FIPI

Federation of Indian Petroleum Industry

POLICY & ECONOMIC REPORT

OIL & GAS MARKET

July 2022

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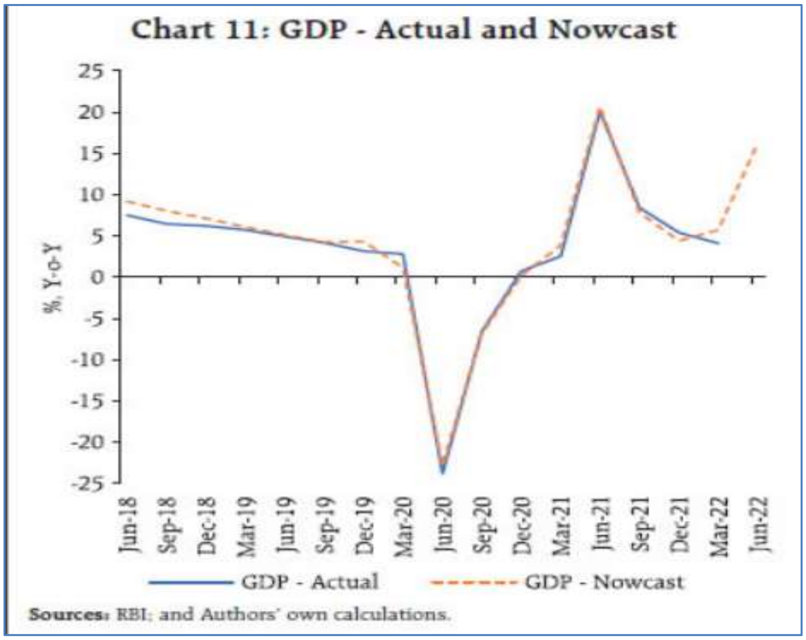
Executive Summary

According to World Economic Outlook released by IMF in July 2022, spill overs from the Russian's invasion of Ukraine has downgraded the global growth forecasts to 3.2 % in 2022-23 and 2.9% in 2023-24.

This reflects stalling growth in the world's three largest economies—the United States, China and the Euro area which have important consequences for the global outlook. The war in Ukraine is leading to high commodity prices, adding to supply disruptions, increasing food insecurity and poverty, inducing inflationary pressures, contributing to tighter financial conditions, and heightening policy uncertainty. Further, renewed COVID-19 outbreaks and lockdowns as well as a further escalation of the property sector crisis might further suppress Chinese growth.

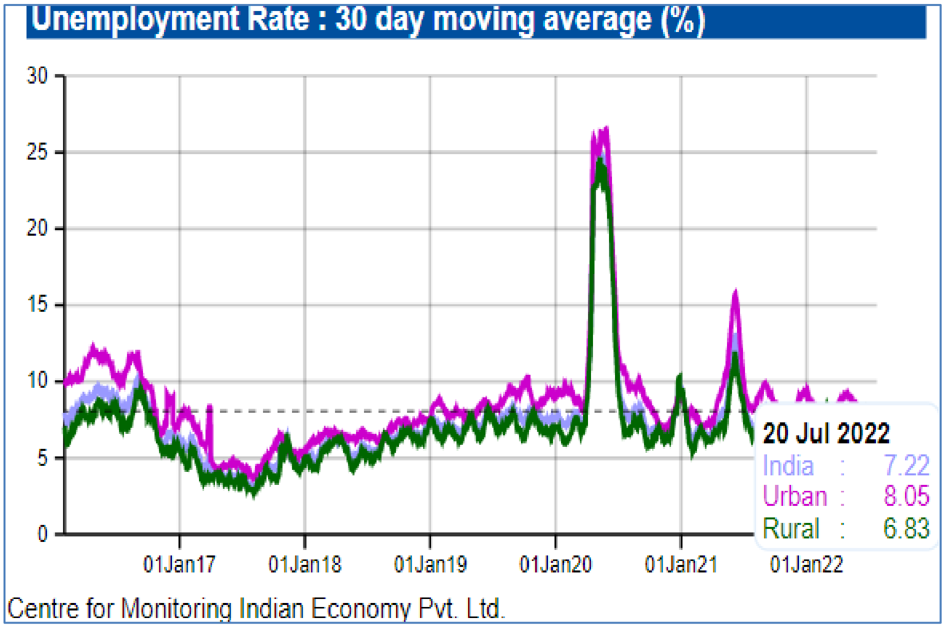
The Indian economy is making resilient progress in Q1:2022-23 in spite of the drag from global spillovers, elevated inflation and slackening of external demand as geopolitical developments take their toll on world trade. The recent revival of the monsoon, the pick-up in manufacturing and services, and strong buffers in the form of adequate international reserves, sufficient food grain stocks and a well-capitalized financial system brighten the outlook and strengthen the conditions for a sustainable high growth trajectory in the medium-term. In view of above, RBI projects real GDP growth in Q1 of FY 2022-23 at 16.2%.



The provisional data released by the National Statistical Office (NSO) on July 12, 2022 showed that inflation, measured by year on year (y-o-y) changes in the all-India consumer price index (CPI), eased marginally in June to 7.01 % relative to 7.04% rate a month ago and WPI inflation eased to 15.2% relative to 15.9% rate a month ago.

The June data marked sixth consecutive month that CPI inflation was above the upper bound of the RBI's target range of 2-6 per cent. The Reserve Bank of India (RBI) has raised interest rates by 90 basis points so far this year to 4.9% to control inflation. The Reserve Bank of India (RBI), which factors in the CPI in its monetary policy, had in June elevated the inflation forecast for the current financial year to 6.7% from its previous estimate of 5%.

The CMIE data for July suggest that the quantum of employment has improved, as the unemployment rate falls to 7.22% in the month of July 2022 with urban unemployment rate at 8.05 % and the rural unemployment rate is 6.83 % in June 2022.



India's merchandise trade deficit grew to a record $25.63 billion in June from $9.61 billion during the same period last year, stated the data released by the Commerce Ministry. The trade deficit in the April to June period this year was $70.25 billion.

The Indian rupee hit a record low by falling to 80.01 against the US dollar, weighed down by a surge in oil prices and broad strength in US dollar. The US dollar is up 7.5% against the Indian rupee so far this year. The rupee has depreciated by around 25 per cent against the US dollar since December 2014.

Oil prices fell on a weakening global demand outlook and the resumption of some Libyan crude oil output. Brent crude futures fell to $102.84, while U.S. West Texas Intermediate (WTI) crude futures were down to $95.27 a barrel.

The fall in crude prices is on the back of growing pessimism over global fuel demand as world economies battle the twin pressures of inflation and monetary tightening by Central Banks. Further, higher gas prices, triggered by Russia's gas squeeze, could lead to additional switching to crude from gas and support rising oil prices. Also, an expectation of an increase in interest rates in the United States to control rising inflation (at 9.1%) have put pressure on prices.

Natural gas spot prices at the U.S. Henry Hub benchmark averaged $7.70 per million British thermal units (MMBtu) in June 2022. U.S. natural gas prices remained relatively high mainly because of lower-than-average natural gas inventories as well as robust demand pressures which is adding to inflationary concerns across the economy.

In Europe, Spot gas prices have soared to record highs as country moves away from dependence on Russian energy. The natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe has been trading at averaged $34.35 per MMBtu

Economy in Focus

Global GDP growth

According to World Economic Outlook released by IMF in July 2022, spill overs from the Russian's invasion of Ukraine has downgraded the global growth forecasts to 3.2 % in 2022-23 and 2.9% in 2023-24.

This reflects stalling growth in the world's three largest economies—the United States, China and the Euro area which have important consequences for the global outlook. The war in Ukraine is leading to high commodity prices, adding to supply disruptions, increasing food insecurity and poverty, inducing inflationary pressures, contributing to tighter financial conditions, and heightening policy uncertainty. Further, renewed COVID-19 outbreaks and lockdowns as well as a further escalation of the property sector crisis might further suppress Chinese growth.

Countries worldwide are being hit by higher commodity prices, which add to inflationary pressures and curb real incomes and spending, further dampening the recovery.

- In the United States, reduced household purchasing power and tighter monetary policy will drive growth down to 2.3 % this year and 1 % next year.
- In China, further lockdowns, and the deepening real estate crisis pushed growth down to 3.3 % this year.
- In the euro area, growth is revised down to 2.6 % this year and 1.2 % in 2023, reflecting spillovers from the war in Ukraine and tighter monetary policy.

Latest World Economic Outlook Growth Projections

(real GDP, annual percent change)	2021	PROJECTIONS 2022	2023
World Output	6.1	3.2	2.9
Advanced Economies	5.2	2.5	1.4
United States	5.7	2.3	1.0
Euro Area	5.4	2.6	1.2
Germany	2.9	1.2	0.8
France	6.8	2.3	1.0
Italy	6.6	3.0	0.7
Spain	5.1	4.0	2.0
Japan	1.7	1.7	1.7
United Kingdom	7.4	3.2	0.5
Canada	4.5	3.4	1.8
Other Advanced Economies	5.1	2.9	2.7
Emerging Market and Developing Economies	6.8	3.6	3.9
Emerging and Developing Asia	7.3	4.6	5.0
China	8.1	3.3	4.6
India	8.7	7.4	6.1
ASEAN-5	3.4	5.3	5.1
Emerging and Developing Europe	6.7	-1.4	0.9
Russia	4.7	-6.0	-3.5
Latin America and the Caribbean	6.9	3.0	2.0
Brazil	4.6	1.7	1.1
Mexico	4.8	2.4	1.2
Middle East and Central Asia	5.8	4.8	3.5
Saudi Arabia	3.2	7.6	3.7
Sub-Saharan Africa	4.6	3.8	4.0
Nigeria	3.6	3.4	3.2
South Africa	4.9	2.3	1.4
Memorandum			
Emerging Market and Middle-Income Economies	7.0	3.5	3.8
Low-Income Developing Countries	4.5	5.0	5.2

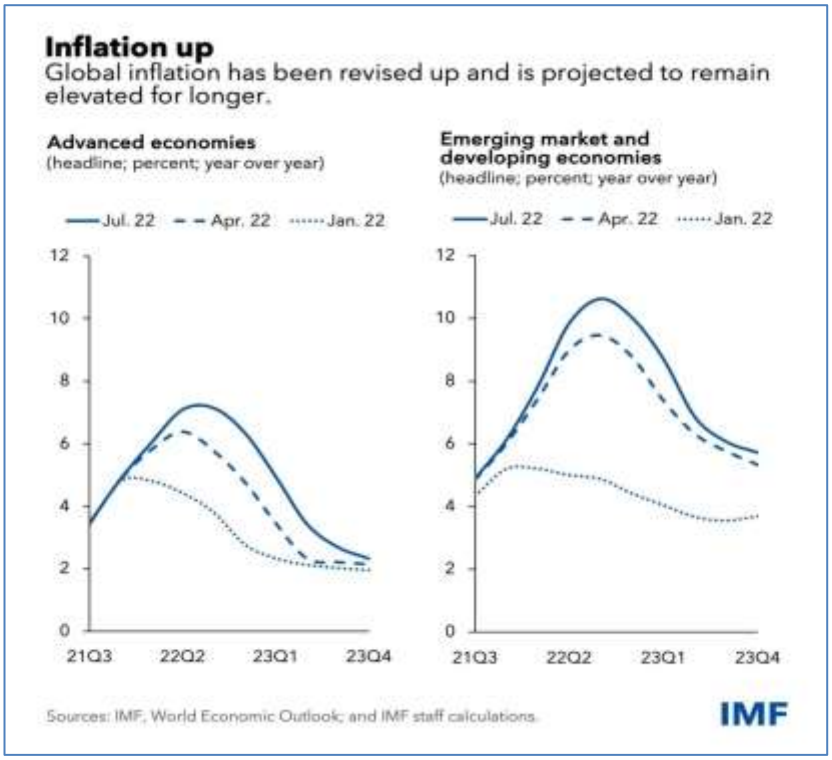
Source: IMF, *World Economic Outlook Update*, July 2022

Note: For India, data and forecasts are presented on a fiscal year basis, with FY 2021/2022 starting in April 2021. For the July 2022 WEO Update, India's growth projections are 7.4 percent in 2022 and 5.3 percent in 2023 based on calendar year.

INTERNATIONAL MONETARY FUND IMF.org

Global Inflation

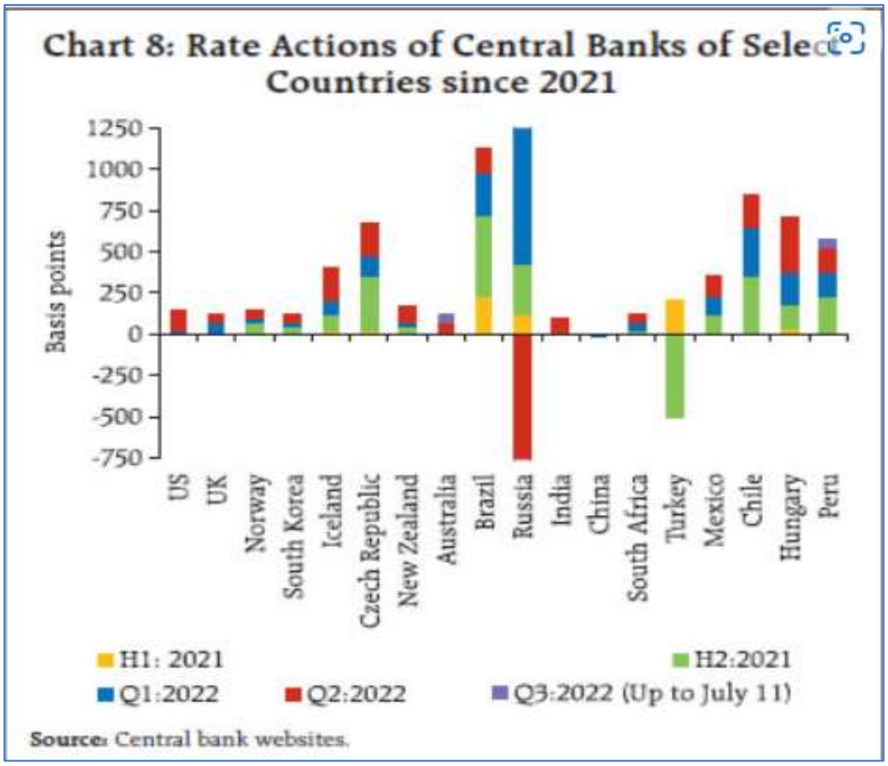
- Inflation has broadened in many economies, reflecting the impact of cost pressures from disrupted supply chains and tight labor markets.
- Global inflation has been revised up due to food and energy prices as well as lingering supply-demand imbalances, and is anticipated to reach 6.6 % in advanced economies and 9.5 % in emerging market and developing economies this year—upward revisions of 0.9 and 0.8 % point, respectively.



Central Banks stance on inflation

Many Central banks have started monetary tightening to tackle the high levels of inflation.

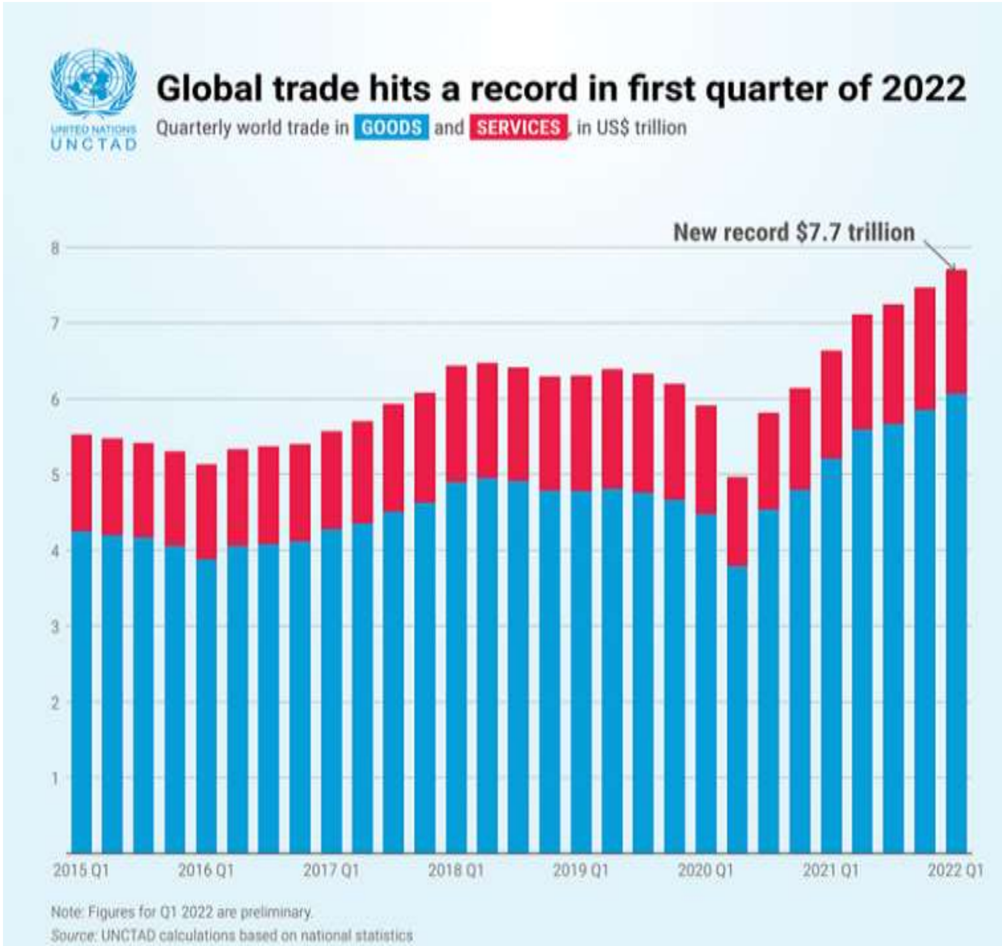
- In its June meeting, the US Federal Reserve raised the target range of the Federal Funds rate by 75 basis points (bps) to 1.5 - 1.75 per cent, the first 75 bps hike in 28 years, resulting in a cumulative hike of 150 bps since March 2022.
- In its June meeting, the Bank of England (BoE) raised its policy rate by 25 bps, taking it to 1.25 per cent.
- Most EME central banks have continued with policy tightening, including Hungary, Mexico and Brazil which hiked their benchmark rates by 185 bps, 75 bps and 50 bps respectively in their latest meetings.
- The Bank of Japan reiterated its accommodative stance with yield curve control, thereby remaining in direct contrast to its peers.



Global trade hits record $7.7 trillion in first quarter of 2022

The value of global trade rose to a record $7.7 trillion in Q1 2022, an increase of about $1 trillion relative to Q1 2021, according to UNCTAD's Global Trade Update. The growth, which represents a rise of about $250 million relative to Q4 2021, is fueled by rising commodity prices, as trade volumes have increased to a much lower extent.

It adds that rising interest rates and the winding down of economic stimulus packages will likely have a negative impact on trade volumes for the rest of 2022. Volatility in commodity prices and geopolitical factors will also continue to make trade developments uncertain.



Trade growth strong for both developed and developing countries

According to the report, trade growth rates in Q1 2022 remained strong across all geographic regions, although somewhat lower in the East Asia and Pacific regions. Export growth has been generally stronger in commodity-exporting regions, as commodity prices have increased.

Trade in merchandise goods reached about $6.1 trillion, an increase of about 25% relative to Q1 2021, and a jump of about 3.6% relative to Q4 2021. The value of merchandise exports from developing countries was about 25% higher in Q1 2022 than in Q1 2021. In comparison, this figure is about 14% for developed countries. Merchandise trade between developing countries also strongly grew during Q1 2022

Trade in services grew to about $1.6 trillion, an increase of about 22% relative to Q1 2021, and a rise of about 1.7% relative to Q4 2021.

Substantial increases across sectors

The report shows that most economic sectors recorded substantial year-over-year increases in the value of their trade in Q1 2022. High fuel prices are behind the strong increase in the value of trade in the energy sector. Trade growth was also above average for metals and chemicals.

By contrast, trade in the transportation sector and in communication equipment has remained below the levels of 2021 and 2019.

Slower economic growth, war in Ukraine dim prospects

The report says the evolution of world trade for the remainder of 2022 is likely to be affected by slower-than-expected economic growth due to rising interest rates, inflationary pressures and concerns over debt sustainability in many economies.

The report states that the war in Ukraine is affecting international trade by putting further upward pressure on the international prices of energy and primary commodities.

In the short term, because of the inelastic global demand for food and energy products, rising food and energy prices would likely result in higher trade values, and marginally lower trade volumes. Other factors expected to influence global trade this year are continuing challenges for global supply chains, regionalization trends and policies supporting the transition towards a greener global economy.

OPEC forecasts slower oil demand growth in 2023

In a monthly report, the Organization of the Petroleum Exporting Countries (OPEC) said it expects world oil demand to rise by 2.7 million barrels per day (bpd) in 2023. This year's growth forecast was left unchanged at 3.36 million bpd.

Oil use has rebounded from the pandemic-induced slump in 2020 and is set to exceed 2019 levels this year even as prices hit record highs. However, high crude prices and Chinese coronavirus outbreaks have eaten into 2022 growth projections.

"In 2023 expectations for healthy global economic growth amidst improvements in geopolitical developments, combined with expected improvements in the containment of COVID-19 in China, are expected to boost consumption of oil," OPEC said in the report.

OPEC said its 2023 forecasts assume there will be no escalation of the war in Ukraine and that risks such as rising inflation do not take a heavy toll on global economic growth. OPEC kept this year’s global economic growth forecast at 3.5% and forecast growth of 3.2% in 2023. The group and allies including Russia, known collectively as OPEC+, are ramping up output after record cuts put in place as the pandemic took hold in 2020.

In recent months OPEC+ has been undershooting targeted production increases owing to underinvestment in oilfields by some OPEC members and by losses in Russian output. The report showed OPEC output bucked that trend in June, rising by 234,000 bpd to 28.72 million bpd.

World's electricity demand growth slowing sharply as prices soar: IEA

The world's electricity demand growth is slowing sharply from its strong recovery the previous year as economic growth weakens and energy prices soar following Russia's invasion of Ukraine, according to International Energy Agency's (IEA) Electricity Market Report.

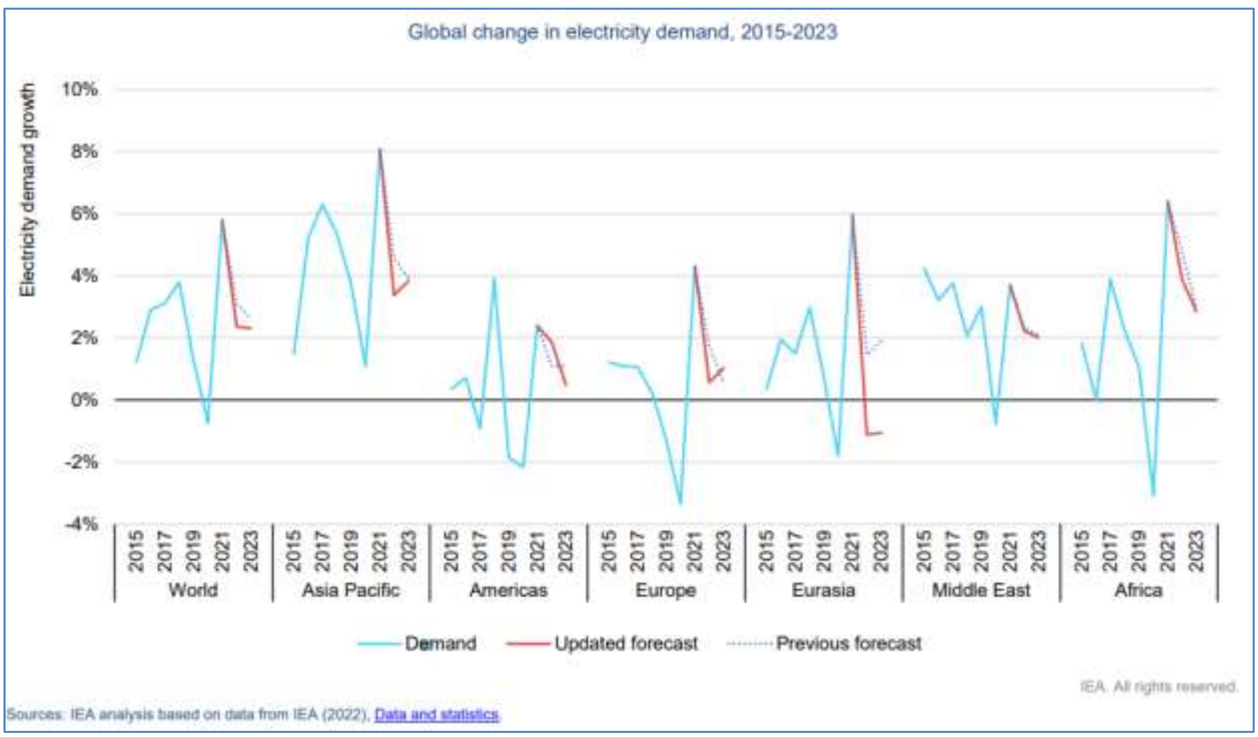
Global electricity demand is expected to grow by 2.4 per cent in 2022 after last year's six per cent increase, bringing it in line with its average growth rate over the five years prior to the Covid-19 pandemic, the report said.

While electricity demand is currently expected to continue on a similar growth path into 2023, the outlook is clouded by economic turbulence and uncertainty over how fuel prices could impact the generation mix.

Strong capacity additions are set to push up global renewable power generation by more than 10 per cent in 2022, displacing some fossil fuel generation. Despite nuclear' s three per cent decline, low-carbon generation is set to rise by seven per cent overall, leading to a one per cent drop in total fossil fuel-based generation. As a result, carbon dioxide (CO_2) emissions from the global electricity sector are set to decline in 2022 from the all-time high they reached in 2021, albeit by less than one per cent.

In the first half of 2022, average natural gas prices in Europe were four times as high as in the same period in 2021 while coal prices were more than three times as high, resulting in wholesale electricity prices more than tripling in many markets.

Due to high gas prices and supply constraints, coal is replacing natural gas for power generation in markets with spare coal plant capacity, particularly in the European countries seeking to end their reliance on Russian gas imports.



To secure energy supplies following Russia's invasion of Ukraine, some European countries have delayed coal phase-out plans and lifted previously imposed restrictions on coal. Globally, coal use for power is expected to increase slightly in 2022 as growth in Europe is balanced by contractions in China, due to strong renewables' growth and only a modest rise in electricity demand, and the US, due to constraints on supply and coal power plant capacity.

Gas power is expected to fall by 2.6 per cent as declines in Europe and South America outweigh growth in North America and the Middle East. "The world is in the midst of the first truly global energy crisis, triggered by Russia's invasion of Ukraine, and the electricity sector is one of the most heavily affected," said IEA Director of Energy Markets and Security Keisuke Sadamori.

"This is especially evident in Europe, which is experiencing severe energy market turmoil, and in emerging and developing economies, where supply disruptions and soaring fuel prices are putting huge strains on fragile power systems and resulting in blackouts.

Global financial conditions are getting worse as borrowing rates rise and economic growth slows: Moody's

According to Moody's Investors Service, the extended war between Russia and Ukraine increased borrowing rates, and weaker economic development has all contributed to a worsening of global financial conditions.

It claimed that the rise in oil and food prices brought on by the situation in Ukraine is eroding consumer buying power, driving up business input costs, and lowering investor confidence. With rising borrowing costs and economies that have not yet fully recovered from the COVID-19 pandemic crisis, many frontier market sovereigns would find it difficult to service their debt, the report stated.

Financial market conditions are tightening across continents as central banks in numerous nations begin to boost interest rates in reaction to excessive inflation. The US-based rating service predicted that financial conditions would continue to tighten as interest rates rise.

Compared to its March predictions of 3.6% and 3%, respectively, Moody's reduced its economic growth forecast for the G-20 nations to 3.1% for this year and 2.9% for next year. In order to avoid a further rise in inflation expectations, central banks in both developed and developing market nations will keep raising interest rates, according to Moody's.

In India, the Reserve Bank has hiked interest rates in two quick successions by 90 basis points to 4.90%. The RBI has the mandate to keep inflation at 4% with a bias of 2% on either side.

Apart from inflation, other risks include the possibility of commodity prices jumping even higher, longer-lasting supply-chain disruptions, a larger-than-expected slowdown of China's economy, and new, more dangerous strains of COVID-19 that led to renewed health emergency and restrictions on mobility and activity.

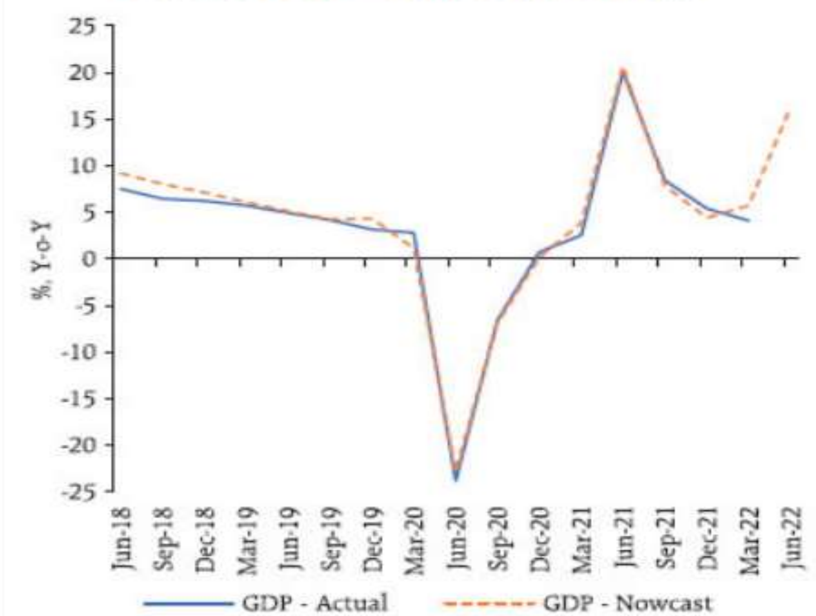
India

India’s economic growth

The Indian economy is making resilient progress in Q1:2022-23 in spite of the drag from global spillovers, elevated inflation and slackening of external demand as geopolitical developments take their toll on world trade.

The recent revival of the monsoon, the pick-up in manufacturing and services, and strong buffers in the form of adequate international reserves, sufficient food grain stocks and a well-capitalized financial system brighten the outlook and strengthen the conditions for a sustainable high growth trajectory in the medium-term. In view of above, RBI projects real GDP growth in Q1 of FY 2022-23 at 16.2%.

Chart 11: GDP - Actual and Nowcast



Sources: RBI; and Authors' own calculations.

According to RBI, the following factors determine India’s GDP growth in FY 2023: -

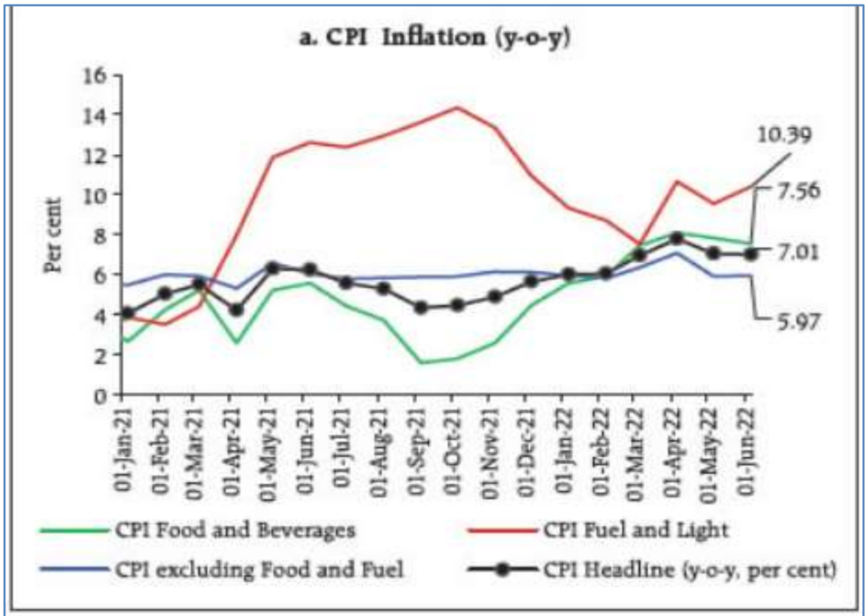
- Urban demand appears to have maintained expansion and rural demand is improving with onset of monsoons and expected improvement in agricultural prospects.
- Investment activity have been on a rise with improving capacity utilization, stronger corporate balance sheets and better financial conditions.
- As per the preliminary data released by the Ministry of Commerce and Industry on July 4, India’s merchandise exports at US$ 37.9 billion in June 2022 registered a robust growth of 16.8 per cent on a y-o-y basis and India’s merchandise imports at US$ 63.6 billion surged to their highest

monthly level in June 2022, growing by 51.0 per cent on a y-o-y basis. Imports of petroleum and its products rose by 94.2 per cent on the back of improving domestic demand.

- Bank credit growth is picking up steadily and is clocking double digits, according to Financial Stability Report (FSR) of the Reserve Bank of India (RBI). It highlighted that the gross NPA was now at a six-year low, with an improvement in the loan loss ratio.

Inflation in India

The provisional data released by the National Statistical Office (NSO) on July 12, 2022 showed that inflation, measured by year on year (y-o-y) changes in the all-India consumer price index (CPI), eased marginally in June to 7.01 % relative to 7.04% rate a month ago and WPI inflation eased to 15.2% relative to 15.9% rate a month ago.



Note: CPI inflation for April-May 2021 was computed based on imputed CPI indices
Sources: National Statistical Office (NSO); and RBI staff estimates.

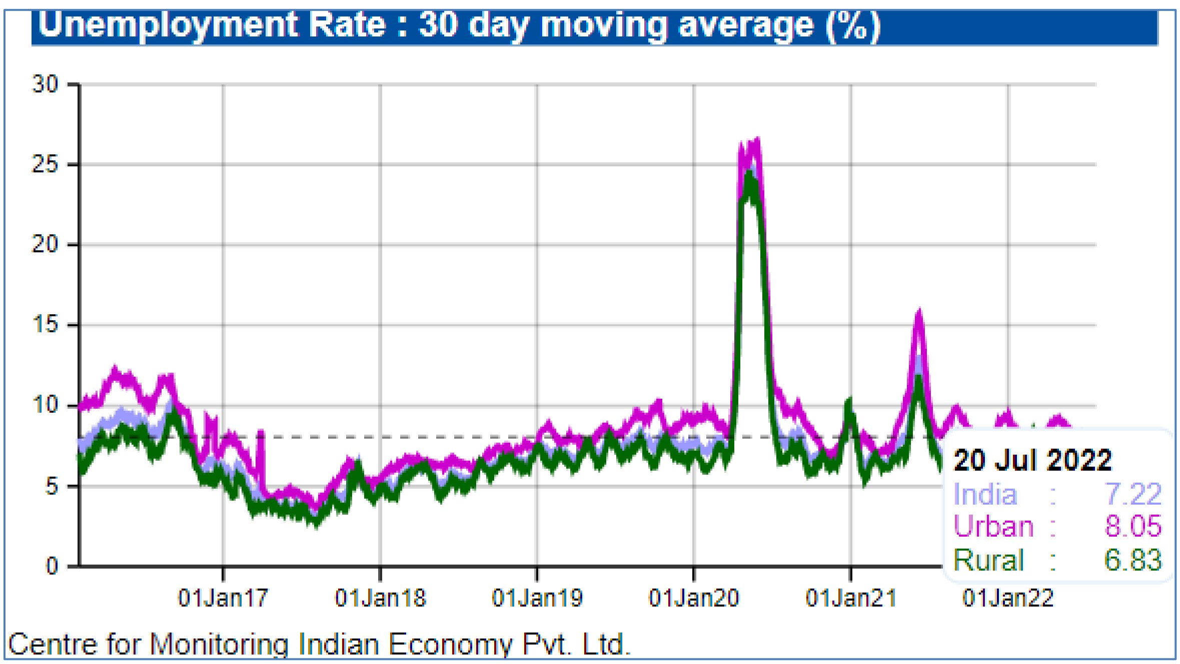
- Food prices, which account for nearly half of the inflation basket, will remain high due to supply chain issues, crude oil price increases amidst geopolitical tensions.
- In June, there was a marginal decline in the contribution of the food group to overall CPI, stemming from softer price changes (y-o-y) in respect of edible oils, eggs, vegetables, pulses, sugar and prepared meals.
- On the other hand, inflation edged up for cereals, meat, fish, milk, fruits and spices.
- The fuel group contributed 10.0 per cent of headline inflation in June, with inflation in the category edging up from 9.5 per cent in May to 10.4 per cent in June. There was a sharp increase in kerosene and LPG prices.

RBI stance on Inflation

- The June data marked sixth consecutive month that CPI inflation was above the upper bound of the RBI's target range of 2-6 per cent.
- The Reserve Bank of India (RBI) has raised interest rates by 90 basis points so far this year to 4.9% to control inflation.
- The Reserve Bank of India (RBI), which factors in the CPI in its monetary policy, had in June elevated the inflation forecast for the current financial year to 6.7% from its previous estimate of 5%.
- RBI expects India's inflation to hold above the central bank's tolerance band for remaining of 2022. This is despite the measures taken by the government pertaining to tax structure imposed on crucial commodities, excise duty cut on petrol and diesel to control the rising inflation.

Unemployment in India

The CMIE data for July suggest that the quantum of employment has improved, as the unemployment rate falls to 7.22% in the month of July 2022 with urban unemployment rate at 8.05 % and the rural unemployment rate is 6.83 % in June 2022.



India's external sector

India's merchandise trade deficit grew to a record $25.63 billion in June from $9.61 billion during the same period last year, stated the data released by the Commerce Ministry. The trade deficit in the April to June period this year was $70.25 billion.

The country's merchandise exports increased by 16.8 percent year-on-year to $37.9 billion in June 2022, the highest-ever recorded in the month, the data stated. On the other hand, imports expanded to 51.03 percent year-on-year to $63.58 billion. The monthly imports and trade deficit were among the highest-ever, in June 2022.

The merchandise exports during the first quarter of this fiscal year jumped 22 percent to $116.7 billion, the highest-ever exports recorded during the first quarter. Non-petroleum exports increased by 11.9 percent to $92.5 billion in the first quarter, which also recorded a major rise in the exports of petroleum products, electronic goods and readymade garments.

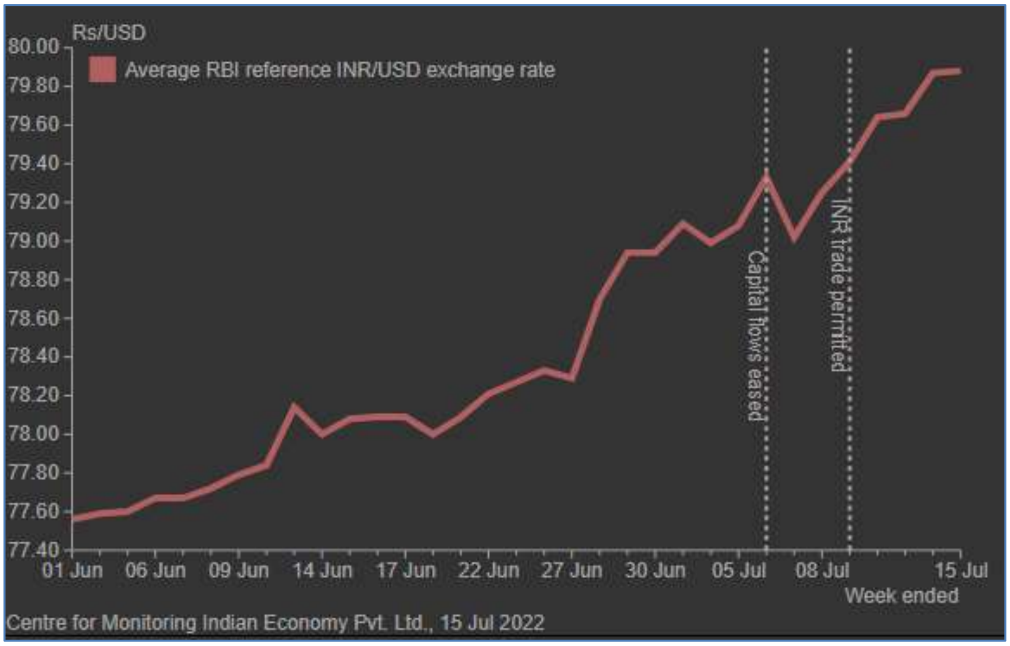
The country saw a positive growth in imports of top 10 major commodity groups from June 2021 to June 2022. There was a 94.17 percent rise in petroleum and crude import, 241 percent rise in coal and coke import, 169 percent increase in gold import and 51 percent rise in total imports.

Cotton yarn exports fell by 22.54 percent, plastic exports reduced by 22.23 percent, engineering goods by 1.57 percent and drug and pharma exports by 1.27 percent. There was a positive growth in all other major export categories from June 2021 to June 2022.

India Rupee falls past 80 per US dollar for first time

The Indian rupee hit a record low by falling to 80.01 against the US dollar, weighed down by a surge in oil prices and broad strength in US dollar. The US dollar is up 7.5% against the Indian rupee so far this year. The rupee has depreciated by around 25 per cent against the US dollar since December 2014.

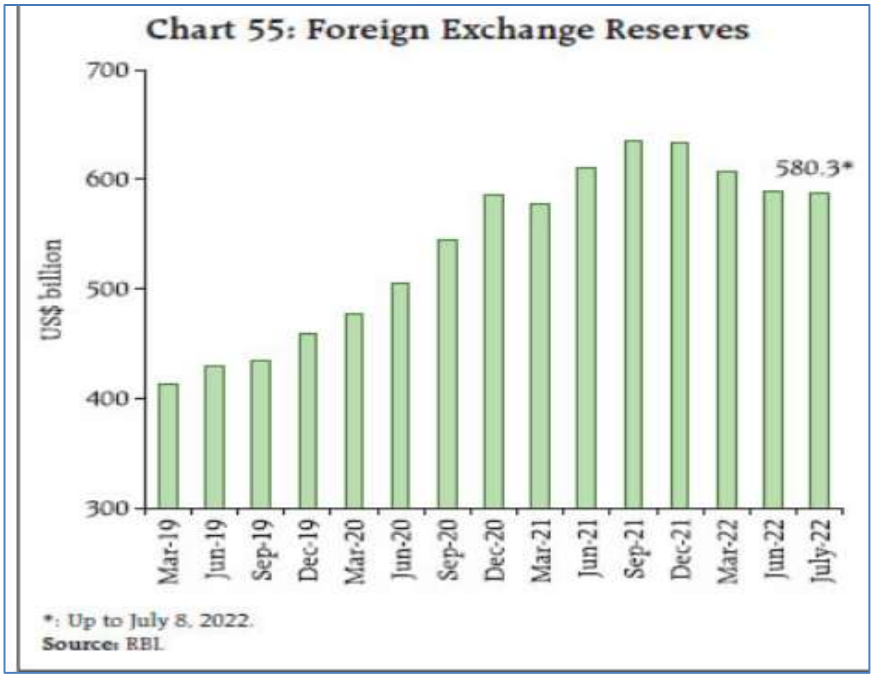
Finance Minister Nirmala Sitharaman said in the parliament that the main reasons for the depreciation in the value of rupee are global factors like the soaring crude oil prices and the Russia-Ukraine conflict. However, the government said, that Currencies such as the British pound, the Japanese yen and the Euro have weakened more than the Indian rupee against the US dollar and therefore, the Indian rupee has strengthened against these currencies in 2022.



The European Central Bank in its regular policy meeting is expected to raise interest rates for the first time in 11 years. Possible interest rate hikes by the ECB supported the euro and pushed the dollar index lower.

Further, global investors are choosing the safety of US markets over the recession risks of the EU. The impending threat of Russia cutting off gas supplies in winter coupled with the slow intervention by the ECB to control inflation, means that the recession in the EU looks imminent. Hence investors are selling Euros and buying dollars. It also reinforces the importance of USD as the safest currency during times of uncertainty.

Further, Forex reserves have plummeted to US$ 580.3 by $62.4 billion from the record high of $642.45 billion registered on September 3, 2021. A major reason for the decline in forex reserves is capital outflows by foreign portfolio investors (FPIs) as the US Federal Reserve started the monetary policy tightening and interest rate hikes.



International rating agencies downgrade India's FY 23 GDP growth forecasts: -

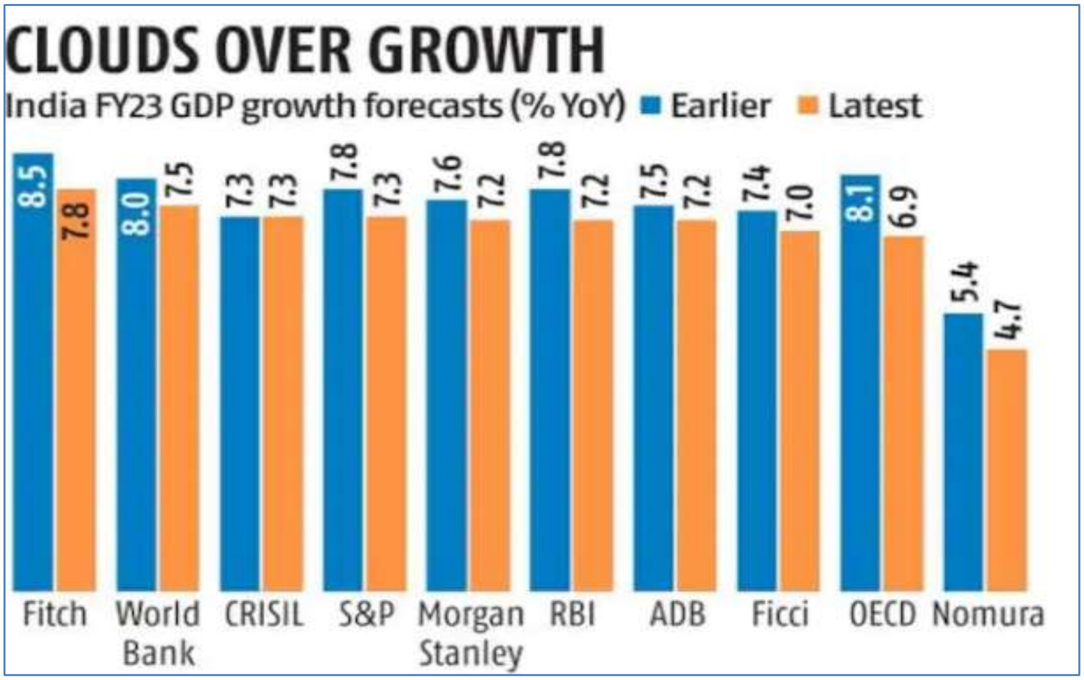
India's FY23 GDP Growth: FICCI, ADB Cut Forecasts on High Inflation, Global Uncertainty

The Asian Development Bank (ADB) on Thursday slashed its growth forecast for India to 7.2 per cent for FY23 from 7.5 per cent estimated earlier citing higher than anticipated inflation since April and subsequent monetary tightening by the central bank. The Manila-based multilateral development bank also raised its inflation forecast for India to 6.7 per cent for FY23 from 5.8 per cent projected earlier.

India's GDP growth moderated to 4.1 per cent in the March quarter of FY22 on "disappointing" growth in private consumption and a contraction in manufacturing.

ADB said private investment will soften due to the higher cost of borrowing for firms as the Reserve Bank of India (RBI) continues to raise policy rates to contain inflation. "Net exports will shrink due to subdued global demand and a rising real effective exchange rate eroding export competitiveness despite a depreciating rupee," it added.

FICCI now projects India to grow at a lower 7 per cent than the 7.4 per cent estimated earlier. Also, FICCI cited that the RBI is expected to maintain a hawkish stance throughout the calendar year 2022. "The policy repo rate is forecasted at 5.65 per cent by the end of the fiscal year 2022-23, with a minimum and maximum range of 5.50 per cent and 6.25 per cent, respectively.



Source- International rating agencies-reports

Morgan Stanley has slashed its forecast for India's economic growth

Morgan Stanley has slashed its forecast for India's economic growth for this financial year and the next in view of a slowdown in global growth. The growth forecast for the country's gross domestic product (GDP) for 2022-23 has been lowered by 40 basis points to 7.2 per cent, while that for 2023-24 has been reduced by 30 basis points to 6.4 per cent.

Crisil cuts India's GDP growth forecast at 7.3% for FY23

Crisil lowered India's real gross domestic product (GDP) growth forecast to 7.3% from 7.8% estimated earlier, citing higher oil prices, slowing global demand for the country's exports, and higher inflation. The GDP predictions are in line with the Reserve Bank of India (RBI's) estimates, which projected the economy to grow at 7.2% for FY23, from earlier guidance of 7.8%. The report says higher inflation reduces purchasing power and would weigh on the revival of consumption, the largest component of GDP, which has been backsliding for a while. However, a normal monsoon forecast and rebound in contact-intensive services are expected to support the economy.

Crisil has pegged the consumer price index (CPI), or retail inflation, could surge to 6.8% on average this fiscal, compared with 5.5% last year. The impact of this year's heatwave on domestic food production, coupled with persisting high international commodity prices and input costs, will cause a broad-based rise, says the report.

On record slump in domestic currency, the agency says the rupee-dollar exchange rate will remain volatile, with a depreciation bias in the near-term due to a widening trade deficit and foreign portfolio investment

(FPI) outflows. The strengthening of the US dollar index, owing to rate hikes by the U.S. Federal Reserve, and safe-haven demand for the dollar amid geopolitical risks, also dragged the local currency. It expects the exchange rate to settle at 78 per dollar by March 2023, compared with 76.2 a dollar in March 2022.

India Set to Surpass China as the World's Most Populous Country in 2023: UN Report

India is set to surpass China as the world's most populous country in 2023, with each counting more than 1.4 billion residents this year, according to United Nations report. The world's population, estimated to reach 8 billion by November 15 this year, could grow to 8.5 billion in 2030, and 10.4 billion in 2100, as the pace of mortality slows, said the report released on World Population Day.

World Population	Year
1 billion	1804
2 billion	1927
3 billion	1959
4 billion	1974
5 billion	1987
6 billion	1998
7 billion	2011
8 billion	2022

Source: United Nations Population Fund

India's population was 1.21 billion in 2011, according to the domestic census, which is conducted once a decade. The government had deferred the 2021 census due to the COVID-19 pandemic.

In 2021, the average fertility of the world's population stood at 2.3 births per woman over a lifetime, having fallen from about 5 births in 1950. Global fertility is projected to decline further to 2.1 births per woman by 2050. Referring to an earlier World Health Organization report – estimating about 14.9 million deaths relating to the COVID-19 pandemic between January 2020 and December 2021 – the UN report said global life expectancy at birth fell to 71 years in 2021 from 72.8 years in 2019, mostly due to the pandemic.

The United Nations said more than half of the projected increase in the global population up to 2050 will be concentrated in eight countries – Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, the Philippines and the United Republic of Tanzania. Countries of sub-Saharan Africa are expected to contribute more than half of the increase anticipated through 2050.

However, the population of 61 countries is projected to decrease by 1% or more between 2022 and 2050, driven by a fall in fertility.

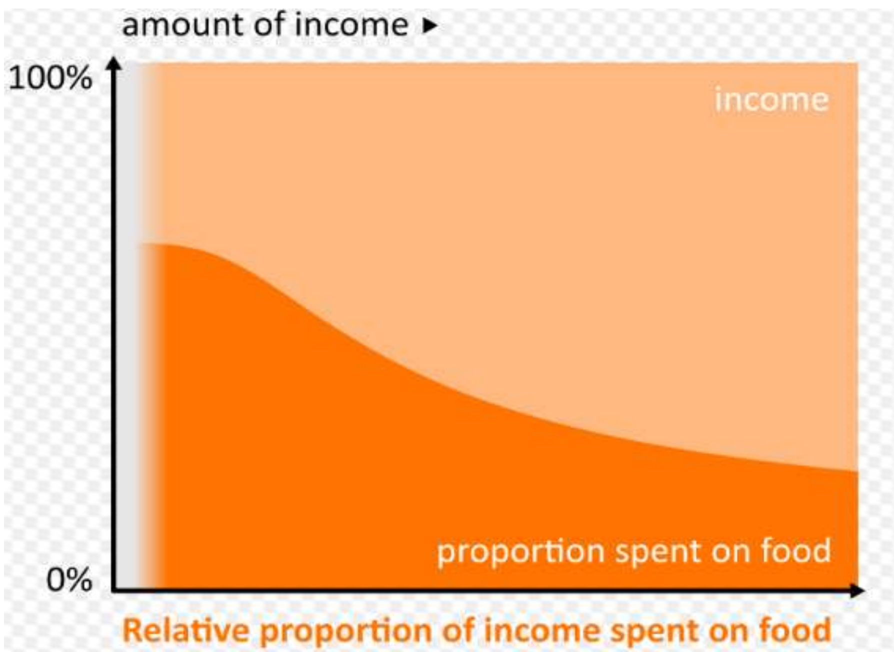
Lessons from economics

ENGEL's LAW

Engel's law is an economic theory that declares the percentage of money going toward food decreases as a person or group of people increases their income.

The theory was introduced by Ernst Engel, a German economist and statistician, in 1857. This theory is derived from economic observation about the income elasticity of demand: As a person's income increases, their demand for food and other survival necessities lessens and takes up a lesser amount of their income. The income elasticity for food expenditure was inelastic, below 1, meaning it is insensitive to price changes.

The below figure shows that according to Engel's law, the share of income spent on food decreases, even as total food expenditure rises.



Many economists have confirmed its continued relevance. Economists have also mounted an international comparison of household expenditure levels, discovering individual citizens in richer countries spend less, percentage-wise, on food than those in poorer countries. Organizations, including the United Nations, use an Engel coefficient to measure nations' total expenditure on food relative to income.

Engel Coefficient

Engel's law can be used as an indicator when looking at standards of living in various countries. For that purpose, a measure called Engel coefficient is used, which is simply a food budget share at a point in time.

- A country that would be poor and have a lower standard of living would have a high Engel coefficient, whereas a country with higher standards of living would have a lower Engel coefficient.
- The Engel coefficient is used for this purpose by The United Nations (UN), where a coefficient above the 59th percentile represents poverty, 50-59% represents a state where daily needs barely are met, 40-50% a moderately well-off standard of living, 30-40% a good standard of living and below 30% a wealthy life.

Implications of Engel's Law

1. **Engel's law applies to countries-** Just as Engel's law applies to specific people in poverty, it also applies to impoverished countries in the aggregate on a macroeconomic level. As these countries experience economic growth, they spend a lesser percentage of their budget share and gross domestic product (GDP) on agriculture and food—on both general and per capita bases. This frees them up to spend more of their resources on education, infrastructure, and other societal forces that will further raise the standard of living for all citizens.

2. **Increased income liberates the poor**. As real income rises, families and countries alike can afford to create an environment for the next generation's greater success. According to Engel's law, the richer a family becomes, the more they can spend on a child's education since they are able to worry less about how much they need to spend on food.

3. **Poor families might purchase inferior food**. People at lower income levels might have to purchase less nutritious foods and inferior goods, in general, to cut costs. Processed snacks or fast-food items are generally cheaper than healthier alternatives, meaning poor people will likely feel more of an urge to buy these sorts of products and save money. As people become richer, they can afford healthier, higher-quality foods.

4. **Agricultural sector shrinks as a percentage of total economic activity as a country grows.** Engel's law implies that when a country grows, the agricultural sector will constitute a smaller percentage of the country's economic activity. This is due to the fact that the share of income spent on food decreases as income itself increases (from economic growth). Poper illustrates on the U.S. that the share of workers in the agricultural sector fell from 41% in 1900 to less than 2% in 2000. This phenomenon is reflected in the fact that more developed economies have lesser proportion of the workforce in the agricultural sector.

Oil Market

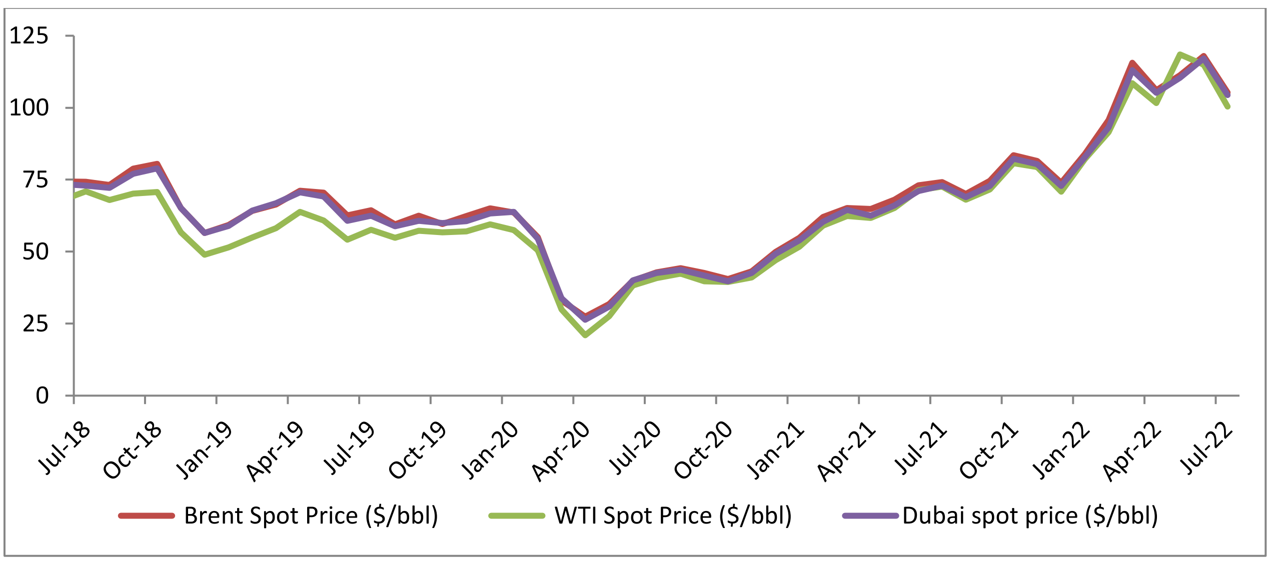
Crude oil price – Monthly Review

Oil prices fell on a weakening global demand outlook and the resumption of some Libyan crude oil output. Brent crude futures fell to $102.84, while U.S. West Texas Intermediate (WTI) crude futures were down to $95.27 a barrel.

The fall in crude prices is on the back of growing pessimism over global fuel demand as world economies battle the twin pressures of inflation and monetary tightening by Central Banks. Further, higher gas prices, triggered by Russia's gas squeeze, could lead to additional switching to crude from gas and support rising oil prices. Also, an expectation of an increase in interest rates in the United States to control rising inflation (at 9.1%) have put pressure on prices.

On supply side, Supply fears were easing slightly as Libya resumed production at several oil fields. Libya's National Oil Corporation (NOC) aims to bring back production to 1.2 million barrels per day (bpd).

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



Source: WORLD BANK

- Brent crude price averaged $ 105.29 per bbl in July 2022, down by 10.7% on a month on month (MoM) and up by 42.1% on year on year (YoY) basis, respectively.
- WTI crude price averaged $ 100.37 per bbl in July 2022, down by 12.7% on a month on month (MoM) and up by 38.3% on year on year (YoY) basis, respectively.
- Dubai crude price averaged $ 104.43 per bbl in July 2022, down by 10.8% on a month on month (MoM) and up by 43.2% on year on year (YoY) basis, respectively.

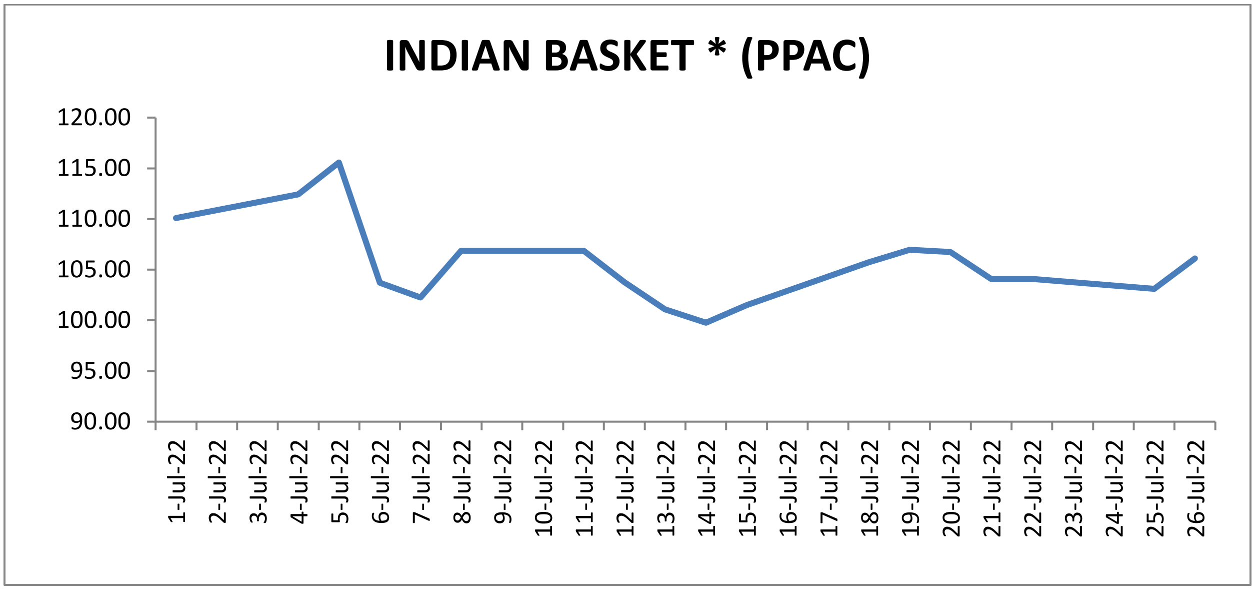
Table 1: Crude oil price in July, 2022

Crude oil	Price ($/bbl)	MoM (%) change	YoY (%) change
Brent	105.29	-10.7%	42.1%
WTI	100.37	-12.7%	38.3%
Dubai	104.43	-10.8%	43.2%

Source: WORLD BANK

Indian Basket Crude oil price

Figure 2: Indian crude oil basket price in $ per bbl



Source: Petroleum Planning & Analysis Cell

- Indian crude basket price averaged $ 105.59 per barrel in July 2022, down by 8.9% on Month on Month (M-o-M) and up by 43.9% on a year on year (Y-o-Y) basis, respectively.

Oil production situation

- According to OPEC, non-OPEC liquids supply growth in 2022 is now expected to grow by 2.1 mb/d to average 65.7 mb/d. The main drivers of liquids supply growth for the year are expected to be the US, Canada, Brazil, China, Kazakhstan and Guyana, while production is expected to decline mainly in Russia, Indonesia and Thailand.
- In 2023, non-OPEC liquids production is projected to grow by 1.7 mb/d to average 67.4 mb/d.
- OPEC crude oil production in June increased by 234 tb/d m-o-m to average 28.72 mb/d, according to OPEC.

Oil demand situation

- According to OPEC monthly report, for 2022, total oil demand is projected to average 100.3 mb/d. Oil demand in the OECD is estimated to increase by 1.8 mb/d, while non-OECD is seen growing by 1.6 mb/d.
- In 2023, expectations for healthy global economic growth amidst improvements in geopolitical developments, combined with expected improvements in the containment of COVID-19 in China, are expected to boost consumption of oil. World oil demand is anticipated to rise by 2.7 mb/d y-o-y, while total world oil demand is projected to reach 103.0 mb/d.

Table 2: World Oil demand in mbpd	2021	1Q2022	2Q2022	3Q2022	4Q2022	2022	Growth	%
Total OECD	**44.77**	**45.83**	**45.49**	**47.03**	**47.84**	**46.55**	**1.79**	**3.99**
~ of which US	*19.93*	*20.38*	*20.57*	*20.99*	*21.21*	*20.79*	*0.86*	*4.34*
Total Non-OECD	**52.15**	**53.50**	**52.85**	**53.62**	**54.93**	**53.73**	**1.58**	**3.03**
~ of which India#	*4.77*	*5.18*	*4.95*	*5.01*	*5.39*	*5.13*	*0.36*	*7.53*
~ of which China	14.94	14.67	14.96	15.42	15.97	15.26	0.32	2.14
Total world	**96.92**	**99.33**	**98.33**	**100.65**	**102.77**	**100.29**	**3.36**	**3.47**

Source: OPEC monthly report, July 2022

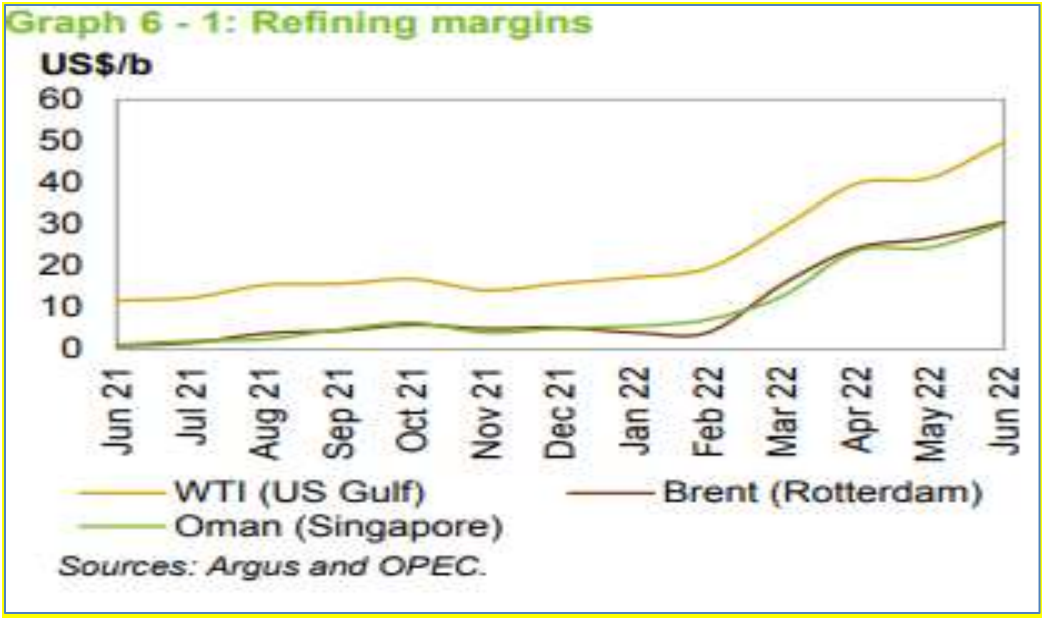
 # During 2022 rising oil demand will be supported by increasing requirements in all main petroleum product categories, however, some downside risks pertain relating to rising COVID-19 cases, new variants and their associated containment measures, as well as fuel substitution.

*Note: *2021=Estimation and 2022 = Forecast. Totals may not add up due to independent rounding*

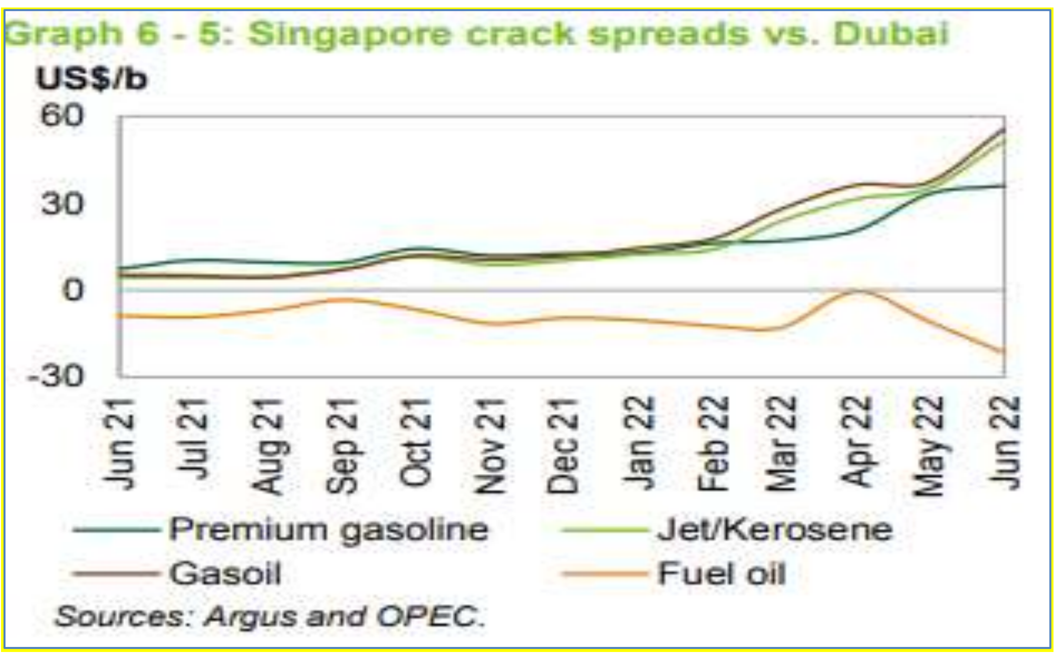
Global petroleum product prices

US Gulf Coast (USGC) refining margins against WTI gained more momentum. Gasoline was the strongest positive contributor as gasoline demand rose amid stronger mobility activities with the onset of the peak driving season. Solid support emerged as well from gasoil and jet/kero markets, despite rising US utilization rates as refineries continue to ramp up their processing rates.

Refinery margins in Rotterdam against Brent showed an upward trend. Continued gasoil tightness within the region, and a decline in Amsterdam-Rotterdam-Antwerp storage hub gasoil inventories led to the largest monthly price rise across the barrel and across all regions, and ultimately also led to a jump in gasoil crack spreads. Despite lower gasoline exports to the US over the month, gasoline markets still managed to exhibit robust performance, supported by healthy regional transport fuel requirements, as compound mobility indicators have reportedly surpassed pre-pandemic levels.



The Asian gasoline 92 crack spread increased and benefitted from strong regional demand, particularly from India as issues at one of the Paradip refinery FCC's units prompted quick gasoline spot cargoes into the country. The Singapore gasoline crack spread against Oman in June averaged $35.97/b, up by $2.81 m-o-m and up by $28.66 y-o-y.



The Singapore gasoil crack spread soared to a new record-breaking high reflective of strong regional demand, firm industrial and manufacturing activity as well as strong exports amid the ongoing gasoil tightness in Europe. The Singapore gasoil crack spread against Oman averaged $55.72/b, up by $18.47 m-o-m and up by $50.44 y-o-y

Table 3: Singapore FOB, refined product prices ($/bbl)

Singapore product prices	Price ($/b) in June 2022	MoM (%) change	YoY (%) change
Naptha	85.72	-10.5%	21.3%
Premium gasoline (unleaded 95)	155.10	5.6%	93.1%
Regular gasoline (unleaded 92)	148.86	5.6%	88.9%
Jet/Kerosene	164.40	15.0%	116.6%
Gasoil/Diesel (50 ppm)	176.61	15.5%	124.9%
Fuel oil (180 cst 2.0% S)	168.56	17.1%	120.0%
Fuel oil (380 cst 3.5% S)	91.26	-5.8%	45.7%

Source: OPEC

Petroleum products consumption in India

Monthly Review:

- Overall consumption of all petroleum products in June 2022 with a volume of 18.7 MMT registered a growth of 14.3% on volume of 16.3 MMT in June 2021.
- MS (Petrol) consumption during the month of June 2022 with a volume of 2.96 MMT recorded a growth of 23.22% on volume of 2.40 MMT in June 2021.
- HSD (Diesel) consumption during the month of June 2022 with a volume of 7.67 MMT recorded a growth of to 23.75% on volume of 6.20 MMT in the month of June 2021.
- LPG consumption during the month of June 2022 with a volume of 2.23 MMT registered a de-growth of 1.37% over the volume of 2.26 MMT in the month of June 2021
- ATF consumption during June 2022 with a volume of 0.591 MMT registered a growth of 128.70% over the volume of 0.258 MMT in June 2021.
- Bitumen consumption during June 2022 with a volume of 0.7 MMT registered a growth 37.28% over volume of 0.51 MMT in the month of June 2021.
- Kerosene consumption registered a de-growth of 66.71% during the month of June 2022 as compared to June 2021.

Table 4: Petroleum products consumption in India, June 2022

CONSUMPTION OF PETROLEUM PRODUCTS (P)	Consumption in '000 MT	MoM (%) change	YoY (%) change
LPG	2,232	3.1%	-1.4%
Naphtha	1,040	14.5%	-12.8%
MS	2,968	-1.6%	23.2%
ATF	591	-1.2%	128.7%
SKO	45	-33.1%	-66.7%
HSD	7,677	5.4%	23.8%
LDO	57	5.5%	-38.9%
Lubricants & Greases	370	5.3%	28.5%
FO & LSHS	537	0.2%	0.6%
Bitumen	699	-0.6%	37.3%
Petroleum coke	1,223	-1.0%	-23.7%
Others	1,231	-8.7%	45.9%
TOTAL	**18,671**	**2.2%**	**14.3%**

Source: PPAC

Natural Gas Market

Natural Gas Price – Monthly Review

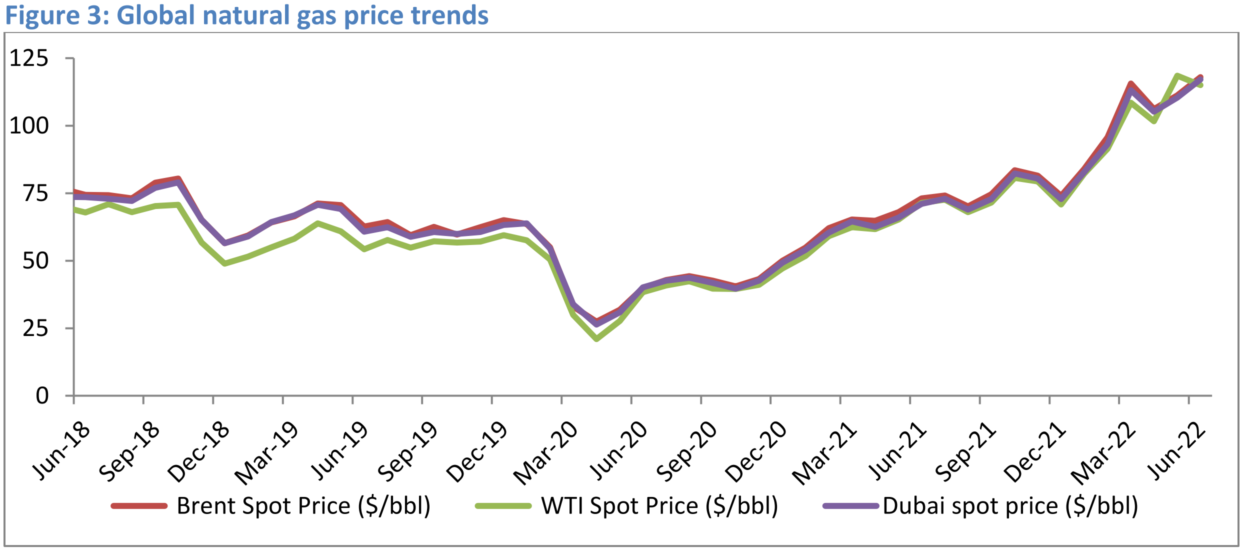
- Natural gas spot prices at the U.S. Henry Hub benchmark averaged $7.70 per million British thermal units (MMBtu) in June 2022. U.S. natural gas prices remained relatively high mainly because of lower-than-average natural gas inventories as well as robust demand pressures which is adding to inflationary concerns across the economy.

- In Europe, Spot gas prices have soared to record highs as country moves away from dependence on Russian energy. The natural gas spot price at the Title Transfer Facility (TTF) in the Netherlands in Europe has been trading at averaged $34.35 per MMBtu

- Japan Liquefied Natural Gas Import Price is averaging at $ 17.07 per MMBtu for June 2022, up from $ 16.68 per MMBtu last month. The rise in prices is a result of persistent cold weather conditions in Japan that results in increase in natural gas heating expenditures during winter.

- The price of domestically produced natural gas is $6.10 per million British thermal unit (MMBtu) from April1, 2022 to September 30, 2022. The price of domestic gas price has been hiked by 110 percent from the previous revision which was $2.90 per MMBtu for October 1, 2021, to March 31, 2022. The domestic gas price increase was driven by the significant run-up in the prices of gas at global gas hubs. Further, the maximum sale price allowed to natural gas production from deep-water, ultra-deep-water, high pressure and high-temperature discoveries was increased from $6.13 per MMBtu to $9.92 per MMBtu.

Figure 3: Global natural gas price trends



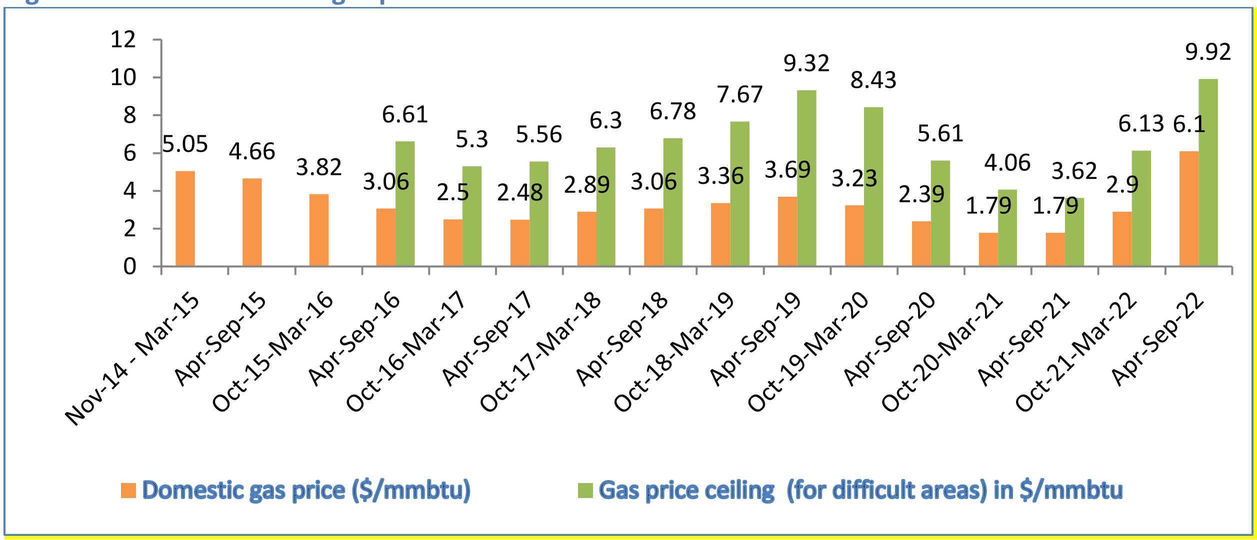
Source: EIA, WORLD BANK

Table 5: Gas price

Natural Gas	Price ($/MMBTU) in June 2022	MoM (%) change	YoY (%) change
India, Domestic gas price	6.10	0.0%	240.8%
India, Gas price ceiling – difficult areas	9.92	0.0%	174.03%
Henry Hub	7.70	-5.4%	138.4%
Natural Gas, Europe	34.35	15.1%	233.5%
Liquefied Natural Gas, Japan	17.07	2.3%	77.4%

Source: EIA, PPAC, World Bank

Figure 4: Domestic natural gas price



Source: PPAC

Indian Gas Market

- Gross production of natural gas for the month of June, 2022 was 2813 MMSCM (increase of 1.3% over the corresponding month of the previous year).
- Total imports of LNG (provisional) during the month of June 2022 were 2451 MMSCM (decrease of 9.5 % over the corresponding month of the previous year).
- Natural gas available for sale during June 2022 was 4727 MMSCM decrease of 4.5 % over the corresponding month of the previous year).
- Total consumption during June 2022 was 4633 MMSCM (provisional). Major consumers were fertilizer (34%), City Gas Distribution (CGD) (23%), power (13%), refinery (8%) and petrochemicals (2%).

Monthly Report on Natural gas production, imports and consumption – June 2022

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of June, 2022 was 2813 MMSCM (increase of 1.3% over the corresponding month of the previous year).

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

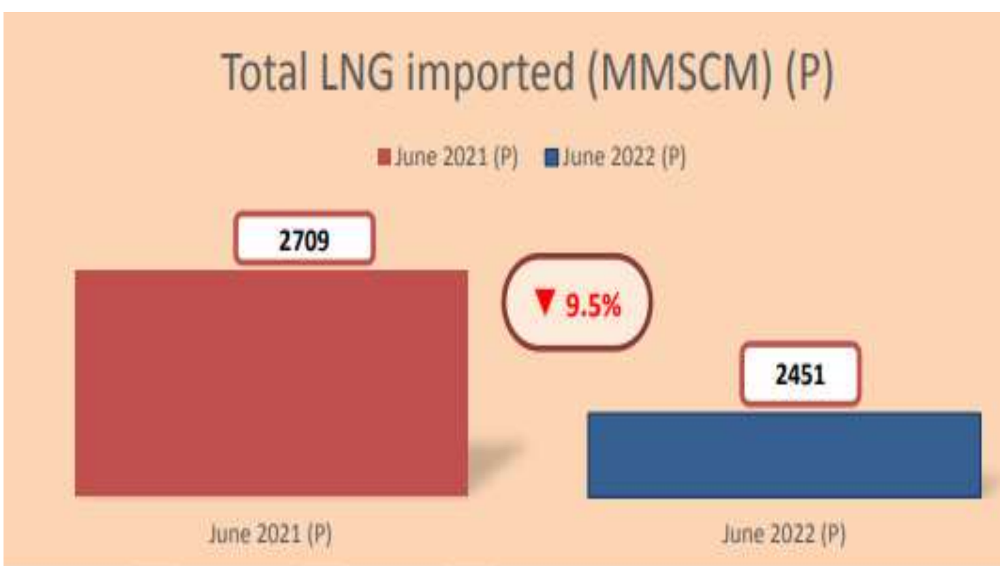
							Qty.in MMSCM
		June			April to June (Cumulative)		
	FY 2021-22	2021-22	2022-23 (P)	Change %	2021-22	2022-23 (P)	Change %
ONGC	15875	1301	1249	-4.0	3889	3893	0.1
OIL	2190	184	186	1.2	535	554	3.5
Pvt./ JVs	9310	757	840	11.0	2108	2457	16.6
Total	**27375**	**2242**	**2276**	**1.5**	**6532**	**6903**	5.7

Source: PPAC

2. LNG imports:

Total imports of LNG (provisional) during the month of June 2022 were 2451 MMSCM (decrease of 9.5 % over the corresponding month of the previous year 2709 (MMSCM).

Table 11: LNG imports (Qty in MMSCM)

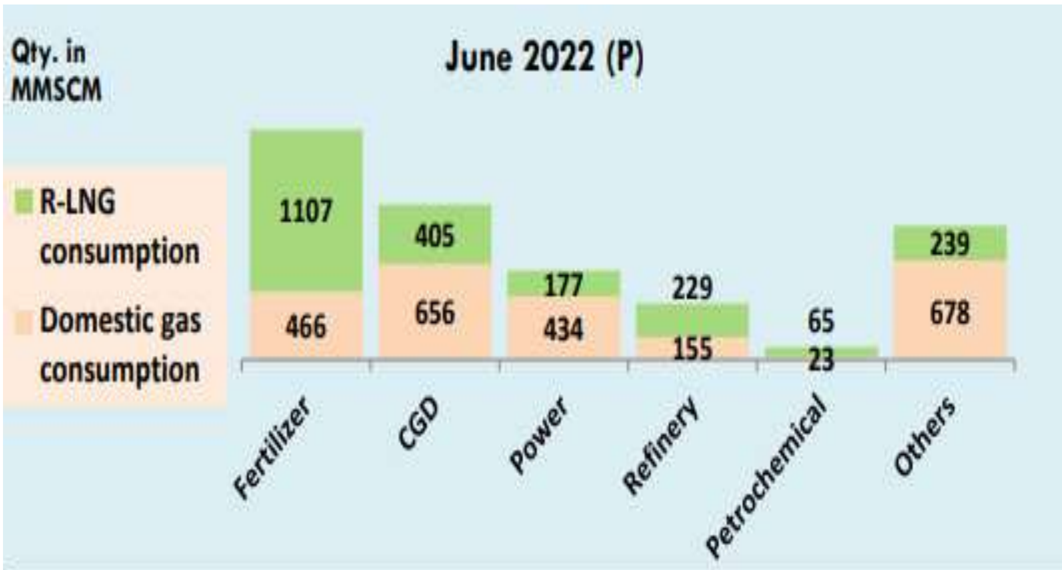


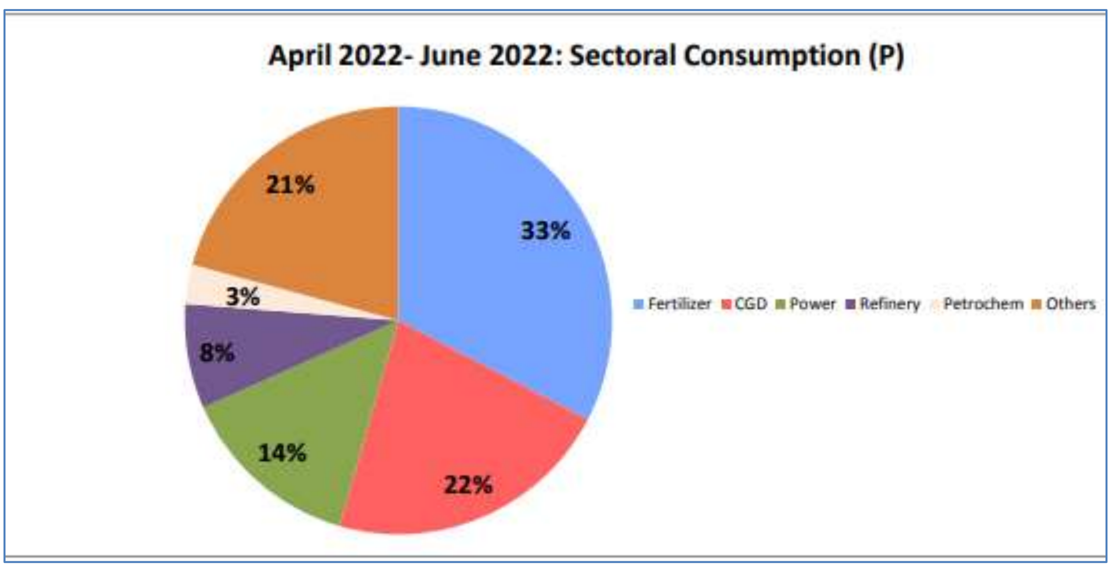
Source: PPAC

3. Sectoral Consumption of Natural Gas:

Major consumers were fertilizer, CGD, power, refinery, others and petrochemicals.

Figure 12: Sectoral Consumption of Natural Gas (Qty in MMSCM) in June 2022





Source: PPAC

Key developments in Oil & Gas sector during June 2022

- **Monthly Production Report for June, 2022**

1. Production of Crude Oil

Indigenous crude oil and condensate production during June 2022 was down by 1.7 % than that of June 2021 as compared to a growth of 4.6 % during May 2022. OIL registered a growth of 4.3 % and ONGC registered a growth of 0.2 % during June 2022 as compared to June 2021. PSC production registered a de-growth of 9.2 % during June 2022 as compared to June 2021. Growth of 0.6 % was registered in the total crude oil and condensate production during April - June 2022 over the corresponding period of the previous year.

2. Production of Natural Gas

Gross production of natural gas for the month of June 2022 was 2813 MMSCM which was higher by 1.3% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 8553 MMSCM for the current financial year till June 2022 was higher by 4.7% compared with the corresponding period of the previous year.

3. Crude Oil Processed (Crude Throughput)

Crude oil processed in the Refineries' during June 2022 was 21.6 MMT, which was 17.3 % higher than June 2021. Growth of 14.9 % was registered in the total crude oil processing during April- June 2022 over the corresponding period of the previous year.

4. Production of Petroleum Products

Production of petroleum products saw a growth of 15.1 % during June 2022 over June 2021. Growth of 13.5 % was registered in the total POL production during April- June 2022 over the corresponding period of the previous year.

5. In Q1 of FY 23, natural gas demand dips as power companies, refiners switch to alternative fuels

India's natural gas consumption is shrinking as refiners, power producers and petrochemical plants are using less of the pricey fuel. Domestic consumption fell 2.5% year-on-year in the first quarter of FY23 while gas imports declined 10%, according to oil ministry. In June 2022, consumption fell 4% over the year.

A part of the decline in imports has been offset by rising domestic output, which expanded 5% over the year in April-June. This has also resulted in lower capacity utilization at gas import terminals.

The decline in demand is mainly due to industries switching to alternative fuels. Refiners switched to liquid fuels while generators have been less inclined to use expensive gas to produce power.

- During April-May, the fertilizer sector remained the biggest consumer of natural gas, with consumption rising 15%. The fertilizer sector, which can fully pass on input costs to customers, consumed 18% less domestic gas and 34% more expensive imported gas compared to a year earlier.
- Gas consumption by the power sector fell 24%, with the use of domestic gas declining 15% and imported gas falling 44%.
- Refiners consumed 29% less gas, with the demand for imported gas halving. Consumption of relatively cheaper domestic gas at refineries, however, more than doubled during April and May. Fuel costs significantly weigh on refining margins.

Prices of domestic and imported gas were sharply higher in April-June quarter than in the corresponding period last year. The price of domestic gas, determined by a government-set formula, has jumped to $6.1 per mmBtu in a year while the price ceiling for gas produced from difficult fields has risen to $9.92 per mmBtu. Local prices or ceilings are still lower than the imported rates. Long-term liquefied natural gas (LNG) prices that are linked to crude oil are around $13 per mmBtu at the current oil price of $100 per barrel.

Key Policy developments in Energy sector

The Government has expanded the scope of Universal Service Obligations- Authorized entities will provide quality and uninterrupted fuel supply services to the consumers

Universal Service Obligations (USOs) have been prescribed so that authorized entities provide quality and uninterrupted fuel supply services to the consumers. These USOs, inter alia, require: -

- maintaining supplies of MS and HSD to retail consumers throughout the specified working hours and of specified quality and quantity.
- ensuring availability of minimum facilities as specified by the Government, to all the retail consumers at the retail outlet.
- maintaining minimum inventory levels of MS and HSD as specified by the Government from time to time.
- providing service to any person on demand within a reasonable period of time and on non-discriminatory basis.
- availability of fuel to the customers at reasonable prices all the time.

In June 2022, the Government has expanded the scope of Universal Service Obligations (USOs) to all retail outlets including remote area retail outlets.

Ministry of Petroleum and Natural Gas launches Open Acreage Licensing Programme Bid Round-VIII

The Hydrocarbon Exploration and Licensing Policy (HELP) was promulgated on 30 March 2016. Since then, seven rounds of Open Acreage Licensing Programme (OALP) have already been concluded and 134

Exploration &Production blocks awarded comprising 2,07,691 sq.km. of area spread across 19 sedimentary basins.

In continuation of its zeal to accelerate of E&P activities, the Government has now launched the OALP Bid Round-VIII, offering 10 blocks, for International Competitive Bidding on July 7, 2022. The bids can be submitted through a dedicated online e-bidding portal till 1200 hrs, September 6, 2022.Successful award of Round-VIII Blocks would add a further 36,316 sq. km of Exploration Acreage and cumulative exploration acreage under OALP regime will be increased to 2,44,007 sq. km.

Details of Blocks on Offer (OALP Bid Round-VIII)

S. No.	NAME Of BLOCK	AREA (Sq. Km.)	BASIN	Category	TYPE
1	CB-ONHP-2022/1	188.52	CAMBAY	I	On land
2	AS-ONHP-2022/1	2057.63	ASSAM SHELF	I	On land
3	MB-OSHP-2022/1	6059.94	MUMBAI OFFSHORE	I	Shallow Water
4	GK-OSHP-2022/1	765.54	KUTCH	II	Shallow Water
5	KK-OSHP-2022/1	6717.56	KERALA KONKAN	III	Shallow Water
6	BP-OSHP-2022/1	5754.92	BENGAL-PURNEA	III	Shallow Water
7	GS-DWHP-2022/1	2742.7	SAURASHTRA	II	Deep Water
8	KK-DWHP-2022/1	1112.71	KERALA KONKAN	III	Deep Water
9	KG-UDWHP-2022/1	1199.64	KRISHNA- GODAVARI	I	Ultra-Deep Water
10	MN-UDWHP-2022/1	9717.34	MAHANADI	II	Ultra-Deep Water
	Total	36,316.50			

The ten blocks under present bid round are spread across 9 Sedimentary Basins and include two on land blocks, four shallow Water blocks, two Deep Water Blocks and two Ultra-Deep-Water blocks. It is expected that OALP Round VIII would generate immediate exploration work commitment of around USD 600-700million.

OALP-VII: - ONGC, OIL, GAIL emerge winners for production of oil and gas

According to information posted by the DGH, ONGC won 3 blocks in the OALP-VII round, OIL won two, GAIL walked away with one block in Rajasthan while Sun Petrochemicals Pvt Ltd won the remaining two blocks.

Earlier on 30 March, 2016, the oil ministry said a new policy for finding and producing oil and gas, called the Hydrocarbon Exploration and Licensing Policy (HELP) was promulgated. Following that, seven bid rounds of the OALP have been concluded and 134 exploration and production blocks awarded. These blocks cover 2,07,691 square kilometers of area across 19 sedimentary basins.

In continuation of its zeal to accelerate E&P activities, the government has now launched the OALP Bid Round-VIII, offering 10 blocks, for international competitive bidding. The bids are due by September 6. Successful award of Round-VIII Blocks would add a further 36,316 sq km of exploration acreage and cumulative exploration acreage under OALP regime will be increased to 2,44,007 sq km.

Under the present bid round, 10 blocks are spread across nine sedimentary basins and include two on-land blocks, four shallow water blocks, two deep water blocks and a similar number of ultra-deep-water blocks.

Govt slashes windfall tax on petrol, diesel, ATF

On 1st July, 2022, the government-imposed windfall gain taxes on the export of petrol, diesel and ATF and on domestic production of crude oil. The government had raised export duty on diesel by Rs 13/litre and that on petrol by Rs 6/litre. The government also imposed a cess of Rs 6 per litre on exports of ATF and also imposed a Rs 23,230 per tonne additional tax on domestically produced crude oil to take away windfall gains accruing to producers from high international oil prices. The main objective to increase the taxes is to increase the domestic availability of fuel.

However, with global oil price ease from a sharp spike earlier this month, the Centre on July 20, 2022, has scrapped a Rs 6 per litre tax on the export of petrol completely and reduced the same on aviation turbine fuel (ATF) to Rs 4 a litre from Rs 6 per litre. Besides, the tax on diesel has been reduced to Rs 11 from Rs 13 per litre, according to a government notification. Further, tax on domestically-produced crude has been cut by 27 per cent to Rs 17,000 per tonne.

India expands excise duty exemption for biofuels

India has expanded the excise duty exemption for biofuels to encourage the blending of higher proportions of ethanol and components of vegetable oil with gasoline and diesel. The tax exemption will be applicable to an ethanol portion of 12%-15% blended with gasoline, up from 10% previously. For diesel, the exemption will apply to a 20% portion of alkyl esters of long chain fatty acids obtained from vegetable oils, the order said.

The move follows the amendments to the National Policy on Biofuels to advance the date by which oil marketing companies have to raise the percentage of ethanol in petrol to 20% to 2025 from 2030 earlier.

India's largest floating solar power project commissioned

India's largest floating Solar Power Project is now fully operational. NTPC declared Commercial Operation of the final part capacity of 20 MW out of 100 MW Ramagundam Floating Solar PV Project at Ramagundam, Telangana with effect from July 01, 2022.

With the operationalization of 100-MW Solar PV Project at Ramagundam, total commercial operation of Floating Solar Capacity in Southern Region rose to 217 MW. Earlier, NTPC declared commercial operation of 92 MW Floating Solar at Kayamkulam (Kerala) and 25 MW Floating Solar at Simhadri (Andhra Pradesh)

The 100-MW Floating Solar project at Ramagundam is endowed with advanced technology as well as environment friendly features. Constructed with financial implication of Rs. 423 crores through M/s BHEL as EPC (Engineering, Procurement and Construction) contract, the project spreads over 500 acres of its reservoir. Divided into 40 blocks, each having 2.5 MW. Each block consists of one floating platform and an array of 11,200 solar modules. The floating platform consists of one Inverter, Transformer, and a HT breaker. The solar modules are placed on floaters manufactured with HDPE (High Density Polyethylene) material.

From environment point of view, the most obvious advantage is minimum land requirement mostly for associated evacuation arrangements. Further, with the presence of floating solar panels, the evaporation rate from water bodies is reduced, thus helping in water conservation. Approximately 32.5 lakh cubic meters per year water evaporation can be avoided. The water body underneath the solar modules helps in maintaining their ambient temperature, thereby improving their efficiency and generation. Similarly, while coal consumption of 1,65,000 Tons can be avoided per year; Co2 emission of 2,10,000 tons per year can be avoided.

National Portal for Rooftop solar

The PM launched the national portal for Rooftop solar, which will enable online tracking of the process of installation of rooftop solar plants. With the launch of this Portal, it will be very simple for a residential consumer to apply and get the solar rooftop solar installed. The consumers will have the choice to select, any vendor registered with the local distribution company, solar modules of equality and efficiency, solar inverter and other balance of plants and equipment. The process of registration of vendors with the distribution company has been made simple, they have to just submit a declaration along with a PBG amount of Rs. 2.5 lakh and they will get registered. These vendors will also get access to provide their information and rates on the National Portal so that any consumer willing to install rooftop solar can contact them and get the rooftop solar installed through mutually agreed rates. The process of registration of the application to release of subsidy in the bank account of the consumer can be tracked online on the Portal. Following steps are involved:

The consumer has to register his mobile and e-mail and activate the account,

i. Log-in and submit application. The application will be automatically forwarded to local distribution company for technical feasibility approval as per the prevailing regulations of the State,

ii. Once the technical feasibility approval is given, it will be automatically reflected in the Portal and an e-mail will also be sent to the consumer,
iii. The consumer can get the rooftop solar system installed and submit the details on the online Portal for inspection and installation of net-meter.
iv. The Discom officials will inspect the installation and will install net-meter.
v. After the net-meter is installed and details uploaded by Discom, the consumer can submit bank account details for release of subsidy.
vi. The subsidy will be released directly into the bank account of the consumer within 30 days. The rate of subsidy will be common for all the consumers in the country.

To protect the interest of consumers, apart from mandating the vendors to get registered at the Discom, the vendor also has to maintain the rooftop solar system for at least 5 years. In the Simplified Procedure, Discoms need not invite tender, discover rates and empanel vendors. Also, the vendors need not to wait for the release of subsidy from the Ministry rather they can get the full amount from the consumer as the consumer will be getting subsidy directly into his bank account. This simplification will fasten the installation of rooftop solar in the country and the targeted 4,000 MW capacity under the Rooftop Solar Programme Phase-II would be achieved. The Programme will benefit more than 10 lakh households. With the installation of rooftop solar, a household consumer will not only save on electricity bill but will also be able to contribute towards addition of green energy and achieving of national goals.

Green Climate Fund

The Government of India organized a stakeholder consultation workshop on 'Understanding India's Climate Financing needs and its mobilization with focus on Green Climate Fund (GCF)' under the ongoing GCF Readiness Program on 24th June 2022 in New Delhi. The workshop addressed ways of mobilizing finance at scale to facilitate a shift to low greenhouse gas emission and climate resilient development path, aligned with India's Nationally Determined Contributions under Paris Agreement. The workshop suggested that sustainability path significantly raises the need for finance and human, technological and institutional capacities.

The task of developing a global architecture for trade in credits for emission reductions under Article 6 of the Paris Agreement is assigned to the UNFCCC Secretariat, as per the decisions of Parties to Paris Agreement. The GCF's objective is to support shift towards low-emission and climate resilient development path by providing support to developing countries in the form of grants, loans, guarantees, equity etc.

The Government of India has been actively engaging with GCF. So far, 5 projects have been approved with total allocation of USD 514.8 million in diverse areas including water, clean energy, livelihoods and transport. Two projects under GCF i.e., (i) Ground Water Recharge and Solar Micro Irrigation to Ensure Food Security and Enhance Resilience in Vulnerable Tribal Areas of Odisha and (ii) Enhancing climate resilience of India's coastal communities, are being implemented with the active participation of communities in the states of Andhra Pradesh, Maharashtra and Odisha.

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