FIPI

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Special Edition: Budget Highlights 2019

Policy & Economic Report - Oil & Gas Market

Federation of Indian Petroleum Industry (FIPI)

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Table of Contents

Policy & Economic report – Oil & Gas market

Economy in Focus

World economy threatened

The imminent downturn makes one reminisce about the mess that 1990-91 was. A buffet of downturns, the recession was a result of a multiple causes – from the troubles of savings and loan institutions, to a glut of office buildings, to falling military spending at the end of the Cold War. While the subsequent ones have had one big cause either a huge housing and debt bubble or the bursting of a bubble in technology stocks and investment, the next big bag of trouble according to Nobel laureate, Paul Krugman has four distinct threats to the world economy.

The day of reckoning for China seems to be around the corner. The fundamentals of China are highly unbalanced, with too much investment and too little consumer spending. While the government has repeatedly been able to steer it away by increasing construction and making credit ultra-easy, this time things look grim looking at Chinese manufacturing. The biggest problem is that doldrums in China will have worldwide repercussions. The first to be impacted, ironically will be the US, with its farmers and energy producers getting impacted since China is a huge buyer of its soybeans and oil.

Recent data in Europe looks ugly, with uncertainty surrounding Brexit and Italy's slow-motion crisis. The run of good luck arising from recovery from the euro crisis seems to be fast getting over.

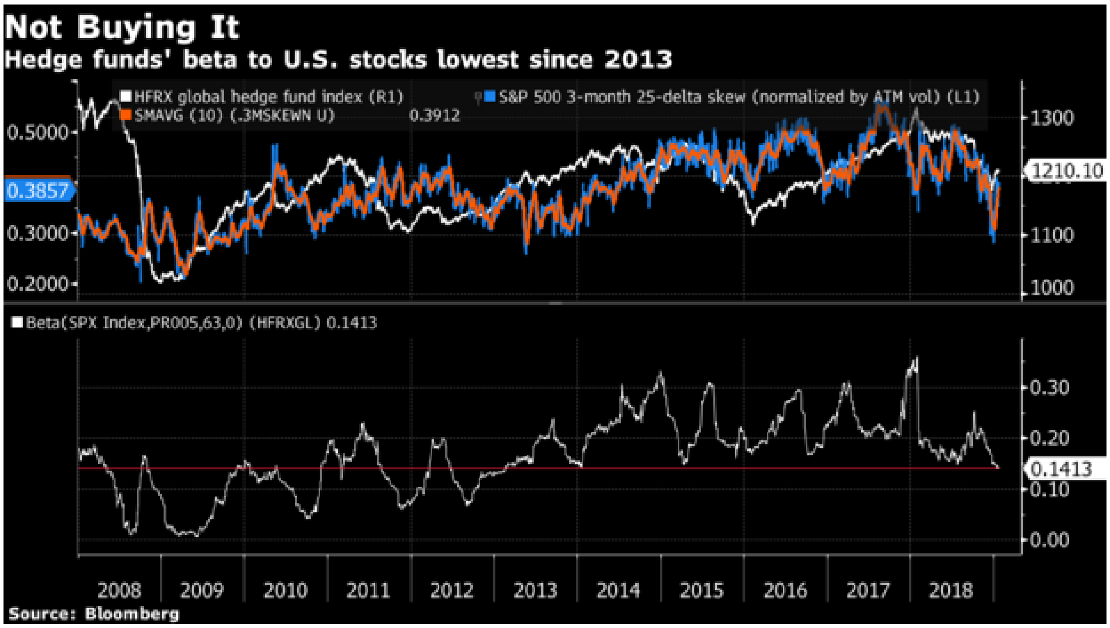
Gone are the days when the world invested heavily, believing that protectionism was a thing of the past. The advent of Trump politics has not only seen imposition of high tariffs but also a willingness to violate existing trade agreements. Quite obviously, this has a huge depressing economic effect.

The shutdown has not only resulted in federal workers not getting paid, but also the contractors, who will never get reimbursed for their losses, the food stamp recipients who will be cut off if the stalemate goes on. While conventional cost estimates of the shutdown are low, what they don't take into account is the impact that the disruption of non-functioning government has on everyday life.

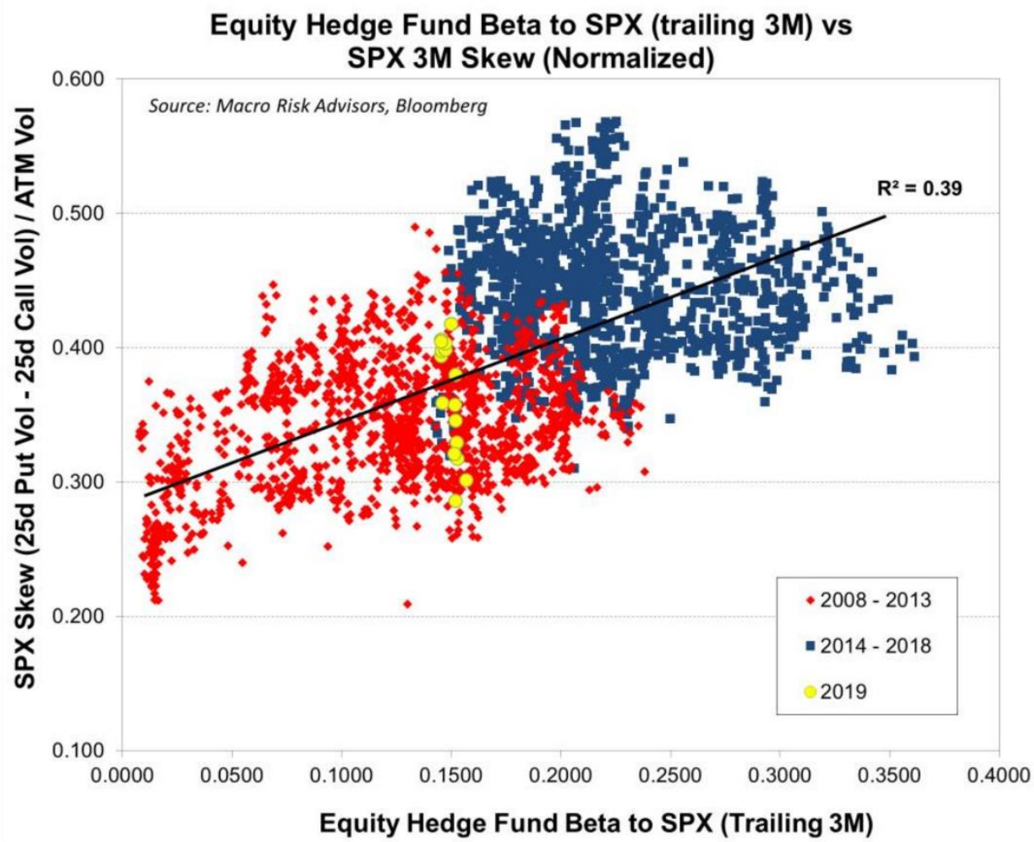
The risks are clearly rising and the conditions for a slump are definitely in place.

Hedge funds seem to think we are already in the midst of financial crisis

Big money managers seem to be behaving in a manner similar to the aftermath of the 2008 financial crisis than the relatively low-volatility environment that's dominated for most of the past five years. Risk aversion can be clearly gauged from the combination of hedge fund's implied equity exposure to the S&P 500 Index and associated trends in the options.



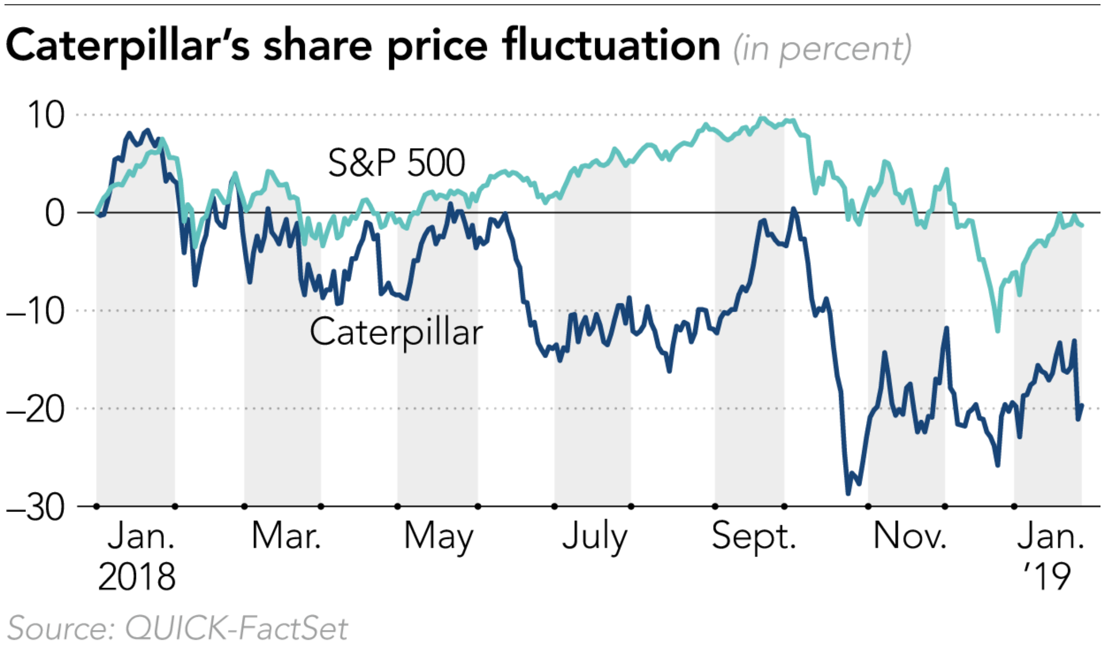
There seem to be two likely explanations for this phenomenon - Hedge funds are adding more to their short rather than long books, meaning more calls rather than puts or the fact that since they are not loading up on long positions in U.S. equities.



Currently, the equity exposure for hedge market is more congruous with the 2008-2013 market regime than the 2014-2018 bull market.

Bad news in spates of three?

With China recording its slowest growth rate since 1990, Caterpillar, Intel and Nvidia are suddenly flash corporate warning signs. As stated by Ed Yardeni, president of Yardeni Research, "Cat is a bellwether of global economic activity," and its latest earnings are a confirmation to the fact that global economy is indeed slowing down.



With Intel's worrying forecasts of flat 2019 revenues and profit margins and Nvidia's eye-popping 19% slashed cash-flows in the last three months of 2018, a week after Apple's downgrade, weaker earnings cycle seems to be imminent.

Caterpillar's woes, however indicate a much larger challenge – that of Asia's largest economy losing its capacity to stimulate economic growth. The financial markets signal that China's growth model is unravelling. The construction activity that began on the President Hu Jintao's watch post the 2008 shock saw unheard of cities like Fuzhou, Wuhan and Changchun abuzz with port, bridge and other building projects, enabling China to grow 8.7% in 2009 and more than 10% in 2010. Since President Xi Jinping's accession to power, the growth has moderated due to diminishing returns, a phenomenon that affects all mature economies.

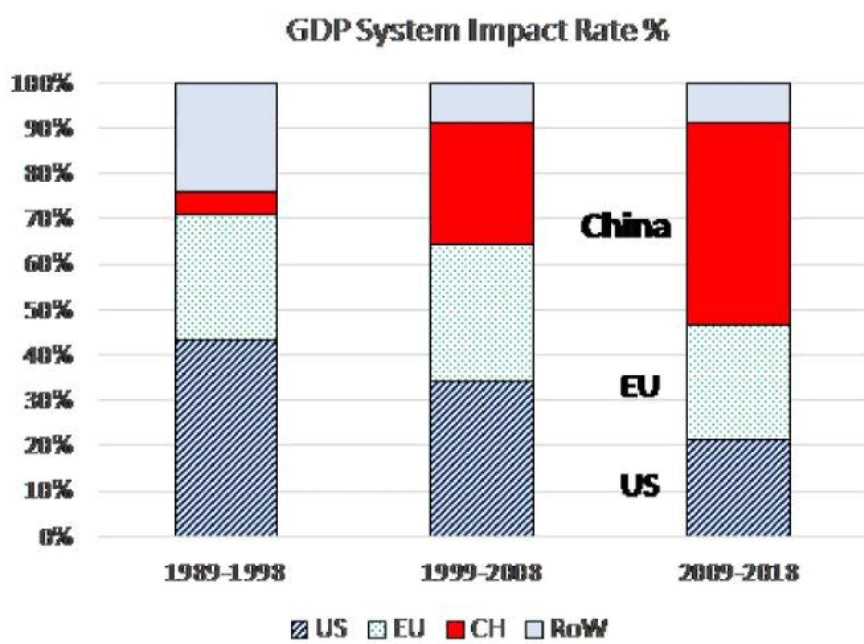
The "America First" Presidency shifted the economic advantage back in the direction of the US. President Xi plans to battle economic gravity are equivalent to 3% of GDP as compared to Hu's plans post 2008 which amounted to 13% of gross domestic product.

Three significant reasons seem to explain as to why President Xi may be lowering his sights, namely, China's mounting debts to the tune of $34 trillion pile of public and private debt which roughly makes it 266% of GDP versus 162% prior to the Lehman crisis; the deleveraging drive launched in 2013 to prove it is implementing its market liberalization pledges which resulted in regulators clamping down on shadow banking thus increasing the impact of economy's trade war downshift; and dampening confidence in old school stimulus especially when inspite of construction activity growing by 6.1% in the fourth quarter from a year ago, the GDP growth has still slowed. With time the GDP boost from major rail projects and six-lane highways, dams, municipal cultural centers, international airports and white-elephant enterprises will wane and hoisting GDP will require much bigger doses of stimulus.

With an 8% drop in Caterpillar's overall Asia-Pacific region sales in the fourth quarter and the 9.1% plunge in Caterpillar shares, it seems that better growth prospects and higher productivity may lie in tapping the private sector.

The Second Sun

Gone seem to be the days, when US was the only sun of the global economy and the rest of the world revolved around it, thereby being influenced by the policy decision of the US economy. A new sun has emerged. China has proved not only big enough, but also with strong economic linkages to influence other economies. This fact has recently been ratified by the gravitational pull felt by Caterpillar and Nvidia. Apparently, China's influence on the world is now as sizable as the combined influence of the US and EU. This shift occurred during the 2008 crisis when US's impact on average global GDP shrunk from just over 40 per cent between 1989-98 to half that between 2009-18.



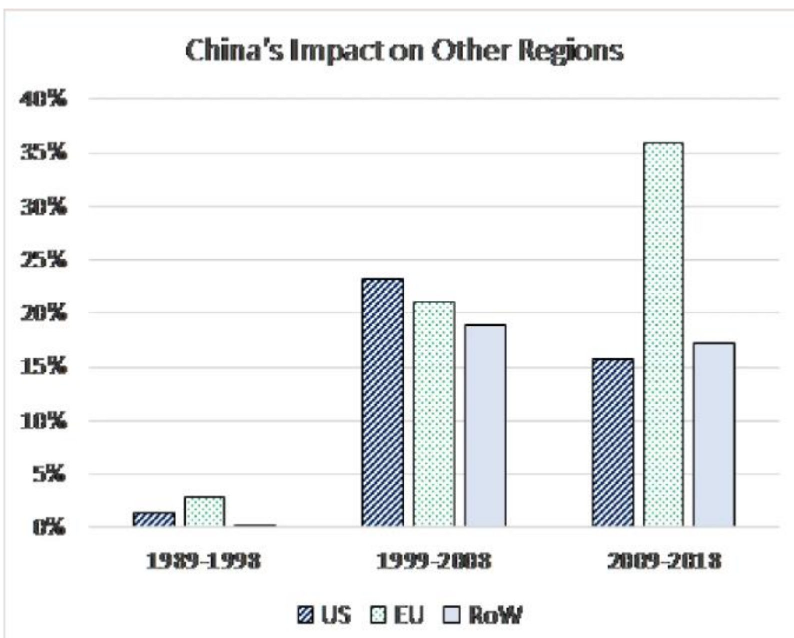
Source: Eurizon SLJ Asset Management

To add to this, last decade saw a $9tn expansion of China's GDP in dollar terms which has outstripped that of the US and EU, which grew $7tn and $2tn respectively over the same period.

Recent reading of China’s industrial reports indicates dire straits for the economy.

Source: Eurizon SLJ Asset Management

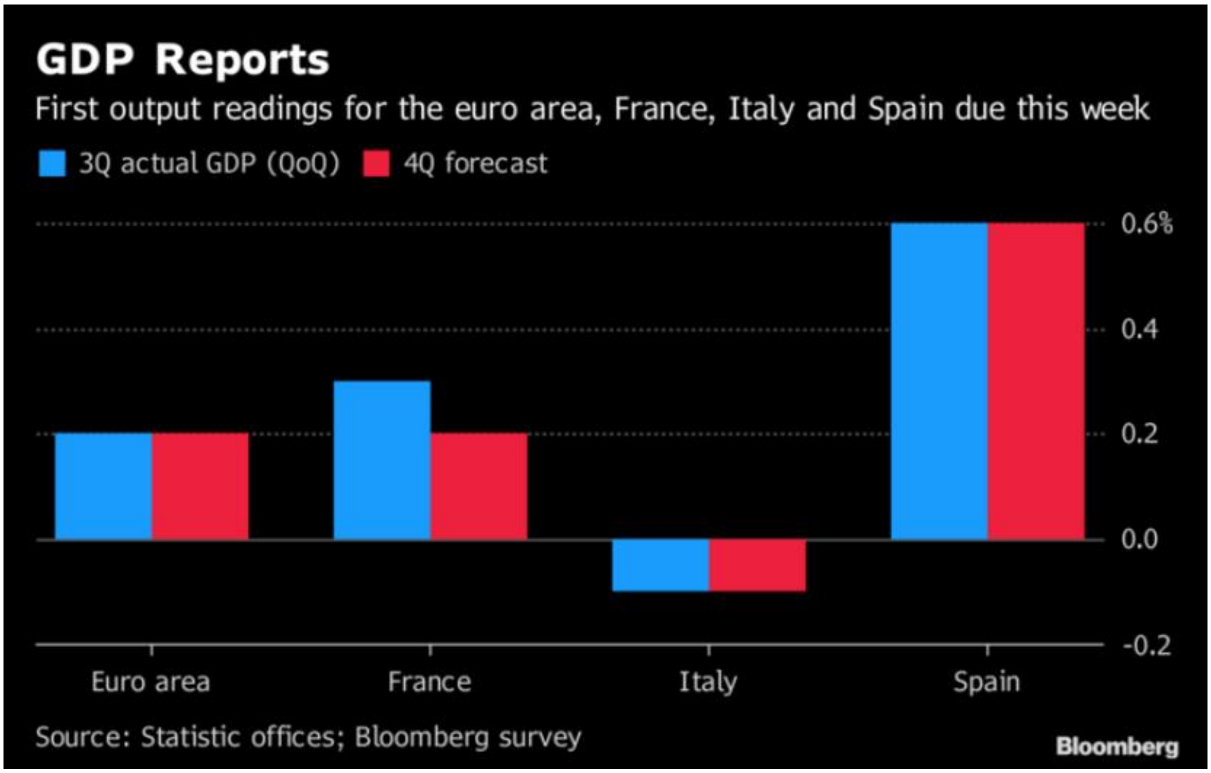
Europe seems to be bearing most of the brunt for whatever happens in China so much so that it is believed that if China can rescue the EU economically, so too can it drag the region down with it.



Source: Eurizon SLJ Asset Management

Europe: A deluge of numbers

Economists have very little to work with considering the recession in Italy, a manufacturing slump in Germany and a further decline in confidence in the outlook for the euro area.



Inspite of drop in business sentiment, the euro rose last week and this could be perhaps due to the fact that the investors have already realized that any hopes of ECB increasing interest rates this year have now faded.

Glimpses of key Budgets of India

The First Budget of India

Prepared for the period of seven and a half months, it was the first Budget wherein it was decided that both India and Pakistan would have the same currency till September 1948.

The Budget of 1951

Recognised in history, as it laid down the proposal for the creation of the Planning Commission.

The Budget of 1957

Introduction of several new measures, like bringing import licensing system, which put severe restrictions on imports, bringing wealth tax and tax on expenditure and raising the excise rate up to 400 per cent etc.

The Budget of 1973

Labelled as the 'Black budget', it is known for the huge deficit of 550 crores. This budget was subjected to criticism as it provided Rs 56 crore for the nationalisation of the general insurance companies, Indian Copper Corp and coal mines.

Interim budget of 1991

Landmark announcements regarding India's first policy on disinvestment. In the interim Budget, the central government said it would disinvest up to 20 per cent of its equity in a few state-owned firms with an aim to raise Rs 2,500 crore in 1991-92.

Budget of 1991-92

Opened new vistas for the India economy by opening it for foreign investors via removing trade barriers. The budget is known to put India on the path of increased growth trajectory.

Budget of 1997-98

Aimed at curbing the black money and widening the tax net this budget relaxed the income tax rates and lowered the customs duties, removal of the surcharge on corporate taxes, and reduced corporate tax rates etc. Besides, This budget is also recalled for bringing the Voluntary Disclosure of Income Scheme.

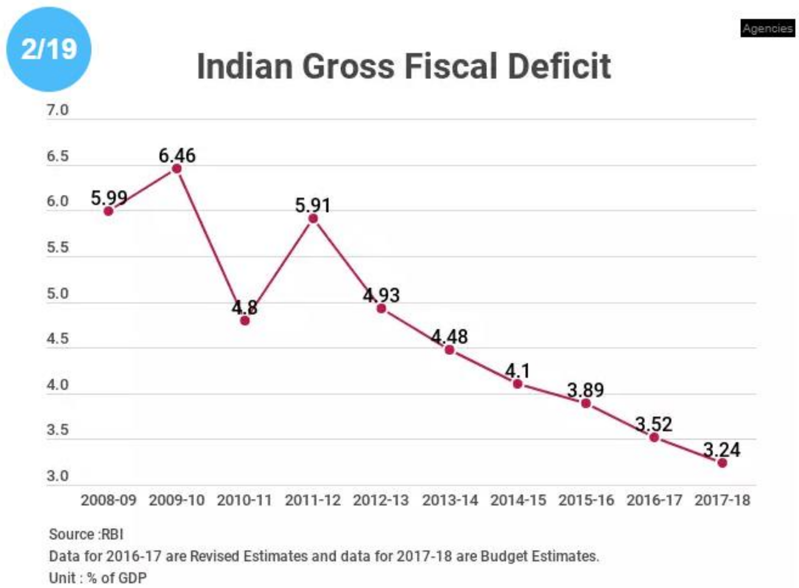
Union Budget of 2000-01

Announcement IOF reduction in customs duties for the raw materials needed for the production of the optical fiber by 10 per cent, in case of mobile phones by per cent; thus facilitating the emergence of India as a technological hub.

A Ready Reckoner of the Indian Economy

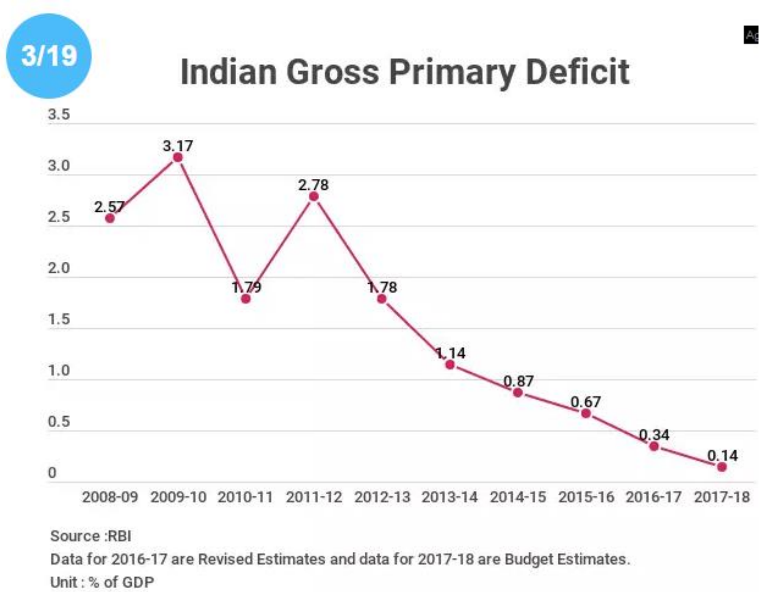
Gross Fiscal Deficit

The gross fiscal deficit is the excess of total expenditure including loans net of recovery over revenue receipts (including external grants) and non-debt capital receipts.



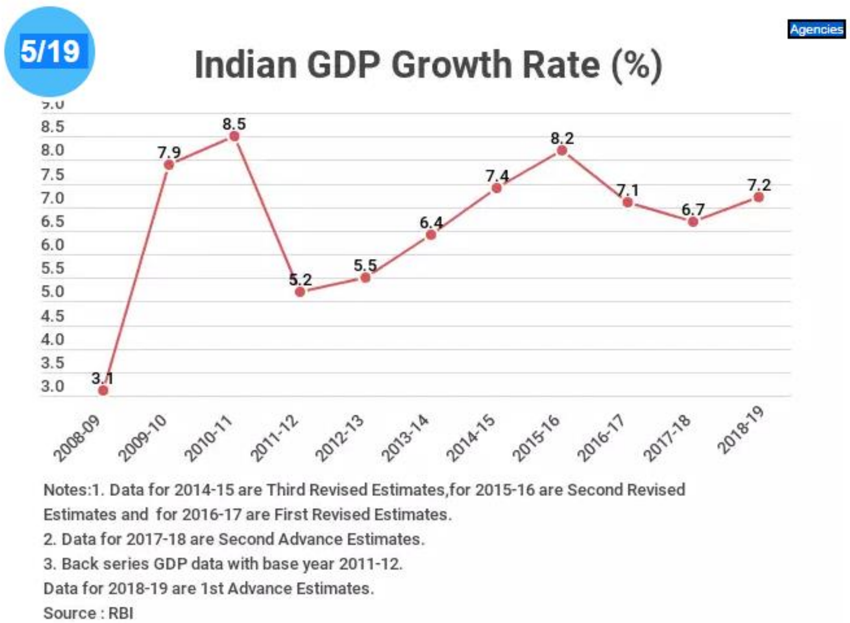
Gross Primary Deficit

Gross Primary Deficit is Gross Fiscal Deficit less interest payments. Net Primary Deficit is Net Fiscal Deficit minus net interest payments. A shrinking primary deficit indicates progress towards fiscal health.



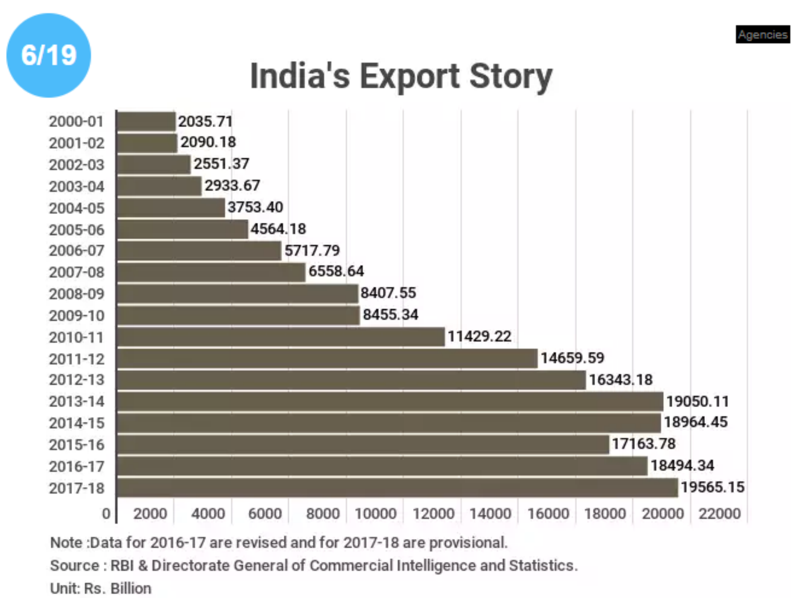
GDP Growth Rate

GDP is the final value of the goods and services produced within the geographic boundaries of a country during a specified period of time, normally a year. GDP growth rate is an important indicator of the economic performance of a country. In India, contributions to GDP are mainly divided into 3 broad sectors - agriculture and allied services, industry and service sector.



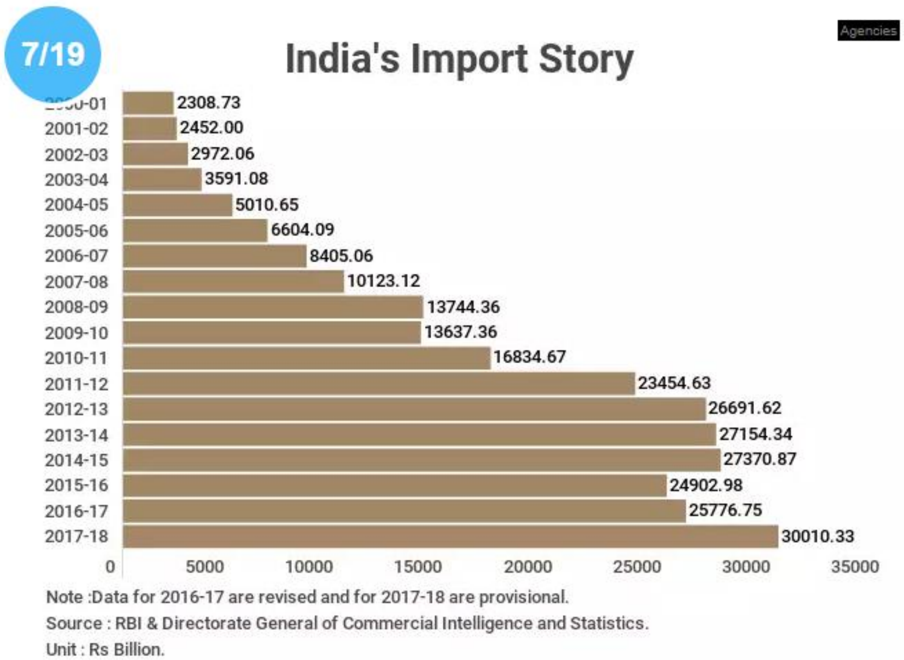
Exports

Exports refers to sale of goods and services beyond the boundaries of one's home country.



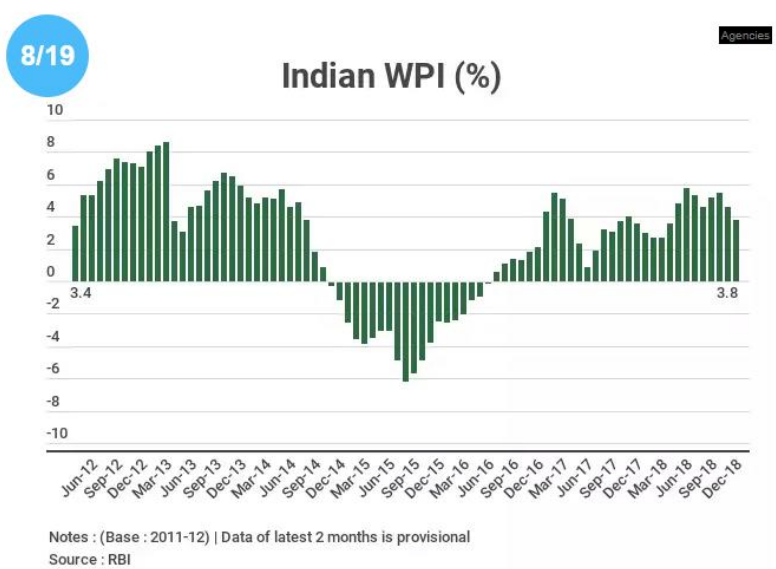
Imports

Imports refers to buying goods and services not manufactured or produced in one's home country but procured from a foreign country.



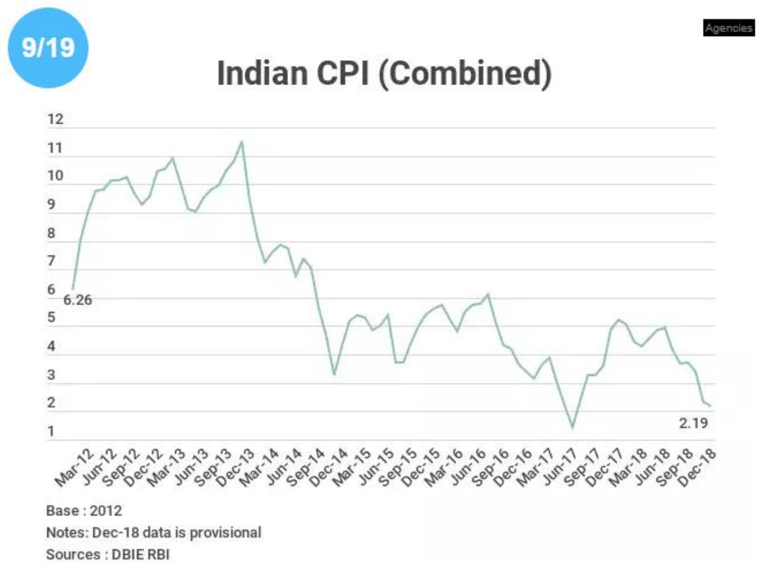
Wholesale Price Index-based Inflation

Wholesale Price Index (WPI) represents the price of goods at a wholesale stage i.e. goods that are sold in bulk and traded between organisations instead of consumers. WPI is used as a measure of inflation in India. Inflation rate is the difference between WPI calculated at the beginning and the end of a year.



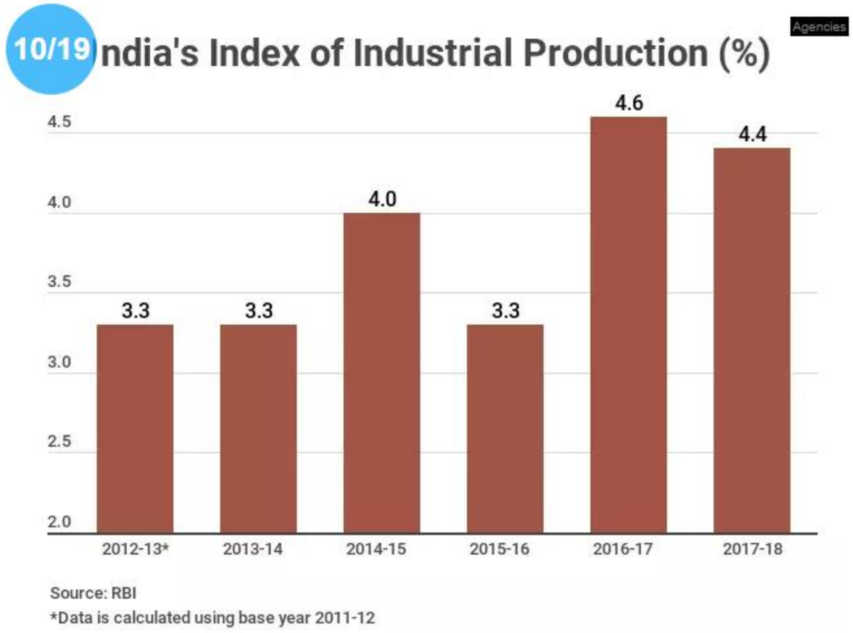
Consumer Price Index (Combined)-based Inflation

A comprehensive measure used for estimation of price changes in a basket of goods and services representative of consumption expenditure in an economy is called consumer price index. It has various categories and sub-categories for classifying consumption items and on the basis of consumer categories like urban or rural. It is one of the most important statistics for an economy and is generally based on the weighted average of the prices of commodities.



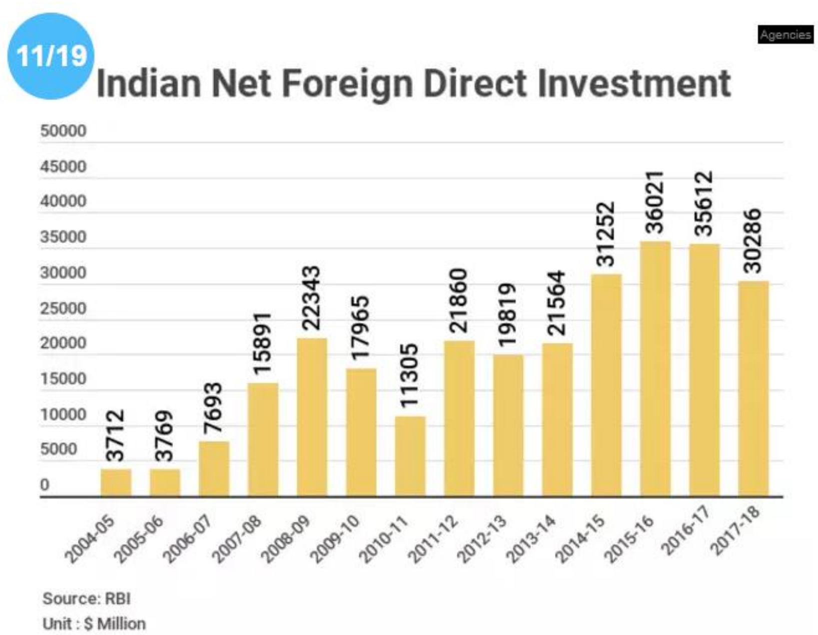
Index of Industrial Production

The Index of Industrial Production (IIP) is an index which shows the growth rates in different industry groups of the economy in a stipulated period of time. IIP is a composite indicator that measures the growth rate of industry groups classified under, 1. Broad sectors, namely, Mining, Manufacturing and Electricity 2. Use-based sectors, namely Basic Goods, Capital Goods and Intermediate Goods.



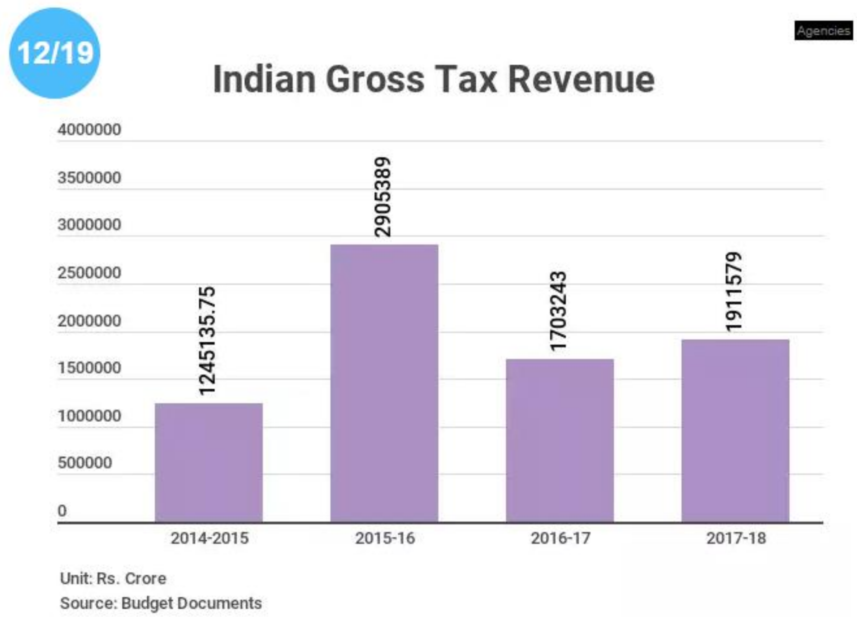
Net Foreign Direct Investment

As per RBI, foreign investment is considered as foreign direct investment (FDI) if the investment is made in equity shares, fully and mandatorily convertible preference shares and fully and mandatorily convertible debentures. In India, foreign direct investment can be done via two routes namely - Automatic route requiring no prior approvals subject to exceptions and Approval route requiring mandatory prior approval of Foreign Investment Promotion Board (FIPB), Department of Economic Affairs, Ministry of Finance.



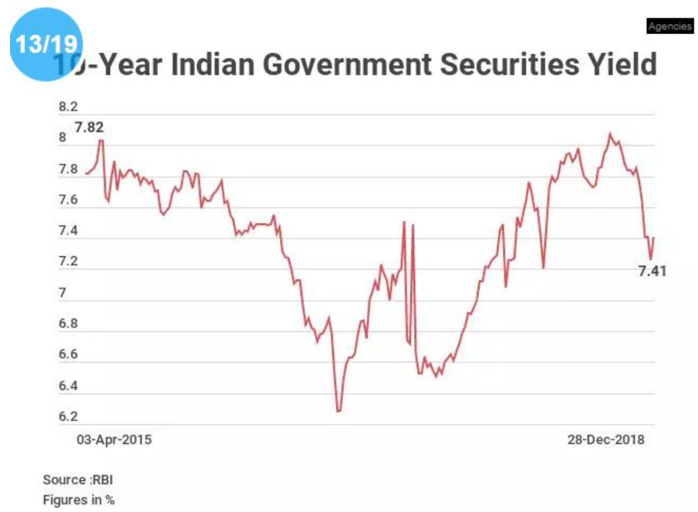
Gross Tax Revenue

Tax Revenue forms part of the Receipt Budget, which in turn is a part of the Annual Financial Statement of the Union Budget. It gives a detailed report on revenue collected from different items like corporation tax, income tax, wealth tax, customs, union excise, service, taxes on Union Territories like land revenue, stamp registration etc. Taxes collected from both direct and indirect tax are considered in Tax Revenue.



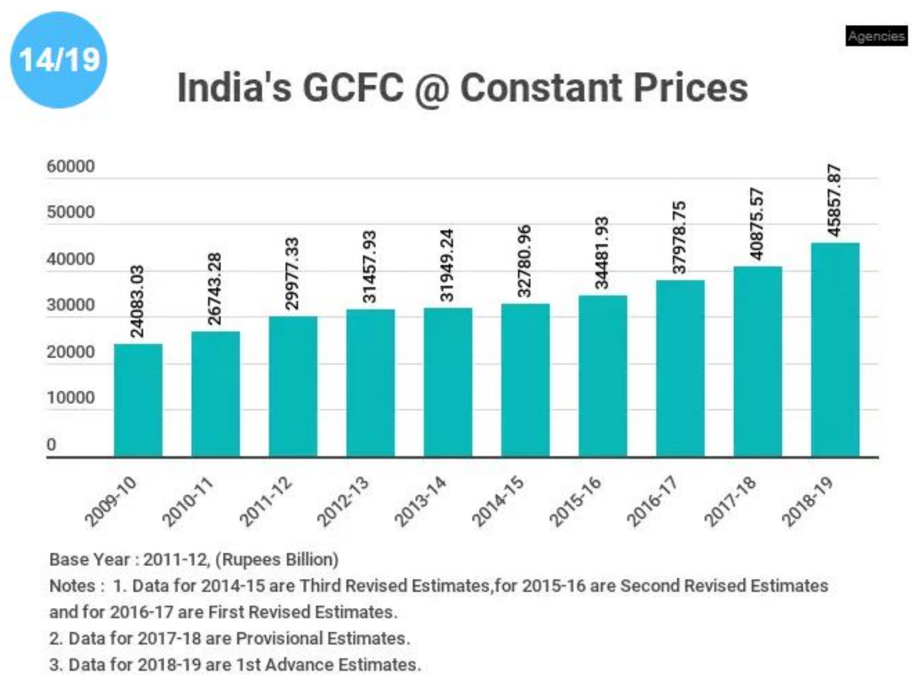
10-Year Government Securities Yield

Benchmark government bond is a debt security issued by the Central government with a residual maturity of 10 years. This bond is backed by sovereign guarantee. Hence investors don't face any default risk. At the maturity of one benchmark sovereign bond, another one with the same residual maturity is issued by the Central government. The coupon rate is decided by way of auction. This bond has the highest liquidity amongst similar maturity bonds.



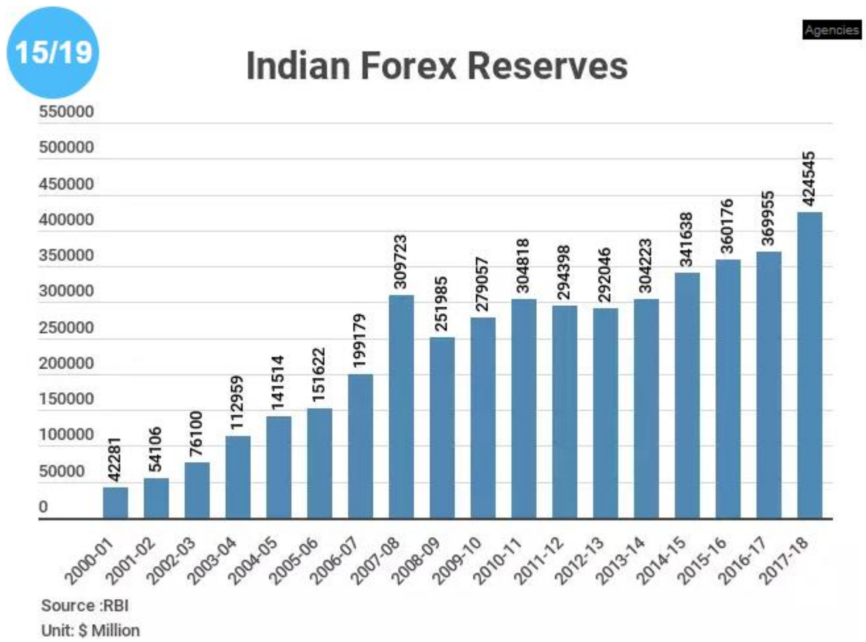
Gross Fixed Capital Formation (Constant Prices)

As per RBI, Gross capital formation refers to the 'aggregate of gross additions to fixed assets (that is fixed capital formation) plus change in stocks during the counting period.' Fixed asset refers to the construction, machinery and equipment.



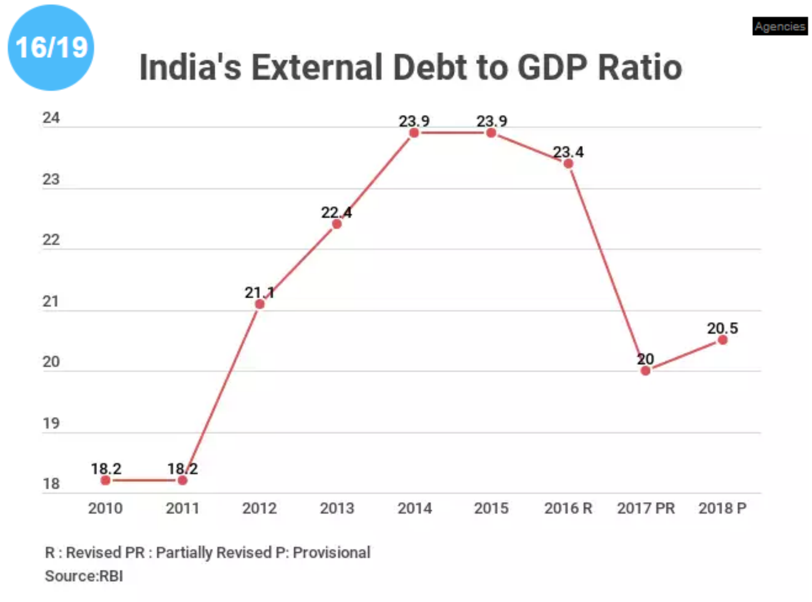
Foreign Exchange Reserves

Forex reserves are foreign currency assets held by the central banks of countries. These assets include foreign marketable securities, monetary gold, special drawing rights (SDRs) and reserve position in the IMF. The main purpose of holding foreign exchange reserves is to make international payments and hedge against exchange rate risks.



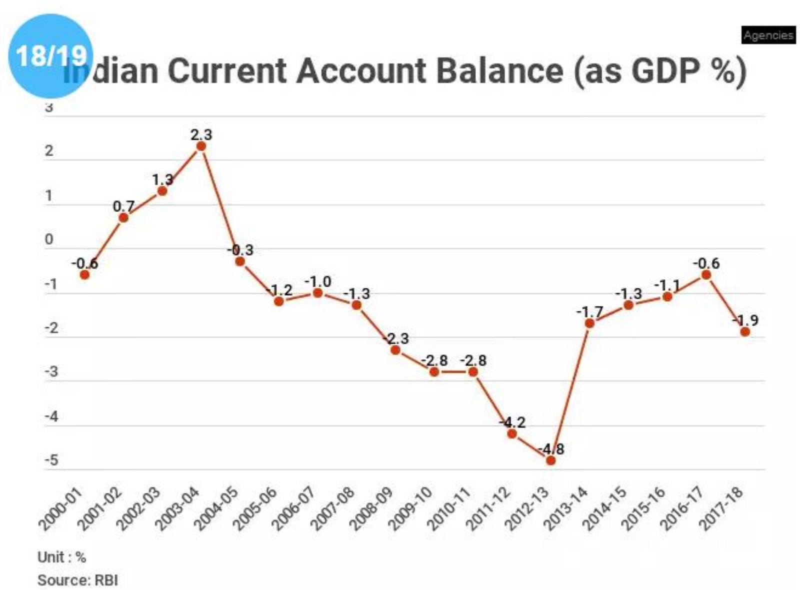
External Debt to GDP Ratio

External debt can be obtained from foreign commercial banks, international financial institutions like IMF, World Bank, ADB etc and from the government of foreign nations. Government and corporations are eligible to raise loans from abroad. These are in the form of external commercial borrowings. The interest rate on foreign loans is linked to LIBOR (London Interbank Offer rate) and the actual rate will be LIBOR plus applicable spread, depending upon the credit rating of the borrower.



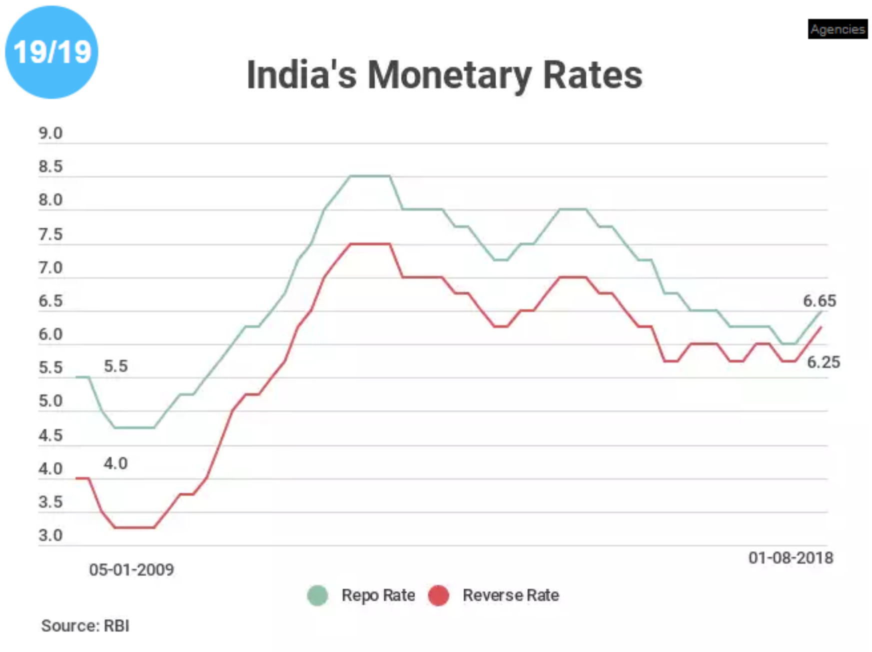
Current Account Balance/GDP

Current Account Balance refers to balance of trade of goods and services plus net income and transfers from abroad. There are three main components of current account – Trade of goods and services, Net Income from abroad and Net transfers from abroad. If the export of goods and services is more than imports, the country has trade surplus whereas if the imports are more than exports, the country is said to have trade deficit.



Repo and Reverse Repo Rates

Repo rate is the rate at which the Reserve Bank of India lends money to commercial banks in the event of any shortfall of funds. Repo rate is used by monetary authorities to control inflation. The central bank takes the contrary position in the event of a fall in inflationary pressures. Repo and reverse repo rates form a part of the liquidity adjustment facility.



Highlights of Budget 2019

DEFICIT/GROWTH

1. Fiscal deficit for 2018/19 seen at 3.4 percent of GDP
2. Fiscal deficit for 2019/20 estimated at 3.4 percent of GDP
3. Fiscal deficit for 2020/21 seen at 3 percent of GDP

India's current account deficit for 2018/19 seen at 2.5 pct of GDP

Debt to GDP ratio to be brought down to 40 percent by 2024/25

Source: Reuters

EXPENDITURE

Total expenditure in 2019/20 budgeted at 27.84 trillion rupees

Capital expenditure for 2019/20 seen around 3.36 trillion rupees in centrally sponsored schemes

Defence budget raised to beyond 3 trillion rupees in 2019/20

To allocate 645.87 billion rupees for railways capital expenditure in 2019/20

Allocation to India's northeast region proposed to be increased by 21 percent over previous fiscal year

Source: Reuters

FARMING/RURAL AFFAIRS

India to allocate 750 billion rupees ($10.56 billion) per year to support farmers' incomes	Impact of 200 billion rupees in current fiscal year
Vulnerable farmers to receive 6,000 rupees per year under new scheme	Farmers affected by natural disasters to receive 2 percent interest subvention, additional 3 percent if they repay loans on time
Government to provide 2 percent interest subvention for farmers pursuing animal husbandry, fisheries	India to allocate 190 billion rupees for construction of rural roads in 2019/20

Source: Reuters

EMPLOYMENT

- India to launch social security coverage for workers in unorganised sector
- New scheme to provide assured monthly pension of 3000 rupees per month, with contribution of 100 rupees per month, for workers in unorganised sector after 60 years of age
- Scheme will benefit 100 million workers in unorganised sector, may become the world's biggest pension scheme for unorganized sector in five years - Goyal
- Government to allocate 600 billion rupees for a rural employment scheme in 2019/20

Source: Reuters

TAXATION/BANKING

- Income tax exemption limit raised to 500,000 rupees in 2019/20
- Benefit of rollover of capital tax gains to be increased from investment in one residential house to that in two residential houses, for a taxpayer having capital gains up to 20 million rupees; can be exercised once in a lifetime
- Gross market borrowing seen at 7.04 trillion rupees in 2019/20 - traders citing agencies
- Average monthly tax collection at 971 billion rupees per month so far this year
- Small and medium-sized businesses registered under the Goods and Services Tax to get 2 percent interest subvention on loan of 10 million rupees - finance minister
- Goyal says expects other banks on the central bank's Prompt Corrective Action list to be removed soon

Source: Reuters

Indian GDP growth pushed to 7.2 % in 2018-19

Improvement in the performance of agriculture and manufacturing sectors is expected to hike growth rate to 7.2 per cent in 2018-19, according to Central Statistics Office (CSO).

Real GVA (Gross Value Added) is anticipated to grow at 7 per cent in the current fiscal as against 6.5 per cent in 2017-18. The expansion in activities in agriculture, forestry and fishing is likely to increase to 3.8 per cent in the current fiscal from 3.4 per cent in the preceding year. The growth of the manufacturing sector is expected to accelerate to 8.3 per cent this fiscal, up from 5.7 per cent in 2017-18. However, the mining and quarrying sector growth rate is estimated to decline from 2.9 per cent in 2017-18 to 0.8 per cent in current fiscal. Trade, hotels, transport, communication and services related to broadcasting will too witness deceleration to 6.9 per cent from 8 per cent in the previous fiscal.

According to the CSO estimates, the per capita net national income during 2018-19 will be Rs 1,25,397, showing a rise of 11.1 per cent as compared to Rs 1,12,835 during 2017-18 with the growth rate of 8.6 per cent.

In terms of GDP, the rates of the GFCF at Current and Constant (2011-12) prices during 2018-19 are estimated at 29.5 per cent and 32.9 per cent, respectively, as against the corresponding rates of 28.5 per cent and 31.4 per cent, respectively in 2017-18.

Unemployment Rate Highest In 45 Years

According to National Sample Survey Office's (NSSO's) periodic labour force survey (PLFS), the country's unemployment rate was at a 45-year-high of 6.1 per cent in 2017-18. The report says in 2011-12, the unemployment rate stood at 2.2 per cent and youth unemployment is at "astronomically high" levels of 13 to 27 per cent.

Joblessness was recorded to be higher in urban areas (7.8 per cent) than in the rural areas (5.3 per cent). To add to existing woes, it seems that more people are withdrawing from the workforce as the labour force participation rate is lower than in the previous years.

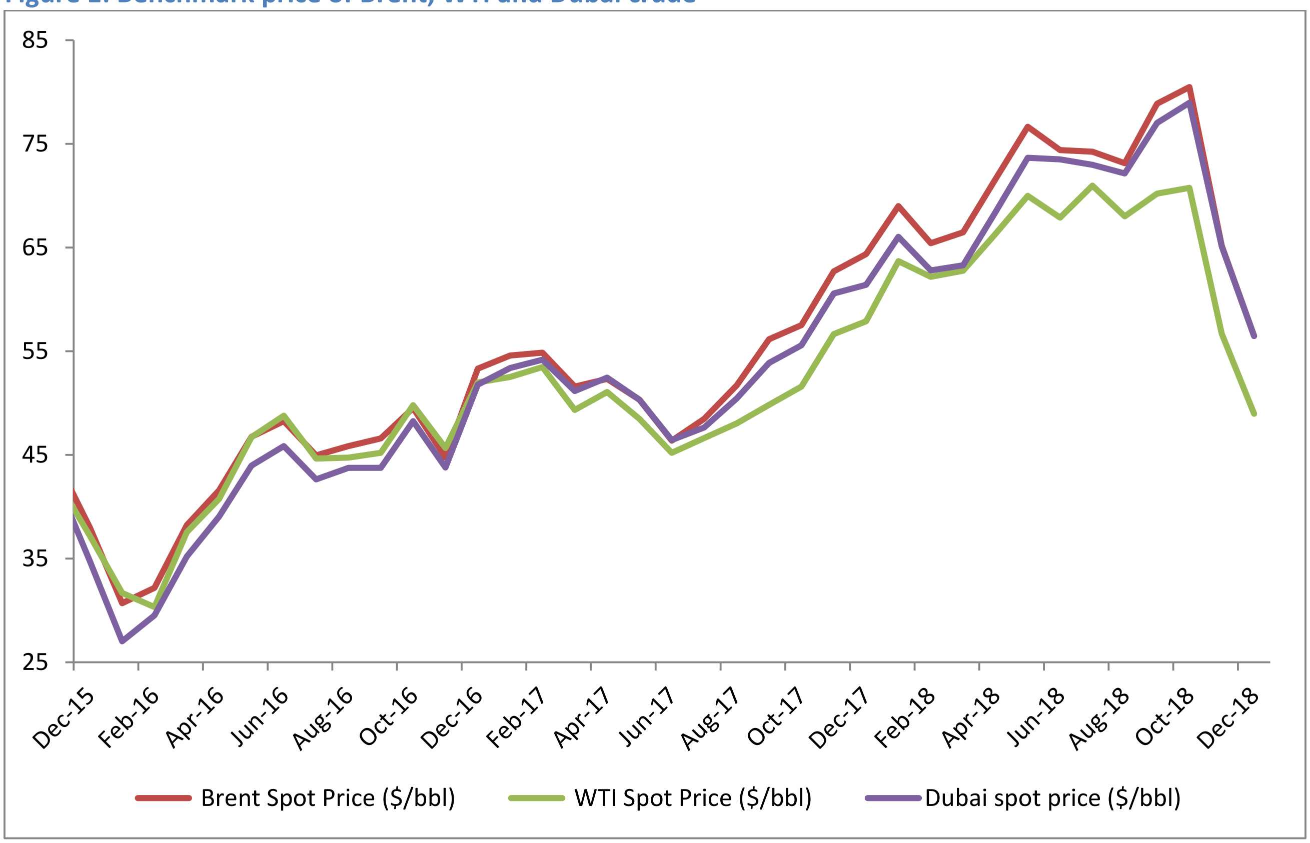
Oil & Gas Market

Crude oil price

In December, oil prices slid down further on the account of market being oversupplied and softening oil demand. Crude prices in December were the lowest since October 2017. In December, OPEC and allies agreed to cut oil production by 1.2 million barrels per day to boost the market. As per the deal made, OPEC members will reduce their current output by 800,000 bpd while Russian and the allied producers will contribute a 400,000 bpd production cut.

Reports of swelling inventories, heightened concerns of oversupply, forecasts of record U.S and Russian output, higher U.S interest rates, the U.S-China trade dispute and worries over the global economic growth are few other reasons that attributed to price fall. Brent, WTI and Dubai basket crude prices declined by around 13.4%, 13.6% and 13.3 % respectively from the prices at start of the month.

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



Source: WORLD BANK

- Brent crude price averaged $56.47 per bbl in December 2018, and was down 13.4% and 12.3% on a month on month (MoM) and year on year (YoY) basis, respectively.

- WTI crude price averaged $48.95 per bbl in December 2018, and was down 13.6% and 15.4% on a month on month (MoM) and year on year (YoY) basis, respectively.
- Dubai crude price averaged $56.47 per bbl in December 2018, and was down 13.3% and 8.0% on a month on month (MoM) and year on year (YoY) basis, respectively.

Table 1: Crude oil price in December, 2018

Crude oil	Price ($/bbl) in December 2018	MoM (%) change	YoY (%) change
Brent	56.46	-13.4%	-12.3%
WTI	48.95	-13.6%	-15.4%
Dubai	56.47	-13.3%	-8.0%

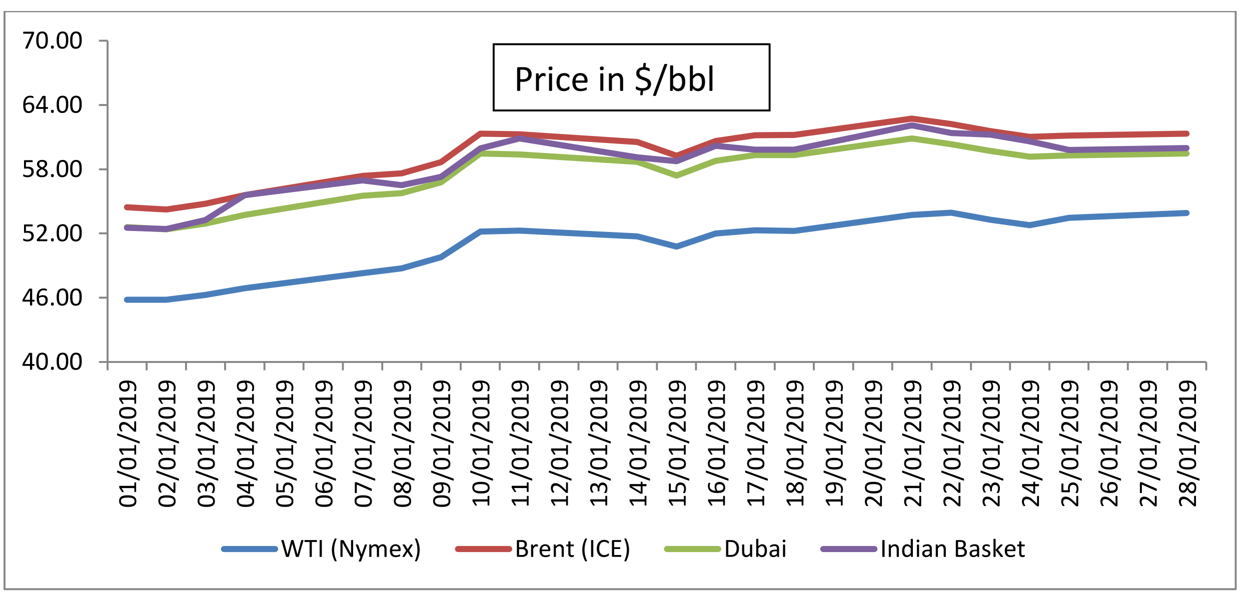
Source: WORLD BANK

Crude oil prices stabilize in January 2019

First fortnight of the January saw the crude price climb by 15 % gradually as the confidence over the global market grew along with the willingness of OPEC plus allies to adhere to its production cut agreement. In the second half of January, crude price continued to rally on the shrinking U.S commercial crude supplies and implementation of production cut by Russia.

Despite crude prices attaining stability in January, fears of global economic slowdown still looms causing the uncertainty over the crude price. Average Brent, WTI and Dubai basket crude prices went up by around 2.06 %, 2.77 % and 2.16 % respectively from the prices in the month of December.

Figure 2: Crude oil price in January 2019

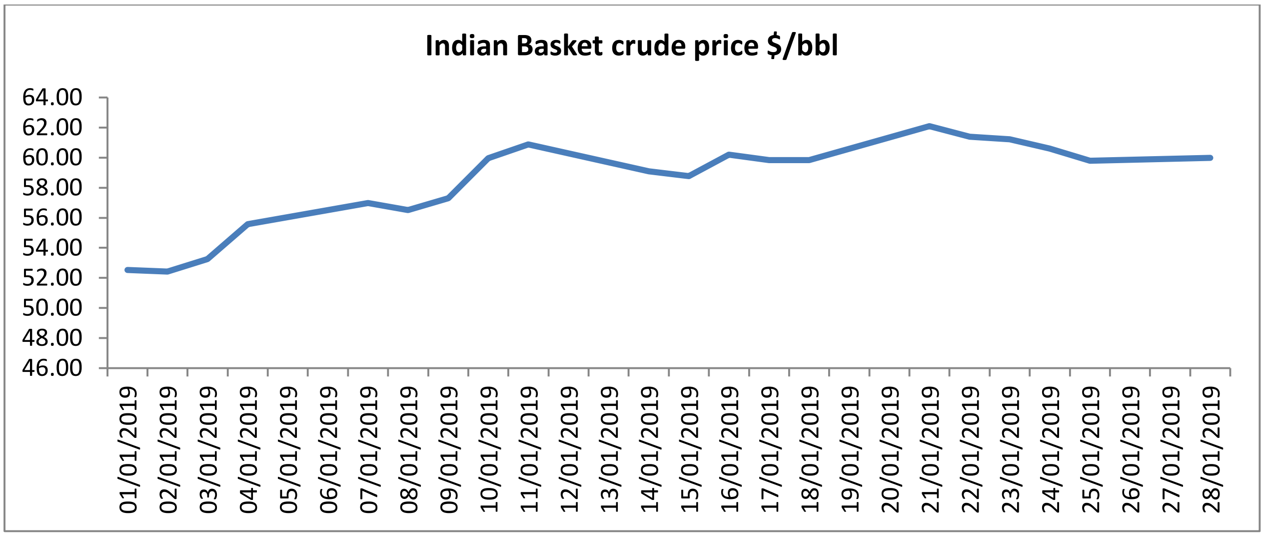


Source: EIA, PPAC

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

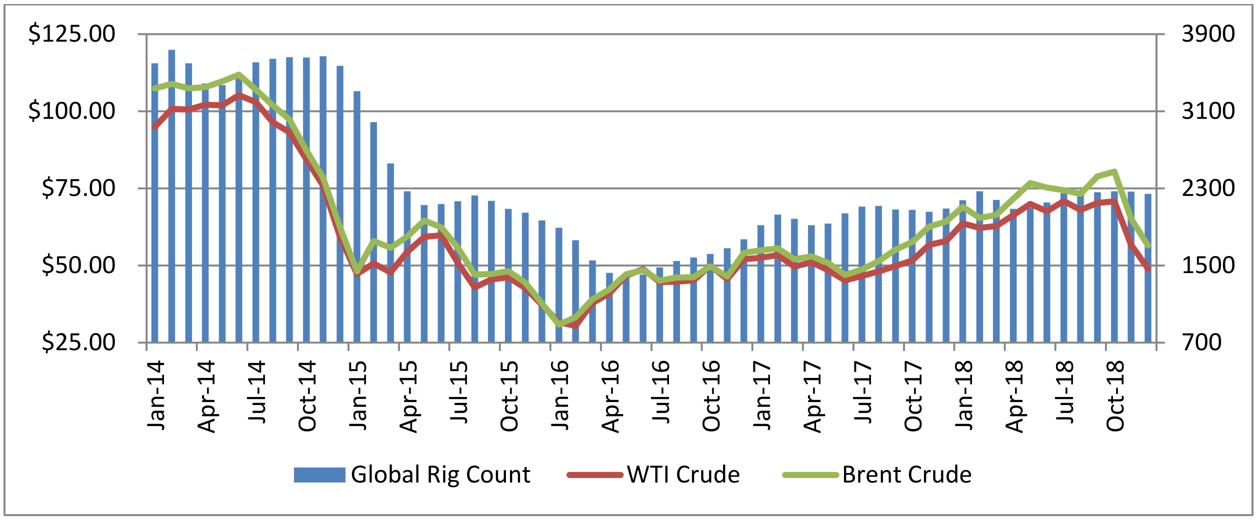
- Indian crude basket price averaged $ 58.41 per barrel in January, up 2.15 % Month on Month (MoM) basis and down by 12.9% on a year on year (YoY) basis, respectively.

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 Huges

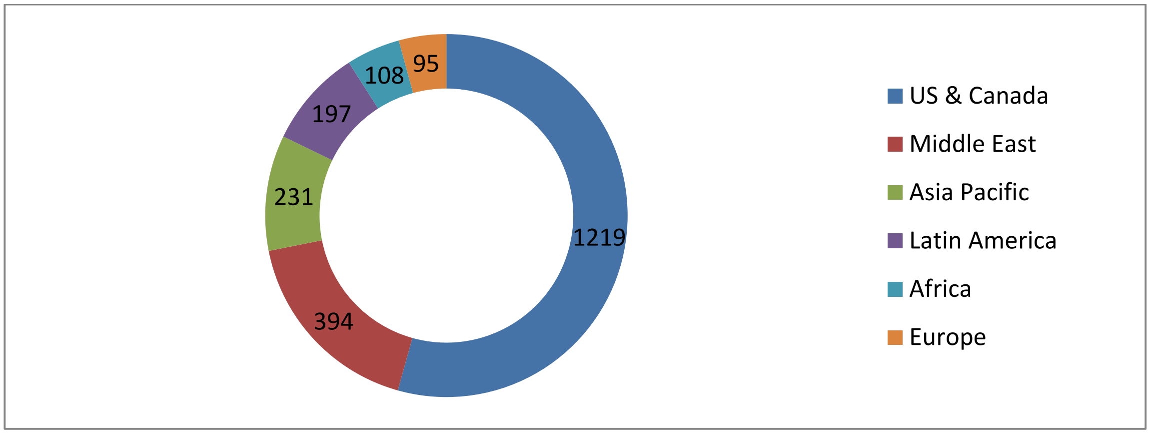
In December 2018, global drilling rig count stood at 2244, 22 lower than November. Onshore rigs went down by 52, while offshore rig count went up by 30. 1706 drilling rigs were deployed globally in oil fields and 442 drillings rigs were deployed in gas fields. Asia-Pacific and Europe saw an increase in offshore rig count. Onshore rig count in North America declined primarily due to lower oil & gas price. United States is the most active market for drilling industry with a rig count of 1083. 1059 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 December 2018	MoM (%) change	YoY (%) change
Land	1984	-2.55%	5.64%
Offshore	260	13.04%	23.22%
Total	2244	-0.97%	7.42%

Source: Baker Huges

Figure 5 Geography-wise Rig count - December 2018



Source: Baker Huges

Indian Drilling Rig Count

Indian rig count went up by 4 in the month of December. Indian drilling rig count grew in 2017-18, albeit the volatile crude oil price. On YOY basis, Indian rig count was up by 7.83% in 2018 as compared to 2017. Onshore rig count remained unaltered in December while, 4 new offshore rigs were active. 102 drilling rigs were deployed in oil fields and the rest 22 drillings rigs were deployed in gas fields.

Figure 6 Indian Rig Count vs. Indian Basket Crude Price

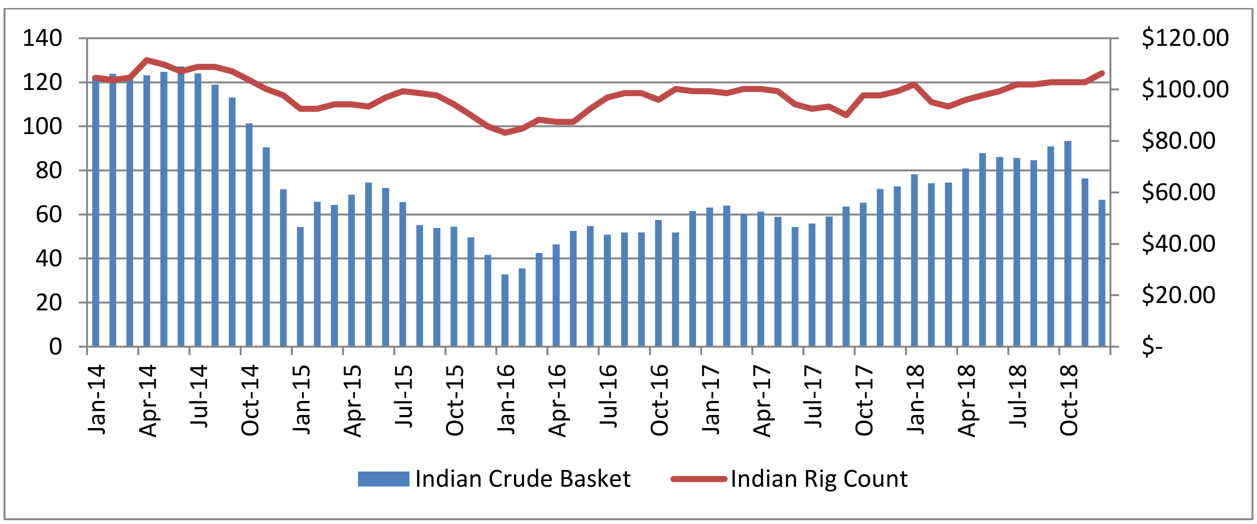


Table 3 : Indian Rig Count

Rig Type	Count in December 2018	MoM (%) change	YoY (%) change
Land	85	0 %	3.66%
Offshore	39	11.43%	18.18%
Total	124	3.33%	7.83%

Source: Baker Huges

Oil demand & supply

Preliminary data indicates that global oil supply declined by 0.35 mb/d to average 100.02 mb/d in December 2018, compared with the previous month. An increase in non-OPEC supply (including OPEC NGLs) of 0.40 mb/d compared with the previous month was mainly driven by OECD Americas. OPEC's crude oil production averaged 31.58 mb/d in December, a decrease of 751 tb/d from the previous month. The share of OPEC crude oil in total global production declined by 0.6% to reach 31.6% in December 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 are based on secondary sources.

For 2019, non-OPEC oil supply growth was revised down up by 0.06 mb/d from the December's forecast to stand at 2.10 mb/d and is now projected to reach an average of 64.16 mb/d. The downward revision comes due to the sizeable expected production decline in Norway and Mexico. Demand forecasts for 2019 for non-OPEC supply growth indicate higher volumes outpacing the expansion in world oil demand, leading to widening excess supply in the market. In 2019, world oil demand growth is anticipated to grow by 1.29 mb/d y-o-y, with total world consumption to reach 100.08 mb/d, unchanged from December's report.

The recent downward revision to the global economic growth forecast and associated uncertainties confirms the emerging pressure on oil demand observed in recent month.

Table 4: World Oil demand in mbpd

	2018	1Q19	2Q19	3Q19	4Q19	2019	Growth	%
Total OECD	**47.87**	**47.98**	**47.44**	**48.44**	**48.61**	**48.12**	**0.25**	**0.53**
Dev. Countries	**32.64**	**33.01**	**33.19**	**33.46**	**33.27**	**33.23**	**0.59**	**1.80**
~ of which India	*4.74*	*5.03*	*4.93*	*4.58*	*5.18*	*4.93*	*0.19*	*4.05*
Other regions	**18.27**	**18.11**	**18.63**	**18.77**	**19.37**	**18.72**	**0.45**	**2.46**
~ of which China	12.71	12.61	13.18	12.99	13.42	13.05	0.34	2.67
Total world	**98.78**	**99.10**	**99.26**	**100.67**	**101.25**	**100.08**	**1.29**	**1.31**

Source: OPEC monthly report, January 2019

*Note: *2018 = Estimate and 2019 Forecast*

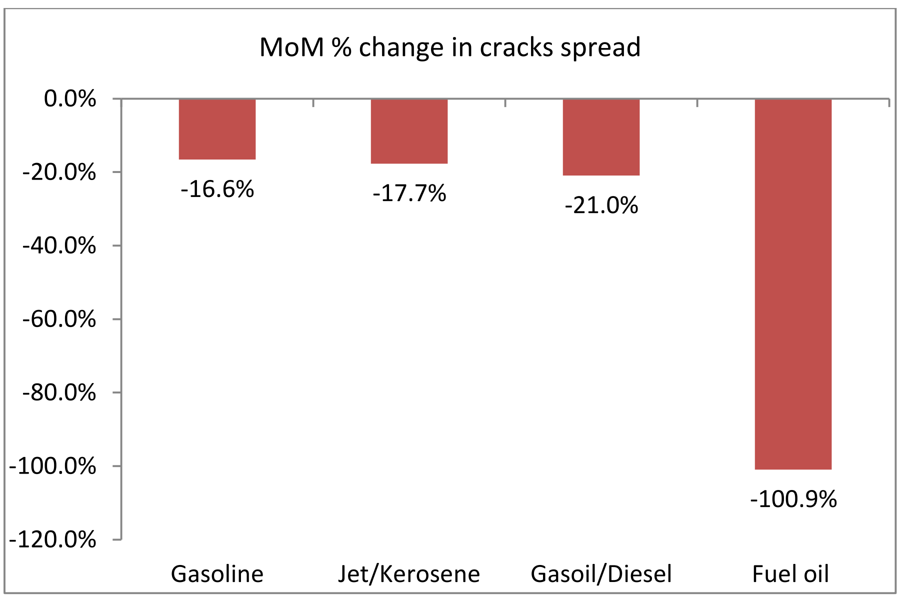
Global petroleum product prices

Prices in the Asian Gasoline-92 market saw a decline of 13.4% over the previous month. Retail price has fallen by significant smaller margin. Refinery margins dipped slightly. Gasoline cracks in Singapore declined to $1.51/b, a new low due to prevailing oversupply despite the slower demand growth. Refinery utilization declined in December averaging 85.25% in selected Asian markets comprising of Japan, China, India and Singapore.

Jet/Kerosene prices declined by 14.3% as compared to November. Earlier in November, Jet/kerosene declined by 13.1 %. The downside trend was driven by reduced demand for heating fuel. In addition, release of the last 2018 batch of Chinese export quotas contributed to added deliveries to Singapore in December, further exacerbating pressure on the Asian jet/kerosene market.

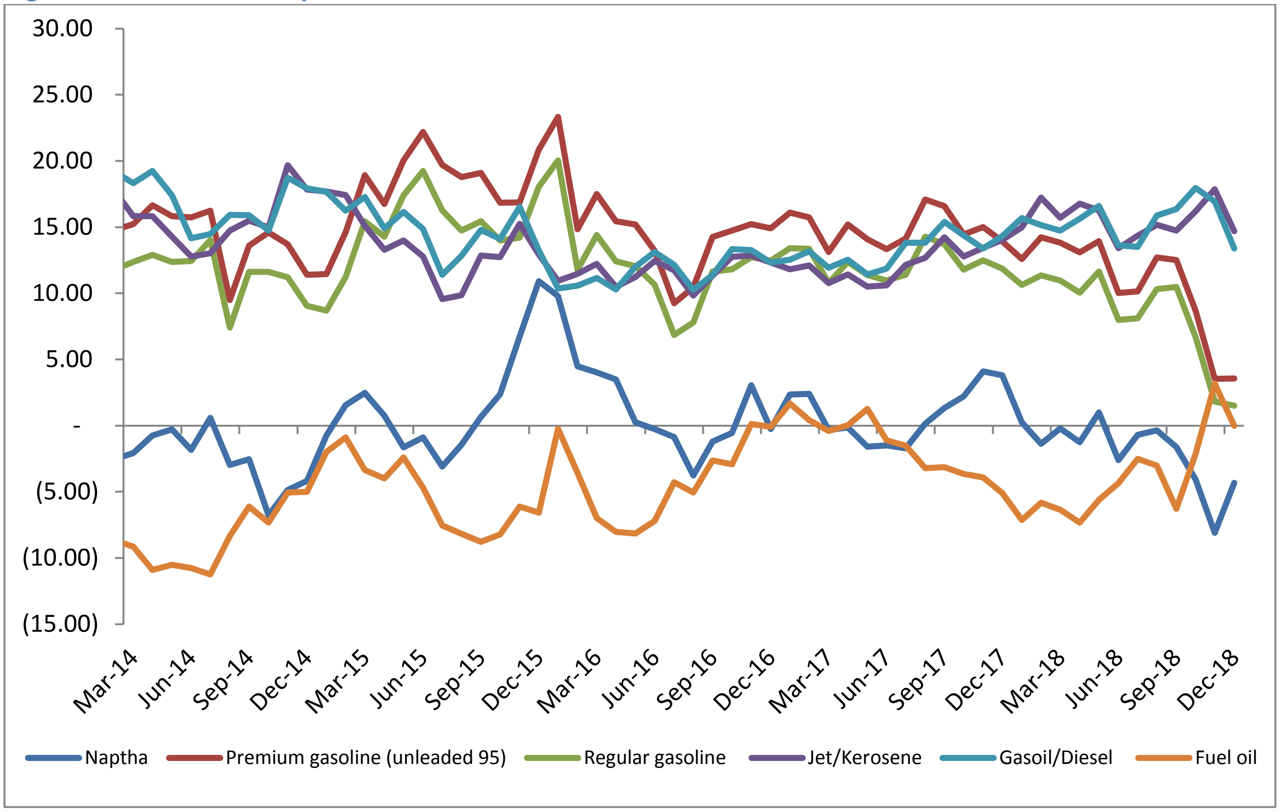
Pressured by slower regional demand, reduced construction activity in China and reduced imports from India, gasoil crack spread declined by 21 %. Singapore gasoil crack spread against Oman averaged $12.57/b, down by $3.69 m-o-m and by $1.57 y-o-y.

The fuel oil market in Singapore came down from multi-month highs registered earlier. Arrival of record volumes in Singapore and loss of demand for power generation sector in Pakistan led to the poor performance.



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 December 2018	MoM (%) change	YoY (%) change
Naptha	52.13	-8.6%	-20.1%
Premium gasoline (unleaded 95)	60.02	-12.6%	-20.3%
Regular gasoline (unleaded 92)	57.98	-13.4%	-20.9%
Jet/Kerosene	71.17	-14.2%	-5.7%
Gasoil/Diesel (50 ppm)	69.86	-14.9%	-7.8%
Fuel oil (180 cst 2.0% S)	56.44	-17.3%	0.2%
Fuel oil (380 cst 3.5% S)	56.63	-17.0%	0.8%

Source: OPEC

Petroleum products consumption in India

- In December, LPG consumption increased 17.5% on MoM basis.
- Consumption of gasoline increased (10.5% YoY) driven by higher demand from transport segment.
- Demand for diesel increased by 3.6% on YoY basis in the month of December.

Table 6: Petroleum products consumption in India, December 2018

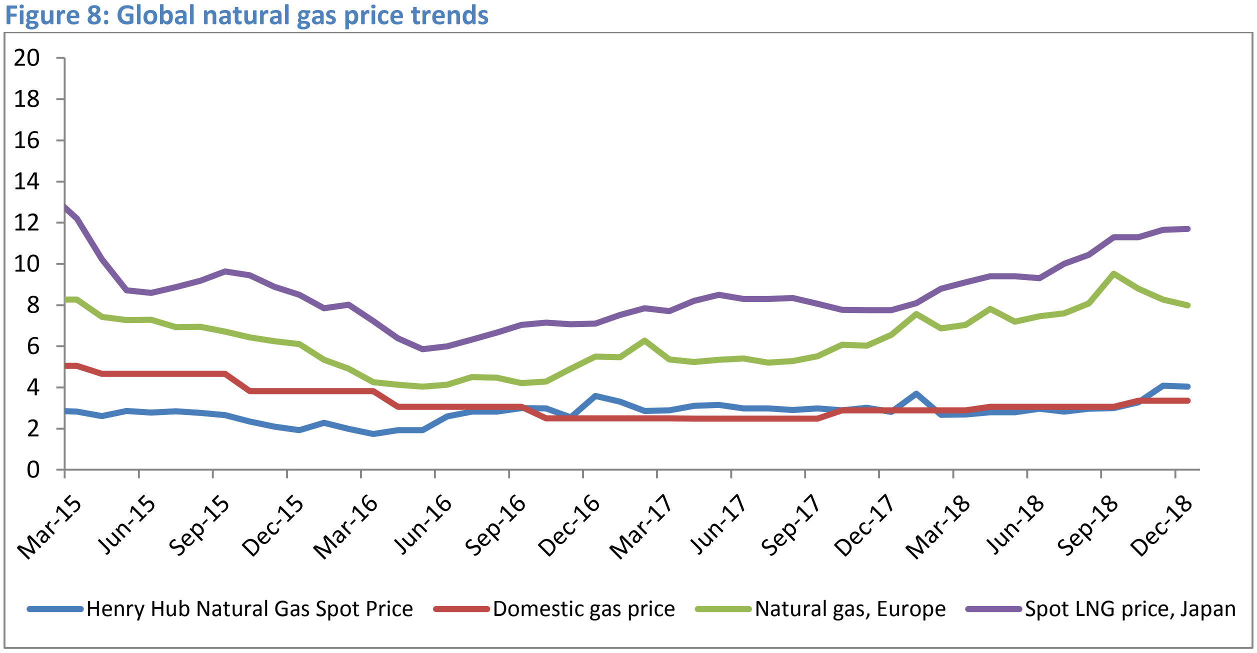
Petroleum products	Consumption in '000 MT December 2018	MoM (%) change	YoY (%) change
LPG	2,165	17.5%	5.3%
Naphtha	1,226	1.0%	19.9%
MS	2,395	3.3%	10.5%
ATF	723	5.9%	7.2%
HSD	7,372	6.5%	3.6%
LDO	52	10.7%	-16.0%
Lubricants & Greases	334	4.0%	8.4%
FO & LSHS	577	15.5%	5.1%
Bitumen	639	23.4%	7.8%
Petroleum coke	1,937	4.4%	2.9%
Others	805	3.7%	26.2%
TOTAL	**18,505**	**7.1%**	**6.4%**

Source: PPAC

Natural Gas Price

US natural gas prices declined sharply in the second half of the month amid warmer-than average temperatures, losing the majority of the gains achieved the previous month. In December, the Henry Hub natural gas index decreased on average by 3.7%, to $3.98/MMBtu.

Figure 8: Global natural gas price trends



Source: EIA, WORLD BANK

Table 7: Gas price

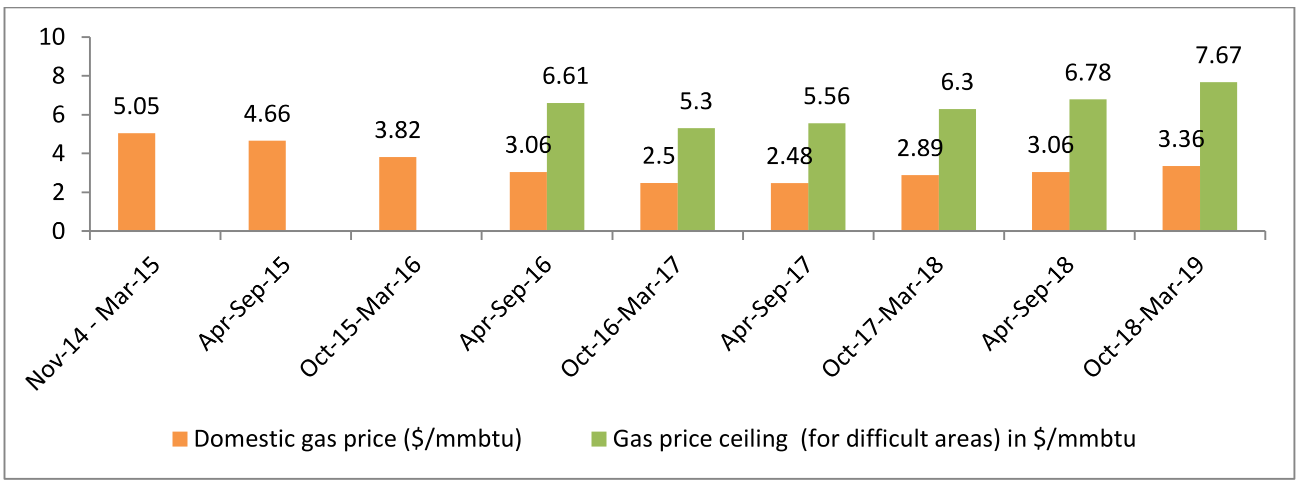
Natural Gas	Price ($/MMBTU) in December 2018	MoM (%) change	YoY (%) change
India, Domestic gas price	3.36	0.0%	16.3%
India, Gas price ceiling – difficult areas	7.67	13.1%	21.7%
Henry Hub	4.04	-1.2%	43.8%
Natural Gas, Europe	7.98	-3.5%	21.6%
Liquefied Natural Gas, Japan	11.70	0.3%	51.0%

Source: EIA, PPAC,

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.

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 to March 2019 period, the price of gas from such areas has been notified at $7.67 per MMBTU.

Figure 9: Domestic natural gas price

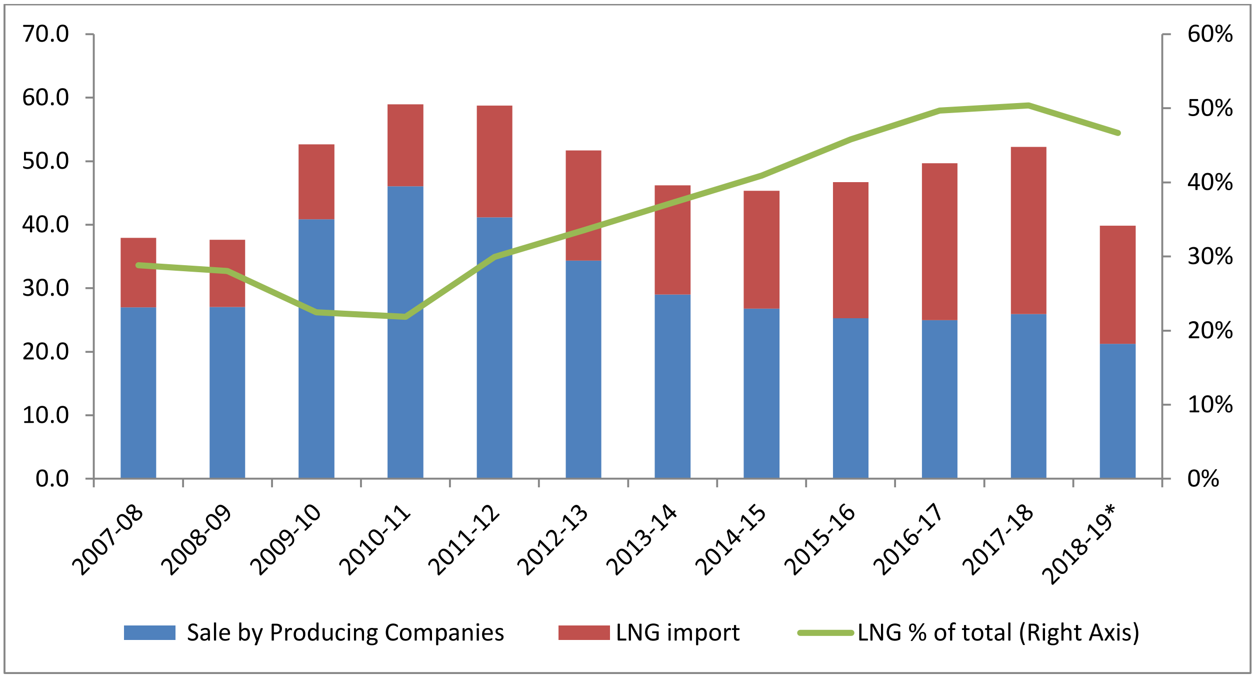


Source: PPAC

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

**Figures for 2018-19 are for the period of April – November only. Sale by producing companies includes internal consumption*

Key developments in Oil & Gas sector during January 2019

- **MoU for setting up Centre of Excellence in Oil, Gas and Energy signed between IIT Bombay and PSU Oil Companies**

  On January 2nd, a Memorandum of Understanding (MoU) for setting up Centre of Excellence in Oil, Gas and Energy was signed between Director, IIT Bombay and CMDs of PSU Oil Companies and EIL. Union Minister of Petroleum & Natural Gas and Skill Development & Entrepreneurship Mr. Dharmendra Pradhan and Secretary, Ministry of Petroleum and Natural Gas Dr. M.M.Kutty graced the occasion. To provide a competitive advantage to India's Oil and Gas industry, Oil & Gas PSUs and IIT Bombay have come together to set up a "Centre of Excellence in Oil, Gas and Energy". The Centre of Excellence is aimed at collaborative Research & Capability Building in the areas of Oil, Gas & Energy. It will work towards developing sustainable solutions and explore new frontiers in technology for future energy needs. The Centre of Excellence will leverage the expertise available with IIT Bombay and the Oil and Gas industry. It will also provide an institutionalized platform for Industry - Academia interactions

- **Open Acreage Licensing Programme Bid Round-II launched**

On 7th January, Union Minister of Petroleum and Natural Gas & Skill Development and Entrepreneurship Mr. Dharmendra Pradhan launched NIO and MRSC for Open Acreage Licensing Programme (OALP) Bid Round-II. Secretary, Ministry of Petroleum and Natural Gas Dr M.M.Kutty and DG, DGH Mr. V.P Joy were also present on the occasion. In this bid round, 14 E&P blocks, with an area of approximately 30,000 sq. km., are being offered for bidding to the investor community under the investor friendly HELP regime. 10 blocks are based on Expressions of Interest submitted by the bidders, and 4 blocks have been carved out by the Government based on data received through the National Seismic Programme and the Resource Reassessment Study carried out by the Government.

- **Rs. 45,000 Crore Gross Estimated Revenue anticipated under Discovered Small Field Bid Round-II**

Gross estimated revenue of Rs.45000 Crore is anticipated under Discovered Small Field Bid Round-II from 25 Contract Areas; and Rs.9000 Crore under Discovered Small Field Bid Round-I from 30 Contract Areas. The gross estimated revenue is based on estimates of oil and gas hydrocarbon in place reserves, assumption in terms of hydrocarbon recovery factor, hydrocarbon sale price, etc., from 25 Contract Areas considering project life of 15 years. However, actual revenue realization from these fields may vary based on actual award of Contract Areas; development strategy adopted by the contractor; actual production realized; and techno-economics of the individual field, etc.

Under the DSF Policy, only those hydrocarbon discoveries of National Oil Companies which could not be monetized for a long period of time are offered for bidding. The ONGC is continuing to make endeavors to optimize production from its operational fields, be it big fields or small fields Mr. Pradhan further informed that the 667 Km long Bokaro-Angul pipeline sections of the landmark Jagdishpur-Haldia-Bokaro-Dhamra Pipeline Project (PM Urja Ganga) is being built by the Gas Authority of India Limited at a sanctioned cost of Rs. 3,437 crores. The pipeline is a part of the landmark Pradhan Mantri Urja Ganga project and traverses 367 Km across 5 districts in Odisha and 360 Km across 6 districts in Jharkhand, he added.

- **Numligarh Refinery Assam capacity to be expanded from 3 MMTPA to 9 MMTPA**

On 16th January, the Cabinet Committee on Economic Affairs, chaired by the Prime Minister Mr. Narendra Modi, has given its approval to the project for capacity expansion of Numaligarh Refinery from 3 MMTPA (Million Metric Tonne Per Annum) to 9 MMTPA. It involves setting up of crude oil pipeline from Paradip to Numaligarh and product pipeline from Numaligarh to Siliguri at a cost of Rs.22,594 Crore. The project is to be completed within a period of 48 months, after approval and receipt of statutory clearances.

The total project cost of Rs. 22,594 Crore will be financed by a mix of debt, equity and Viability Gap Funding (VGF). The debt of Rs.15,102 Crore will be raised by Numaligarh Refinery Ltd (NRL) and apart from its internal accrual of Rs.2,307 Crore, the promoters, namely, Bharat Petroleum Corporation Ltd, Oil India Ltd & Government of Assam (GoA) will contribute to equity. The project will be supported by Viability Gap Funding of Rs.1,020 Crore from the Government of India.

The expansion of the refinery will meet the deficit of petroleum products in the North East. It will also sustain the operations of all North East refineries by augmenting their crude availability. It will generate direct and indirect employment in Assam and is a part of the Government's Hydrocarbon Vision 2030 for the North East.

- **Saksham 2019, annual event of PCRA, launched**

On 16th January, 'Saksham', an annual high intensity one-month long people-centric mega campaign of Petroleum Conservation Research Association (PCRA) under the aegis of Ministry of Petroleum and Natural Gas was launched by Mr. Rajiv Bansal, Addl. Secretary & Financial Adviser, Ministry of Petroleum and Natural Gas. Various interactive programs and activities are being planned by PCRA, Public Sector upstream/downstream Oil & Gas companies during the month long 'Saksham-2019'. 'Saksham' Cycle Day in 200 cities, Cyclothons, Short Film making contest on MyGov, Workshops for drivers of commercial vehicles, Seminars for housewives/cooks on adopting simple fuel saving measure, Nationwide campaign through Radio, TV, Digital Cinemas, Outdoor media etc. will be conducted, with a focus on reaching out to various segments of fuel users. PCRA is going to utilize the social media platforms for various customized campaigns through Facebook, twitter, MyGov platform

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