

# RIPPED-OFF



## Unprecedented Turbulence

Several months have passed since Russia-Ukraine conflict, which sent the oil price surging, yet the turbulence in one of the world's most crucial commodities is showing little signs of easing. Crude oil prices increased by some 36% between August 2021 and February 2022, driven by a strong recovery in oil demand and then followed by geopolitical tensions in Eastern Europe. Supply of crude in the global markets was already tight prior to the war as the easing of supply curbs by the OPEC+ members was happening at a measured pace, while production in non-OPEC countries increasingly slowed because they have been pivoting their focus on cash generation rather than increasing investments due to energy transition. Now, since more and more countries are seeking to reduce dependence on Russian energy supply, coordinated releases of strategic petroleum reserves (SPR) globally have been providing buffer to some extent, while spare capacity has not been tapped.

On May 4, European Union announced a phased oil embargo on Russia, which includes phasing out supplies of Russian crude oil within six months and refined products by the end of 2022. American Congress in early April already passed a bill to ban imports of Russian oil and gas. Even in countries that have not taken any regressive step, prospective buyers are struggling to transact with the Russian financial intermediaries on account of them being cut off from SWIFT and also fear of fresh sanctions to come. This leaves a great deal of power in the hand of two countries, Saudi Arabia and United Arab Emirates, which have the capability to offset a large chunk of Russian shortfall. So far, both have shown little willingness to raise output substantially.

However, Saudi Arabia cut oil prices for buyers in Asia as coronavirus lockdowns in China weighs on demand. Recently, Saudi Aramco dropped, for the first time in four months, its key Arab Light crude grade for next month's shipments to Asia to \$4.40 a barrel above the benchmark it uses, from \$9.35 in May. The state-controlled company also lowered all grades for the north-west European region and almost all for the Mediterranean, though prices for US customers were kept unchanged from May.

Another major uncertainty plaguing the global markets is regarding the capacity of American shale oil production that could meet the supply shortfall. During the first fracking boom from around 2010 to 2015, American output surged, causing the oil price to slump and weakening OPEC's hand. But now conditions in the American economy have changed dramatically, leaving analysts and industry insiders highly doubtful that shale can rise to the challenge. America, under Biden leadership, shut-down shale oil production to combat climate change. Restarting American shale wells would take six months and delivering crude would take another six.

Global upstream oil and gas investment have also been on a downward trajectory. After booming during the so-called shale revolution, as per IMF, global upstream oil and gas investment peaked at 0.9% of global GDP (3.6% of investments) in 2014. Since then, it has declined to less than 0.5% of global GDP (1.5% of investments) in 2019, falling further during the pandemic.

Figure 1.SF.3. Oil and Gas Investment as Share of World GDP (Percent, US dollars a barrel)

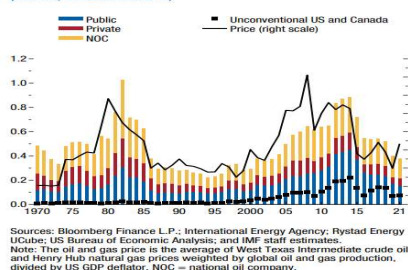
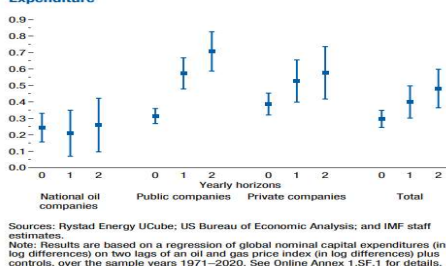


Figure 1.SF.4. Price Elasticity of Global Oil and Gas Capital Expenditure

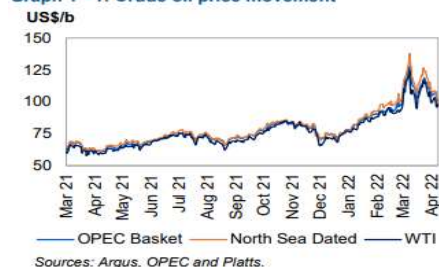


Now China's 'zero-covid' strategy that has been impacting demand is adding another layer of volatility in global oil prices. As per a Bloomberg report, Chinese restrictions was expected to cut oil demand by 1.2 million barrels per day in April compared to a year ago—the largest hit to demand since the Wuhan lockdowns at the beginning of the pandemic. Moreover, China's refiners were expected to lower their refinery runs in April at the biggest scale by 900,000 bpd. Even before the lockdowns began, the health of Chinese economy was little pleasing given the deceleration of the property sector.

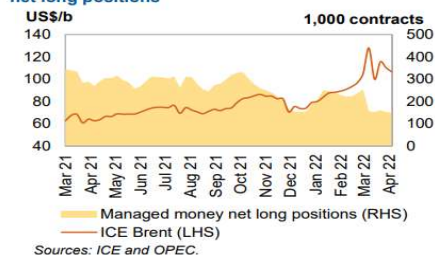
## The Volatile Price Swings

Amidst substantial uncertainty in petroleum markets driven by Russia-Ukraine conflict that has promulgated trade disruptions, sanctions, and private sector divestments from doing business in Russia, the crude oil prices have been subjected to a wide range of price pressures and sustained volatility over the past couple of months. Since the war which began on February 24, Brent crude oil prices crossed \$100/b in late February, and remained above \$100/b for all but two trading days in March. The average Brent front-month futures price in March 2022 was \$112/b, an increase of \$18/b over February 2022 and \$47/b over March 2021. The front-month futures price for Brent crude oil settled at \$113.22/b on May 6, 2022, an increase of \$11.57/b over previous month. The front month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, was \$109.77/b on May 6, an increase of \$13.54/b during the same period.

Graph 1 - 1: Crude oil price movement



Graph 1 - 3: ICE Brent vs. Managed Money net long positions

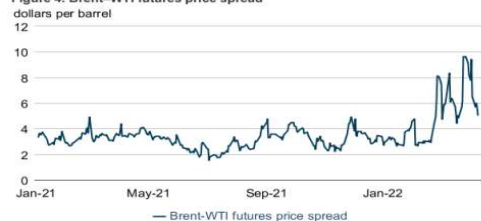


The substantial volatility as observed in monthly price trading range reflects rapid changes in crude oil prices and heightened sensitivity to new market information. Several other factors ranging from new mobility restrictions in China, uncertainty on future COVID-19 developments, additional geopolitical risks related to Iran and Libya and release of Strategic Petroleum Reserve (SPR) in the markets are contributing to wide swings in prices. On March 1 2022, U.S. Secretary of Energy Jennifer M. Granholm released a statement in which the United States and 30 other member countries of IEA, supported by the European Commission, agreed to collectively release an initial 60 million barrels of oil from strategic petroleum reserves. On March 31, the White House announced its SPR release of 1 million barrels of crude oil per day for a period of six months to expand supply and ease pressure on prices. On April 7, the International Energy Agency (IEA) confirmed this additional coordinated release. These releases from strategic reserves have contributed to downward oil price pressure by offsetting market perceptions of the risk of supply disruptions.

In addition, city-scale mobility restrictions in China related to surging cases of COVID-19 contributed to heightened demand-side risks and downward pressure on crude oil prices during March. Reports of restrictions began in early March, notably in the Jilin province and major industrial city of Shenzhen, followed by the announcement in Shanghai on March 28, and eventually restrictions were extended on an indefinite basis on April 4. Chinese Premier Li Keqiang warned in a statement on Saturday of a 'complicated and grave' employment situation as the government tries to contain Covid. Last week Chinese leaders doubled down on their 'zero-covid' strategy, warning against any attempts to question the approach even as economic activity contracts amid factory closings and supply-chain disruptions. The city of Zhengzhou, a major factory for iPhone supplier Foxconn, ordered residents to work from home and for schools to move online. As per Bloomberg sources, China's gasoline, diesel, and jet fuel demand is set to plunge 20% in April compared to the consumption in April 2021.

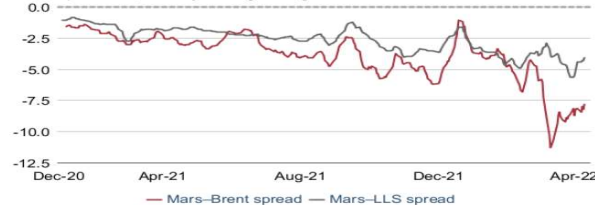
As far as sharp widening in the oil price differentials between Brent crude oil and WTI crude oil are concerned, effect of current disruptions on European markets has been more volatile compared with markets in the Western Hemisphere. This regional price spread is reflected in both spot market and front-month futures prices. After increasing sharply in late February, the front-month futures spread between Brent and WTI increased to a monthly average of \$6.83/b in March; its highest point since June 2019. As of May 6, the spread was \$3.45/b. As per U.S. Energy Information Administration forecasts made in April 2022, the Brent-WTI spot price spread will average \$6.00/b in May before declining to \$5.50/b by July 2022. Goldman Sachs Research forecasts 2022 and 2023 Brent spot price to be \$135/b and \$115/b respectively amid geopolitical tensions in Europe between Russia and Ukraine.

Figure 4. Brent-WTI futures price spread



Source: Based on data from Intercontinental Exchange, as compiled by Bloomberg L.P.  
Note: WTI=West Texas Intermediate

Figure 5. Mars crude oil price spreads  
dollars per barrel, five-day moving average



Source: Based on data from CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.  
Note: LLS=Light Louisiana Sweet

Source: EIA

Source: EIA

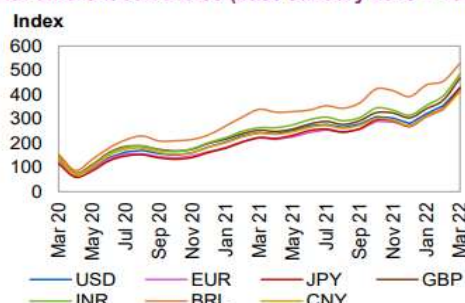
## The Inflation Double-Whammy

While the drag of the pandemic was still being felt in major economies in first quarter of 2022, the war in Eastern Europe has led to a level shift in global commodity prices. The strong rise in global energy prices along with new supply-chain bottlenecks and COVID-19-related logistical logjams in China and elsewhere are further escalating global inflation. In fact, food inflation, especially fueled by rising crude oil prices, is somewhat creating an existential challenge for low-income and less-developed economies. Thereby, if these effects of the conflict and especially the rising energy inflation are sustained, it could lead to a decline in consumption and investments to varying degrees.

These price pressures have guided central banks across the world to act swiftly to counter inflation. As expected, the US Federal Reserve announced the first interest rate increase of 25 bps since December 2018 in March 2022. This increase followed rate hikes by the Bank of England (0.25% hike to 0.75%) and hawkish comments by the European Central Bank as a means to cool rising inflation. In fact to counter a 40-year high in inflation, the Federal Reserve on Wednesday announced half a percentage point in interest rates— the biggest hike in two decades. Yet, so far, the shift towards hawkish monetary policies did not significantly impact the commodity markets.

However, following the announcements of interest rate increases by the US Federal Reserve (Fed), the US dollar (USD) rallied against major currencies. Given, the strong performance of the US labour market and mounting inflationary pressures support additional rate hikes and thus a stronger appreciation of the USD. In the past one month in developed markets as of May 8, the USD has exhibited sequential increase of 3.3% against euro, 5.2% against the Japanese yen, and by 5.6% against the pound sterling. Meanwhile in the emerging markets during the same period, the USD has increased by 1.4% against the Indian rupee sequentially, 4.7% against the Chinese yuan and 8.1% against Brazilian Real. The USD's appreciation is most noticeable in the developing markets as central banks have adopted less aggressive monetary policy approach to combat inflation.

Graph 3 - 19: ORB crude oil price index compared with different currencies (base January 2016 = 100)



Sources: IMF and OPEC.

Graph 3 - 20: Impact of inflation and currency fluctuations on the spot ORB price (base June 2017 = 100)



Source: OPEC.



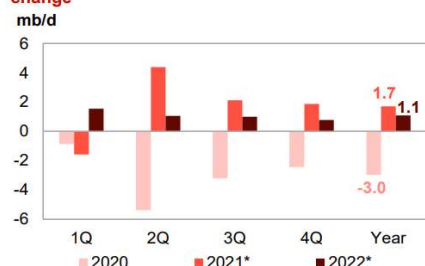
## Demand Taking a Hit

As per OPEC, world oil demand in 2021 grew by 5.7 mbd with OECD oil demand contributing 2.6 mbd, while non-OECD countries contributing the remaining. In the first quarter of this calendar year, global oil demand growth was robust mainly due to strong economic rebound, supported by stimulus programmes and further easing of COVID-19 containment measures. OECD oil demand in 1Q22 is estimated to have grown by 2.8 mb/d y-o-y, while non-OECD grew by 2.2 mb/d as compared to the corresponding period in 2021. However, as per OPEC, there have been some downward revisions in oil requirements in the remaining part of the year. Oil demand in 2022 is expected to grow by an average 3.7 mbd (a downward revision by 0.5 mb/d compared to March forecast) to 100.5 mbd largely accounting for declines in global GDP on the back of present geopolitical unrest and the resurgence of the Omicron variant impacting Chinese oil demand.

US oil demand in January 2022, as per OPEC, grew strongly by 1.1 mbd (6% y-o-y) driven by strong demand for the majority of petroleum products, except naphtha. Even in Canada and in Mexico, oil demand grew firmly during the first two months of 2022 supported by rising oil requirements in the transportation and industrial sectors. However, early indications are showing signs of slowdown in economic activities with major breaks in the placing of new orders for manufactured goods in the near term that could affect spending in undesirable ways. Though, expectations of a comprehensive stimulus package in the US is anticipated to provide strong support for oil demand, and accordingly, it is estimated (by OPEC) to record strong growth of 1.6 mb/d in 1Q22, backed by rising mobility and economic activities. 2Q22 growth is also expected to be along the similar lines of 1Q, while 3Q22 and 4Q22 oil demand growth could slow to 1.0 mb/d and 0.8 mb/d, respectively. Overall, 2022 US oil demand is expected to exceed pre-COVID-19 levels.

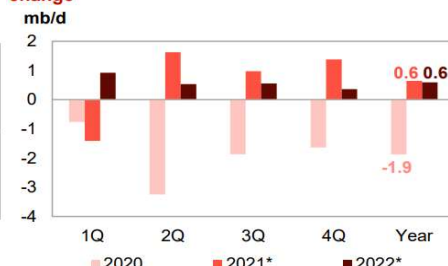
The recovery trajectory in transportation fuel demand in OECD Europe helped oil demand reach slightly below pre-pandemic levels. Supported by this usual seasonal boost in mobility as people travelled for leisure and business-related activities, oil demand in the region in January 2022 grew strongly by 1.3 mb/d y-o-y. However, oil demand growth will be impacted in the region. As per OPEC, OECD Europe oil demand in 1Q22 is estimated to have grown by 0.9 mb/d y-o-y, however growth momentum is projected to slow down at 0.5 mb/d y-o-y in 2Q22 and 3Q22, and drop further to 0.4 mb/d in 4Q22. Overall, oil demand is expected to grow by 0.6 mb/d y-o-y in 2022, yet very high natural gas prices in the EU are expected to some extent incentivize fuel switching between natural gas and diesel, mainly in the industrial sectors.

Graph 4 - 1: OECD Americas oil demand, y-o-y change



Note: \* 2021 = Estimation and 2022 = Forecast.  
Source: OPEC.

Graph 4 - 2: OECD Europe's oil demand, y-o-y change

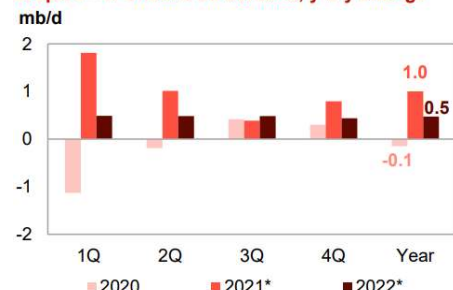


Note: \* 2021 = Estimation and 2022 = Forecast.  
Source: OPEC.

Despite the resurgence of COVID-19 in some cities of China, oil demand remained resilient in February driven by light distillate requirements for ramping up propane dehydrogenation plants after returning from maintenance and by excessive heating requirements by households amidst a cold winter. However, the major transportation fuels were negatively impacted by stringent COVID-19 containment measures. OPEC forecasts Chinese oil demand to grow by 0.5 mb/d in 2022 supported by strong petrochemical and industrial demand for feedstock and NGLs, including LPG and naphtha. Similarly, strong seasonal demand for agriculture and refineries' demand for feedstock will add additional support.

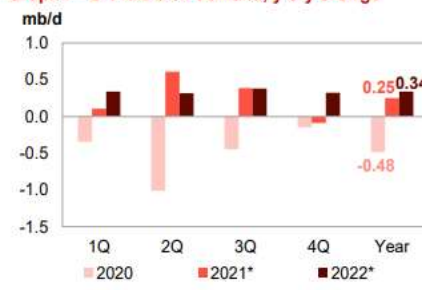
Indian oil demand for February 2022 grew by more than 0.2 mb/d y-o-y, marking the highest monthly growth since September 2021 and averaging roughly at pre-COVID levels. These developments are in line with the lifting of restrictions on mobility and travel, subsequent intensified vehicle use and full resumption of business activities. Accordingly, India's diesel consumption recovered from a four-month low, growing by 0.1 mb/d m-o-m, supported by construction, agriculture and industrial activities. Given effective COVID-19 management and the dismantling of trade-related supply chain bottlenecks, India is expected to continue with its oil demand growth trajectory in 2022. Transportation fuels – gasoline and diesel – are projected to be the main drivers of oil demand growth, supported by mobility and the acceleration of industrial activities. Oil demand is projected to increase by 0.3 mb/d in 1Q22, 2Q22 and 4Q22 each, with seasonally slightly higher growth of 0.4 in 3Q22 mb/d.

Graph 4 - 4: China's oil demand, y-o-y change



Note: \* 2021 = Estimation and 2022 = Forecast.  
Source: OPEC.

Graph 4 - 5: India's oil demand, y-o-y change



Note: \* 2021 = Estimation and 2022 = Forecast.  
Source: OPEC.

## Supply Uncertainty

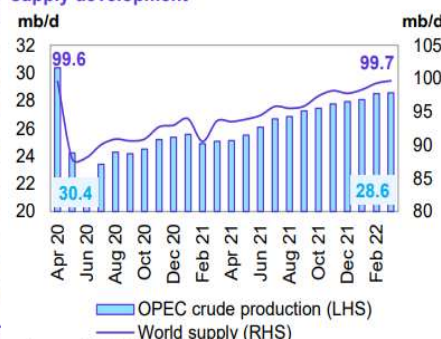
Crude oil production for the year 2021 was largely a disappointment for those hoping that production would rapidly bounce back to at least the 2019 level. After a decrease of -7.5% in 2020, as per EIA data, world crude oil production in 2021 increased by just 1.4% to 77.0 million barrels per day, which was still 5.9 million barrels per day below the highest year of crude oil production in 2018. This growth of 1.4% in overall production was largely driven by OPEC countries at 3.0%, along with Russia at 2.5%. On the other hand, production in United States declined by 1.1% in 2021. As per OPEC Monthly Oil Market Report - April 2022, total OPEC crude oil production in 1Q22 averaged at 28.38 mbpd, exhibiting a sequential growth of 2.4%.

Table 5 - 7: OPEC crude oil production based on secondary sources, tb/d <sup>1</sup>

Secondary sources	2020	2021	3Q21	4Q21	1Q22	Jan 22	Feb 22	Mar 22	Change Mar/Feb
Algeria	904	913	926	958	983	975	979	993	14
Angola	1,247	1,117	1,108	1,124	1,155	1,146	1,164	1,156	-8
Congo	294	271	266	269	265	262	275	260	-15
Equatorial Guinea	114	100	99	91	92	96	88	92	4
Gabon	194	186	184	188	192	191	195	192	-4
IR Iran	1,991	2,392	2,472	2,472	2,528	2,499	2,539	2,546	7
Iraq	4,076	4,049	4,078	4,240	4,286	4,253	4,298	4,309	11
Kuwait	2,439	2,419	2,448	2,532	2,612	2,584	2,614	2,639	25
Libya	367	1,143	1,146	1,111	1,062	1,006	1,111	1,074	-37
Nigeria	1,575	1,372	1,335	1,321	1,382	1,413	1,378	1,354	-24
Saudi Arabia	9,204	9,111	9,554	9,879	10,176	10,060	10,208	10,262	54
UAE	2,804	2,727	2,770	2,861	2,958	2,932	2,960	2,983	23
Venezuela	512	555	540	662	682	662	689	697	8
<b>Total OPEC</b>	<b>25,722</b>	<b>26,355</b>	<b>26,925</b>	<b>27,708</b>	<b>28,375</b>	<b>28,079</b>	<b>28,500</b>	<b>28,557</b>	<b>57</b>

Notes: Totals may not add up due to independent rounding, given available secondary sources to date. Source: OPEC.

Graph 5 - 29: OPEC crude production and world oil supply development



Source: OPEC.

Now the prospect of large-scale disruptions to Russian oil production is threatening to create a global oil supply shock. Only Saudi Arabia and the UAE hold substantial spare capacity that could help to offset a Russian shortfall. IEA estimates that as sanctions take hold and buyers shun imports, 3 mbpd of Russian oil output could be shut in from April onwards. And OPEC+ is, for now, sticking to its earlier agreement to increase supply by modest monthly amounts. Moreover, prospects of any additional supplies from Iran could be months off as talks over a nuclear deal that would relieve Iran of sanctions have apparently stalled abruptly. However, if an agreement be reached upon, exports could ramp up by, as per IEA, around 1 mbpd over a six-month period. Outside of the OPEC+ alliance, growth will come from the US, Canada, Brazil and Guyana, but any near-term upside potential is limited.

In the 28th OPEC and non-OPEC Ministerial Meeting, the third OPEC+ meeting since Russia invaded Ukraine, held on May 5, 2022, the group agreed to leave its production plan unchanged, aiming to boost crude oil production in June by 432,000 barrels per day, in a move widely expected by the market. As per market analysts, this action of the OPEC+ group, or rather the inaction could be justified this time, due to persistent market concerns about slowing oil demand in China, and the possibility that losses of Russian supply could re-enter the market. While the alliance is sticking to its policy of modest monthly increases, many of its members are not pumping to their quotas and the group overall is around 1.5 million bpd below its quota.

Supply was tight even before the war as supply is easier to cut but takes longer to ramp up. Many midstream facilities such as oil refineries, which was shut during covid-19 remained offline, thus creating bottlenecks. Another major reason for worry is vanishing Russian supply. Some of the Russian is still flowing out as millions of barrels are seen crossing the Atlantic. But most of it was bought or/and paid for earlier. Fresher supplies of Urals crude, the variety Russia pumps, are no longer moving, despite 25% price discounts. Western firms stuck with unsaleable cargo are preempting possible sanctions and also fearing a public backlash: on March 8th Shell said it would stop buying Russian oil after days of negative press coverage following a purchase of Urals crude. The most problematic issue is the lack of financing. Most foreign banks, even Chinese ones, have stopped issuing letters of credit for Russian trades. Banks are seemingly in no mood of taking chances after a decade of paying steep fines for breaching sanctions against Iran and other pariahs.

In normal years Russia used to export some 7m-8m bpd, half of which reached European Union. Now in theory, China could buy more from Russia freeing some supply. But Rystad Energy, a consultancy, estimates that Russia's pipelines could reroute just 500,000 bpd from Europe to Asia, with rail adding another 200,000 bpd. Moreover, ferrying Russian oil to Europe takes 5-10 days, while shipping it to Asia would take 45 days. In fact, redirecting flows would get even harder if sanctions target non-western firms, suggesting a fair chunk of Russia's oil supply could exit the market.

## Threats of a Looming Recession

The presage of the world economy looks bad. When oil prices surge, growth typically moves in the opposite direction. Sometimes the price shock begins with a political earthquake, like the Suez crisis of 1956. Sometimes oil producers deliberately create the shock, as observed with the OPEC embargo of 1973. And sometimes soaring demand becomes the culprit as witnessed in 2008 when oil prices hit record highs. The common conclusion in all these cases is that America and most other rich countries soon faced recessions. Hence, it would hardly be surprising if the current surge in oil prices foreshadows a sharp downturn in growth. Yet, it is not necessary that the easily observed historical relationship between oil and the economy will hold. Moreover, much of the global economy seems to be better insulated from oil market shocks over time.

As energy forms an important factor of production, any sharp decrease in its supply or increase in its price may severely impact output. And if a higher oil price discourages people from other spending, it may also hurt demand. In addition, the central banks may tighten monetary policy aggressively to counter inflation, as observed following the OPEC crisis of 1973 and the Iranian revolution of 1979. The effects of higher oil prices from a pure supply shock are, by contrast, more harmful. The uptrend in crude prices from the spring of 2020 to the start of 2022 reflected growth bouncing back from its pandemic induced slowdown. But, the most recent surge is unquestionably a supply shock, caused by the Ukraine war and associated sanctions.

Hence, the larger picture still remains that whether an increase in supply from elsewhere would help restore demand-supply imbalance. America has already enabled an increase in oil output of 1m bpd and is pressing members of the OPEC to increase supply, yielding perhaps another 2m bpd. Lifting sanctions on Iran may add another 1m bpd. But all this may increase global supply by 3m-4m bpd that might not be enough. OPEC members also cannot ramp-up production all of a sudden because of under-investment in new fields for years.

It now appears that oil shocks are now less destabilizing for the American economy in aggregate when compared to past as the country witnessed a major shift in economic output from industry to services over the years. The world has also become more efficient in using oil. For example, cars now could go twice as far per gallon of petrol as it did in 1970s. This coupled with shift towards renewable sources of energy, especially electric vehicles is providing another layer of buffer. But whether a resilient American economy would act as a cushion for rest of the world, amid all the turbulence, remains to be seen. The European Union should largely be worried not about crude but shortage of natural gas. But turmoil in energy markets is largely expected to take a toll on the overall consumption growth in emerging markets, walloping their current account deficits. Countries like Pakistan and Turkey, which are already under stress, would see their finances worsening. China could also see a percentage point knocked off its current account surplus.



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