FIPI

April 2019

Policy & Economic Report - Oil & Gas Market

Federation of Indian Petroleum Industry (FIPI)

3rd Floor, PHD House, 4/2, Siri Institutional Area,
August Kranti Marg, New Delhi - 110016

Table of Contents

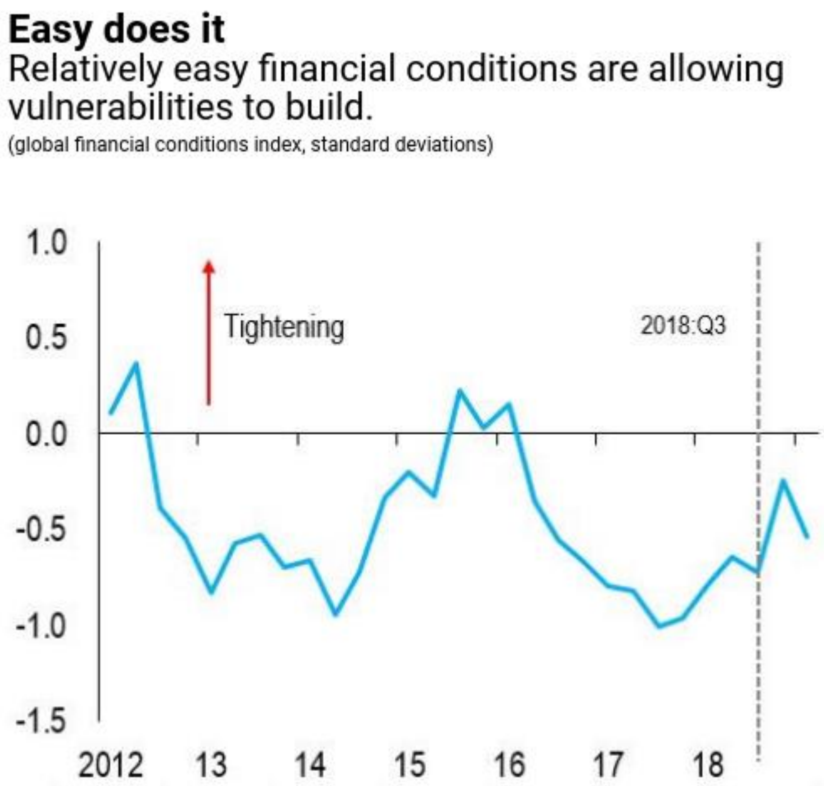
Policy & Economic report – Oil & Gas market

Economy in Focus

1. **Global Economy – Why we should continue to worry?**

Major vulnerabilities see to be on the rise all around the world. While in the United States, the ratio of corporate debt to GDP is at record-high levels, several banks in the European nations are overloaded with government bonds. China is seeing bank profitability declining and capital levels remaining low at small and medium-sized lenders.

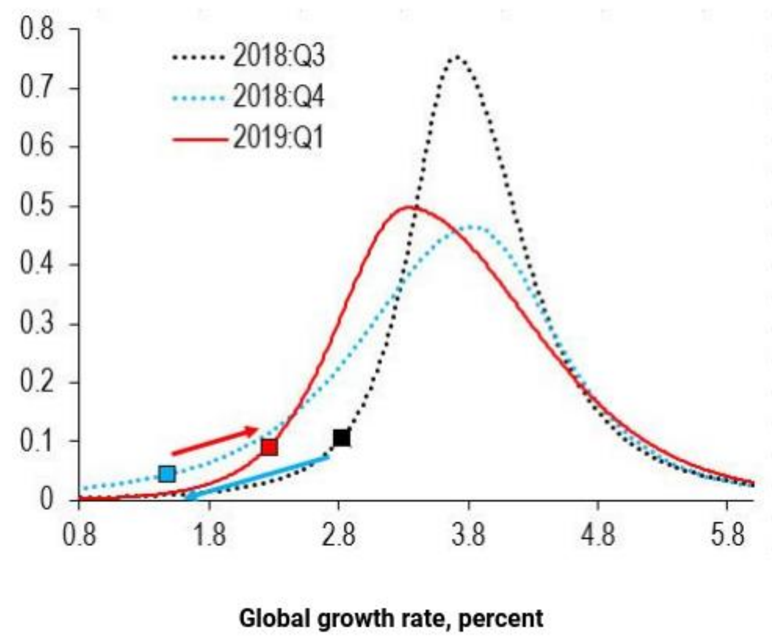
If these and other vulnerabilities continue to build, they could amplify shocks to the global economy, raising the odds of a severe economic downturn a few years down the road.



Source: IMF Staff calculations.
Note: An upward move in the index denotes a tightening of financial conditions, and a downward move denotes a loosening.

While short term risks still seem to be low by historical standards, in the medium term, the risks remain elevated. While with the right administration of policies, countries can sustain growth in the midst of turbulent times, it is important to acknowledge financial vulnerabilities since they have the capability of amplifying shocks.

Risk assessment
Short-term risks to global financial stability are slightly higher than in October, though they remain low by historical standards.
(probability densities)



Source: IMF Staff calculations.
Note: The square markers denote growth outcomes with a 5 percent chance of occurring. A leftward shift in a marker indicates greater downside risks to growth.

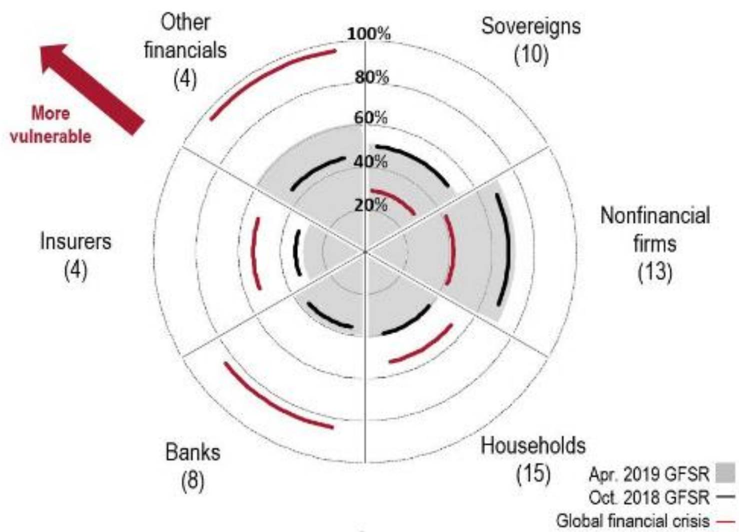
Global Financial Stability Report has developed a way to quantify vulnerabilities in the financial system, so policymakers can monitor them in real time and take preventive steps if needed to mitigate risks. This technique encompasses six sectors: corporates, households, governments, banks, insurance companies, and other financial institutions or what are popularly known as “shadow banks.”

This particular methodology tracks both the level and the pace of change along a variety of vulnerabilities, including leverage and mismatches in the maturity and liquidity of assets and liabilities, as well as currency exposures. These vulnerabilities are tracked at regional and global levels, across 29 systemically important countries.

On the radar

Risks have risen among banks, nonfinancial corporations, and other financial institutions.

(Percentage of systemically important countries in sample, by GDP, with high and medium-high vulnerabilities. Numbers of countries are in parentheses.)



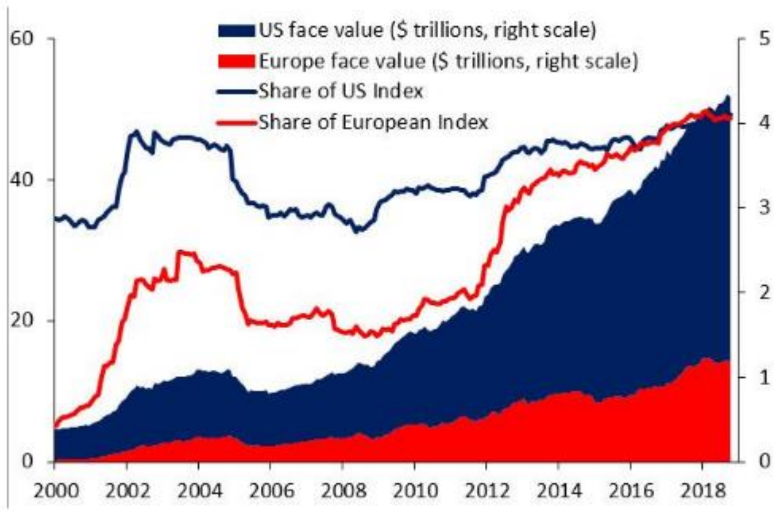
Source: IMF Staff calculations.

Some of the serious vulnerabilities are as follows:

a. Advanced economies: While corporate debt and financial risk-taking have increased, the creditworthiness of borrowers has deteriorated. The stock of bonds with BBB ratings has quadrupled, and the stock of speculative-grade credits has almost doubled in the United States and the euro area since the crisis. Tightening of financial conditions or a severe downturn could make it harder for indebted firms to repay their loans and force them to cut back on investment or employment.

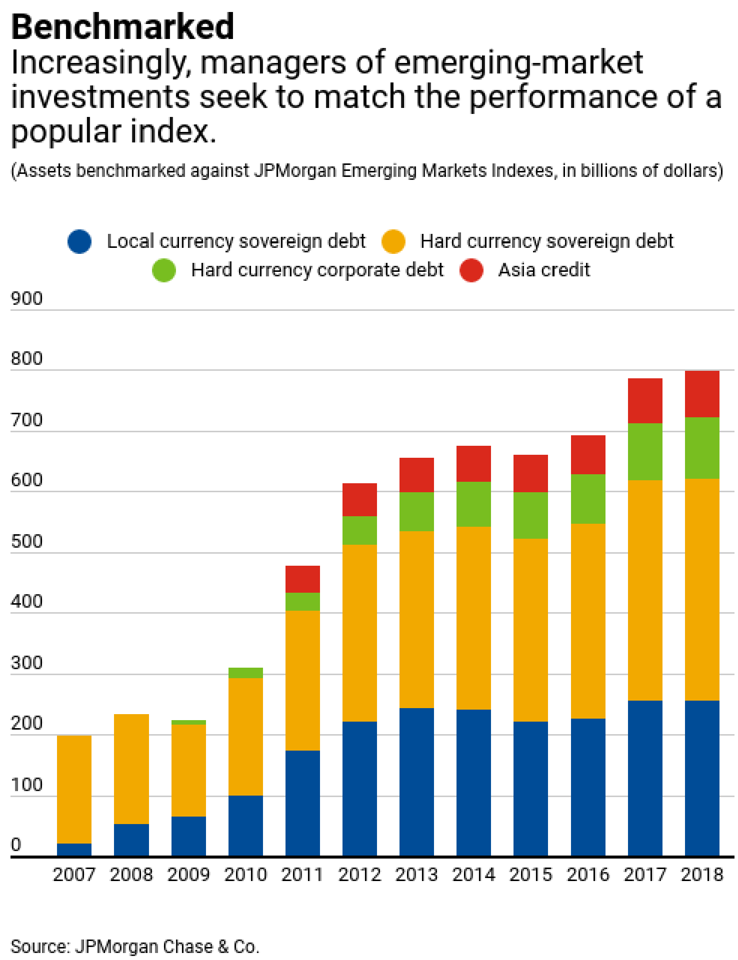
Declining quality

The proportion of investment-grade corporate bonds with a rating of BBB, the lowest rung, is rising as a percentage of the total.



Source: ICE Bond Indexes; and IMF Staff calculations

b. Euro area: The sovereign-financial sector nexus was at the heart of the euro crisis in 2011. Fiscal challenges drove bond yields sharply higher, resulting in significant losses for banks with large holdings of government debt. This meant that the insurance companies could also face losses. However, banks have higher capital ratios today and adequate measures are being taken by policy makers to address nonperforming loans on banks' balance sheets.
c. China: Credit to smaller private firms is being restrained by a decline in profits and low levels of capital at small and medium-sized banks. On the other hand, further monetary and credit support may increase financial stability risks, since continued credit growth makes it harder for smaller banks to clean up their balance sheets.
d. Emerging markets: The value of fixed-income, benchmark-driven investments have quadrupled in the past ten years to $800 billion. While index-driven funds expand the universe of investors for emerging market economies, they also leave them more vulnerable to sudden reversals of capital flows in response global trends.



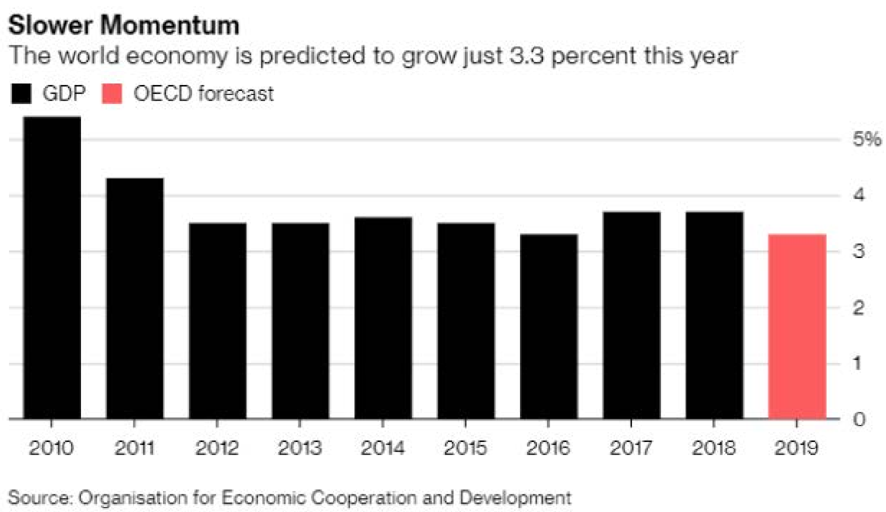
How to address these vulnerabilities?

a. Countercyclical capital buffers, which require banks to increase capital when credit is growing, are macroprudential tools that can cool credit growth and make the financial system more resilient.
b. The utmost priority in eurozone is to lower the debt-to-GDP ratio among highly indebted governments. Also repairing banks' balance sheets, including reducing non-performing loans will go a long way in easing troubles.
c. China needs to ensure that lenders build capital buffers and should actively work towards reducing leverage in the financial sector, especially in shadow banking.
d. Emerging market economies coping with volatile capital flows could limit reliance on short-term overseas debt and ensure adequate foreign currency reserves and fiscal buffers. Countries can also use flexible exchange rates to absorb shocks.
e. Monetary policy can be used in some countries with strong economies and inflation at or above target.

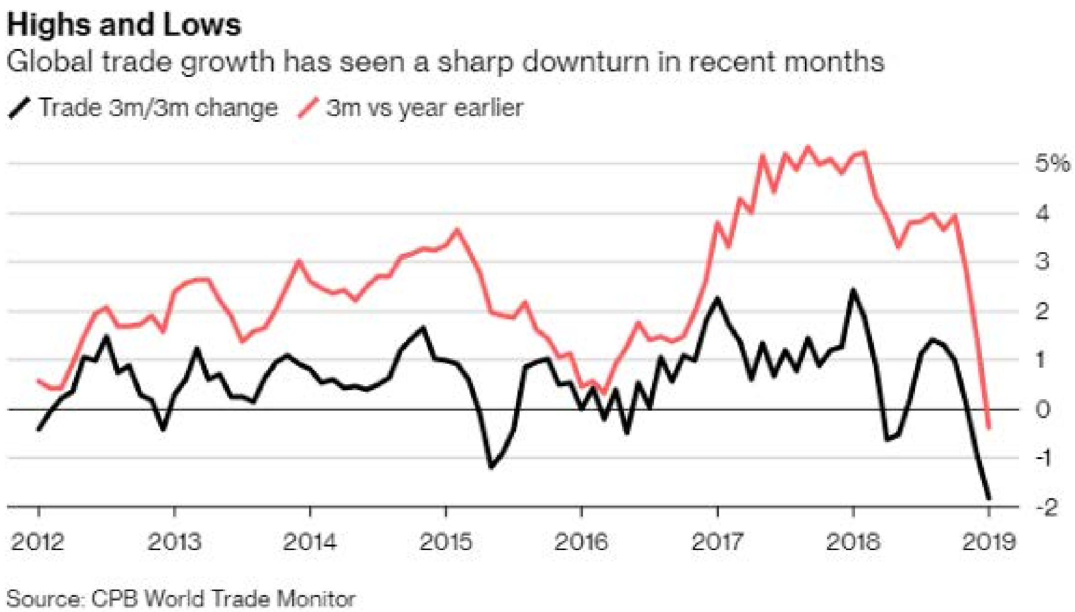
2. **Debt – The 'opioid crisis' of the global economy**
   Modern monetary theory states that nations can pile on debt with impunity. This school of thought has led to the world has been borrowing and spending like no tomorrow. The last ten years has seen the world debt soaring by $100trn to around $240trn - equivalent to 270% of GDP. Starting as a short-term fix to prevent the global economy from the slump of 2008, this tool has now become a chronic habit for the world, and an addictive one at that. With interest rates already low, central banks have little room to re-inflate should conditions deteriorate.
   Inspite of quantitative easing (QE), the global economy continues to slow down due to the diminishing effect. Germany is leading Europe to a recession. The impact of Trumps tax cuts is waning and the US is seeing a slowdown. Chinese growth is at an all-time low, as it pivots its economy to domestic consumption.

3. **Reckoner about the global economy**

   While the World Trade Organization has slashed its 2019 trade projection to the weakest in three years, the OECD cut its economic forecasts and warned that even worse was to come.



   a. Trade
      With no clear resolution in sight, the US-China trade talks continue to jangle. The Chinese economy has been sliding more than expected with bouts of improvement. This has had the global demand in a flurry and has resulted in dramatically slower trade flows.



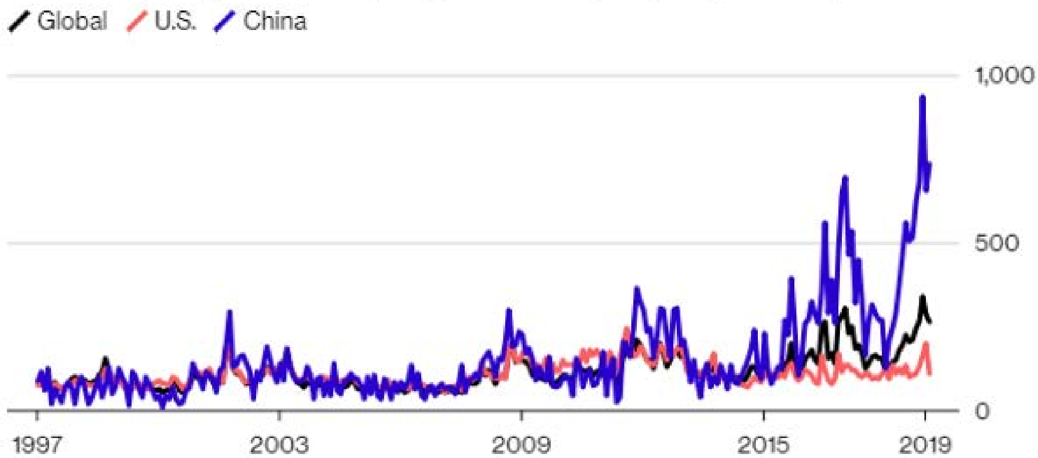
Acute impact seems to be on Asia, home to some of the world's most export-reliant economies. Purchasing manager indexes across the continent are only starting to show hints of a China-led rebound after several months of souring.

b. Policy Uncertainty

Politics and policy are interfering with fundamentals and this is quite evident from trade talks, tariff wars, Brexit, a spate of elections -- some of them messy, like Thailand -- and the sharp turn in the global monetary policy cycle.

Hazy Outlooks

Economic policy uncertainty surges in China; stays high in U.S., worldwide



Source: "Measuring Economic Policy Uncertainty" by Scott Baker, Nicholas Bloom and Steven J. Davis; www.PolicyUncertainty.com
Notes: Global is purchasing power parity-adjusted; U.S. is 3-factor index

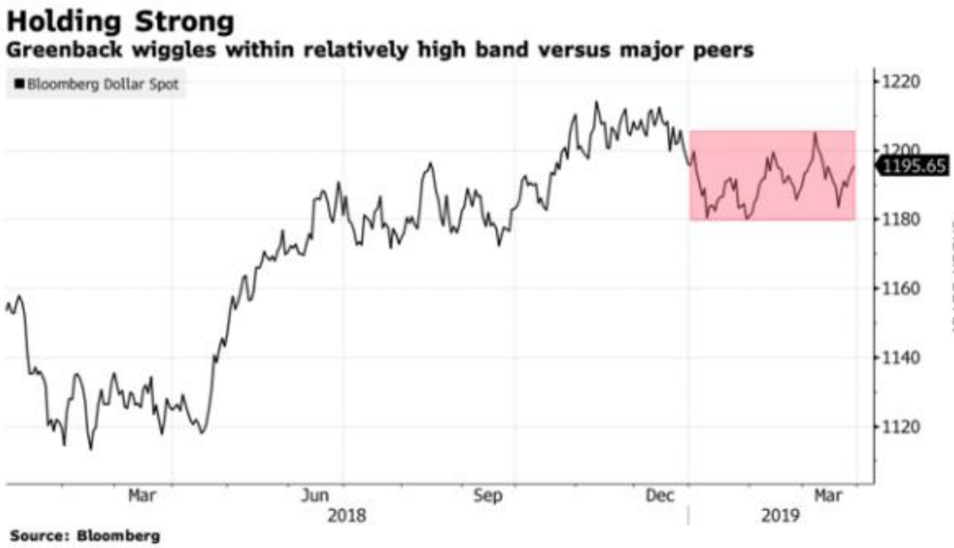
In the UK, Brexit is holding back capital spending and broader economic growth. Investment intentions have been at the lowest in eight years as firms refuse to commit to projects in such an uncertain backdrop.

External Demand Stabilizing

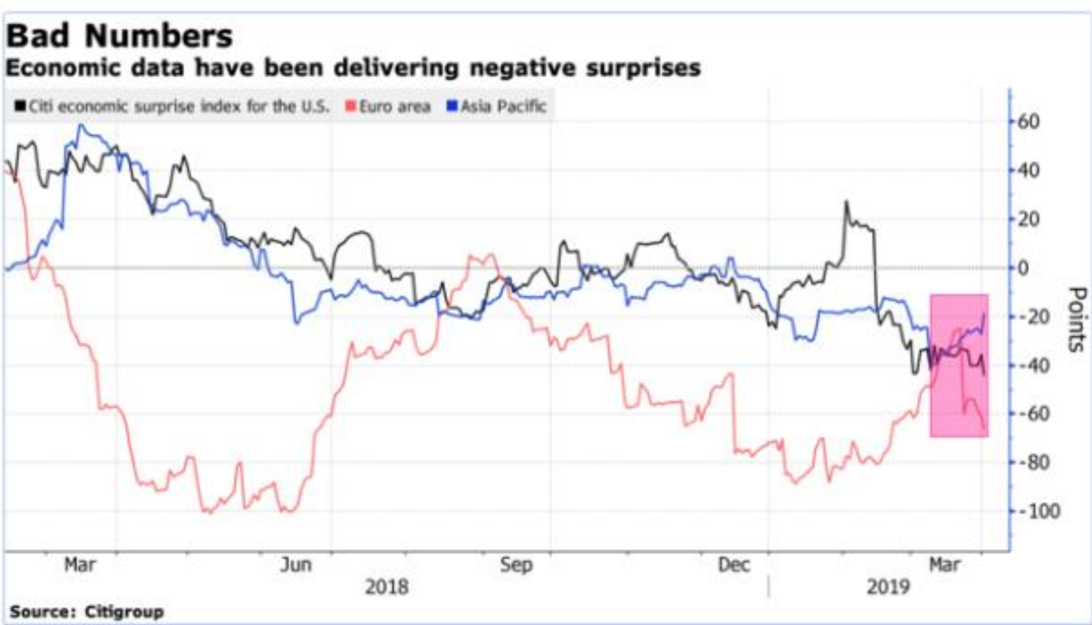
Source: Bloomberg Economics, ONS

c. Dollar Strength

The dollar remains in a relatively stronger band against a basket of major currencies, particularly compared with its position a year ago.

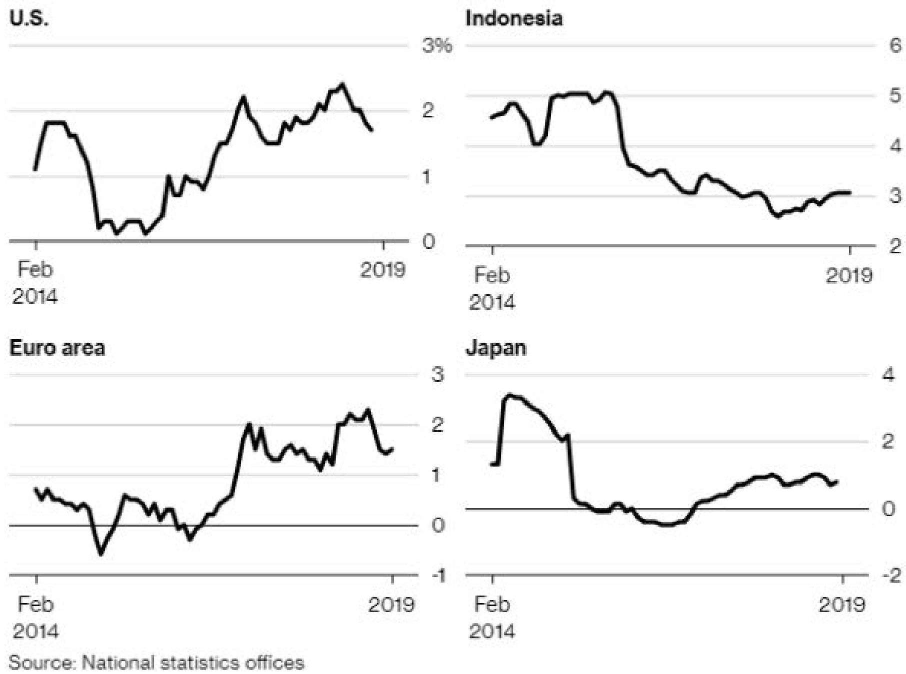


d. Economic Surprises



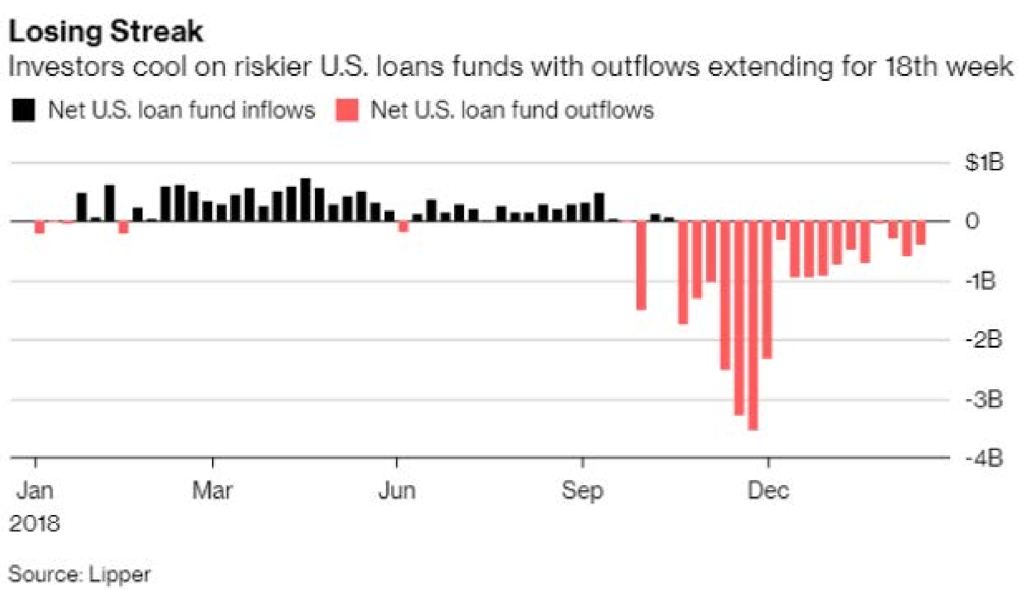
e. Low-flation

Stubborn low inflation has garnered even more attention around the world. Despite unprecedented monetary support, central bankers have been constantly frustrated in their attempts to generate sustainable price growth.



f. Debt

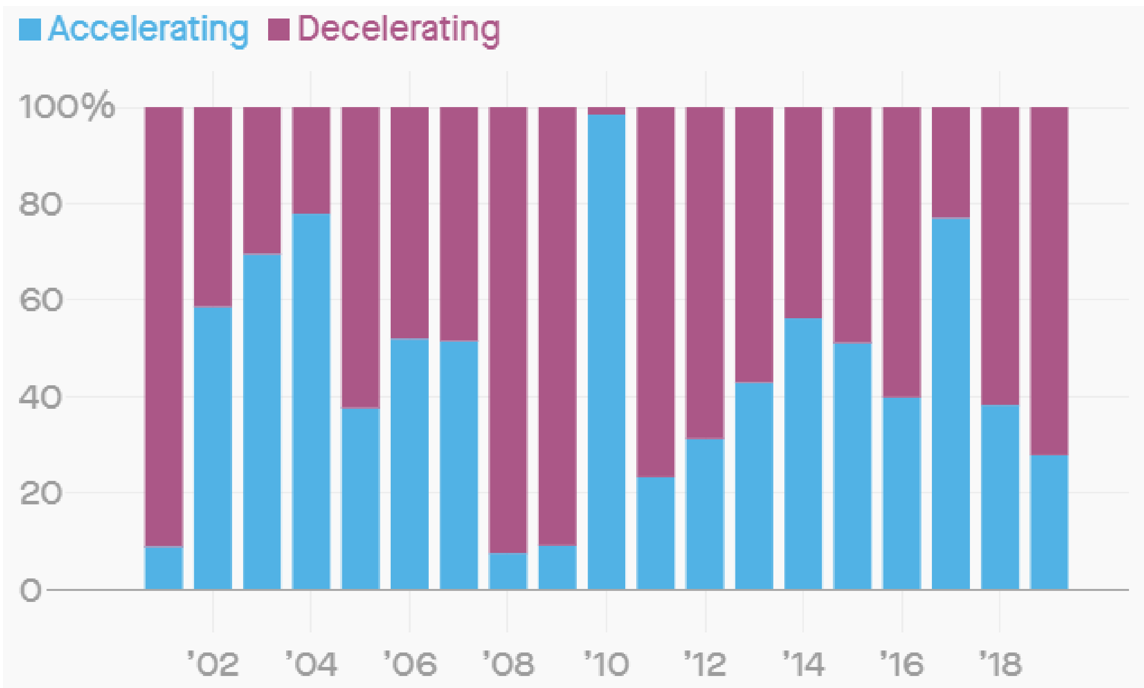
The U.S. leveraged loan market has been under the scanner for some time now. UBS Group AG and Deutsche Securities Inc. analysts have cited the risk.



4. **IMF Reports of a Global Slowdown in 2019**

For the fourth time in nine months, IMF has downgraded its forecasts for global economic growth. According to the latest forecasts 70% of the global economy is poised to witness a slowdown in 2019, making it the most synchronized global slowdown since 2011. Presenting the latest forecasts Ms. Gita Gopinath said that the world is set to witness a "significantly weakened global expansion".

Share of Global Economy with Accelerating/Decelerating Growth

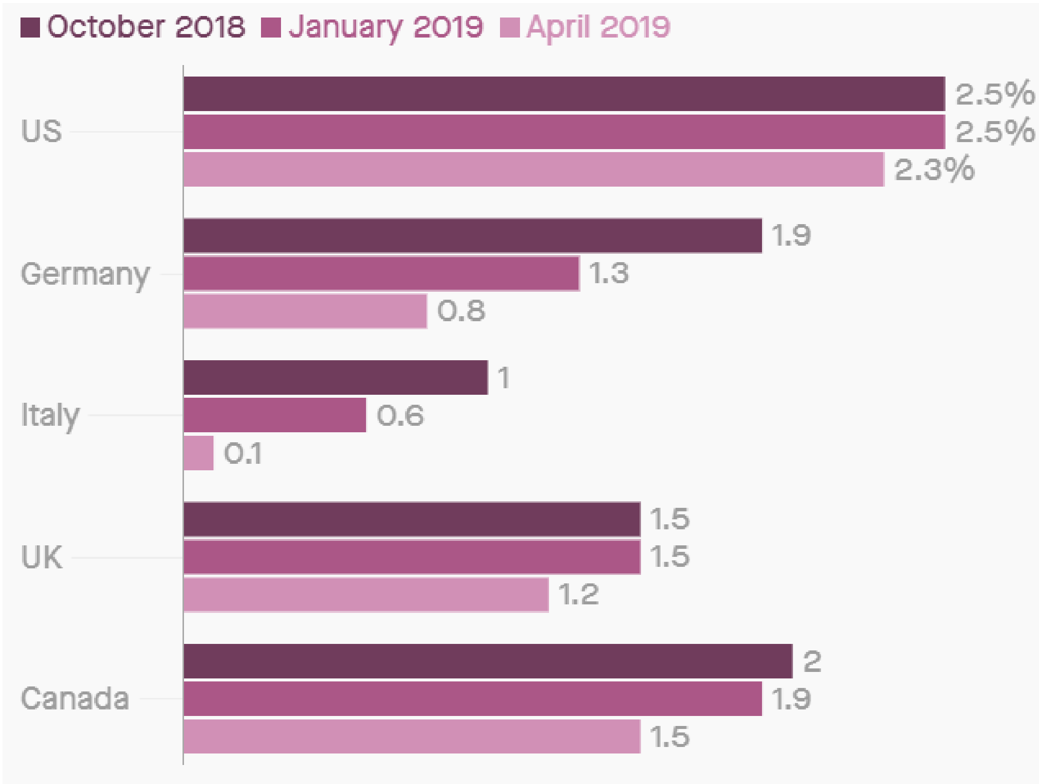


Source: IMF

According to IMF, the lowering of global growth forecasts for all major economies is a combined impact of a range of causes starting from US-China trade tensions, credit tightening in China, economic turmoil in Argentina and Turkey, weakness in Germany's auto sector, higher interest rates to persistent issues of low productivity and aging populations.

The IMF report suggests that the growth of Germany, Europe's traditional engine of growth, has also stalled over the past few months. The report further downgrades Italy's GDP growth rate from 1 per cent in December 2018 to 0.2 per cent in the recent report.

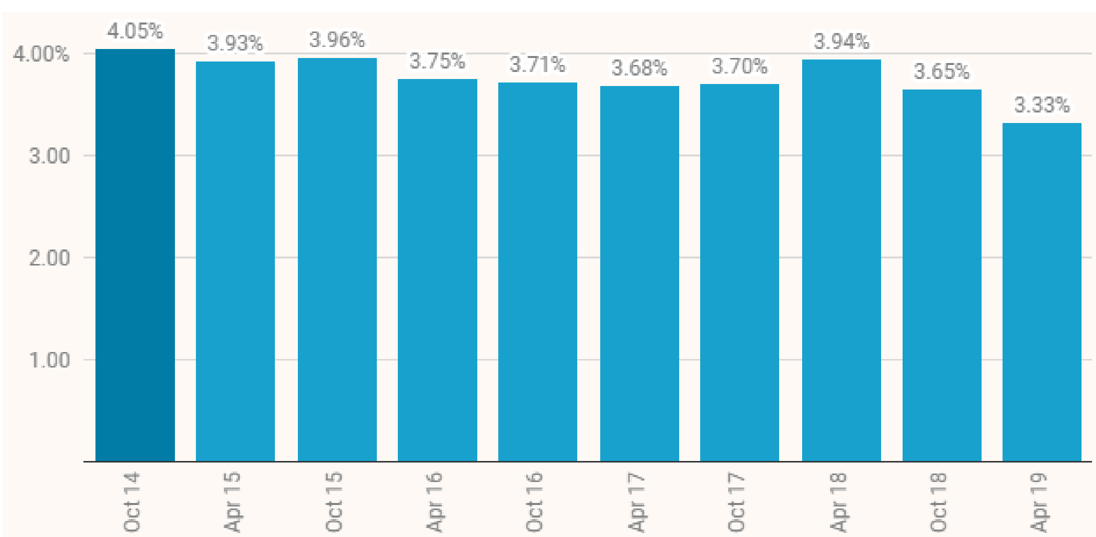
IMF Forecast for 2019 Growth in Select Economies



Source: IMF

The report suggests that the global economic growth will pick up in 2020 to 3.6 per cent from a projected growth of 3.3 per cent in 2019. However, this recovery will be based on rebound of presently stressed economies of Turkey, Argentina and other emerging market economies.

IMF Projections for GDP Growth in 2019



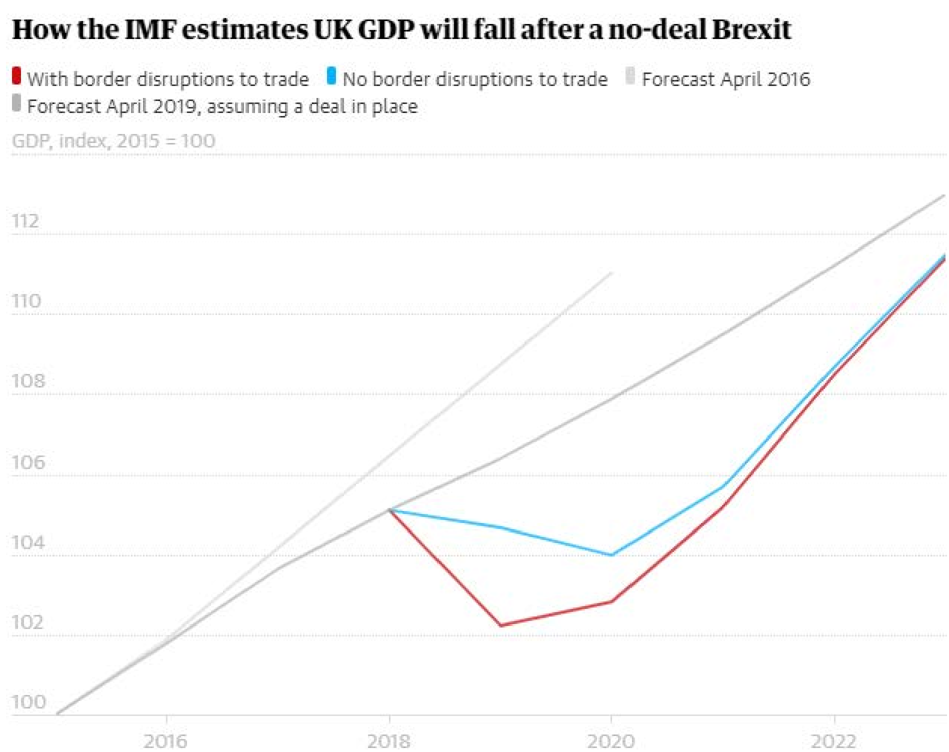
The biggest sign of a global slowdown is evident in the stance of the US Federal Reserve, which has suggested for no rate hikes this year against four rate hikes in 2018.

5. Brexit Woes to Continue for the UK Economy

Ahead of Theresa May's request to EU to delay Britain's departure, the International Monetary Fund (IMF) has warned that Britain might face a two-year recession by a no-deal Brexit. IMF has predicted that the UK economy could be 3.5% smaller than expected by 2021 if the trade barriers are not lifted. In March, considering Brexit done, IMF had predicted a growth rate of 1.2 per cent for the UK in 2019. The latest IMF report has also revised its prediction for 2020 for the UK by 0.1 points to 1.4 per cent.

The report suggests that there were alternative no-deal scenarios in which the UK would be hit by trade barriers, customs delays, barriers to financial services firms and the loss of preferential access to non-EU countries under trade deals negotiated by Brussels. As a result of these the output from the country will

witness a decline in 2019 – 20. It further suggested that in case of a no-deal Brexit that disrupts supply chain and raises trade costs, the UK might have to potentially suffer large and long-lasting negatives.

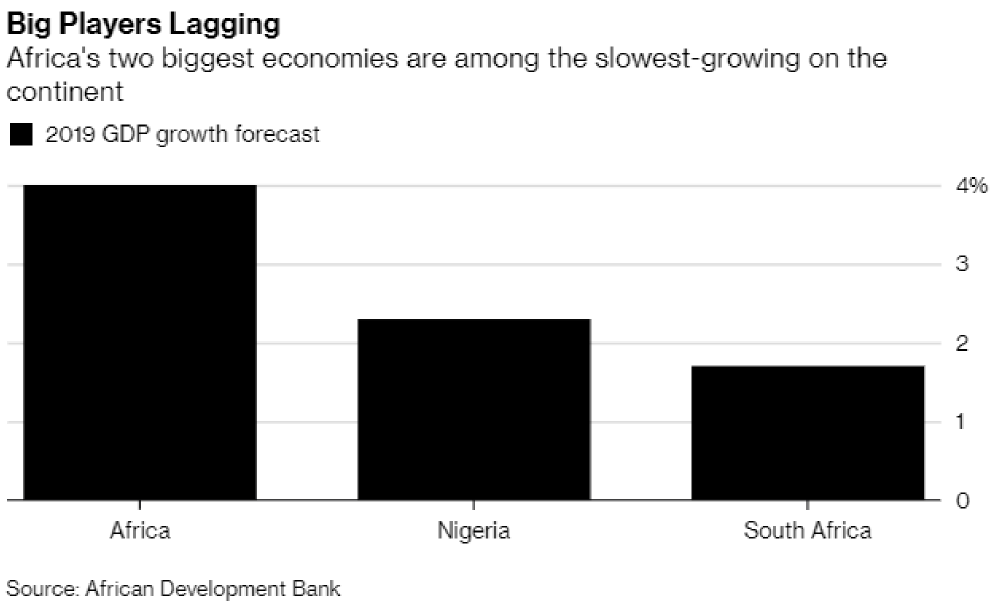


Source: IMF

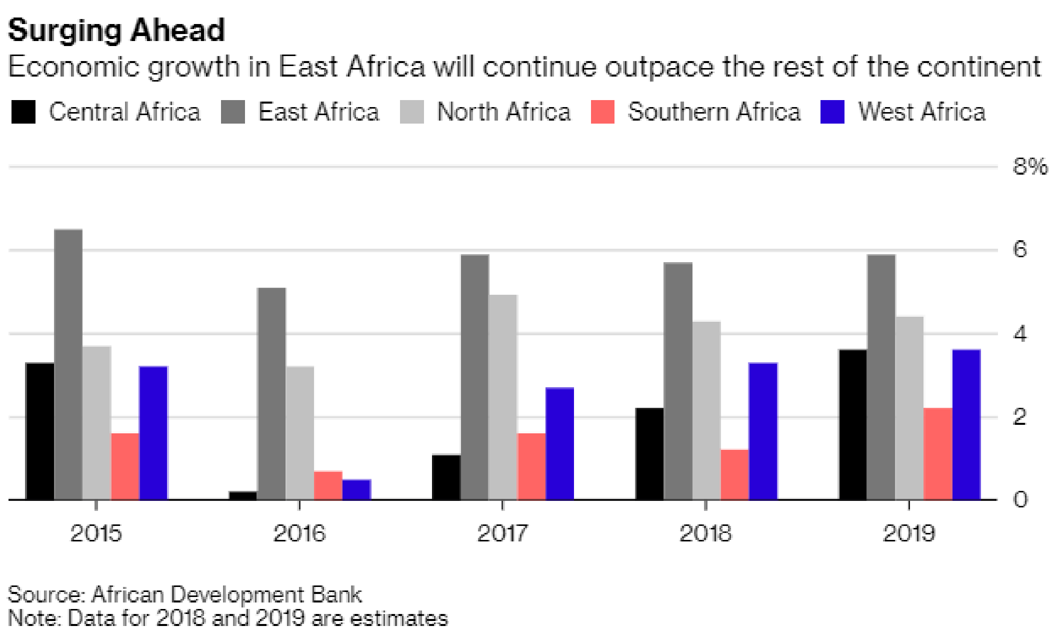
The report suggests that despite the pick-up in wage growth prompted due to the lowest unemployment since the mid-1970s, Bank of England should be wary of raising interest rates and should be prepared to cut taxes and raise public spending if there is a significant slow-down in growth.

6. East Africa Drives Growth for the Continent Despite a dismal Performance by Majors

A recent report from the Africa Development Bank suggests that the GDP in the continent of Africa is poised to grow at a robust rate of 4 per cent in 2019 against an estimated 3.5 per cent in 2018, making it the fastest growing continent after Asia. This growth is forecasted despite a weakening in Nigeria and South Africa, the two largest economies in the region which constitute almost half of the continents GDP.



The Nigerian economy is set to grow at a rate of 2.3 per cent in 2019 due to the Government's failure to reduce the nation's oil dependence and attract foreign investments. South Africa, the region's most industrialized economy, is poised to witness a GDP growth at 1.7 per cent as it is yet to get over the recession from last years.



Growth in the continent will be driven by the East African countries. Ethiopia, Kenya, Rwanda and Tanzania all feature on the AfDB's list of 10 fastest-growing economies for 2019. Egypt will also play a significant role in driving growth in the continent. Egypt, the biggest economy after Nigeria and South Africa, owing to the government's investor friendly reforms is set to witness GDP growth at 5.5 per cent in 2019.

7. Uncertainty over Parliament Election to subdue Industrial Productivity in India

A recent report suggests that the decline in economic growth momentum in October-December quarter of FY19 is likely to continue in India due to uncertainties related to parliament elections. The report suggests that subdued consumption demand combined with uncertainty over election will affect India's industrial productivity negatively.

The Dun and Bradstreet's (D&B) report suggests that post elections uplifting the domestic demand and resolving the issues in the strategic sectors like aviation, power and banking and non-banking financial companies should be the priority for the new Government as risks from slowing global economic activity and trade can be difficult to circumvent

On the prices front, the report said while there is a reversal in rates of some food articles, moderating inflation in some segments under the core inflation is likely to keep the overall inflation low. However, rising oil prices coupled with strengthening of El Nino conditions might impact the rainfall during June and July to create inflationary pressures for the non-core segment.

8. ADB Downgrades Forecasts for India and SE Asia; China Forecast Remains Unchanged

The Asian Development Bank (ADB), owing to the risks arising from trade tensions and Brexit, has downgraded its economic forecast for India and Southeast Asia for 2019.

The ADB report had lowered South East Asia's growth forecast by 0.2 percentage point to 4.9 percent. It has also lowered India's growth forecast for 2019 by 0.4 percentage points to 7.2 per cent from its December 2018 forecast of 7.6 per cent. It suggests that while deteriorating trade conflict between China and the US will impact foreign investments in the region, a chaotic Brexit and the financial market volatility will add to the risks. Below are some of the major insights from the ADB report:

- China will continue to grow at 6.3 per cent in 2019 and will slow down to 6.1 per cent in 2020
- The biggest economic blocs in developing Asia will see softer consumer price growth this year than previously forecast
- Exchange rate volatility might prove problematic to country's relying on dollar debts.
- Suitable monetary tools, regional dialogue and deeper domestic markets must be considered to cushion impact of tighter external funding conditions

Oil & Gas Market

Crude oil price

In March, Crude prices stabilized as the excess supply from OPEC dried in the market. Tightening supply lead to removal of extra barrels of crude in the market and strengthened the price. Oil prices are near four-month high as WTI crude crossed $60 dollar mark in the last week of March. Production disruptions in Libya, Venezuela further tightened the market.

As the equilibrium was tilting towards the supply side, crude prices saw a new high in 2019 by the month of March. Average Brent, WTI and Dubai basket crude prices went up by around 3.6%, 5.8% and 3.9 % respectively from the prices in the month of February.

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

Source: WORLD BANK

- Brent crude price averaged $66.80 per bbl in March 2019, and was up 3.6 % and down 0.1% on a month on month (MoM) and year on year (YoY) basis, respectively.
- WTI crude price averaged $58.15 per bbl in March 2019, and was up 5.8% and down 7.3% on a month on month (MoM) and year on year (YoY) basis, respectively.
- Dubai crude price averaged $66.80 per bbl in March 2019, and was up 3.9 % and 5.5% on a month on month (MoM) and year on year (YoY) basis, respectively.

Table 1: Crude oil price in March, 2019

Crude oil	Price ($/bbl) in March 2019	MoM (%) change	YoY (%) change
Brent	66.41	3.6%	-0.1%
WTI	58.15	5.8%	-7.3%
Dubai	66.80	3.9%	5.5%

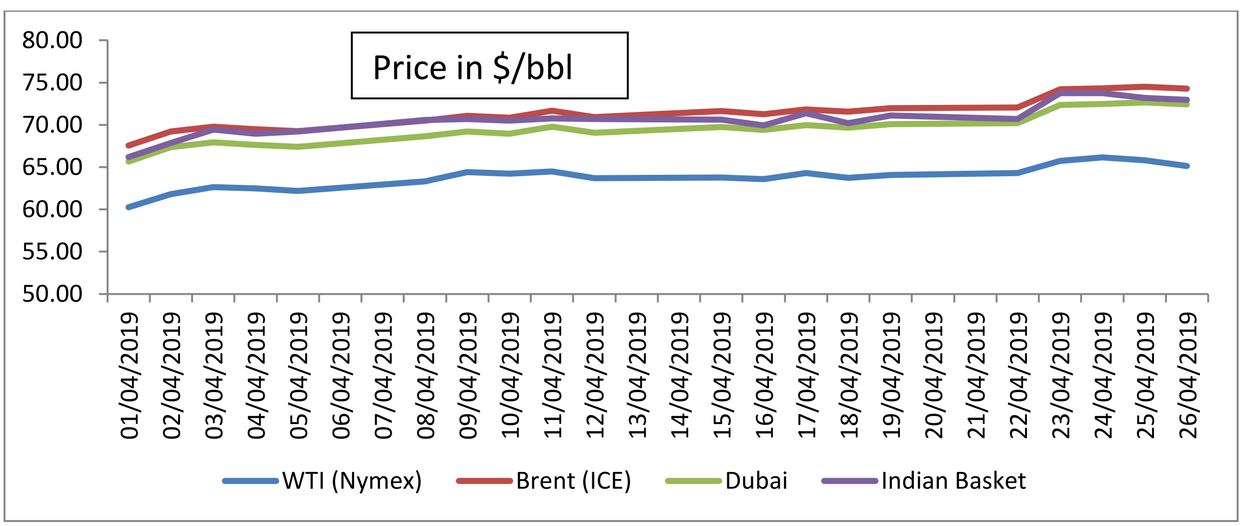
Source: WORLD BANK

Crude oil price strengthens in April 2019

Crude prices rallied higher in April as OPEC and allies increased their quota of production cut. Tightening supply lead to removal of extra barrels of crude in the market and strengthened the price.

Last week of April saw crude prices further risings, as the US decided to remove the Iran sanction waivers for 8 countries who export crude from Iran. Average Brent, WTI and Dubai basket crude prices went up by around 6.89 %, 9.73 % and 4.10 % respectively from the prices in the month of March.

Figure 2: Crude oil price in April 2019

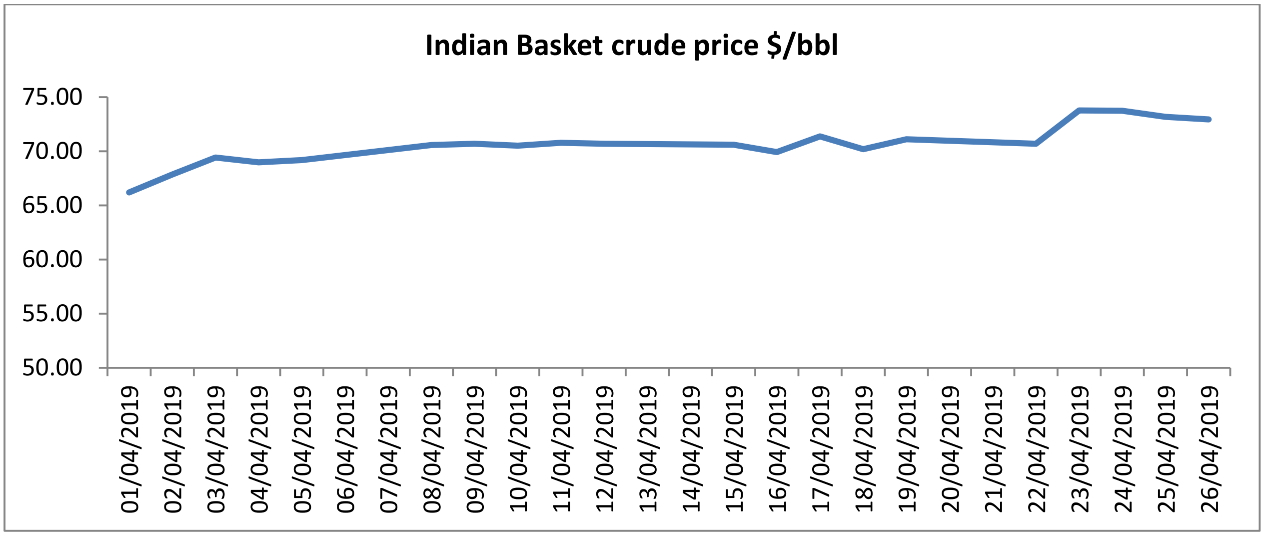


Source: EIA, PPAC

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 $ 70.62 per barrel in April, up 5.89 % Month on Month (MoM) basis and 2.97 % on a year on year (YoY) basis, respectively.

Impact of waiver cancellation for Iran Crude Import

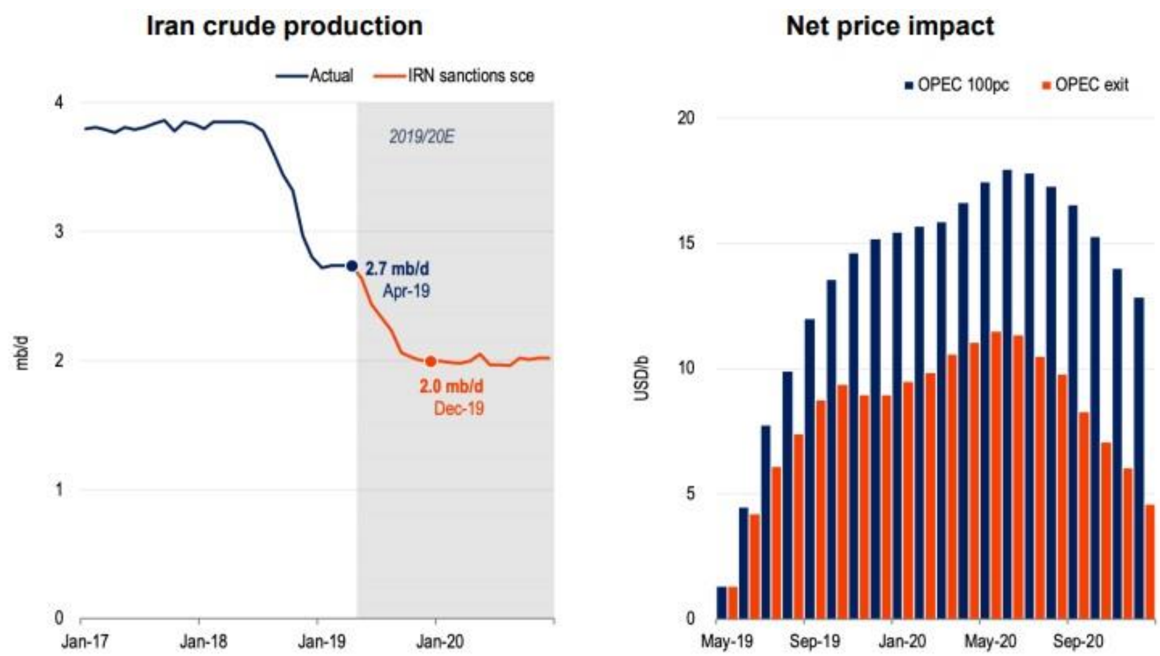
On 22nd of April, US announced that, it won't review waivers that let countries buy Iranian oil without facing U.S Sanctions. US's decision to bring down the Iran's oil import to zero is aimed at denying the Iranian government, its primary source of revenue. This move has upset major importers of Iran crude namely, India and China. Other countries that export from Iran are Greece, Italy, Japan, South Korea, Taiwan and Turkey. Current set of waivers for these countries expires on May 2.

In 2015, US pulled out of the 2015 nuclear deal between Iran and six global powers and reinstated the sanctions. In November 2018, the US re-imposed the sanctions on Iran's energy, shipping, ship building, and financial sectors in a move to compel Iran for re-negotiating the nuclear deal. However, six-month waivers were granted to eight main buyers of Iran crude from economic penalties. The waiver period of 6 months was to give these countries time to find alternative sources and to avoid shocks to global crude market.

Global Impact:

Crude prices rallied as a result of waiver withdrawal and reached all-time high since November 2018. Brent was trading at $74.21 /barrel, while WTI was trading at %66.15 on 23rd of April. Fears of oil shortage due to unexpected removal of supplies from Iran and production cut by OPEC + Allies triggered the price jump. However, the US is assuring to stabilize the global crude supply with additional crude supplies from Saudi Arabia and the United Arab Emirates. Earlier in November 2018, Saudi Arabia increased their crude output prematurely on the account of Iran sanctions to balance the market. However, Iran's crude loss didn't materialize and led to stock build in the last quarter of 2018. Since then, Saudi Arabia has curtailed its production to balance the part as a part of production cut deal between OPEC nations and allies. With its ability to produce 11.1 mb/d, Saudi Arabia can do the role of swing producer to balance the crude supply market if Iran's crude export reaches zero.

Net Price Impact of Iranian Sanctions, May 2019 – December 2020 (Expected)



Source : The Oxford Institute For Energy Studies

Impact on India:

India is the second largest importer of Iranian crude. India imported about 24 MT of crude oil in 2018-2019. 11% of the Indian crude oil import comes from Iran. India oil, Mangalore Refinery and Bharat Petroleum are the major buyers of Iranian Crude. Unavailability of Iran crude has already triggered the crude price. Indian refiners hadn't finalized the annual purchase deal with Iran foe 2019-20 as they were studying the US decision on waivers. Crude supply for Indian refiners will not be affected as the refiners have already roped in alternative supplies from other crude players namely, Kuwait, UAE, Saudi Arabia, the US and Mexico.

Advantages for Indian Refiners with Iran Crude

i) Longer 60-day credit period offered on Iranian oil compared to 30-day credit period offered by other suppliers
ii) Free freight and insurance
iii) Discount of $2-4/barrel of crude

Financial implication is estimated to go high for the Indian refiners as the result of waiver withdrawal. As domestic rates of petrol and diesel are linked to the global price, rising crude oil price will push the retail price of petrol and diesel. With India's export dependency around 84%, rising crude oil price will weaken the rupee.

Implications on Indian Economy due to higher crude price

- Every $10 a barrel jump in crude oil prices expands India's current account deficit (CAD) by 0.4 per cent of GDP.
- Fuels have 2.3 per cent weightage in CPI inflation and every 10 per cent increase in crude oil prices can push up the inflation rate by 20 basis points.
- Discontinuation of Iranian crude oil imports might negatively affect the annual operating profits of Indian refiners by over Rs 2,500 crore, credit rating agency ICRA
- The annual operating profits of the domestic refining industry could be negatively impacted by as much as $350 million (~Rs 2,500 crore) due to the discontinuation of Iranian oil imports

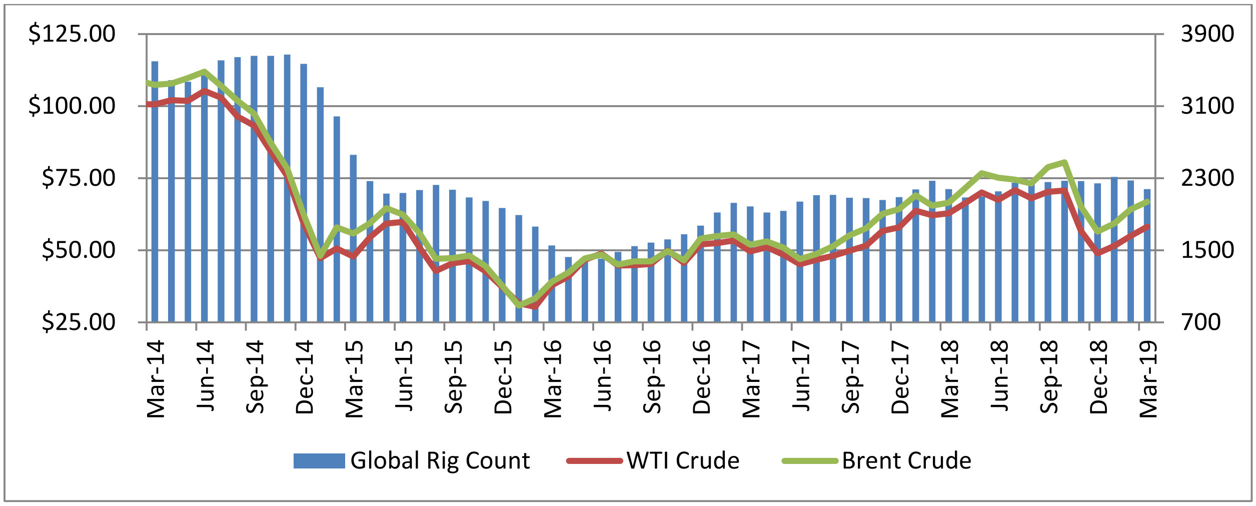
Source: ICRA

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

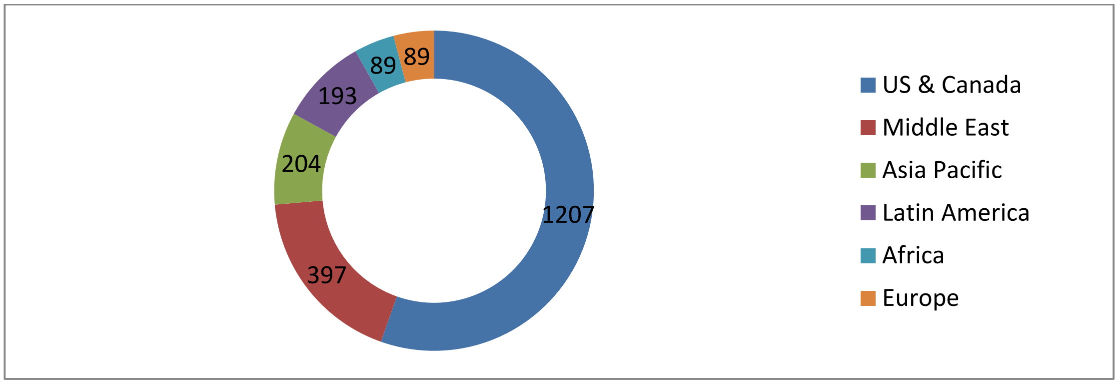
In March 2018, global drilling rig count stood at 2179, 97 less than February. Onshore rigs went down by 26 and offshore rig count went down by 71. Europe, Middle East, North America and Asia Pacific saw a decrease in rig count, while rig count went up in Latin America and Africa. Onshore rig count in North America decreased despite the strengthening oil & gas price. United States is the most active market for drilling industry with a rig count of 989. 976 were onshore rigs and 13 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 March 2018	MoM (%) change	YoY (%) change
Land	1978	-1.30%	4 %
Offshore	201	-35.32%	2.03%
Total	2179	-4.45%	3.81%

Source: Baker Hughes

Figure 5 Geography-wise Rig count - March 2018



Source: Baker Hughes

Indian Drilling Rig Count

Indian rig count stood unchanged in March 2019. Indian drilling rig count grew in 2018-19, albeit the volatile crude oil price. On Y-O-Y basis, Indian rig count was up by 12.8% in 2019 as compared to 2018. 101 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

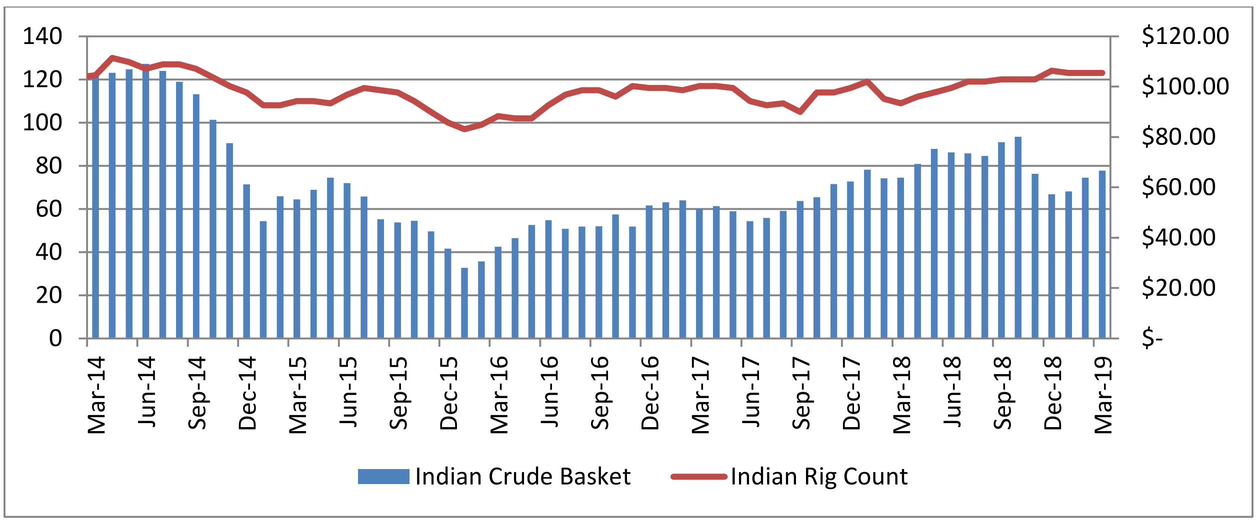


Table 3 : Indian Rig Count

Rig Type	Count in March 2019	MoM (%) change	YoY (%) change
Land	85	0 %	1.2 %
Offshore	38	0 %	52 %
Total	123	0 %	12.8 %

Source: Baker Hughes

Oil demand & supply

Preliminary data indicates that global oil supply declined by 0.14 mb/d to average 99.26 mb/d in March 2019, compared with the previous month. An increase in non-OPEC supply (including OPEC NGLs) of 0.39 mb/d compared with the previous month was mainly driven by US and Brazil. This was offset by a remarkable decline in OPEC crude oil production of 534 tb/d, this equates to a total increase in global oil output of 1.05 mb/d y-o-y. The share of OPEC crude oil in total global production declined by 0.5% to 30.2% in March 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 was revised down by 0.06 mb/d from March's forecast to stand at 2.18 mb/d due to the extended maintenance in Kazakhstan, Brazil and Cana which was partially offset by upward projections in the US and Russia's oil supply. Total non-OPEC supply is now projected to reach an average of 64.54 mb/d. The US, Brazil, Russia, the UK, Ghana, Sudans and Australia are expected to be main drivers. Countries projected to see the largest declines are Mexico, Kazakhstan, Indonesia, Norway and Vietnam. In 2019, world oil demand growth is anticipated to grow by 1.21 mb/d y-o-y, with total world consumption to reach 99.91 mb/d, slightly lower than previous month's assessment.

Table 4: World Oil demand in mbpd

	2018	1Q19	2Q19	3Q19	4Q19	2019	Growth	%
Total OECD	**47.42**	**47.69**	**47.24**	**48.16**	**48.14**	**47.81**	**0.39**	**0.83**
Dev. Countries	**32.13**	**32.44**	**32.60**	**32.86**	**32.56**	**32.61**	**0.49**	**1.52**
~ of which India	*4.53*	*4.83*	*4.74*	*4.40*	*4.96*	*4.73*	*0.20*	*4.43*
Other regions	**17.74**	**17.68**	**18.18**	**18.32**	**18.90**	**18.27**	**0.53**	**2.99**
~ of which China	12.32	12.28	12.84	12.65	13.07	12.71	0.39	3.18
Total world	**97.29**	**97.80**	**98.02**	**99.35**	**99.60**	**98.70**	**1.41**	**1.45**

Source: OPEC monthly report, April 2019

*Note: *2018 = Estimate and 2019 Forecast*

Global petroleum product prices

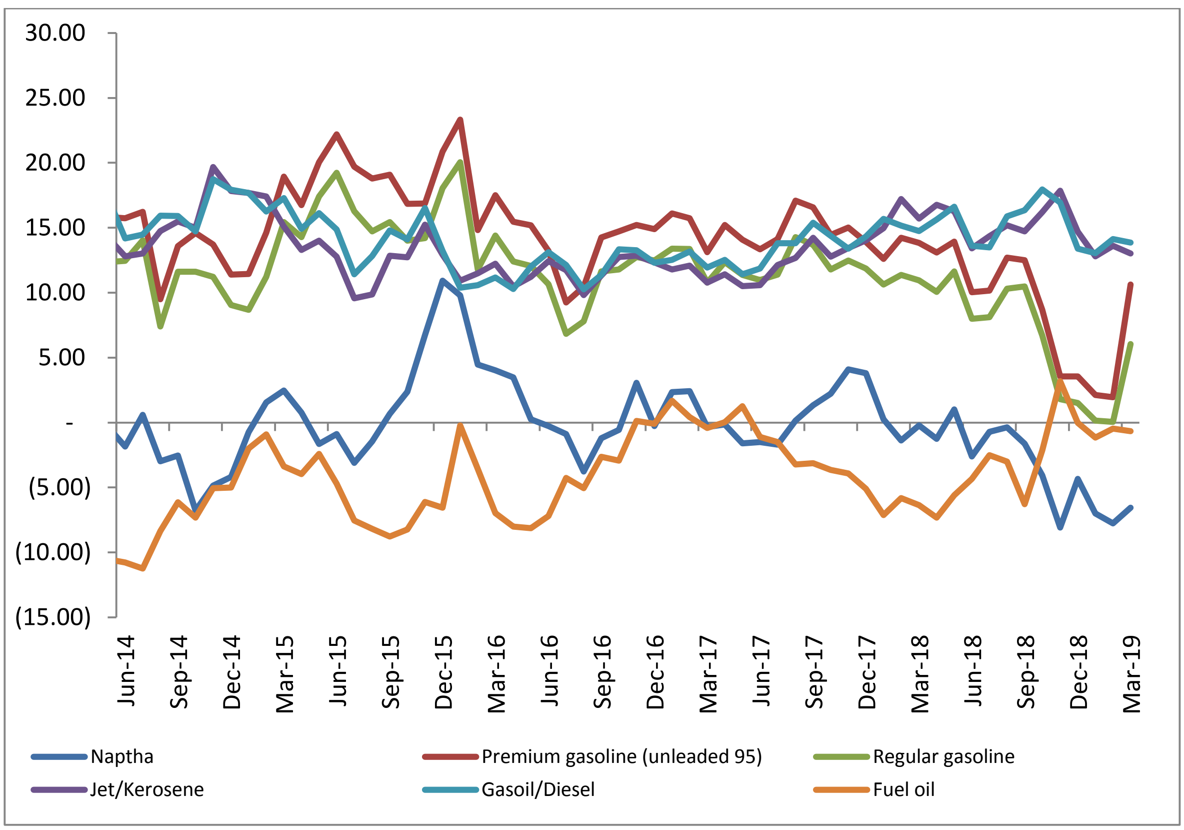
Prices in the Asian Gasoline-92 market saw an increase of 6.5% over the previous month. Retail price has fallen by significant smaller margin. Refinery margins dipped slightly. Gasoline cracks in Singapore increased by $5.98 /b, showing a recovery after five consecutive months of decline. Refinery utilization declined in March averaging 77.69 % in selected Asian markets comprising of Japan, China, India and Singapore.

Jet/Kerosene prices increased by 2.4 % in March. Earlier in February, Jet/kerosene increased by 8.6 %. Jet/Kerosene spread continued under pressure as air travel activities returned to normal after China's peak travelling season due to Lunar New Year Holidays in the previous month. The Singapore jet/kerosene crack spread against Oman averaged $12.91/b, down by 60¢ m-o-m and by $3.33 y-o-y.

The Singapore gasoil crack spread weakened during the month, pressured by lower arbitrage opportunities as, contrary to what was witnessed last month, exports of Indian volumes to the west became economically unfavorable. In March, gasoil crack spread increased by 2.8 %. Singapore gasoil crack spread against Oman averaged $13.75/b, slightly up by 27¢ m-o-m and by down $1.74 y-o-y.

The fuel oil market in Singapore went up by 3.6 % pressured by higher supplies as conversion units went offline for maintenance. Fuel oil arrivals in Singapore and stock levels rose relative to the levels registered in recent months. Singapore fuel oil cracks against Oman averaged minus 77¢/b, down by 21¢ m-o-m, but were up by $5.05 y-o-y.

Figure 7: Product crack spreads vs. Dubai crude



Source: OPEC, FIPI

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

Products	Price ($/b) in March 2019	MoM (%) change	YoY (%) change
Naptha	60.24	6.5%	-4.5%
Premium gasoline (unleaded 95)	77.42	16.8%	0.4%
Regular gasoline (unleaded 92)	72.83	13.2%	-1.9%
Jet/Kerosene	79.82	2.4%	1.0%
Gasoil/Diesel (50 ppm)	80.66	2.8%	3.4%
Fuel oil (180 cst 2.0% S)	66.14	3.6%	16.2%
Fuel oil (380 cst 3.5% S)	65.56	2.8%	17.0%

Source: OPEC

Petroleum products consumption in India*

- In February, LPG consumption decreased 4.2% on MoM basis.
- Consumption of gasoline increased (8.7% YoY) driven by higher demand from transport segment.
- Demand for diesel increased by 2.9% on YoY basis in the month of February.

Table 6: Petroleum products consumption in India, February 2019*

Petroleum products	Consumption in '000 MT February 2019	MoM (%) change	YoY (%) change
LPG	2,216	-4.2%	13.9%
Naphtha	1,285	2.1%	34.5%
MS	2,255	-5.0%	8.7%
ATF	680	-7.7%	8.8%
HSD	6,719	-4.9%	2.9%
LDO	57	-12.8%	21.5%
Lubricants & Greases	335	1.2%	14.5%
FO & LSHS	532	-9.0%	0.9%
Bitumen	652	-0.7%	3.1%
Petroleum coke	1,580	-9.4%	-28.2%
Others	837	-11.4%	41.5%
TOTAL	**17,419**	**-5.0%**	**4.1%**

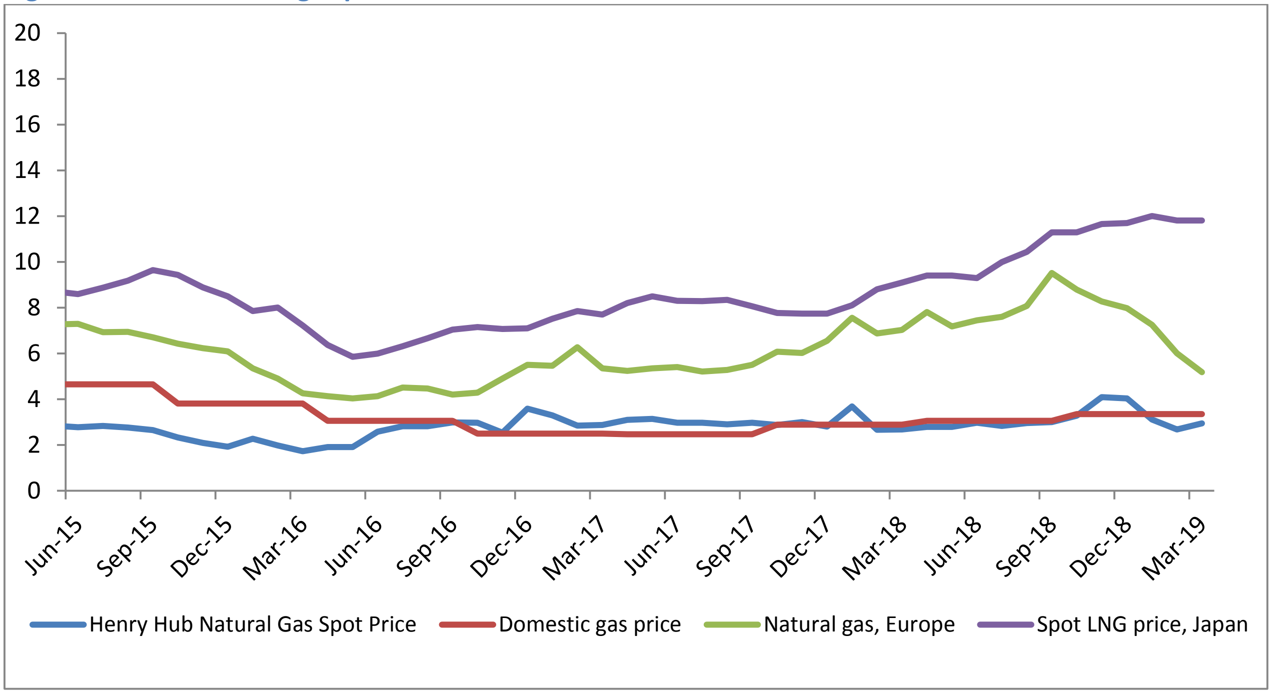
Source: PPAC

Note - * Data for March is not available.

Natural Gas Price

In March, the Henry Hub natural gas index increased on average by 9.7%, to $2.95/MMBtu. The index was 9.77% above the March 2018 level. Prices saw an increase as a result of colder-than-normal temperature in the month of March across much of the US.

Figure 8: Global natural gas price trends



Source: EIA, WORLD BANK

Table 7: Gas price

Natural Gas	Price ($/MMBTU) in March 2019	MoM (%) change	YoY (%) change
India, Domestic gas price	3.69*	9.8%	20.6%
India, Gas price ceiling – difficult areas	9.32*	21.5%	37.5%
Henry Hub	2.95	9.7%	9.7%
Natural Gas, Europe	5.18	-13.8%	-26.3%
Liquefied Natural Gas, Japan	11.81	0.0%	29.8%

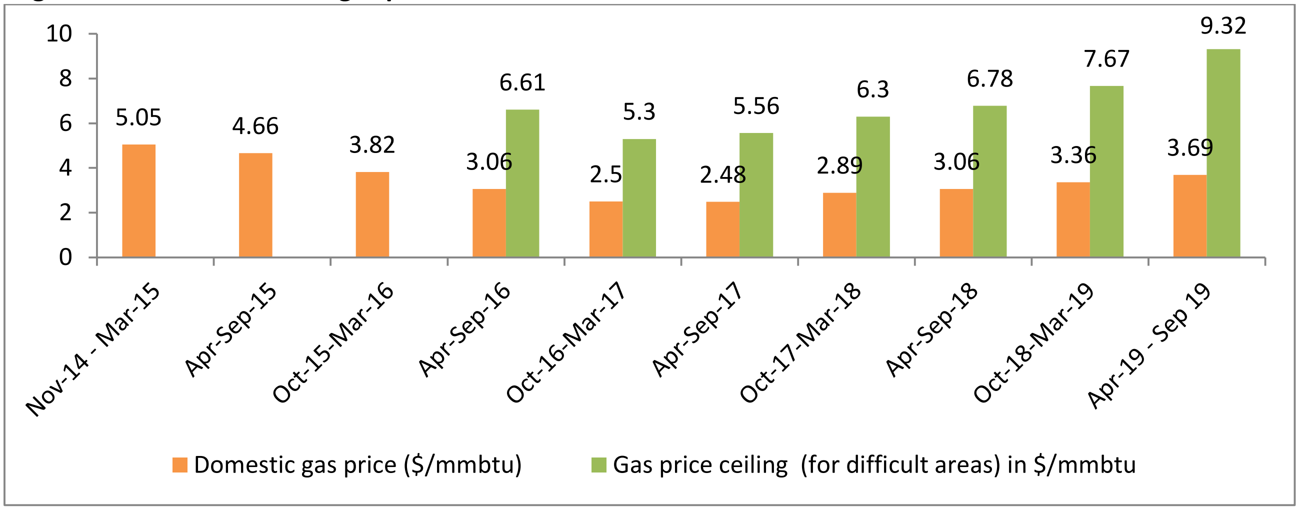
Source: EIA, PPAC,

**From 1st April 2019*

Domestic natural gas price which takes into account international benchmarks including Henry Hub, Alberta hub, Russia and UK National Balancing Point, has increased around 21% as compared to a year before, thus capturing the international gas price trends. Gas price for April to September 2019 is $3.69 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 April to September 2019 period, the price of gas from such areas has been notified at $9.32 per MMBTU.

Figure 9: Domestic natural gas price

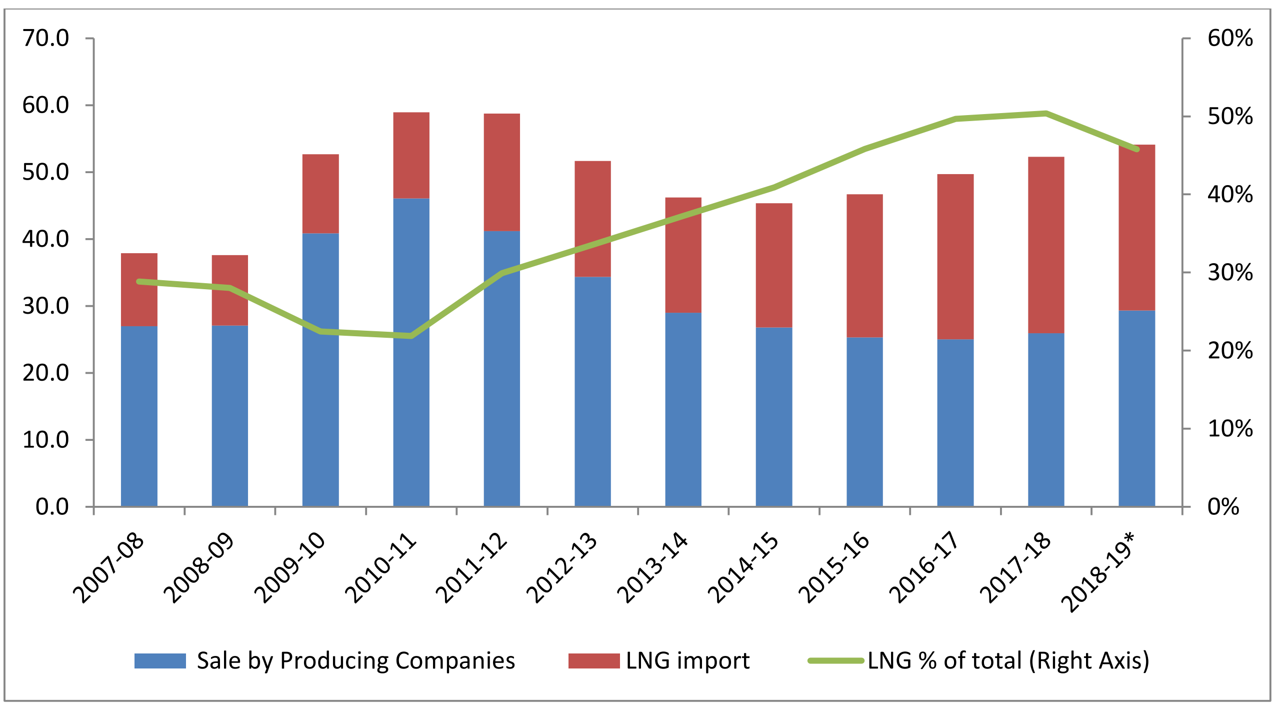


Source: PPAC

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 – February only. Sale by producing companies includes internal consumption*

Key developments in Oil & Gas sector during April 2019

- **Statement of Ministry of Petroleum and Natural Gas on the announcement by US to discontinue the Significant Reduction Exemption to all purchases of crude oil from Iran**

The Government of India has put in place a robust plan to ensure that there is adequate supply of crude oil to Indian oil refineries from May 2019 onwards. There will be additional supplies from other major oil producing countries from different parts of the world. The Indian refineries are fully prepared without any problem to meet the national demand for petrol, diesel and other petroleum products in the country.

- **Monthly Production Report for March, 2019**

Crude oil production during March, 2019 was 2854.32TMT which is12.99 % lower than target and6.16% lower when compared with March, 2018.Cumulative crude oil production during April-March, 2018-19 was 34203.27 TMT which is 7.59% and 4.15% lower than the cumulative target and production respectively during the corresponding period of last year.

Natural gas production during March, 2019 was 2815.96 MMSCM which is 1.20% higher when compared with March, 2018 although 8.99% lower than the target for the month. Cumulative natural gas production during April-March, 2018-19 was 32873.37MMSCM which is marginally higher by0.69% when compared with the production during corresponding period of last year, however is lower by 7.66% than target for the period.

Research, analysis & compilation by:

Praveen Rai, Deputy Director (Economic Policy & Planning)

Email: prai@fipi.org.in

Kaushiki Sinha Ray, Senior Assistant Director (Economic Policy & Planning)

Email: Kaushiki@fipi.org.in