FIPI

Federation of Indian Petroleum Industry

POLICY & ECONOMIC REPORT

OIL & GAS MARKET

November

2019

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Policy & Economic report – Oil & Gas market

Economy in Focus

1. Driven by emerging markets, global growth to recover in 2020: Morgan Stanley

A recent report by a renowned investment firm suggests that global growth will recover from the first quarter of 2020 onward as trade tensions and monetary police ease, reversing the downward trend of the past seven quarters.

Morgan Stanley report on global outlook for 2020 suggests that easing of trade tensions will reduce business uncertainty and make policy stimulus more effective. The report has predicted global economic growth of 3.2 per cent next year, compared to 3 per cent in 2019.

The report mentions that much will depend on the outcome of U.S.-China trade talks and whether or not the Trump administration's next round of tariffs, scheduled for 15 December, go into effect. The activation of those tariffs will slow the growth in the final quarter of the year to 2.8 per cent and will further delay the recovery.

However, the US Government seems divided on easing off on tariffs and President Donald J Trump has said publicly that he has not committed to lifting any of his administration's duties against Chinese exports. China has also been reluctant to commit to purchasing USD 50 billion in U.S. agriculture goods, a key demand by the US Government.

The report states that the trade tensions and monetary policy are easing in tandem for the first time in seven quarters. Central Banks in a large number of countries have slashed interest rates and more monetary easing is expected in the coming few months. The U.S., however, will experience slower growth as emerging markets drive much of the recovery. Morgan Stanley forecasts that real GDP growth in the U.S., which is clearly in late-cycle, will slow from 2.3 per cent in 2019 to 1.8 per cent in 2020.

The Federal Reserve's decision to slash rates by 75 basis points this year lifted private demand, driving housing and consumer durables and offsetting weakness in sectors exposed to the world and the trade war. This helped stabilize the slowdown, but much of the benefit has already been absorbed. Though the U.S. economy is on a solid footing, the bank still sees uncertainty surrounding trade policy as a key downside risk as well as the looming 2020 presidential election.

2. IMF releases list of countries with majority contribution to global GDP by 2024

The IMF has projected for a slow-down in global economic growth in the next few years. However, the contribution of individual countries to global GDP is set to undergo a major change by 2024. Countries such as India and Indonesia are expected to play a much more important role in global economic growth in the years to come.

According to the International Monetary Fund (IMF), economic growth is expected to fall to a rate of 3 per cent this year — the worst since the global financial crisis in 2007. The IMF blamed escalating global tensions as well as the ongoing trade war between America and China that is affecting international trade.

China, which has been ahead in terms of economic growth for a long time, is now expected to slow down to 4.4 per cent. However, despite this, the superpower is still expected to make the largest contribution to global growth — at about 28 per cent — by 2024.

The United States, another major economic power, is projected to lose its current second-place ranking to India by 2024, coming in third with 9.2 per cent. India will contribute to global growth with an estimated 15.5 per cent.

The report has ranked Indonesia in fourth place, with 3.7 per cent, followed by Russia with 2 per cent and Brazil with 1.8 per cent. Although, not on the top eight, the United Kingdom has occupied the ninth ranking, but is expected to drop to 13 by 2024 due to the Brexit crisis.

Among the 20 countries that will drive the global economy in five years that are not included in the list are Mexico, Pakistan, Saudi Arabia, South Korea, the Philippines, France, Thailand, Malaysia, and Bangladesh. Spain, Poland, Canada, and Vietnam are expected to reduce their output and no longer be among the countries with the strongest economic growth in the world.

Below is the list of top eight contributors to global GDP by 2024:

1. **China:** China's economy has been growing at a slower pace due to US-led trade war as well as softer domestic demand. Despite this, the superpower will still lead the way when it comes to global growth in 2024

2. **India:** India will leapfrog Germany and the United States to claim the number three spot in global rankings in 2024. Its economic growth is expected to be at 5.5 per cent in 2019-2020

3. **United States:** Despite the trade war with China, the US economy is growing faster than expected. But, business investment has fallen again, with companies cutting back on new equipment

4. **Indonesia:** Indonesia will remain in the fourth spot even though its economy is expected to drop from 3.9 per cent growth share in 2019 to 3.7 per cent growth share in 2024

5. **Russia:** According to the IMF projections, Russia will displace Japan and rank in 5th place by 2024, with 2 per cent of GDP growth

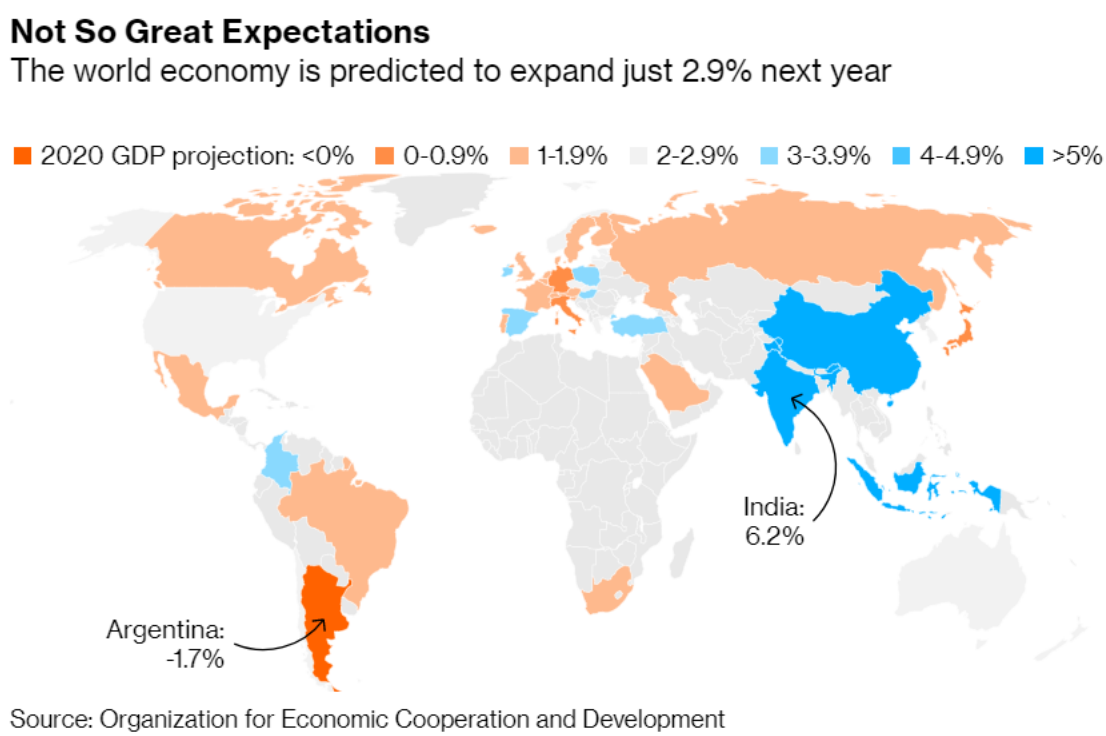
6. **Brazil:** Brazil overtook Germany and Japan to be ranked in 6th place. Its economy is the ninth-largest in the world, and mainly relies on primary products for export

7. **Germany, Turkey & Japan:** These three countries will each have a share of 1.6 per cent. Germany's GDP, in particular, is only expected to rise by 0.5 per cent this year and 1.2 per cent next year, making it the country with the second-lowest economic growth in 2019

8. **Egypt:** The Middle Eastern country is expected to contribute 1.5 per cent to world growth, coming in 8th place. It is one of the smaller countries that will be driving global growth in the next five years.

3. OECD warns of climate change as bigger challenge than a potential inflation

OECD's recent outlook and policy prescriptions have marked a significant step beyond its repeated warnings about threats to growth from U.S.-China tensions, weak investment and trade flows. The recent report has flagged systematic challenges from climate change and technology while it held trade war as part of a bigger shift in the global order.

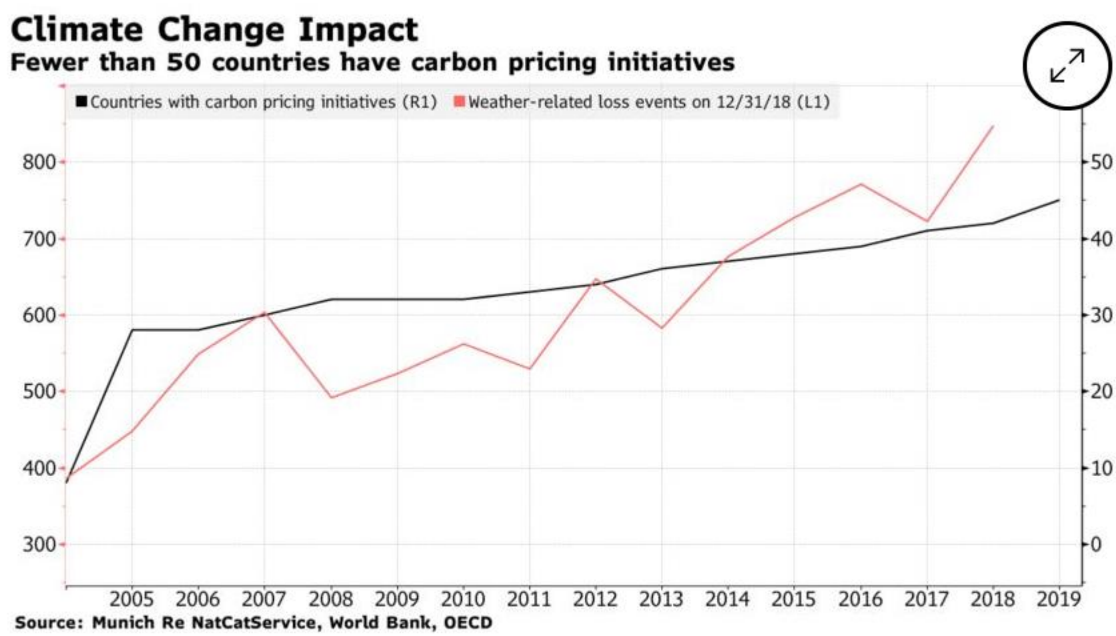


The report further suggests that the bigger concern is that the deterioration of the outlook continues unabated, reflecting unaddressed structural changes more than any cyclical shock. It warns that considering these shifts as temporary factors that could be addressed through monetary and fiscal policy. These are structural changes that will require more than short-term fiscal and monetary fixes.

Such pessimistic outlook from the OECD is in stark contrast from financial markets, where investors are increasingly betting on an upswing next year depending on the latest twists in trade talks. Morgan Stanley has predicted a pickup in global growth, starting early next year while Goldman Sachs has indicated in the next year due to the recently introduced policy reforms.

The OECD sees global growth stuck at 2.9 per cent this year and next, and rising slightly to 3 per cent in 2021. It lowered its 2019 U.S. forecast to 2.3 per cent from 2.4 per cent previously, and left 2020 at 2 per cent.

The entrenched trade and investment challenges mean governments must make deeper changes beyond simply rolling back tariffs of the last two years. There is a need to update global rules and reducing subsidies, which have a harmful effect on trade.



The OECD report urges the Governments around the world to rethink their environment policy to tackle the challenges presented by climate change. Without clear policy on issues like carbon tax, the delays to business investment will have dire consequences on growth and employment. While fiscal stimulus could provide a short-term boost, focus should be on the long term, such as through dedicated investment funds.

4. US Federal Reserve cuts rate for a third time in 2019

The US Federal Reserve has cut the interest rates for the third time this year as the US economy continues to slow down amid ongoing trade disputes and weak global growth. The federal funds rate, which affects the cost of mortgages, credit cards and other borrowing, will now be between 1.5 per cent and 1.75 per cent.

Federal Reserve Chairman Jerome Powell strongly suggested that the Fed would hold rates steady for the foreseeable future. He further said that the current level is likely to remain appropriate given the Fed's economic outlook of moderate economic growth, a strong labour market and inflation growing at around 2 per cent

Rate cuts during an economic expansion aren't common, but they aren't unprecedented either. The Fed similarly made what former Fed Chairman Alan Greenspan called "insurance cuts" in 1995 and 1998. The Fed quickly went back to rate hikes after those moves. Yet, despite the fact that there is little room left to cut rates further should the economy suddenly start shrinking, Mr Powell said he doesn't believe the Fed is about to start raising rates anytime soon.

Mr. Powell noted that a potential "phase one" trade deal between the United States and China and signs that the UK may be able to orchestrate a smooth exit from the EU may mean that risks are less dire and could boost business confidence.

Fed officials next meet in six weeks. They left some room open for further rate cuts by omitting certain language in their statement, but left some room for deviation by pointing to remaining "uncertainties" to the country's economic outlook. The committee will continue to monitor the implications of incoming information for the economic outlook as it assesses the appropriate path of the target range for the federal funds rate

In the third quarter, the economy grew 1.9 per cent according to initial data released by the Commerce Department. That was better than the predicted, but still fell short of the Trump administration's forecast of hitting 3 per cent economic growth annually. While the fresh data shows the economy isn't quite going off the road yet, consumers are now spending less than before just as manufacturing continues to contract and investment spending by businesses continues to decline.

5. IMF predicts economic growth in Europe to decline to 1.8 per cent in 2019

As in the rest of the world, European trade and manufacturing have weakened. There are some signs that this slowdown is spreading into the rest of the economy. While services and consumption have remained relatively resilient in line with strong labour markets, investment is starting to lose steam. IMF's latest health check of Europe's economy suggests that the recent developments have slowed economic activity in the region.

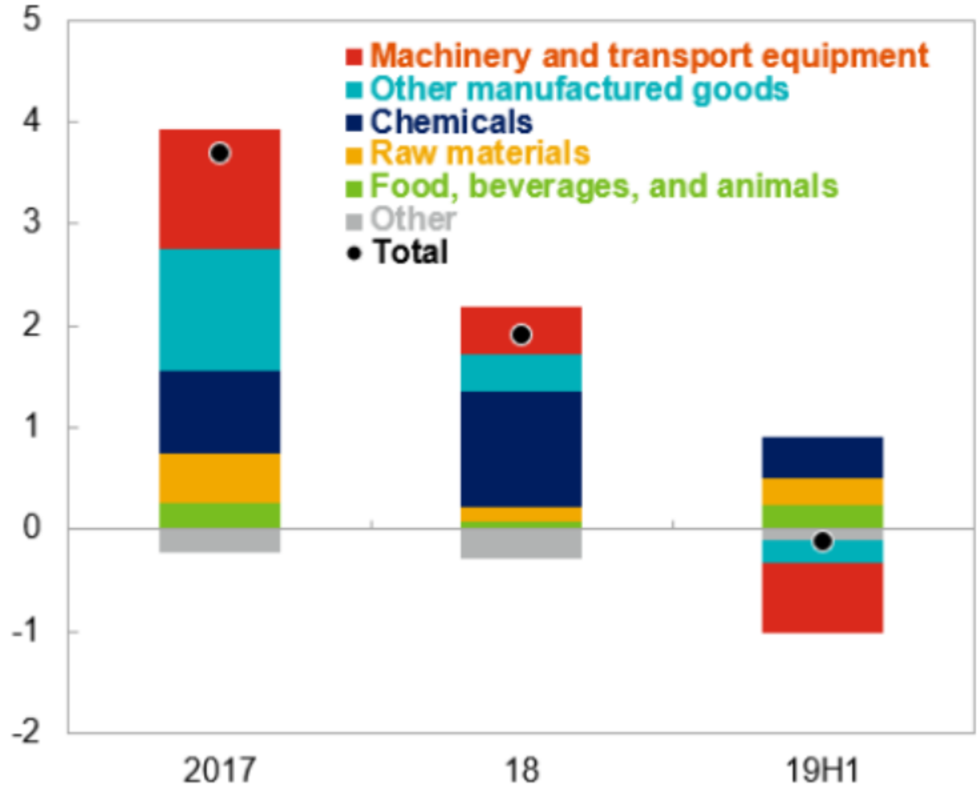
The report predicts growth will moderate from 2.3 per cent in 2018 to 1.4 per cent in 2019, its lowest rate since 2013. In 2020, growth is projected to recover modestly to 1.8 percent as international trade is expected to rebound. But several risks to the outlook remain.

Weakening of European trade and industry has slowed growth

Following global trends, trade and manufacturing in Europe have weakened considerably. This weakness is primarily driven by machinery and transport equipment—sectors that are particularly relevant for Europe. As a result, economic activity in Europe has slowed, especially in advanced economies. Emerging European economies outside of Russia and Turkey were a bright spot, with growth remaining strong.

Industrial production, YoY percentage change, 6 months moving average

Contribution to growth in European Union export volumes, percentage change

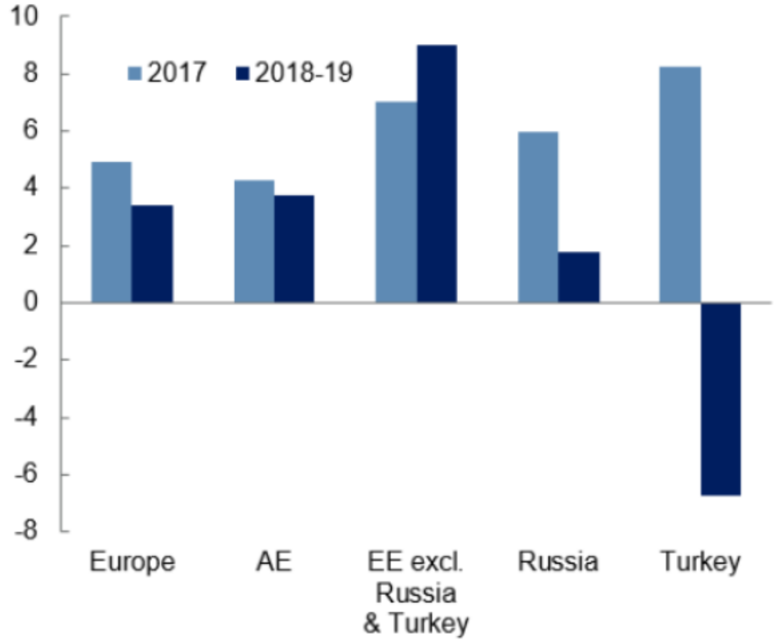


Sources: Eurostat; Haver; IMF, Global Data Source; and IMF staff calculations.

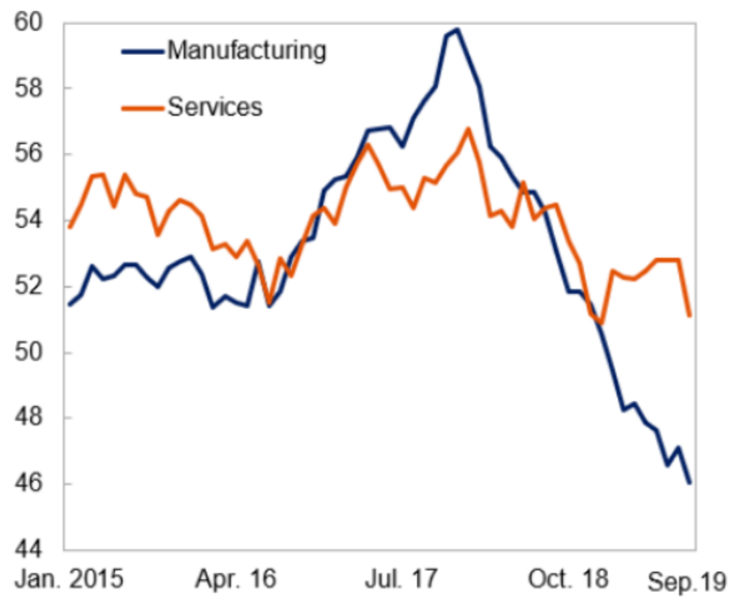
Some signs of spill overs, but still relatively limited

The weakening trade and manufacturing—along with subdued business confidence and elevated trade uncertainty—have started to spill over into investment, especially in many advanced European countries. While the services sector has been relatively buoyant, it too has started to soften. Private consumption, however, has stayed relatively robust.

YoY percentage change in fixed investments



European Union PMI, seasonally adjusted, 50 + =expansion

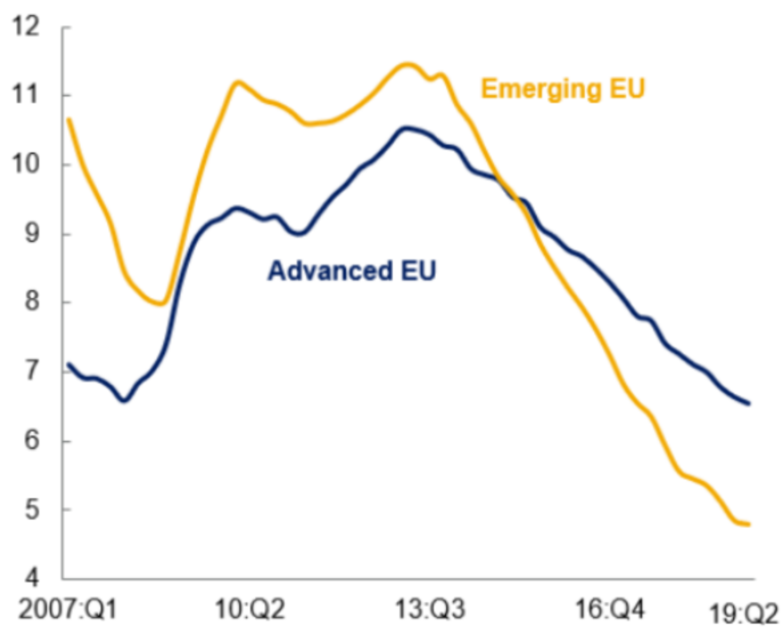


Sources: Eurostat; IHS Markit Purchasing Managers Survey; IMF, World Economic Outlook; and IMF staff calculations.
Note: PMI= Purchasing Managers' Index; AE = Advanced Economies; EE = Emerging Europe.

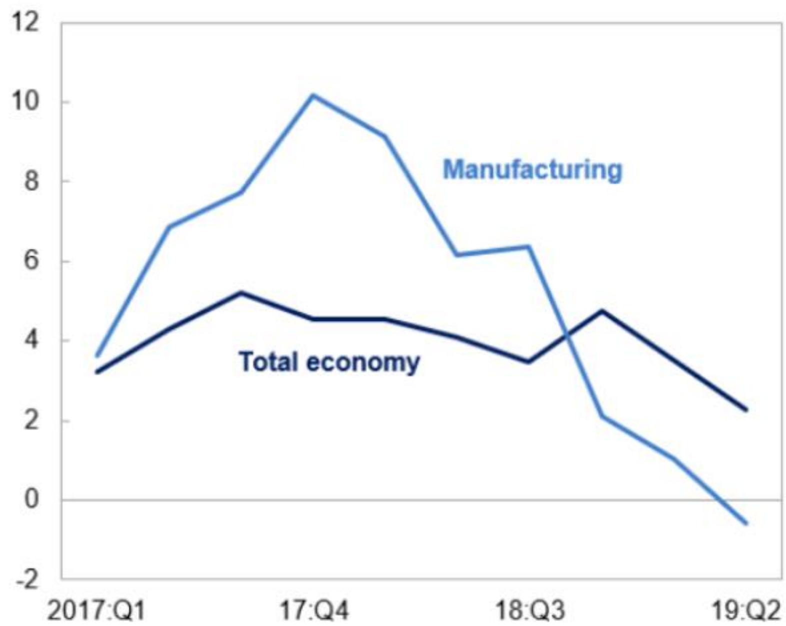
Labour markets hold the key to the resilience of services and consumption

As long as employment and wage growth remain robust, consumption spending and hence the demand for services will remain buoyant. Labour markets in Europe are still strong—unemployment rates are at or below pre-crisis levels and wage growth has generally held up. However, signs of a slowdown are also emerging in labour markets. For example, job openings—a measure of labour demand—are not only falling in the manufacturing sector, but vacancy growth for the overall economy has also slowed since the beginning of the year.

European Union unemployment rate



European Union job vacancies, quarter over quarter percentage change



Source: IMF

Europe's Economic Outlook

On balance, Europe's growth is projected to decline from 2.3 percent in 2018 to 1.4 percent in 2019. A modest and precarious recovery is forecast for 2020 due to an expected rebound in external demand that would limit emerging spill-overs into investment and services.

Growth in advanced Europe has been revised down by 0.1 percentage point to 1.3 percent in 2019, while growth in emerging Europe has been revised up by 0.5 percentage point to 1.8 percent. Amid high uncertainty, there are several risks to the outlook, including Brexit related disruptions, intensifications of protectionism and related uncertainty, abrupt declines in risk appetite, and rising geopolitical tensions.

6. At USD 3 Trillion, AEC emerges as the fifth largest economy in 2018

According to a recent report published by ASEAN, the region's economy has emerged as the fifth largest economy in the world with a gross domestic product (GDP) of around USD 3 trillion last year.

The 2019 ASEAN Integration Report suggests that despite growing uncertainty in the global economy, the bloc's overall economic performance remained promising. The region's trade totaled USD 2.8 trillion in 2018, an increase of 23.9 percent from the 2015 figure of USD 2.3 trillion. In 2018, the region attracted USD 154.7 billion worth of Foreign Direct Investment (FDI), marking the highest in the history and a 30.4 percent increase from FDI inflows of $118.7 billion in 2015.

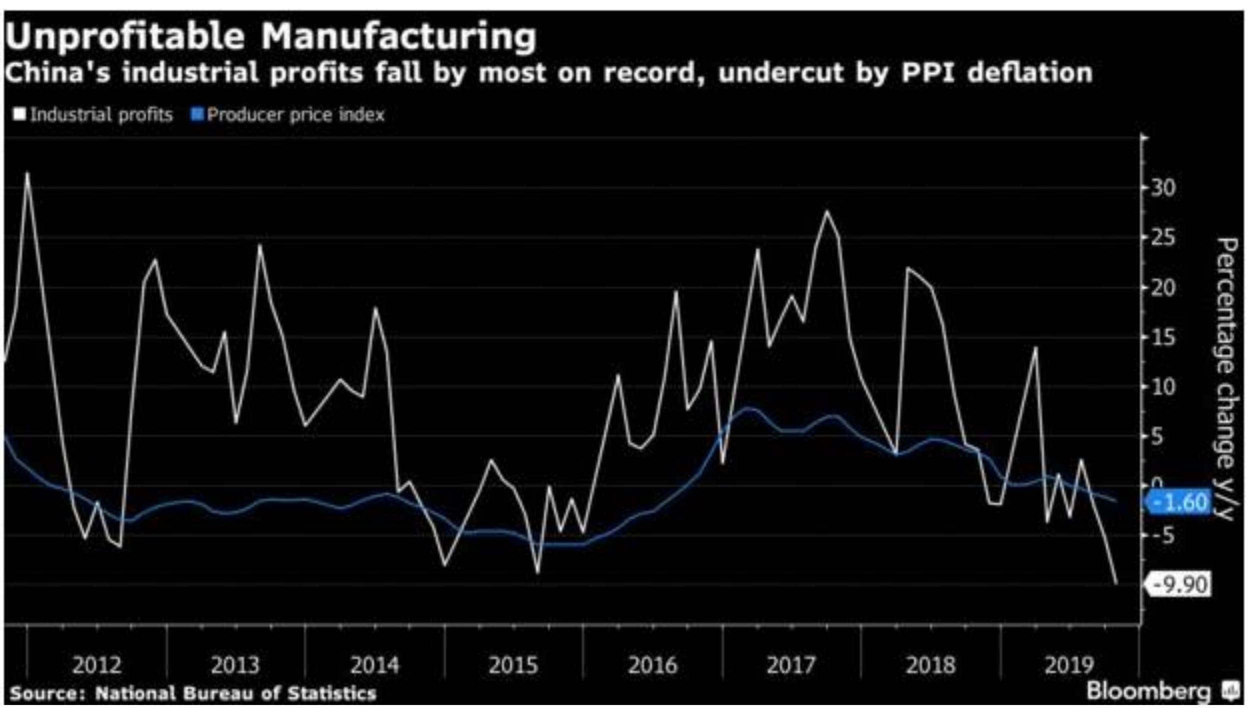
The economic integration of ASEAN continued to contribute to the region's emerging position as a global growth driver, with intra-ASEAN activity accounting for the largest share of ASEAN's total trade and FDI in 2018 at 23 per cent and 15.9 per cent, respectively.

ASEAN Economic Community (AEC), introduced in 2015, is essentially the economic integration of the 10 ASEAN members, guided by the 2025 AEC blueprint, which provides extensive directions through strategic measures between 2016 and 2025. The community recognizes the free movement of skilled labor, goods, services and investment between member countries as key factors.

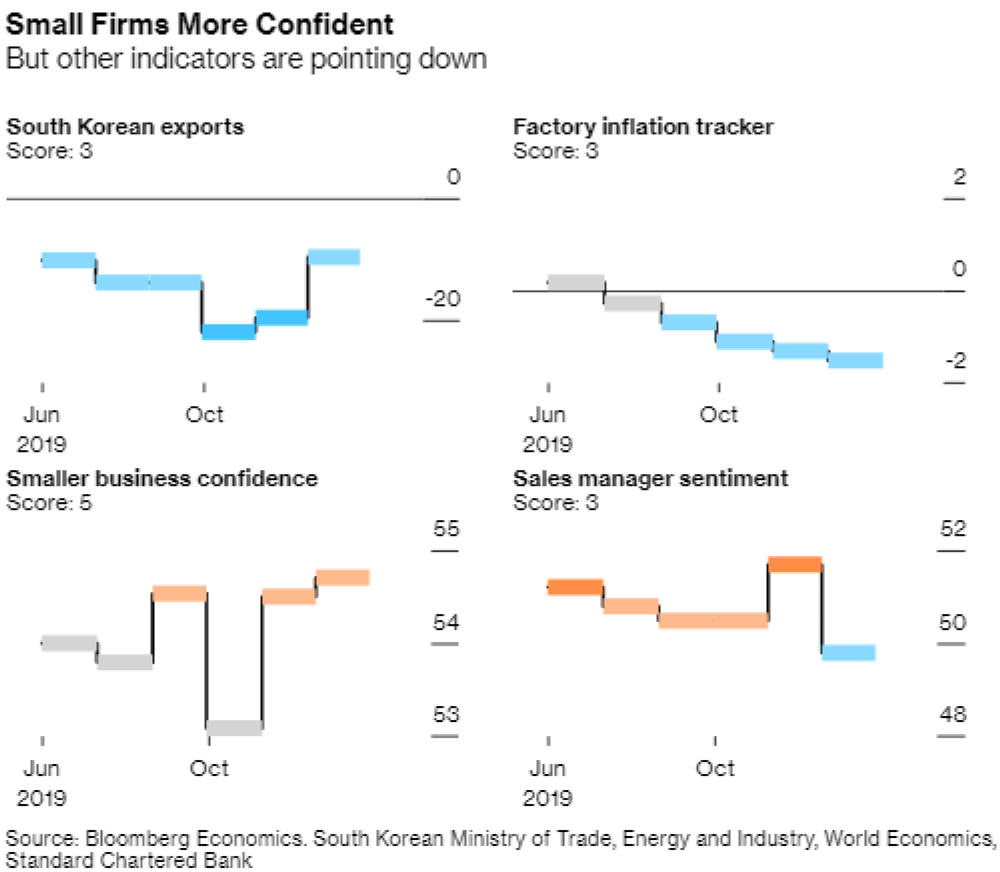
7. Chinese economy continues to suffer in third quarter, records lowest growth in three decades

The early indicators of the Chinese economy point towards a continued slow-down in the month of November. The country's economic growth in the third quarter this year was the slowest in the last three decades.

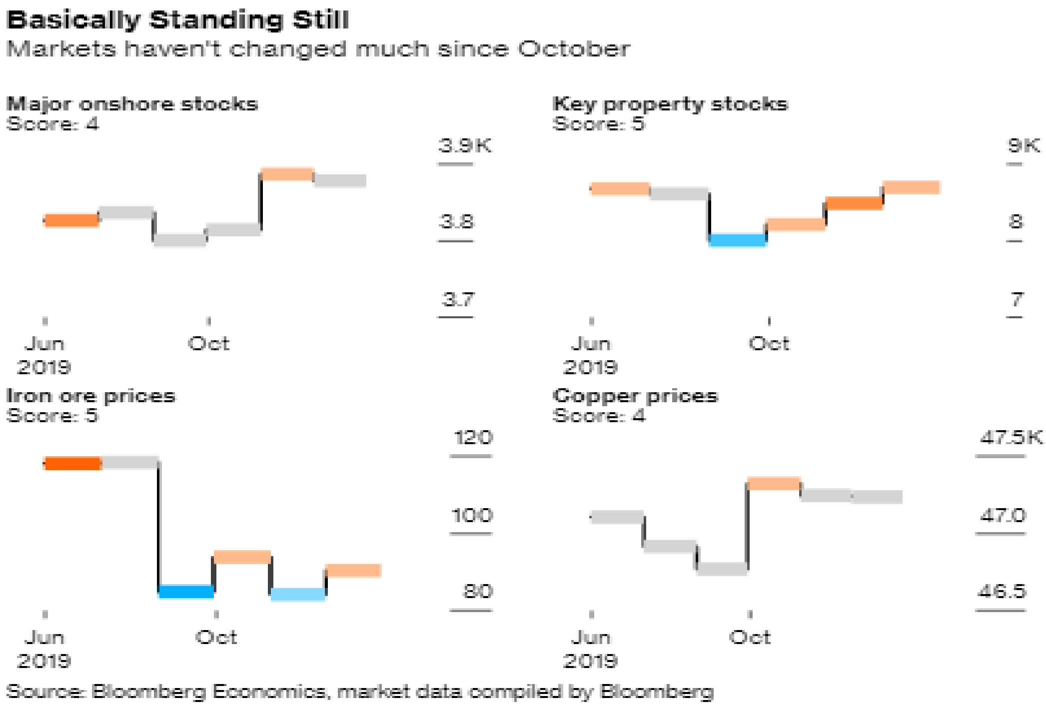
While tensions with the U.S. have eased since the two sides announced talks toward a so-called "phase one" deal last month, a leading indicator for trade flows in Asia, South Korean exports, still contracted almost 10 per cent in the first 20 days of November. In October, the profits of the Chinese industrial firms dropped by 9.9 per cent from a year ago. The decline in prices at the factory gate is one of the factors undercutting those profits and is expected to continue in November.



The falling prices also indicate a weakness in domestic demand. The continuation of the deflationary effect will only further hurt corporate profits and will eventually drag down prices and profits overseas as well.



However, there is still some optimism among the parts of the economy most exposed to the global economy. A recent Standard Chartered survey found export-focused firms more upbeat amongst the smaller businesses. Production activity accelerated as external demand rebounded while the new orders sub-index for domestically focused smaller companies weakened. The manufacturing sector outperformed, its performance index rising to a seven-month high, while that of the services sector dropped.

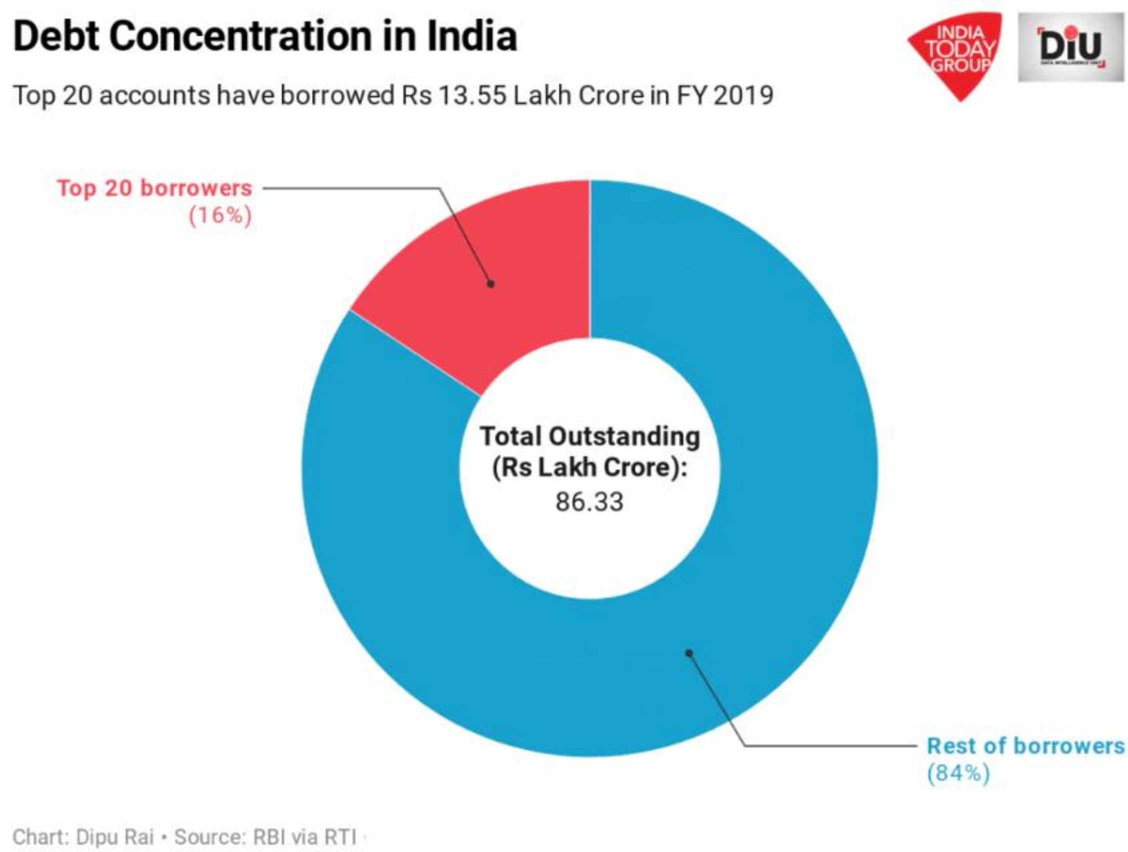


The recent rise in iron ore prices on optimism for domestic demand next year, with prices of steel rebar, which is used in construction, surging to the highest since May.

8. Top 20 borrowers owe over 16 per cent of the total loan exposure by Indian banks

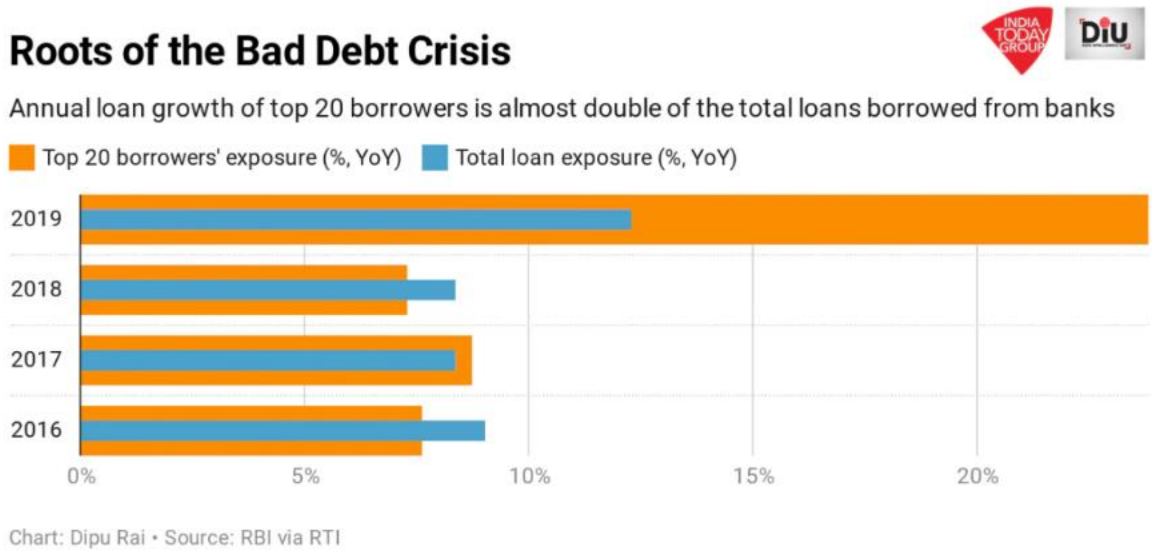
Debt service is becoming riskier with deteriorating economy, though banks are still taking the risk of debt concentration, as India's top 20 borrowers have managed to get about 16 per cent of the loan amount of the Indian banking system.

Data from the Reserve Bank of India (RBI) reveals that the tiny number of borrowers owed Rs 14 lakh crore exposure in the financial year 2019 - about 16 per cent of the total loan exposure of the Indian banking system. Between FY 2018 and FY 2019, Loan exposure to the top 20 borrowers has spiked about 24 per cent. Over the last year, India’s total outstanding loan portfolio has grown only 12 per cent.

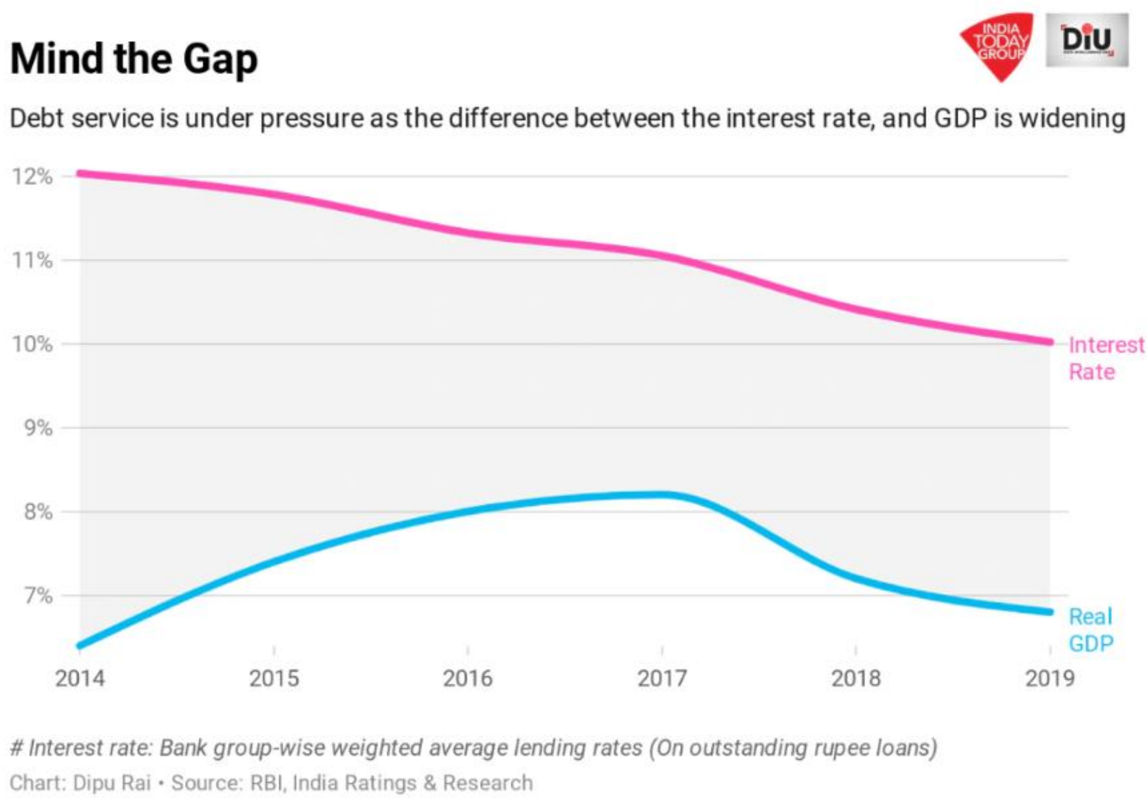


The total outstanding to all borrowers has grown from Rs 76.88 lakh crore in FY 2018 to Rs 86.33 lakh crore in FY 2019. On the other hand, these 20 borrowers' outstanding has jumped from Rs 10.94 lakh crore to Rs 13.55 lakh crore in the same period. These borrowers have shared almost half the total industry loan, including Micro, Small & Medium Enterprises (MSME). Moreover, banks have funded thrice more money to them than MSME.

Experts are of the opinion that debt concentration in the economy is going to have a very negative impact on the small and medium sector because funds are going to be unavailable for them and this will have a large impact on entrepreneurship. There are over 10 crore medium, small and tiny entrepreneurs in India who generate jobs for 30 crore people, while the large scale sector generates jobs for only 1 crore. It is this medium, small and tiny sector that will be hammered by loan concentration

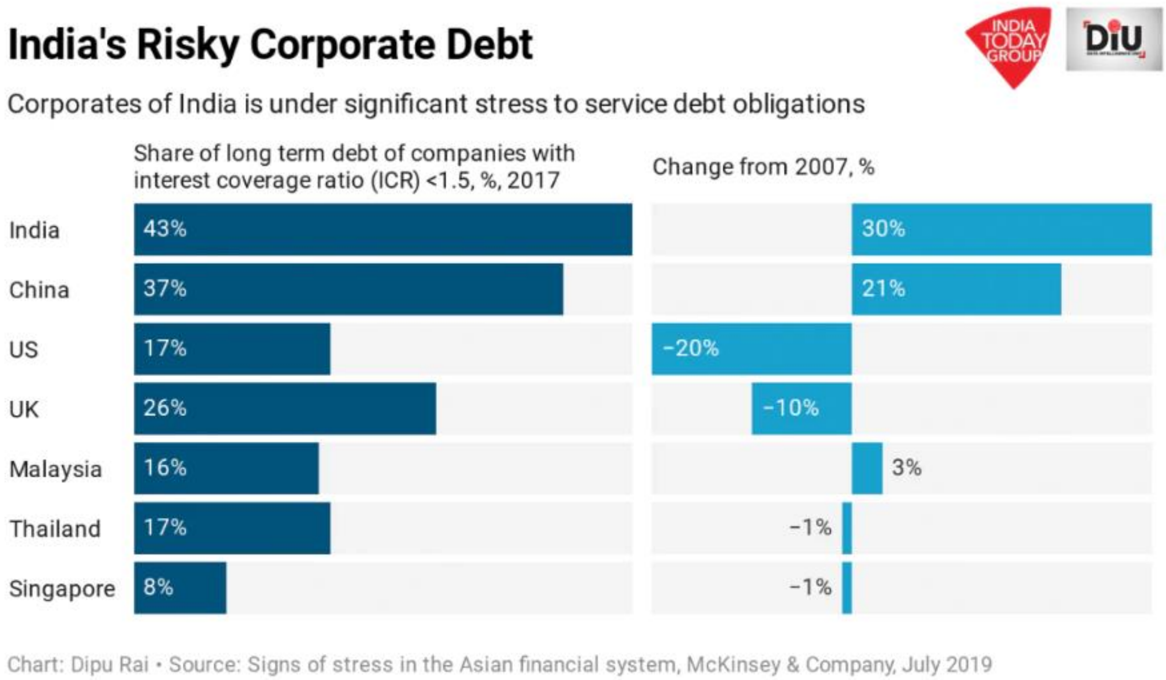


Debt service capability is under pressure as the Indian economy remains in slowdown phase. Ideally, the average interest rate should be equal to gross domestic product (GDP).



India's average interest rate has been 9 per cent in FY 2019, while the GDP growth rate has been 6.6 per cent, and it may further slump to 5 per cent in the first quarter of FY 2020. Debt service paid to the banks is eating into the economy as the gap between the interest rate and GDP is widening.

The central bank has started different mechanisms to cope with these challenges, primarily via low interest rates. But low interest rates have repercussions. The International Monetary Fund (IMF), which charges for monitoring financial mismatch of the world economy, has warned that the global economy is sitting on a USD 19 lakh crore corporate debt time bomb.



Low interest rates are encouraging corporations of eight major countries - US, China, Japan, Germany, Britain, France, Italy and Spain - to take a level of debt that they may fail to repay even if a downturn half as severe as 2008 occurs.

9. India needs to spend over USD 3.3 Trillion on infrastructure to achieve 7.5 per cent growth

According to a recent report, the Government of India must invest trillions of dollars on roads and other critical infrastructure if it intends to pull India's economy out of its slump. More than half of this expenditure needs to come from State Governments.

The report by rating agency Crisil suggests that the country will require an investment of Rs 235 lakh crore ($3.3 trillion) on infrastructure over the coming decade to return economic growth rates to more than 7.5 per cent. The report mentioned that to achieve such high growth rate, States will have to more than triple their contributions from the current decade. It underlined that with private investments tepid in recent years, and fiscal limitations on central spending states will need to step up contributions from about 41 per cent.

Unless States contribute nearly 50 per cent of infrastructure investments, India's build-out momentum could taper sharply, the report warned. Crisil recommends that frontrunner states such as Maharashtra and Gujarat must attract more private investments to counteract a probable slowdown at recent high spenders including Rajasthan and Uttar Pradesh.

10. India to emerge as the sixth largest clothing market globally in 2020 with net worth of USD 53.7 Bn

Amidst a dim global outlook for consumer spending due to rising trade tensions, geo-political uncertainty and economic concerns, clothing market in India presents an exciting opportunity particularly for price competitive players.

The fourth annual state of fashion report by The Business of Fashion and McKinsey & Company predicts that by 2020, Indian clothing market is expected to be worth $53.7 billion, making it the sixth largest in the world.

An IMF report has suggested that While GDP growth this year has been somewhat weaker than expected, in part due to regulatory uncertainty, India is still projected to be the fastest-growing major economy. Over the last few years, the Indian clothing market has attracted global brands like Zara, H&M and Marks & Spencer among others. The recent relaxation offered by the Government local sourcing norms in single-brand retail, providing further impetus to the industry.

The McKinsey Global Fashion Index (MGFI) forecasts that the overall fashion industry revenue growth will slow further in 2020 — down to 3-4 per cent from the 3.5-4.5 per cent growth predicted for 2019. The most optimistic region is Asia, although, even here only 14 per cent of executives expect an improvement in conditions, the report showed.

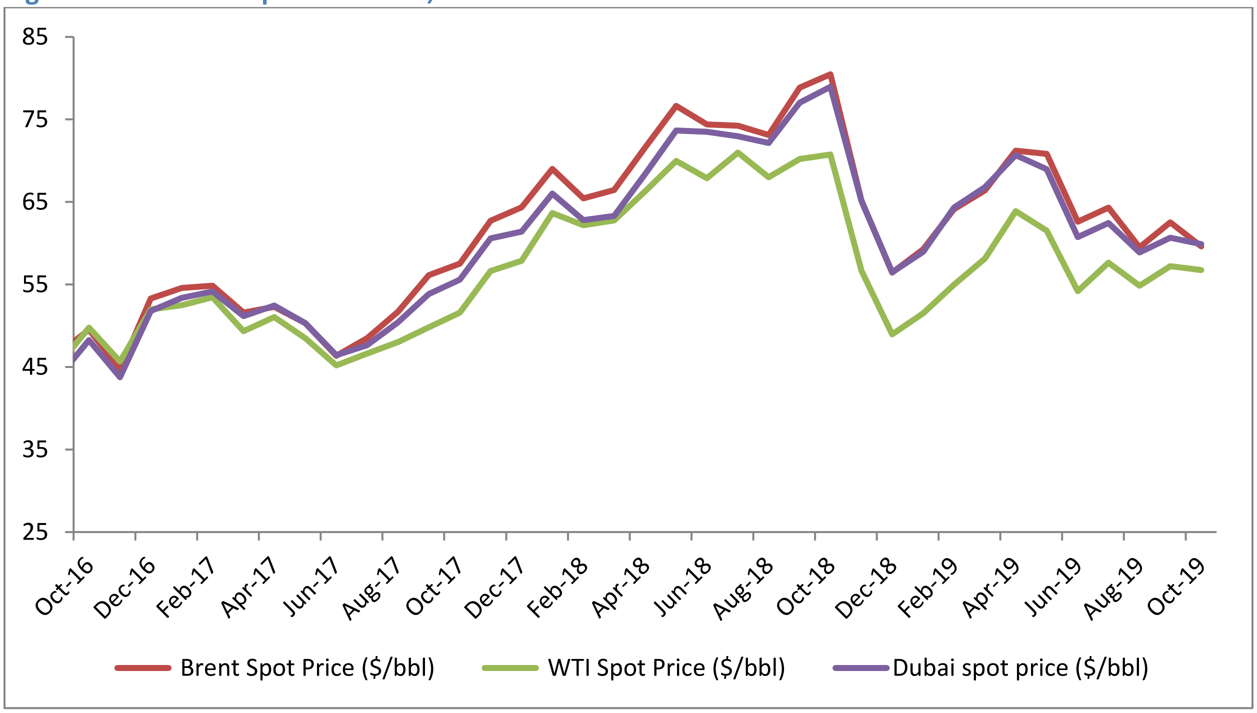
The survey reveals pessimism across all geographies and price points. The majority — 55 per cent of fashion executives foresee a slowdown in 2020. A mere 9 per cent of respondents think conditions for the industry will improve next year, compared to 49 per cent last year.

Oil & Gas Market

Crude oil price

Crude prices stayed stabilized throughout the month of October. Crude prices cooled off from the peak caused by the supply impact in Saudi Arabia. Restoration of Saudi oil production coupled with trade war between the US and China kept the crude prices under control. Market recovered from the supply shortage to supply surplus.

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



Source: WORLD BANK

- Brent crude price averaged $59.63 per bbl in October 2019, and was down 4.65 % and 25.90 % on a month on month (MoM) and year on year (YoY) basis, respectively.
- WTI crude price averaged $ 56.76 per bbl in October 2019, and was down 0.82 % and 19.77 % on a month on month (MoM) and year on year (YoY) basis, respectively.
- Dubai crude price averaged $59.91 per bbl in October 2019, and was down 1.25 % and 24.13% on a month on month (MoM) and year on year (YoY) basis, respectively.

Table 1: Crude oil price in October, 2019

Crude oil	Price ($/bbl) in October 2019	MoM (%) change	YoY (%) change
Brent	59.63	- 4.65 %	- 25.90%
WTI	56.76	-0.82 %	- 19.77%
Dubai	59.91	-1.25 %	- 24.13%

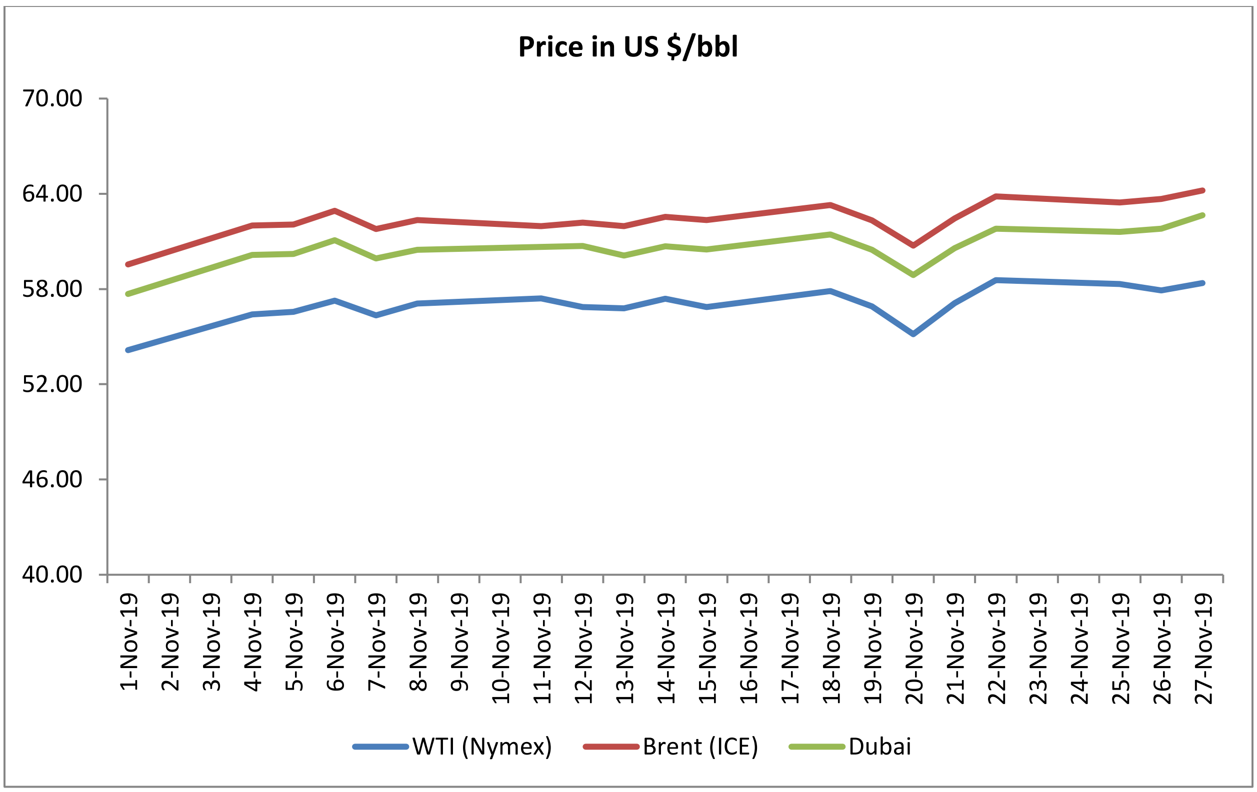
- *Source: WORLD BANK*

Crude price increases in November 2019

Crude prices saw a mild increase in the month of November. News of new production curbs from OPEC countries, and new optimism on US-China deal and declining stocks of crude oil inventory led to the increase of crude price.

Average Brent, WTI and Dubai basket crude prices went up by 4.65 %, 0.46% and 1.15 % respectively from the prices in the month of October.

Figure 2: Crude oil price in November 2019

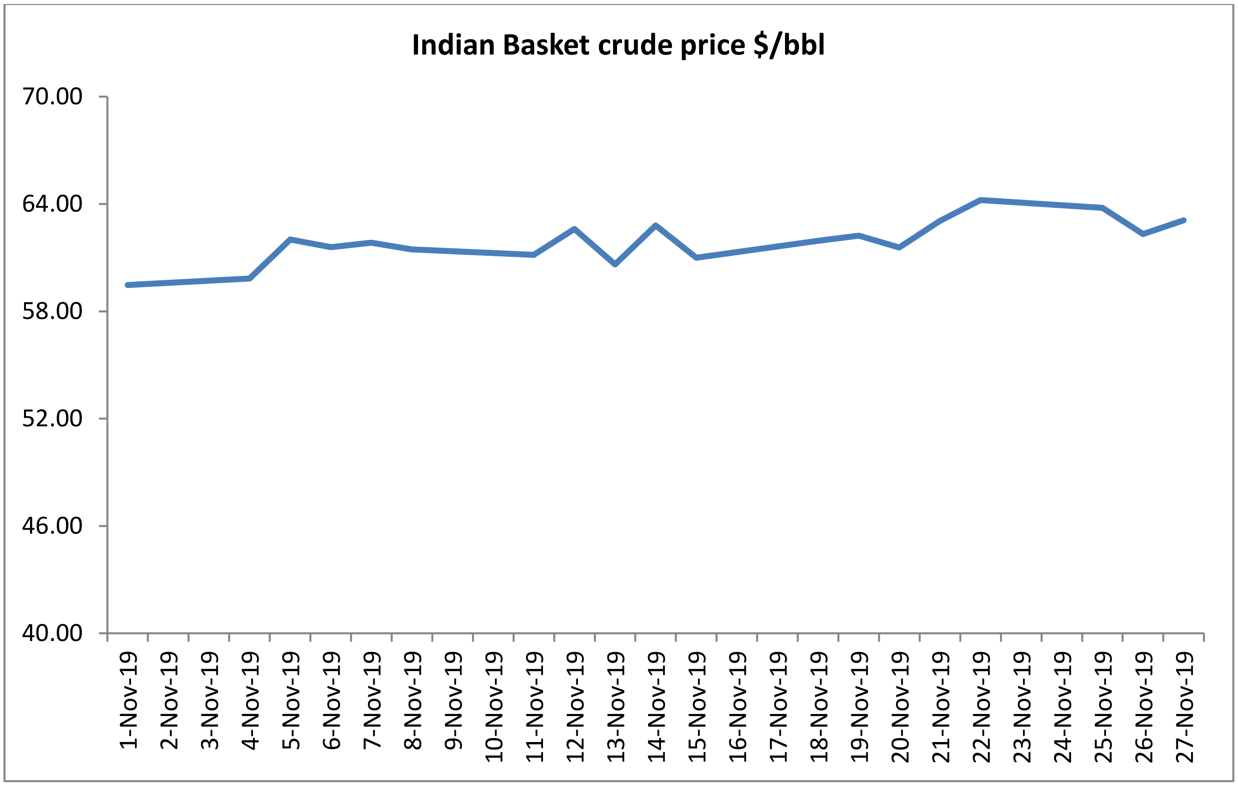


Source: EIA

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

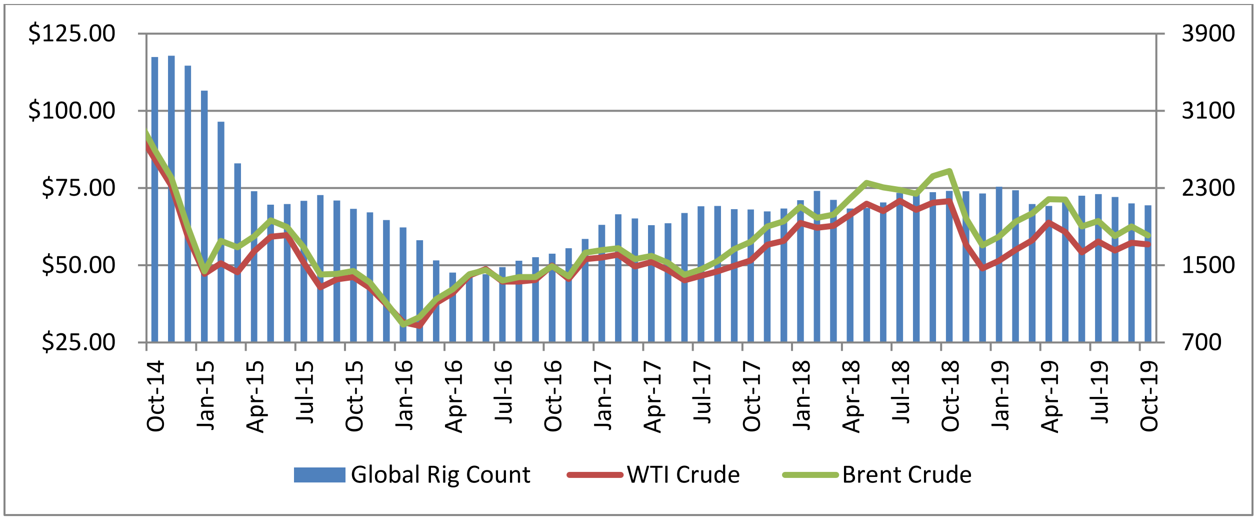
- Indian crude basket price averaged $ 61.93 per barrel in November, up by 4.82 % on Month on Month (M-o-M) basis and down 5.31 % on a year on year (Y-o-Y) basis, respectively.

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

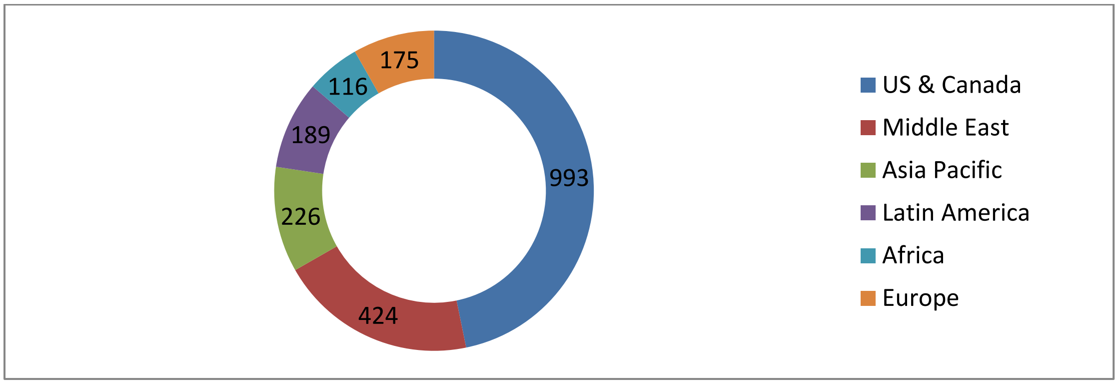
In October 2019, global drilling rig count stood at 2,123, 18 less than September. Onshore rig count declined by 16 and offshore rig count went down by 2. Rig count saw a change Middle East, Africa, Europe, while rig count remained unchanged in Asia Pacific and Latin America. Rig count dropped by around by 30 in the United States to reach 848. 825 were onshore rigs and 23 were offshore rigs. US & Canada and the Middle East count for about 2/3rd of the global rig count.

Table 2 : Global Drilling Rig Count

Rig Type	Count in October 2019	MoM (%) change	YoY (%) change
Land	1,856	-0.85 %	-9.06 %
Offshore	267	- 0.74 %	16.09 %
Total	2,123	-0.84 %	-6.52 %

Source: Baker Hughes

Figure 5 Geography-wise Rig count - October 2019



Source: Baker Hughes

Indian Drilling Rig Count

Indian rig count remained unchanged in the month of October 2019. On Y-O-Y basis, Indian rig count declined by 10 % in 2019 as compared to October 2018. 77 were onshore rigs and the rest 31 were offshore rigs.

Figure 6 Indian Rig Count vs. Indian Basket Crude Price

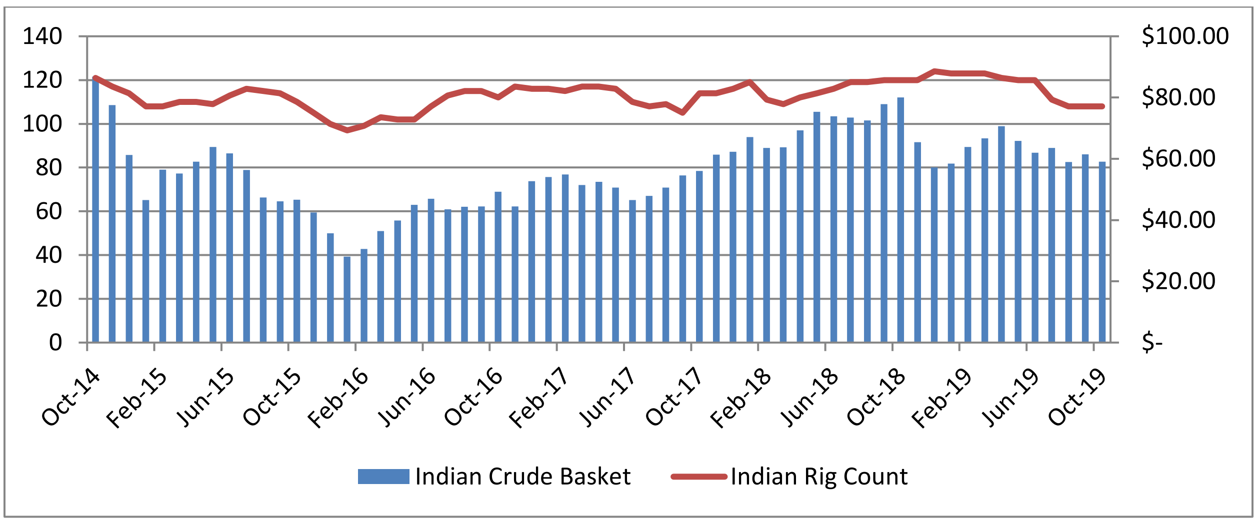


Table 3 : Indian Rig Count

Rig Type	Count in October 2019	MoM (%) change	YoY (%) change
Land	77	0	-9.41 %
Offshore	31	0	-11.43 %
Total	108	0	-10.00 %

Source: Baker Hughes

Oil demand & supply

Preliminary data indicates that global oil supply increased by 1.67 mb/d m-o-m to average 99.34 mb/d in October 2019, compared with the previous month. Non-OPEC supply (including OPEC NGLs) increased by 0.73 mb/d m-o-m to average 69.69 mb/d in October. Incremental production from the US, Canada, Norway, the UK, Australia, Kazakhstan, China and OPEC NGLs led to increase in supply. The share of OPEC crude oil in total global production increased by 0.5% to 29.8% in October 2019 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.

For 2019, non-OPEC oil supply growth forecast for 2019 remains at 1.82 mb/d y-o-y, as incremental production in Canada, the UK and Kazakhstan was offset by the downward production adjustment data for the US and Indonesia. The US, Brazil, China, the UK, Australia and Canada are the key drivers for growth in 2019 while; Mexico and Norway are projected to see the largest decline.

World oil demand remained unchanged for both 2019 and 2020. Oil consumption is expected to reach 99.88 mb/d and 100.88 mb/d in 2019 and in 2020 respectively.

Table 4: World Oil demand in mbpd

	2018	1Q19	2Q19	3Q19	4Q19	2019	Growth	%
Total OECD	**47.93**	**47.65**	**47.26**	**48.50**	**48.44**	**48.44**	**0.02**	**0.04**
Dev. Countries	**32.62**	**32.97**	**32.87**	**33.49**	**33.14**	**33.12**	**0.50**	**1.53**
~ of which India	*4.73*	*5.03*	*4.75*	*4.49*	*5.14*	*4.85*	*0.12*	*2.57*
Other regions	**18.27**	**18.13**	**18.64**	**18.75**	**19.38**	**18.73**	**0.45**	**2.49**
~ of which China	12.71	12.63	13.19	12.98	13.43	13.06	0.35	2.73
Total world	**98.82**	**98.76**	**98.76**	**100.69**	**100.95**	**99.80**	**0.98**	**0.99**

Source: OPEC monthly report, November 2019

*Note: *2018 = Estimate and 2019 Forecast*

Global petroleum product prices

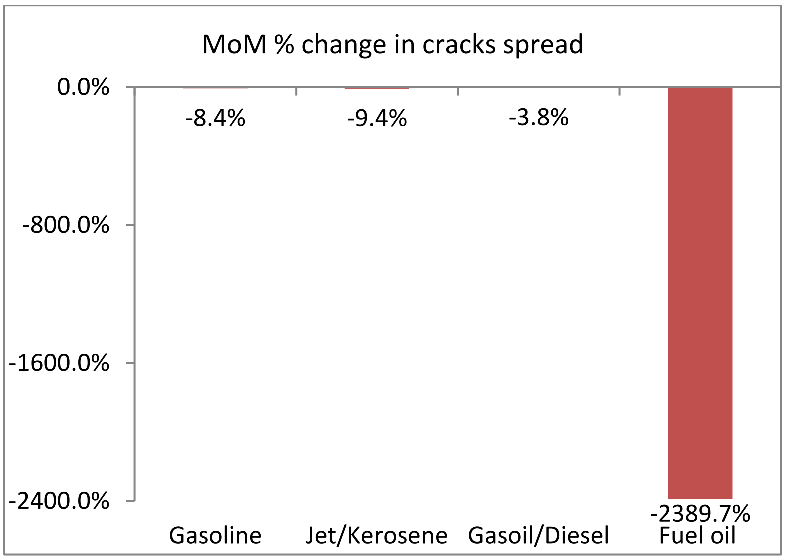
Prices in the Asian Gasoline-92 market saw a decrease in price by 1.51 % over the previous month. Refinery margins fell due to soaring freight rates discouraged long distance trade flows and pressurized HSFO demand. Refinery margins in October stood at $2.46/b, lower by $4.36 on m-o-m and by $2.93 on y-o-y basis.

Singapore Gasoline cracks averaged $8.58/b against Oman, up by 14 ȼ m-o-m but down by $2.32 y-o-y. Refinery utilization rates declined by 2.4% in October averaging 87.52 % in selected Asian markets comprising of Japan, China, India and Singapore.

Jet/Kerosene prices decreased by 2.37 % in October as the demand for air travel reduced slightly due to financial challenges faced. The Singapore jet/kerosene crack spread against Oman averaged $15.92, down by 72 ȼ m-o-m and slightly up by 16 ȼ y-o-y.

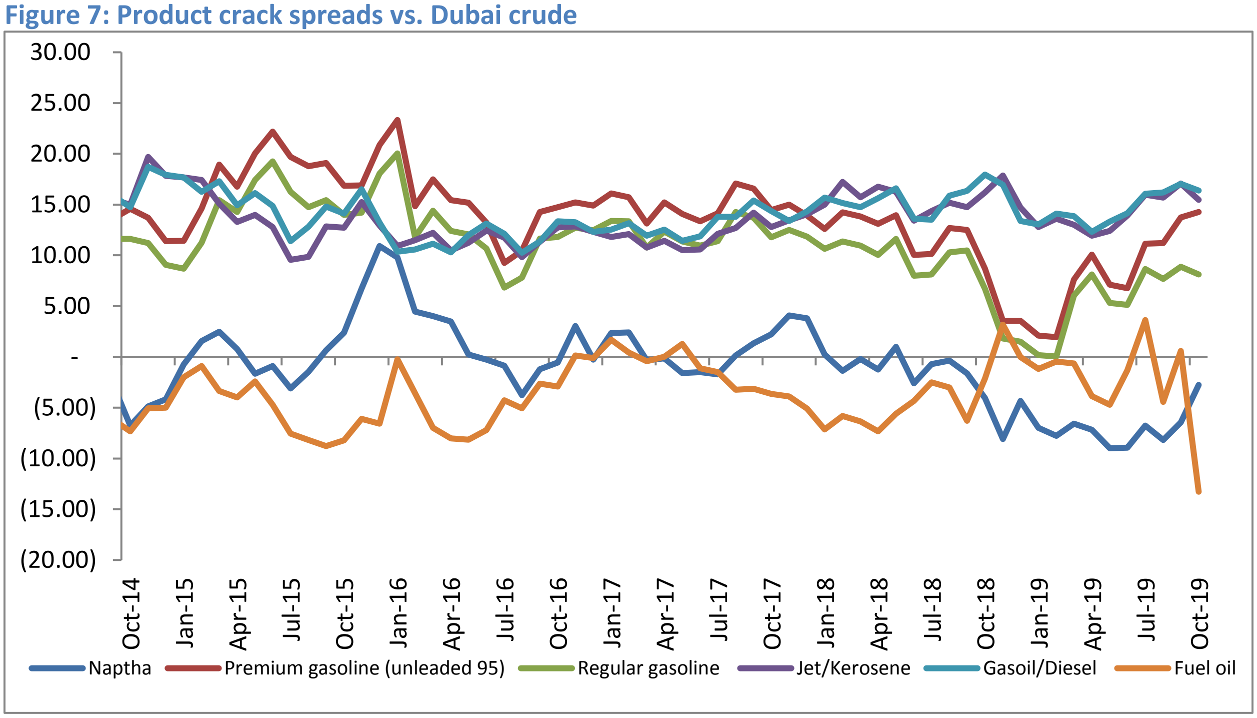
The Singapore gasoil crack spread moved slightly upwards in the month of October on the back of stronger exports. In October, gasoil price went up by 3.5%. Singapore gasoil crack spread against Oman averaged $16.84/b, up 25¢ m-o-m and but down by 67¢ y-o-y.

The Singapore fuel oil crack spread declined after rebounding in the last month. Pressurized by lower demand, and sanctions on selected group of the Chinese shipping industry, significant losses occurred. Consequently, HSFO prices plunged in October. Singapore fuel oil cracks against Oman averaged minus $12.83, down by $12.97 m-o-m and by $10.25 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 October 2019	MoM (%) change	YoY (%) change
Naptha	57.14	5.4%	-23.7%
Premium gasoline (unleaded 95)	74.19	-0.3%	-15.3%
Regular gasoline (unleaded 92)	68.04	-2.2%	-20.6%
Jet/Kerosene	75.39	-3.0%	-20.8%
Gasoil/Diesel (50 ppm)	76.3	-1.8%	-21.3%
Fuel oil (180 cst 2.0% S)	46.63	-23.9%	-39.3%
Fuel oil (380 cst 3.5% S)	46.25	-24.6%	-39.6%

Source: OPEC

Petroleum products consumption in India

- October month saw an increase in overall consumption by petroleum products by 8.7%
- In October, LPG consumption increased by 8.1 % on M-o-M basis.
- Consumption of gasoline increased (8.9 % Y-o-Y) driven by higher demand from transport segment.
- Demand for diesel declined by 6.9 % on Y-o-Y basis in the month of October

Table 6: Petroleum products consumption in India, October 2019

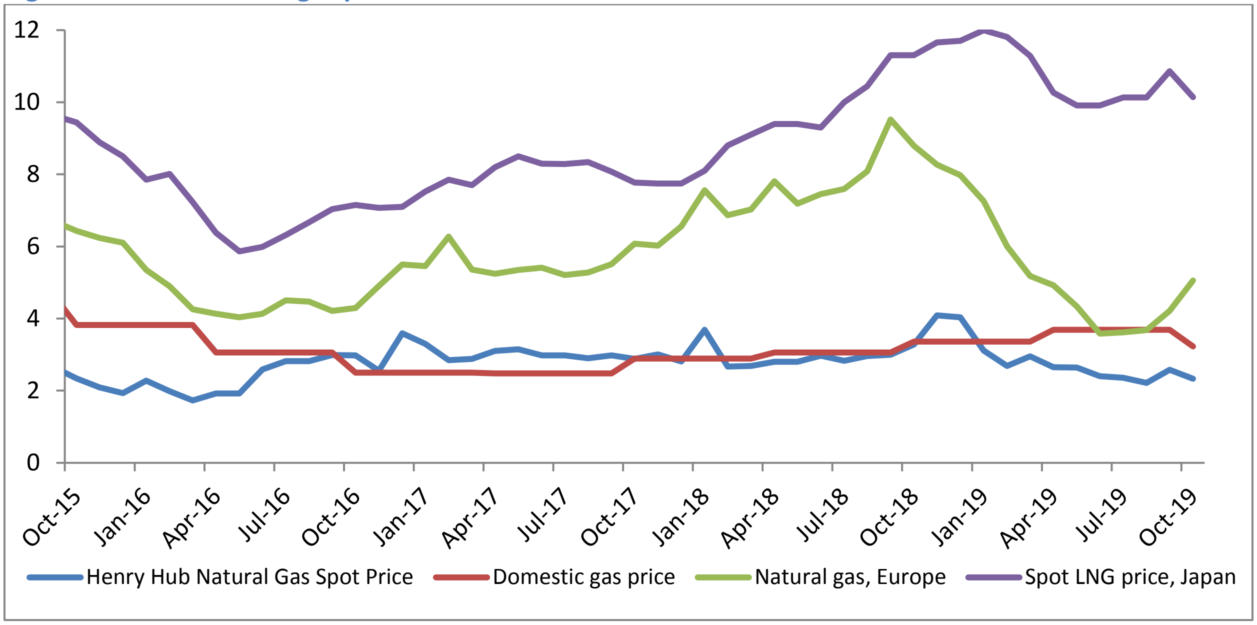
Petroleum products	Consumption in '000 MT October 2019	MoM (%) change	YoY (%) change
LPG	2,360	8.1%	14.3%
Naphtha	1109	31.5%	-9.9%
MS	2,539	7.0%	8.9%
ATF	706	6.1%	2.4%
HSD	6,507	11.6%	-6.9%
LDO	48	-20.1%	-1.8%
Lubricants & Greases	298	-10.5%	-9.3%
FO & LSHS	470	-10.5%	-15.3%
Bitumen	418	21.8%	-26.2%
Petroleum coke	1,792	3.2%	-12.5%
Others	988	4.8%	15.7%
TOTAL	17,406	8.7%	-3.3%

Source: PPAC

Natural Gas Price

In October, natural gas price at the Henry Hub decreased by 9.6% to reach $2.33/MMBtu. Increase in gas stockpile during the same period across the United States led to the decrease in natural gas price.

Figure 8: Global natural gas price trends



Source: EIA, WORLD BANK

Table 7: Gas price

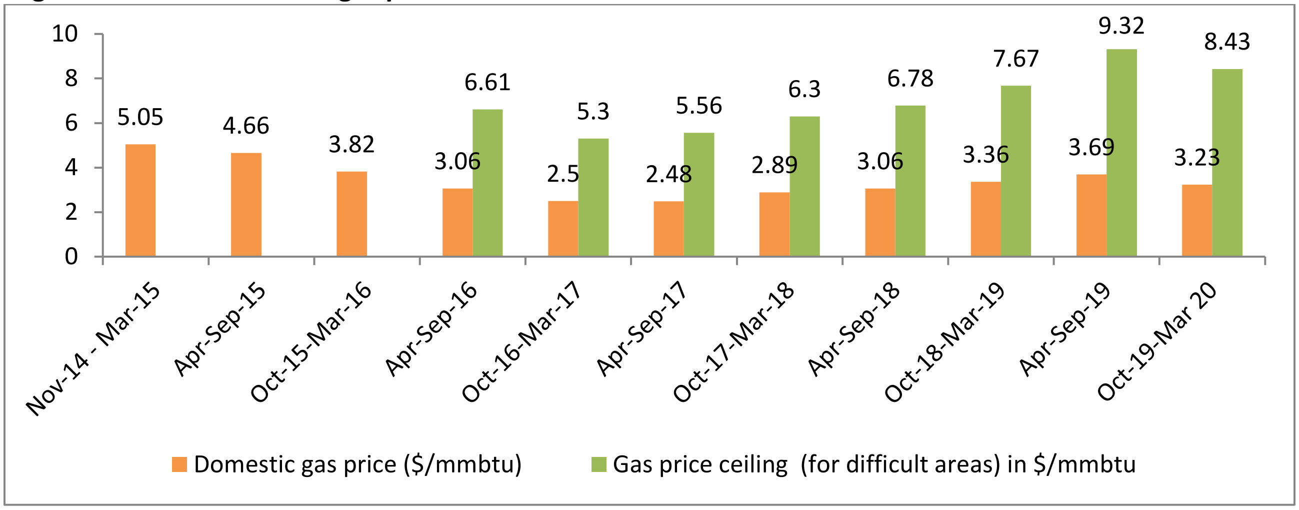
Natural Gas	Price ($/MMBTU) in October 2019	MoM (%) change	YoY (%) change
India, Domestic gas price	3.23	-12.5 %	20.6%
India, Gas price ceiling – difficult areas	8.43	-9.54 %	9.90%
Henry Hub	2.33	-9.6 %	-14.0%
Natural Gas, Europe	5.06	20.1%	-55.8%
Liquefied Natural Gas, Japan (Long Term Contract, not Spot Market)	10.14	-6.6%	-10.3%

Source: EIA, PPAC, World Bank

Domestic natural gas price which takes into account international benchmarks including Henry Hub, Alberta hub, Russia and UK National Balancing Point, has increased around 23% as compared to a year before, thus capturing the international gas price trends. Gas price for October 2019 to March 2020 is $3.23 per MMBTU

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 2019 to March 2020 period, the price of gas from such areas has been notified at $8.43 per MMBTU.

Figure 9: Domestic natural gas price

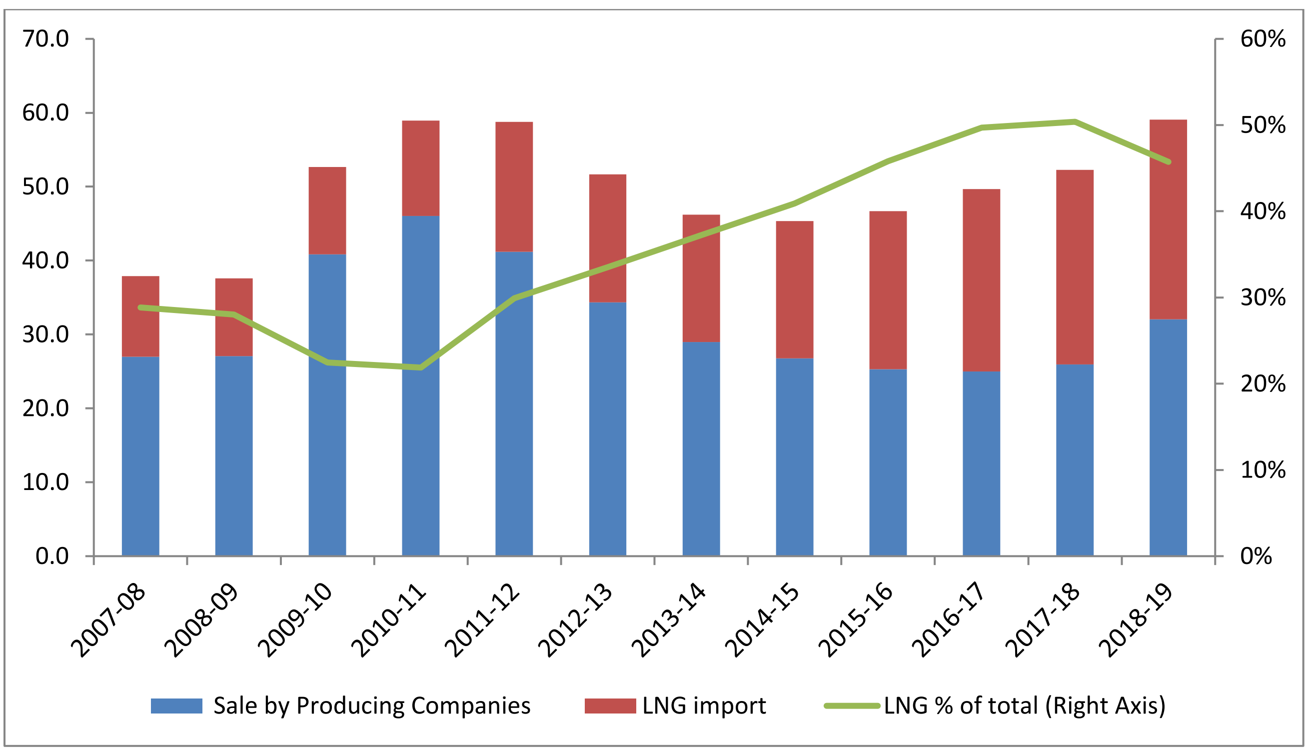


Source: PPAC

Natural gas production, consumption and import in India

- Natural gas constitutes for 6.2% of total energy primary mix of India
- Natural gas consumption in India has grown at a very slow pace in the past 3 – 4 years, with share of LNG imports increasing in the overall consumption mix

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



Source: PPAC

Sale by producing companies includes internal consumption

Key developments in Oil & Gas sector during November 2019

- **Guidelines Issued on Marketing of Transport Fuels**

Ministry of Petroleum and Natural (MoPNG) Gas vide Resolution dated 08.11.19 revised the guidelines for authorization to market transportation fuels which have been published in the Gazette of India. The revised guidelines would promote ease of doing business and boost private players including foreign players to invest in retail sector. The said Resolution is available on the website of MoPNG. The main features of the said guidelines are as below:-

I. The resolution applies for marketing of only Motor Spirit and High Speed Diesel for "Bulk" and "Retail" business.
II. An entity desirous of seeking authorization for either retail or bulk must have a minimum net worth of Rs. 250 Crore at the time of making application. In case authorization is required for retail and bulk, minimum net worth will be Rs.500 Crore.
III. Separate applications to be made for retail and Bulk business.
IV. Non-refundable application fee of Rs. 25 lakh is applicable.
V. For retail authorization, an entity has to set up at least 100 retail outlets, out of which 5% should be in the notified remote areas within 5 years of the grant of authorization. An effective mechanism has been prescribed to ensure that the entity delivers on its commitment to set up the ROs in remote areas.
VI. An entity is required to deposit prescribed Bank Guarantee amount as a security at the time of grant of authorization in addition to application fee.

- **Home Minister launches winter-grade diesel suitable for extreme winters of up to -30O Celsius for Ladakh Region**

Union Home Minister Shri Amit Shah presided over a function to launch a special winter-grade diesel, developed by Indian Oil Corporation (Indian Oil), for the high-altitude regions of Ladakh through a video-link on 17th November 2019. Shri Dharmendra Pradhan, Minister of Petroleum & Natural Gas and Steel, and Shri Jamyang Tsering Namgyal, MP of Ladakh were also present on the occasion. Motorists in high-altitude sectors like Ladakh, Kargil, Kaza and Keylong face the problem of freezing of diesel in their vehicles when winter temperatures drop to as low as -30° Celsius. Indian Oil has come up with an innovative solution to this problem by introducing a special winter-grade diesel with a low pour-point of -33° Celsius, which does not lose its fluidity function even in extreme winter conditions.

Speaking on the occasion, Shri Amit Shah congratulated the people of Ladakh for getting their long-pending demand fulfilled, by getting Union Territory status for Ladakh. The new status will accelerate the pace of holistic development of the region and bring prosperity to the people at par with the rest of India. The Home Minister said that the Government of India has initiated a number of development projects for the UT of Ladakh, in the areas of power, solar energy, education and tourism with an estimated investment of Rs. 50,000 Crore. He further said that, keeping in view the special development requirement of the region, the Government of India has made a provision that the budget allocation for the UT of Ladakh will remain non-lapsable, so as to enable the local administration to make full use of these funds as per their development needs. The Home Minister assured the people of UT of Ladakh that they will witness a fast pace of growth and development of the region under the decisive leadership of Honorable Prime Minister, Shri Narendra Modi.

Expressing his happiness at Indian Oil's customer-driven approach, Shri Dharmendra Pradhan said that today is an important day for the people of Ladakh region as they will now get uninterrupted supply of special winter-grade diesel, which will help reduce the hardships faced by the local people for transportation and mobility during the harsh winter months. This will further facilitate the local economy as well as tourism of the region. Shri Pradhan expressed his gratitude to the Home Minister for launching the special winter-grade diesel and facilitating ease of living for the Ladakh region.

- **India will chart its own Course of Energy Transition in a Responsible Manner, says Sh. Dharmendra Pradhan**

Union Minister of Petroleum and Natural Gas & Steel Shri Dharmendra Pradhan said that Global energy system is transforming at an unprecedented pace. Participating in the ENRich 2019 - KPMG India's Annual Energy Conclave here today, the Petroleum Minister said India, too, is in the midst of a major transformative shift in its energy sector. "In India we are finding ways to achieve the twin objectives of more energy and less carbon through a healthy mix of all commercially-viable energy sources. India will chart its own course of energy transition in a responsible manner", the Minister said.

Speaking at the event about sustainable growth, Sh. Dharmendra Pradhan said the centrality of energy growth in a sustainable manner is a high priority of the government. There is unprecedented advancement, on both the demand and supply sides of the equation, as the world and India seek out more benign methods to advance global growth and welfare. He further said the trajectory to end energy poverty in India, as compared to the rest of the world, would be based on special national circumstances. This is more so when the average Indian lives only on a third of the per capita consumption of energy that the United Nations believes is necessary for human well-being.

Talking about India's growing energy needs, the Petroleum Minister said India has a huge appetite for energy, and will be a driver of global energy demand in coming decades. Speaking about Hon'ble Prime Minister Shri Narendra Modi's vision of a $5 Trillion Indian economy, Sh. Pradhan emphasized on both ease of doing business as well as on ease of living. He said that country's economic growth will be driven by heavy investment in infrastructure, digital economy and job creation in small and medium firms.

Talking about reform measures, the Minister said, Government has undertaken several structural reforms in the last 5 years to create business-friendly environment. These reforms include insolvency and bankruptcy code, tax reforms and intellectual property reforms. Hydrocarbon sector has also been overhauled through series of business-friendly policy measures. Reiterating his Government's commitment towards building a gas based economy; Minister Sh. Dharmendra Pradhan further added that Government is making all efforts to move towards a gas-based economy. An estimated investment of 60 billion dollars is lined up in developing gas infrastructure, which includes pipelines, city gas distribution and LNG terminals."

- **No Proposal under Consideration to Make Assessment for Revising the Domestic Prices of Natural Gas Pricing Formula**

At present, no proposal is under consideration of Government to make assessment for revising the domestic natural gas pricing formula notified on October 25th, 2014. The domestic natural gas pricing guidelines, 2014 were approved by the Government after detailed deliberation, including Rangarajan Committee Report and Report of Committee of Secretaries on this subject matter and inter-ministerial consultation. The domestic natural gas pricing guidelines, 2014 is formula based and has been worked out considering the volumes and prices prevailing at major international markets such as Henry Hub, National Balancing Point, Alberta and Russia. The formula has been finalized considering the requirements of producing and consuming sectors, and had tried to make a fine balance between their interests. The prices are notified every six month in accordance with said guidelines.

To incentivize additional production of natural gas, Government vide Notification dated March 21st, 2016 granted marketing including pricing freedom on natural gas produced from Deep water, Ultra deep water and High Pressure-High Temperature areas subject to ceiling price based on landed price of alternate fuels. Further, Government has also granted marketing and pricing freedom for sale of natural gas under Discovered Small Field Policy, Hydrocarbon Exploration and Licensing Policy and Coal Bed Methane (CBM) contracts. In addition, Government vide Notification dated February 28th, 2019 granted marketing and pricing freedom to those new gas discoveries whose Field Development Plan (FDP) will be approved for the first time after the Notification.

- **Shri Dharmendra Pradhan inaugurated the India Pavilion at the ADIPEC**

Union Minister of Petroleum & Natural Gas and Steel Shri Dharmendra Pradhan today inaugurated the India Pavilion at the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) on 11th November. The India Pavilion has been set up by 9 Indian Oil & Gas companies from the upstream, midstream, downstream and engineering segments, along with Federation of Indian Petroleum Industry (FIPI).

Inaugurating the exhibition, Shri Pradhan said India has a huge appetite for energy, and will be a driver of global energy demand in coming decades. In fact, oil and gas would continue to play a critical role in meeting our energy requirement, in coming two decades even as we adapt renewable energy. He said "Our focus is to attract global investments into the oil and gas sector, as India would invest 100 billion dollars by 2024 in refining, pipelines and gas terminals. There is no better place to invest if you are in the business of energy. Political stability, predictable policies and a huge diverse market make India an attractive investment destination for global investors. We have recently liberalized the entry norms for fuel retailing which has paved way for entry of new players in the fuel retailing space and enhancing competition."

At the ADIPEC inaugural global discussion in Abu Dhabi, Shri Pradhan said that we are working to make PM Modi's vision to make India a gas based economy and working for a cleaner and greener environment. "For this we will be working on investing in gas based infrastructure like increase in CGD and PNG network and gas based industries." He said that Global energy transition is driven by Asia becoming the center of energy consumption, greater availability of LNG, greater promise of energy independence through renewables including solar and wind energy, emergence of US a leading hydrocarbons exporter and the urgency to meet COP 21 Paris climate commitments.

Research, analysis & compilation by:

Economic Policy & Planning Team - FIPI

Email: prai@fipi.org.in, Kaushiki@fipi.org.in

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