0.22 mb/d.

Table 4: World Oil demand in mbpd	2019	1Q2020	2Q2020	3Q2020	4Q2020	2020	Growth	%
Total OECD	**47.75**	**45.41**	**37.56**	**43.27**	**45.35**	**42.90**	**-4.84**	**-10.14**
~ of which US	**20.86**	**19.66**	**16.38**	**19.62**	**20.38**	**19.01**	**-1.85**	**-8.86**
Total Non-OECD	**52.02**	**47.27**	**45.02**	**47.72**	**49.51**	**47.39**	**-4.63**	**-8.90**
~ of which India	*4.84*	*4.77*	*3.51*	*3.55*	*4.34*	*4.04*	*-0.80*	*-16.53*
~ of which China	13.30	10.70	12.85	12.97	13.58	12.53	-0.77	-5.79
Total world	**99.76**	**92.68**	**82.58**	**90.99**	**94.86**	**90.29**	**-9.47**	**-9.49**

Source: OPEC monthly report, October 2020
*Note: *2019 = Estimate and 2020 Forecast*

Global petroleum product prices

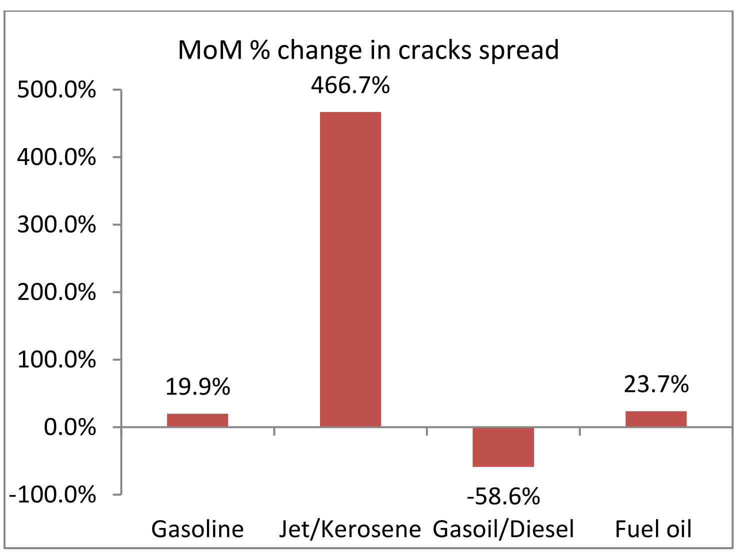
In Asia refinery margin declined in September, while the other regions saw the upward trend. Weakness from the middle section of the barrel impacted the positive performances in Asian product markets. Refinery margins for Oman in Asia lost 21¢ on m-o-m to average 65¢/b in September and were lower by $6.18 on y-o-y basis. Refinery utilization rates in September averaged 86.12 % in selected Asian markets comprising of Japan, China, India and Singapore.

Asian gasoline 92 cracks spreads against Dubai strengthened as loosening of lockdown restrictions led to stronger gasoline consumption and economic activity within the region. Singapore Gasoline cracks averaged $4.21/b against Oman in September, up by $1.14 m-o-m, but lower by $4.23 y-o-y.

Jet/kerosene cracks spread against the Oman lost ground due to the limited air travel activities in the region. As winter in Japan begins, the region will see kerosene stockpiling on temporary basis. The Singapore jet/kerosene crack spread against Oman averaged minus $2.08 /b, down by $1.47 m-o-m and by $18.72 y-o-y.

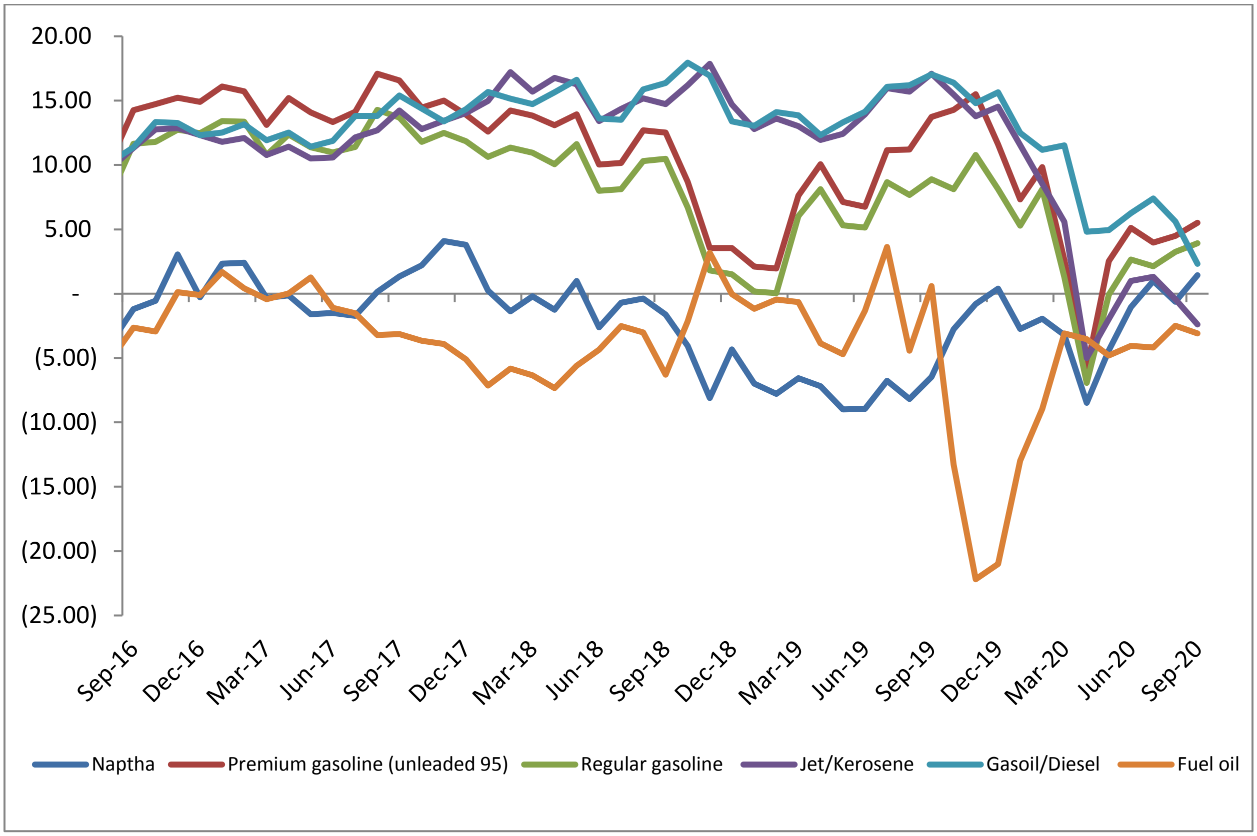
The Singapore gasoil crack spread weakened as the product remained oversupplied in the region and market conditions signaling further imbalances. Singapore gasoil crack spread against Oman averaged $1.85/b, down by $2.36 m-o-m and by $14.74 y-o-y.

The Singapore fuel oil crack spread decreased due to dwindling demand following the peak summer air conditioning season in the Middle East. While flows from Singapore to Pakistan continued, the previous larger flows to Saudi Arabia have dried with no new cargoes since last week of August. Singapore fuel oil cracks against Oman averaged minus $2.78, down nu 10 ¢ m-o-m and by $2.92 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 September 2020	MoM (%) change	YoY (%) change
Naptha	**43.19**	0.3%	-20.3%
Premium gasoline (unleaded 95)	**47.27**	-1.9%	-36.5%
Regular gasoline (unleaded 92)	**45.66**	-2.8%	-34.3%
Jet/Kerosene	**39.37**	-9.0%	-49.4%
Gasoil/Diesel (50 ppm)	**44.07**	-10.6%	-43.3%
Fuel oil (180 cst 2.0% S)	**38.67**	-6.2%	-36.9%
Fuel oil (380 cst 3.5% S)	**37.98**	-6.5%	-38.1%

Source: OPEC

Petroleum products consumption in India

- In September 2020, overall petroleum products consumption went up by 7.5 % as relaxation of covid containment continued.
- Petrol consumption was up by 2.2 % as people relied on personal vehicles to commute avoiding public transport due to outbreak of covid.
- Diesel consumption went up by 13.2% as freight transport went up indicating the recovery signs of economic activities.
- ATF consumption increased by 22.3% as flight frequency went up due to relaxation of air traffic restrictions.
- LPG consumption saw a minor decline on monthly basis, while it was up by 3.9% on yearly basis.
- Recovery in industrial activity was evident as the consumption pattern for the month as key products like Lubricants & Greases, Bitumen saw an increase by 11.9% and 40.4% respectively.
- On yearly basis, petroleum product consumption was down by 3.4%.

Table 6: Petroleum products consumption in India, September 2020

Petroleum products	Consumption in '000 MT September 2020	MoM (%) change	YoY (%) change
LPG	2,267	-0.4%	3.9%
Naphtha	1,139	6.2%	35.0%
MS	2,450	2.9%	3.3%
ATF	314	22.3%	-52.9%
HSD	5,489	13.2%	-5.8%
LDO	65	8.8%	8.5%
Lubricants & Greases	346	11.9%	3.9%
FO & LSHS	490	-2.0%	-6.8%
Bitumen	444	40.4%	29.2%
Petroleum coke	1,346	-2.1%	-22.4%
Others	949	9.9%	0.6%
TOTAL	15,465	7.5%	-3.4%

Source: PPAC

Natural Gas Market

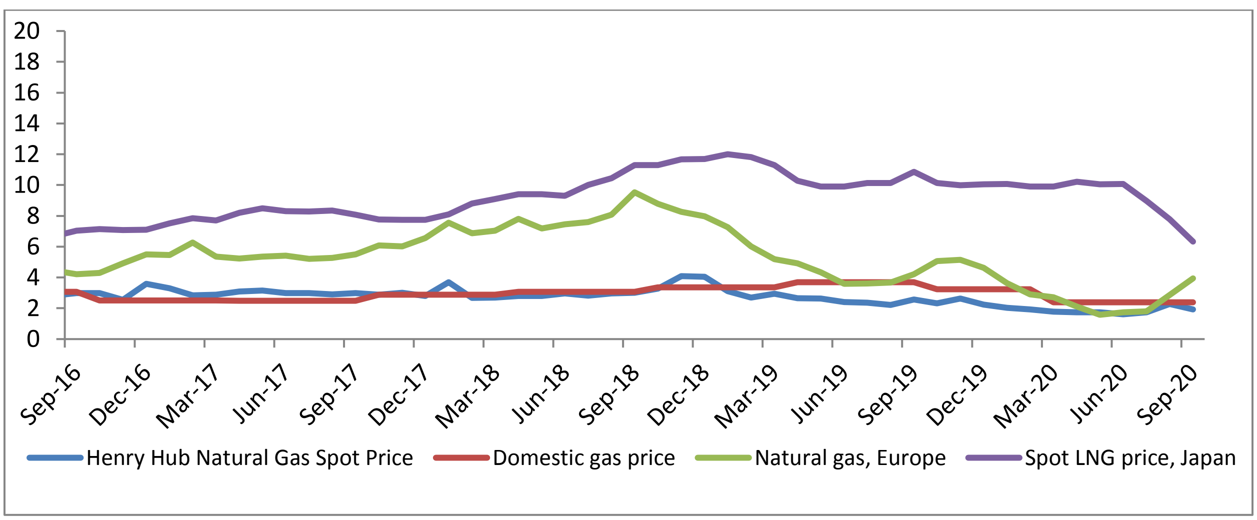
Natural Gas Price

Global gas market saw different trends across different geographies. Natural gas price in the Henry hub went declined by 16.2% to reach $1.92/MMBtu, erasing all the gains made in the month of August. Lower demand for natural gas from the U.S electric power sector due to cooler-than normal temperature in the second half of September and lower US LNG exports led to the decline in price of the Natural gas. However, natural gas price is expected to rise to $3.38/MMBtu in January 2021as the winter is likely to trigger the demand for gas domestically and LNG for exports.

Natural gas price in Europe increased by up by 38% in the month of September posting a second straight increase in last two months. Demand for natural gas from factories where gas in burn for heat has picked up as region's economy is back in the path of recovery. Maintenance work in French nuclear-power stations has necessitated the need for gas fired electricity generation. Rising prices for carbon credits in the region have encouraged power plants to turn towards natural gas instead of coal and ignite. September gas price in Europe stood at USD 3.95/MMBtu.

Asian spot LNG prices went up in the month of September due to the possibility of higher consumption in the coming winter months. November delivery LNG price for the North East Asia market was estimated to be USD 4.90 /MMBtu. The region saw significant purchases of new LNG cargoes from India, Taiwan and South Korea. Japan LNG benchmark declined by 18.6%, due to prevailing market surplus situation in the country. However, with winter nearing, the Japan LNG benchmark prices can rebound sharply.

Figure 8: Global natural gas price trends



Source: EIA, WORLD BANK

Table 7: Gas price

Natural Gas	Price ($/MMBTU) in September 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	1.92	-16.2%	-25.6%
Natural Gas, Europe	3.95	38.1%	-6.2%
Liquefied Natural Gas, Japan	6.34	-18.6%	-41.6%

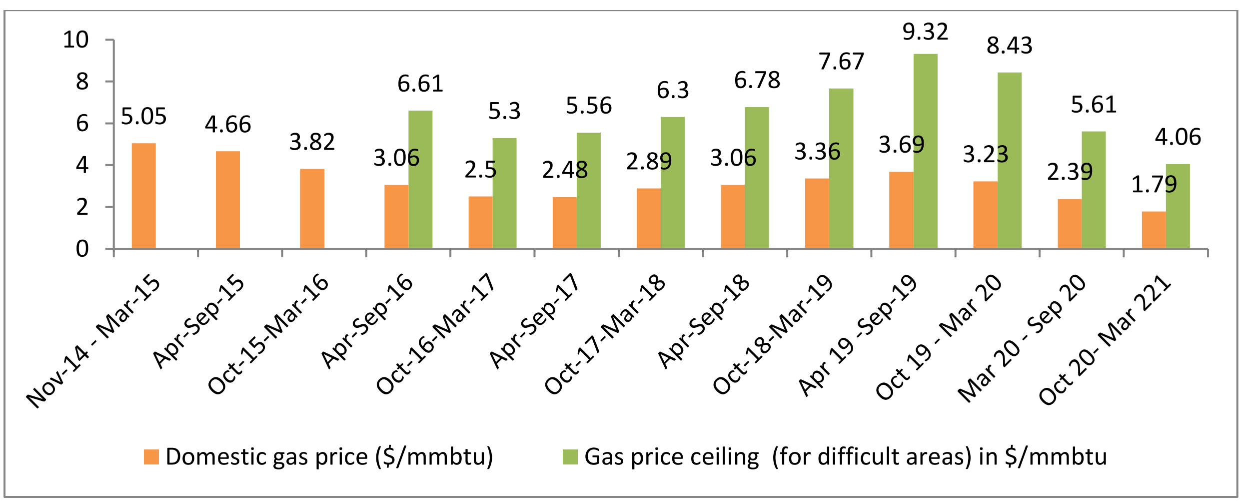
Source: EIA, PPAC, World Bank

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 October 2020 to March 2021 is $1.79 per MMBTU and it is down by 25.10 % as compared to last revision and down by 44.58 % 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 October 2020 to March 2021 period, the price of gas from such areas has been notified at $4.06 per MMBTU, 27.62 % down from last revision and 51.8% down from last year.

Figure 9: Domestic natural gas price



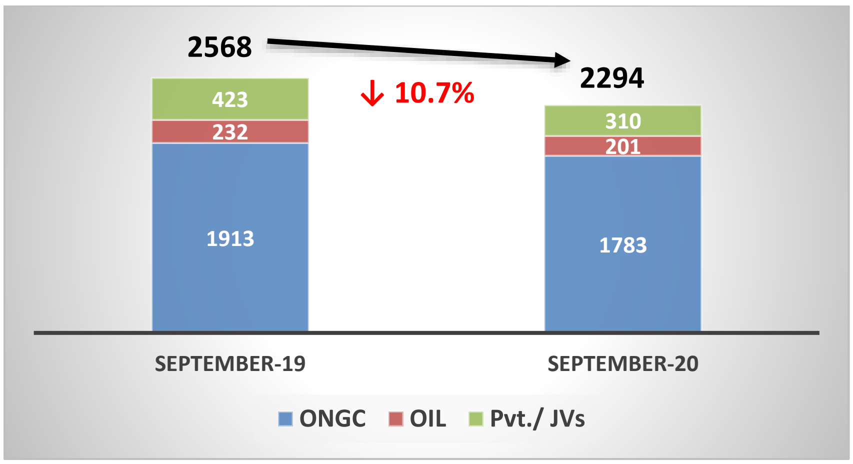
Source: PPAC

Monthly Report on Natural gas production, imports and consumption – September 2020

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of September 2020 was 2294 MMSCM (decrease of 10.7% over the corresponding month of the previous year 2568 MMSCM)

Figure 10: Domestic natural gas Gross production (Qty in MMSCM)

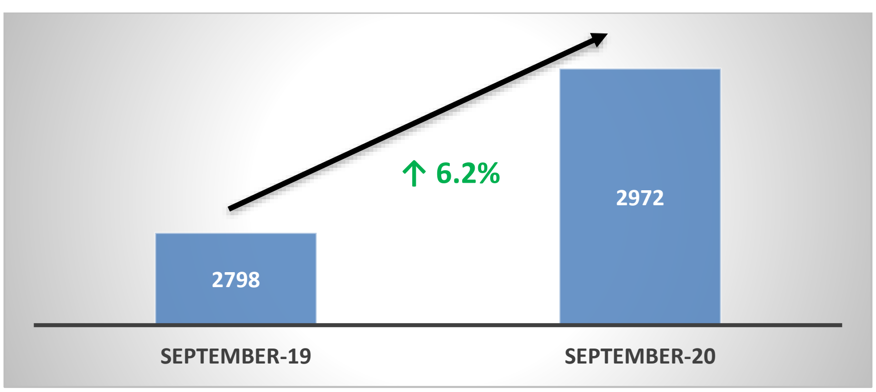


Source: PPAC

2. LNG imports:

Total imports of LNG (provisional) during the month of September 2020 were 2972 MMSCM (increase of 6.2% over the corresponding month of the previous year 2798 MMSCM).

Figure 11: LNG imports (Qty in MMSCM)

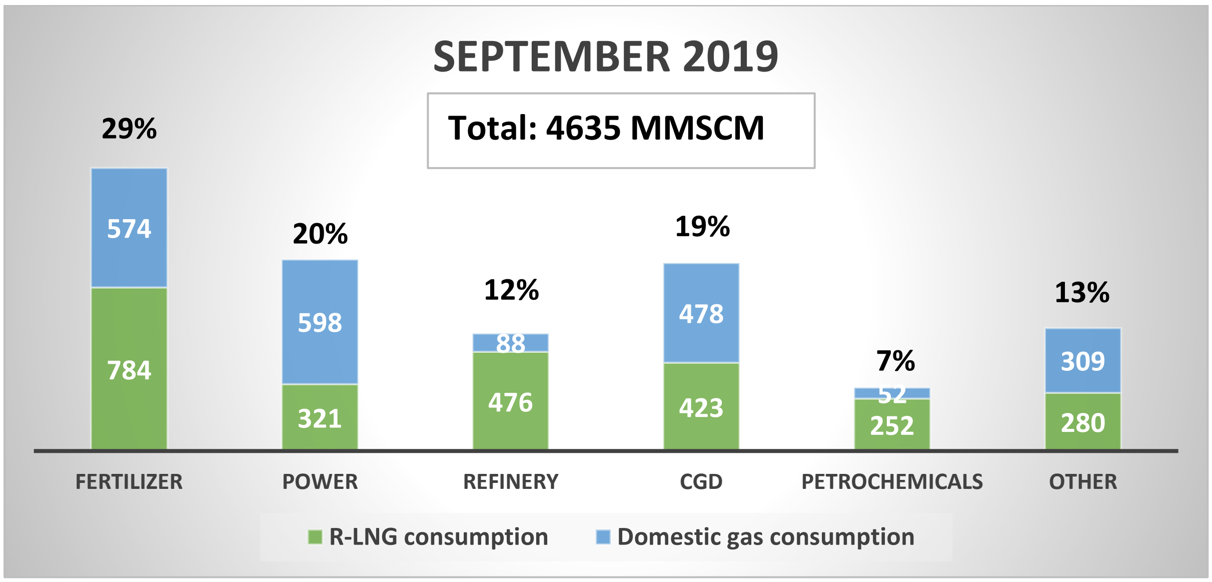


Source: PPAC

3. Sectoral Consumption of Natural Gas:

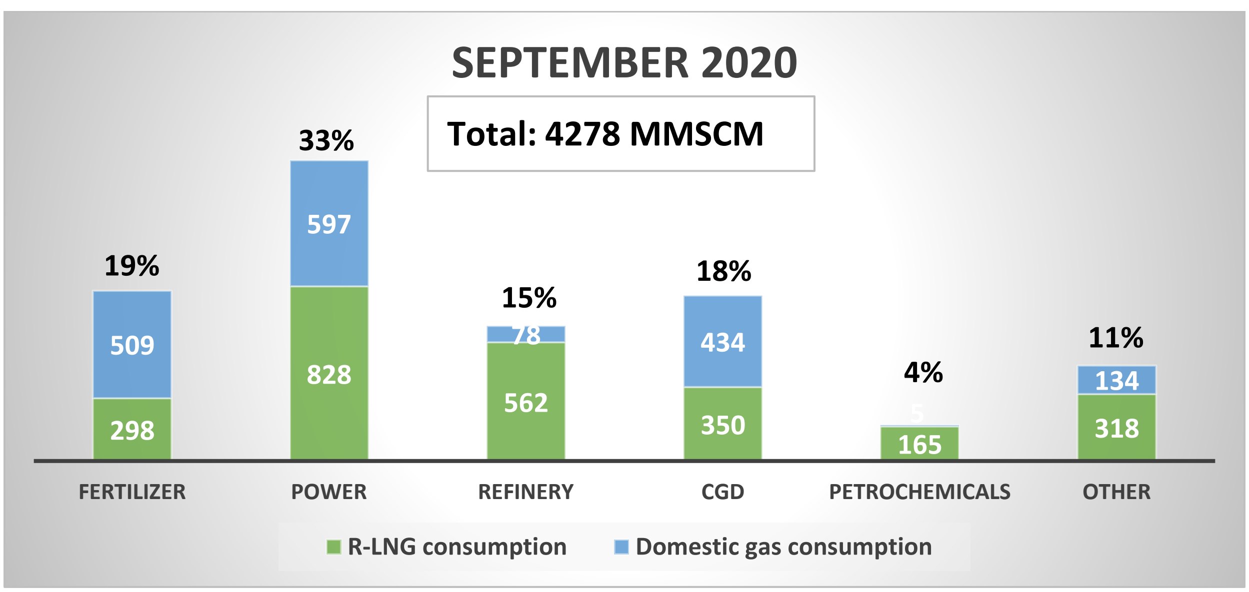
Total consumption of natural gas during September 2020 was 4278 MMSCM (decrease of 7.7% over the corresponding month of the previous year 4635 MMSCM). Major consumers were Power (33%), Fertilizer (19%), City Gas Distribution (CGD) (18%), refinery (15%), and petrochemicals (4%).

Figure 12: Sectoral Consumption of Natural Gas (Qty in MMSCM) in September 2019



Source: PPAC

Figure 13: Sectoral Consumption of Natural Gas (Qty in MMSCM) in September 2020



Source: PPAC

Key developments in Oil & Gas sector during October 2020

- ## Monthly Production Report for September, 2020

Crude oil production during September,2020 was2486.52 TMT which is6.94% lower than target and6.05% lower when compared with September2019.Cumulative crude oil production during April-September, 2020 was 15372.79 TMT which is 4.64% and 6.10% lower than target for the period and production during corresponding period of last year respectively.

Natural gas production during September,2020 was 2293.52MMSCM which is 18.07% lower than the monthly target and 10.69% lower when compared with September, 2019. Cumulative natural gas production during April-September, 2020 was 13953.67MMSCM which is 13.11% and 12.82% lower than target for the period and production during corresponding period of last year respectively.

Crude Oil Processed during September, 2020 was 17706.85 TMT which is 14.75% lower than the target for the month and 8.80% lower when compared with September, 2019. Cumulative crude throughput during April-September, 2020 was100166.06 TMT which is 18.96% and 20.33% lower than target for the period and crude throughput during corresponding period of last year respectively.

- ## Cabinet approves ‘Natural Gas Marketing Reforms’

On 7th October, the Cabinet Committee on Economic Affairs chaired by the Prime Minister Shri Narendra Modi has approved ‘Natural Gas Marketing Reforms’, taking another significant step to move towards gas-based economy. The objective of the policy is to prescribe standard procedure to discover market price of gas to be sold in the market by gas producers, through a transparent and competitive process, permit Affiliates to participate in bidding process for sale of gas and allow marketing freedom to certain Field Development Plans (FDPs) where Production Sharing Contracts already provide pricing freedom.

The policy aims to provide standard procedure for sale of natural gas in a transparent and competitive manner to discover market price by issuing guidelines for sale by contractor through e-bidding. This will bring uniformity in the bidding process across the various contractual regimes and policies to avoid ambiguity and contribute towards ease of doing business. The policy has also permitted Affiliate companies to participate in the bidding process in view of the open, transparent and electronic bidding. This will facilitate and promote more competition in marketing of gas. However, rebidding will have to be done in case only affiliates participate, and there are no other bidders. The policy will also grant marketing freedom to the Field Development Plans (FDPs) of those Blocks in which Production Sharing Contracts already provide pricing freedom. These reforms will build on a series of transformative reforms rolled out by the Government in last several years. These reforms in gas sector will further deepen and spur the economic activities in the following areas:

- The whole eco-system of policies relating to production, infrastructure and marketing of natural gas has been made more transparent with a focus on ease of doing business.
- These reforms will prove very significant for Aatmanirbhar Bharat by encouraging investments in the domestic production of natural gas and reducing import dependence.
- These reforms will prove to be another milestone in moving towards a gas based economy by encouraging investments.
- The increased gas production consumption will help in improvement of environment.
- These reforms will also help in creating employment opportunities in the gas consuming sectors including MSMEs.
- The domestic production will further help in increasing investment in the downstream industries such as City Gas Distribution and related industries.

The Government has taken transformative reforms in the upstream sector with a view to make investment easier focusing on ease of doing business. The Open Acreage Licensing Policy (OALP) which is investor driven acreage auction process has increased substantial acreages in the country. No blocks were allocated between 2010 and 2017 which has impacted the long term viability of the domestic production. Since 2017 more than 1.6 lakh sq.km area under 105 exploration blocks have been allocated. This will ensure sustainability of the domestic production in long run. Government brought a series of reforms in Gas sector and as a result investment of more than Rs. 70,000 crore is being made in the East coast. Gas production from East coast will contribute to Aatmanirbhar Bharat by meeting increasing energy needs of the country.

In February 2019, Government implemented major reforms in upstream sector and brought paradigm shift by focusing on production maximization. Acreages under OALP rounds are being allocated based on work programme only in Cat II and Cat III basins. The domestic gas production has complete marketing and pricing freedom. All discoveries and field development plans approved after 28 Feb, 2019 have complete market and pricing freedom.

- **Shri Dharmendra Pradhan inaugurates H-CNG Plant and Launches trials in Delhi**

On 20th October, Shri Dharmendra Pradhan, Union Minister of Petroleum & Natural Gas and Steel, inaugurated Indian Oil's compact reformer plant and launched the much-awaited trial run of Delhi's buses on Hydrogen-blended CNG (HCNG) at the Rajghat Bus Depot-I of DTC. In India's quest to promote Hydrogen as a clean fuel for the mobility sector, Hydrogen-blended HCNG is emerging as an excellent interim technology for achieving emissions reduction and import substitution. Refueling of H-CNG blends in vehicles can be performed with minimum modifications in the infrastructure that is currently under use for dispensing CNG. Shri Kailash Gahlot, Minister of Transport, Government of Delhi, was also present on occasion.

Speaking on the occasion, Shri Pradhan said that providing clean and reliable energy supplies to 130 crore plus Indians is the top most priority of the Government. He said that India will emerge as a winner in developing the solutions, the world would admire for the decades ahead. The Minister mentioned that

Prime Minister Shri Narendra Modi is committed to usher in clean energy future that has minimal impact on the environment. Complementing the initiatives of Indian Oil, the Minister said, "I am happy to note that the scientists of Indian Oil R&D have risen to the occasion and have developed an innovative compact reforming technology for production of Hydrogen-mixed CNG." Elaborating on the importance of Hydrogen in facilitating India's energy transformation, Mr. Pradhan mentioned, "Hydrogen is the ultimate fuel, which, while giving energy, produces clean water in the emissions. Apart from this, it has many other virtues as the capacity to get the rural sector involved with the energy sector through biomass". The Minister said that this pilot project will be unique. It will help the county and the world as a whole.

A brief on Indian Oil's patented H-CNG Production Technology

Globally, Hydrogen required for blending in CNG (Compressed Natural Gas) is produced through electrolysis of water, followed by high-pressure blending with CNG. This process's high cost offsets the savings achieved from fuel economy gains compared to baseline CNG. In India's continuous quest to use hydrogen as a fuel for the mobility sector, hydrogen blended CNG (commonly called H-CNG) has emerged as an excellent interim fuel for achieving emission reductions and import substitution. The existing IC engine without any significant modification can be run on H-CNG and with minimal infrastructural upgrade, the existing CNG dispensing refueling infrastructure can be used to deliver H-CNG blends as well.

H-CNG blends can be produced directly from CNG, bypassing the energy-intensive electrolysis process and high-pressure blending costs. The flexible and robust process allows the production of H-CNG on-site, in less severe conditions, and under low pressure. It provides a higher yield H-CNG mixture by up to 4% to 5% compared to CNG's input quantity. The cost of H-CNG production by the above process is about 22% cheaper than conventional physical blending

- **First ever India- Russia Webinar on Use of Natural Gas as a Motor Fuel organized**

The first ever India-Russia webinar on the use of natural gas as motor fuel was organized under the aegis of Ministry of Petroleum and Natural Gas, Government of India and the Ministry of Energy of the Russian Federation.

In his inaugural speech, Shri Tarun Kapoor, Secretary, Ministry of Petroleum & Natural Gas, Government of India informed that the Memorandum of Understanding between Ministry of Petroleum and Natural Gas, India and Ministry of Energy of the Russian Federation for cooperation on the use of Natural Gas for Transportation was signed in presence of Hon'ble Prime Minister of India Mr. Narendra Modi and Hon'ble President of Russian Federation Mr. Vladimir Putin. He further noted that the implementation of this MoU would assist in collective efforts to use natural gas as an environment friendly motor fuel for mutual benefit. He looked forward to the exchange of insights from both sides for stimulating penetration of natural gas as motor fuel in both our countries.

H.E. Mr. Anton Inyutsyn, the Russian Deputy Minister, in his address expressed that he was positive that the exchange of information in this webinar would be beneficial for both countries and would lead to joint activities and mutual investments.

Mr. D B VenkateshVarma, Ambassador of India to the Russian Federation delivered the welcome address. He stressed on the importance of continuous collaboration between the two nations with historic felicity and friendship. He assured that the Indian Embassy in Russia would extend all possible support for making this partnership in the energy sector more robust.

The webinar included two Technical sessions on LNG as Transport Fuel and CNG as Transport Fuel, wherein perspectives from Indian and Russian sides were presented and saw the attendance of dignitaries, speakers and participants from both India & Russia.

Speakers from KPMG India and PWC India set the initial tone for the webinar by their presentations on CNG and LNG usage, policies and future prospects in the Indian markets. Besides, from Russia, there were presentations by Rostec, Kamaz Group and Natural Gas Vehicles Association speaking on the prospect of partnership for the CNG and LNG equipment manufacturing for the transport sector.

During the webinar, Indian speakers highlighted the growth potential of LNG and CNG as a transport fuel. It was mentioned that LNG is being promoted as a transport fuel because of its low carbon emission. India is likely to have 120,000 LNG vehicles by 2030. By then, road transport is forecast to account for 1.2-3 MMTPA LNG demand which is likely to go up to 4.5 MMTPA by 2035.

City Gas distribution network expansion is the Backbone for CNG growth. Now CGD coverage is being expanded to over 400 districts across 27 states and Union Territories. There is a huge market potential in the CNG sector in India with expected investment of USD 3-4 billion in CNG equipment, USD 50-60 billion through CNG vehicles and USD 1-1.5 billion via service market till 2030.

Russian speaker from Rostec, which is having a significant share of Russia's industrial assets, spoke at length about the technological and equipment aspects of LNG production and the supply chain. Speaker from Kamaz gave a comprehensive overview of the various LNG vehicles designed by the Company and ready for use in Indian market. Speaker from Natural Gas Vehicles Association eloquently described the vast scope for Natural Gas in automobile industry, both in Russia and India and the need for corporation of both the counties in increasing the share of Natural gas as a motor fuel.

Subsequently, speakers from Indian companies, namely GAIL (India) Limited and Indian Oil Corporation Limited also made presentations about their experience in CNG and LNG as transport fuel in India.

The webinar is expected to act as a catalyst for coming up with practical measures for initiating projects on pilot basis in each other's countries and eventually to scale up to the national levels and for mutual investments.

- **Shri Dharmendra Pradhan invites Global Oil & Gas and Other Energy Majors to Partner India in its Multi-Pathway Energy Transition**

Union Minister of Petroleum and Natural Gas & Steel Shri Dharmendra Pradhan has invited the global industry and experts to become partners in India's shared prosperity by enhancing India's production of all forms of energy. Speaking at the concluding Session of CERA Week India Energy Forum last evening he said that inauguration of India Energy Forum by the Hon'ble Prime Minister is reflective of the importance the Government of India attaches to improve the energy security, architecture and transform our energy landscape at a time when the Covid-19 pandemic is impacting adversely the global energy sector.

Shri Pradhan said that we are deeply honoured that Hon'ble Prime Minister Shri Narendra Modi inaugurated the event for the first time in which he outlined his energy vision – A new energy map of India, with seven key drivers. The Minister underlined the key message of the Prime Minister about the rapid strides made by India in making universal electrification at village level, Clean Cooking Fuel reach far and wide in the country to each and every household, and nation-wide supply of LED bulbs, leading to massive energy efficiencies, thereby delivering on our promise of significantly reducing energy poverty in the country.

Shri Pradhan said that the Prime Minister on the first day of the event interacted with CEOs/Experts and Leaders of World's leading Oil and Gas companies and exchanged ideas on the energy sector in India. He said that Prime Minister highlighted that at the core of the Government policy is providing equitable access of clean, affordable and sustainable energy to all Indians. Shri Modi underlined that the Government is taking a series of policy reforms to make India an attractive destination. The Prime Minister also mentioned that a self-reliant India will also be a force multiplier for the global economy.

Shri Pradhan said Indian oil and gas industry has made significant strides in recent years. It has risen to the occasion in a commendable manner during these challenging times by ensuring energy supplies, including making clean cooking fuel reach the remotest part of the country. "I am confident the leaders of Indian oil & gas industry not only contributed their experiences but also will take home fresh ideas from this Forum" he added.

The Minister said under the decisive and visionary leadership of Hon'ble Prime Minister, we are making concerted efforts and taking all necessary steps to make the energy sector fuel India's economic growth during and in the post-Covid period. He said that the world is going through unprecedented health crisis and the Covid pandemic is obstructing the economic growth in the world. "We are at such a point, when we have to assess the impact of Covid led disruptions to global energy sector supply chains and calibrate our approach towards strengthening of India's energy sector", Shri Pradhan added.

Shri Pradhan thanked the participants of the event especially H.R.H. Prince Abdulaziz, Ministry of Energy of Saudi Arabia and H.E. Dan Brouillette, US Secretary of Energy for their special inaugural messages in the India Energy Forum. The Minister also thanked Finance Minister Smt. Nirmala Sitaraman and Minister of Railways, Commerce and Industry Shri Piyush Goyal for joining the event.

Around 40 global CEOs of oil and gas companies, as well as Indian CEOs from public and private companies, participated in the event and presented their views, suggestions and investments in the country. Addressing the industry leaders, the Prime Minister had stated that with India's energy demand estimated to double in the next two decades, India has a unique role to play in rebuilding a more sustainable world.

The India Energy Forum by CERAWeek, which started in 2017, has become an annual event. The principle idea behind is bringing together the global energy leaders and experts to India to deliberate on the opportunities and challenges in India's energy sector. The Minister commended Dr. Daniel Yergin, Vice Chairman IHS Markit and his team for their dedication in continuing uninterrupted with the fourth edition of the India Energy Forum on a virtual platform.

During the 3-day event Shri Pradhan had launched the book "The New Map" by Dr. Yergin.

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