The Evolution of Oil Prices and the Role Played by OPEC+

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Abstract: After the two oil shocks of the 1970s when OPEC was able to strongly increase the prices at the expense of economic recessions, a collapse followed in 1986, the so called oil counter-shock, due to the disagreements within OPEC and the decisions taken by Saudi Arabia to strongly increase oil supply. After that the prices fluctuated under $ 50/barrel and the periods of declining prices were more numerous than those of the boom, but each boom created the conditions for a subsequent fall in prices**.** The oil's price volatility has increased dramatically in the last two decades, and in late 2016 a larger alliance/group OPEC+ was formed between OPEC and some non OPEC countries (13). OPEC + is an alliance of 13 OPEC members and 13 non-OPEC members, which together control over 50% of the world's crude oil supply and hold about 90% of certain oil reserves. OPEC+ alliance, based on close cooperation between Saudi Arabia and Russia, was able to reach an agreement in April 2020 and to cut oil supply by 10 million barrels/day and to extend the agreement in 2020 and in 2021, to stabilize the market and increase the prices, also with the support of other producers, such as the USA, Canada, but mainly due to the recovery of consumer demand in developed countries. In view of all those mentioned evolution my article aims to assess OPEC+ role in assuring the stability of oil prices while maintaining a balanced growth for the total global production.

Key Words: price volatility, boom, supply, demand, OPEC+ cooperation, agreement
JEL Classification: Q 31, Q 35, Q 41, Q 42

1. Introduction

Crude oil is a raw natural resource, a type of fossil fuel, extracted from the earth and refined into petroleum products used for all kinds of transport, petrochemicals, industry and electricity, other purposes. Crude oil is also a global commodity, maybe the most important one in the world, which is traded in spot markets and in commodity exchanges, like those from New York and London. Crude oil represents the primary source of energy production and the heavy dependence of this sector on fossil fuels is one of the main causes of global warming, which has particularly negative effects on human societies.

Crude oil remains fundamentally different from other commodities from both an economic and national security perspective. Oil supply is not simply a function of demand. Demand for oil, especially refined, is inelastic in the short term but on long term some changes may occur and may lead to the reduction of oil consumption (Toprani, 2019). If supply, depending on extraction, cannot meet demand, price increases are inherent. On long term the most important factor to stimulate long-term supply is the price of oil, not its demand. The price of oil is not simply a function of existing demand, but also depends on a multitude of factors, like geopolitical events. The prestigious weekly magazine The Economist recently assessed that there is a high volatility of oil prices on short and medium term but no discernible/clear trend on long term and no forecast model can be used (Economist, 2020).

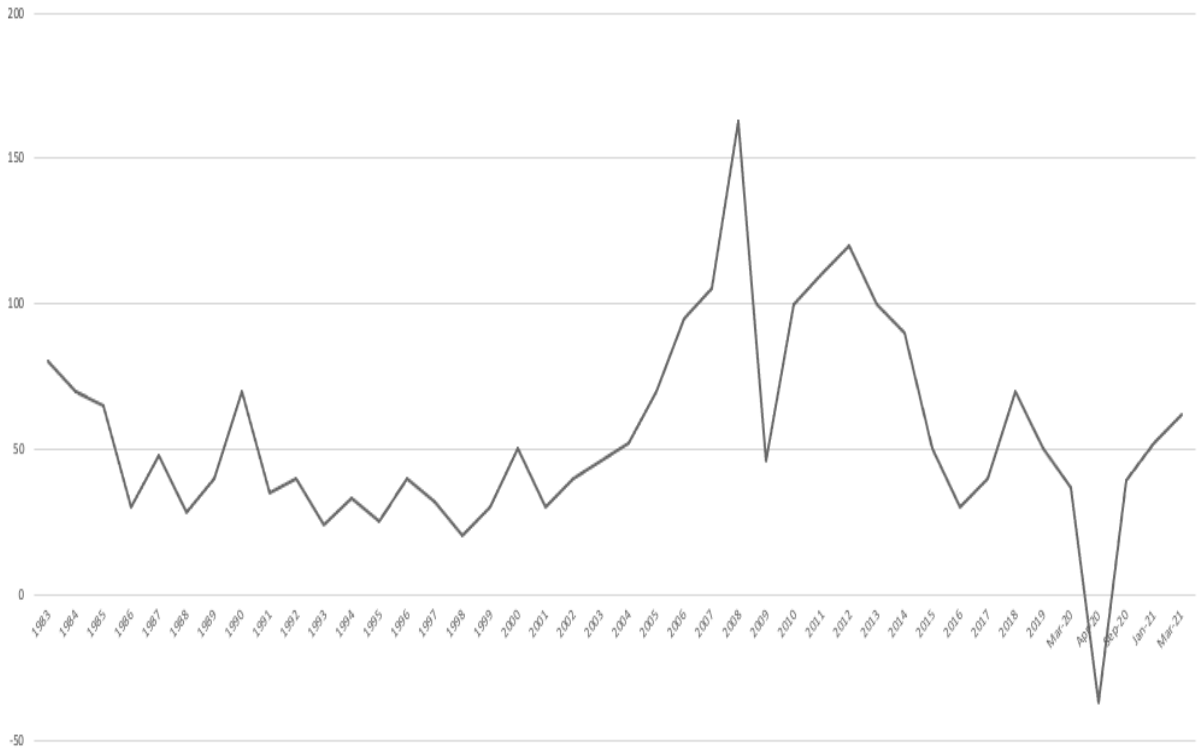
2. The evolution of oil prices in the last decades

In the graph no.1 one can see the evolution of WTI price in the last 38 years. One may see that periods of declining prices were more numerous than those of the boom, but each boom created the conditions for a subsequent fall in prices. After the two oil shocks of the 1970s oil prices collapsed in 1986 due to the disagreements within OPEC and amid the decisions taken by Saudi Arabia to strongly increase oil supply (oil counter-shock). From 1991 to 2004 oil prices fluctuated under $ 50/barrel and since 2005 a sharp upward trend began to take shape until the financial crisis and afterwards. Due to the fear of a major supply deficit and subsequent price increases, fiscal incentives granted in USA led to the introduction of hydraulic fracturing and the impressive development of shale oil. But after financial crisis from 2008-2009 it was the strong increase of

demand in Eastern Asian countries, especially in China, that led to an impressive boom of oil prices which lasted for 4 years. The oil prices declined in 2015 and 2016 due to high imbalance between supply and demand and recovered partially in 2018.

The new decline of oil prices started in 2019 before the Covid 19 Pandemic and intensified in the spring of 2020 when the rapid decrease of oil demand led to the collapse of prices. Since the 1970s, the key player in the market has become OPEC cartel, that ensured a certain price stability, but price volatility has increased dramatically in the last two decades, and in late 2016 a larger alliance/group OPEC+ was formed between OPEC and some non OPEC countries (13). OPEC+ is an alliance of 13 OPEC members and 13 non-OPEC members, which together control over 50% of the world's crude oil supply and hold about 90% of certain oil reserves.
The evolution of crude oil prices in the 2010-2020 period, in the form of annual averages is presented in the table no.1, where it is observed the record levels attained in the period 2011-2014 caused firstly by the strong increase in the consumer demand from East and South Asia (China and India) and secondary by the influence of the economic recovery after the financial crisis and also by the stock market operations of hedging funds and other funds. But it followed a period of sharp decline in 2015 and 2016 due to strong growth in crude oil production and supply of shale oil from the USA and the increased production/supply of crude oil from Canada, Iraq, South American states, offshore operations. The partial price recovery in 2017-2018 was driven by the tighter supply control of the new OPEC+ alliance, which meant co-opting important non-OPEC producers, especially Russia, in the policy framework of limiting oil production and supply.

Graph.no1: Evolution of US WTI future prices, in constant dollars, between December 1983 and March 2021 ($/barrel)



Source: Adapted by the author after Bloomberg Finance LD, 2020

3. The evolution of oil prices in 2020 and 2021

In the table no.2 it is shown the evolution of oil prices, in the form of monthly averages, between January 2020 and March 2021, which reflects the major impact of the Covid-19 Pandemic and the measures taken by major oil producers from the OPEC+ alliance to limit the level of supply and counteract the downward trend in prices. In early February 2020, when slightly downward trend in oil prices became obvious, Russia did not agree with the proposed reduction of the alliance production by another 600,000 barrels/day. In early March when the effects of the Coronavirus Pandemic began to become apparent OPEC has proposed a further reduction of the OPEC+ supply by 1.5 million barrels per day, a measure that was rejected by Russia. Russia did not accept Saudi

Arabia's proposal to further restrict supply, arguing that the market had fallen into a demand trap, when any supply cut is unable to save prices because global demand collapsed suddenly (the somewhat exaggerated estimate was 20-30 million barrels/day). This opposition from Russia has triggered a genuine oil price war with Saudi Arabia due to the announce of significant increases in oil production which affected oil prices, stock and commodities exchanges, financial situation of oil exporters. Subsequently, the March and April collapse in prices severely affected US shale oil producers and prompted the Trump Administration to put pressure on Russia and Saudi Arabia to reach an agreement and cut oil supply by 10-15 million barrels/day. The agreement reached by the OPEC+ alliance in April 2020 to cut supply by 10 million barrels/day in May and June was a rescuing one, especially since US and other crude oil inventories were at record levels, and it was extended in the following months while the production/supply of other large producers such as the USA and Canada also decreased significantly.

The volatility in crude oil prices rose in April 2020, on April 13 the price of WTI crude oil at the New York Stock Exchange (NYMEX) was $ 22.41/barrel, it fell to $ 18.27/barrel on April 17, and on Monday April 20 completely collapsed into a negative margin, as the contract for May was going to expire on April 21, and there was no demand at all, but there was a massive supply, including of Saudi crude oil (37 million barrels in oil supertankers), very large inventories and massive overproduction in the US. The price dropped by $ 55.90/barrel in one day to $ -37.63/barrel, but the spot price (immediate delivery) reached the same level. Holders of contracts with delivery at the end of May had to either sell them or take over the goods in time, but they had no storage facilities and had to lower the price even in negative territory, because neither the refineries nor other customers wanted to take over these contracts.

Table no.1: Evolution of oil prices in 2010-2020 period

Year/Annual average	Brent, London, ICE $/barrel	WTI, New York, NYMEX $/barrel
2010	80.18	79.39
2011	111.04	94.90
2012	111.76	94.07
2013	108.77	97.63
2014	99.53	93.81
2015	53.37	48.88
2016	45.01	43.37
2017	54.82	50.99
2018	71.48	64.75
2019	64.13	57.13
2020	43.21	39.62

Source:Calculated by the author based on data from http://www.wtrg.com/index.html

Table no.2: Evolution of oil price in 2020 și 2021 (first quarter)

Year/Monthly average	Brent, London, ICE $/barrel	WTI, New York, NYMEX $/barrel
2020		
-January	63.71	57.65
-February	55.48	50.63
-March	33.73	30.45
-April	26.63	18.57
-May	32.41	28.78
-June	40.77	38.58
-July	43.22	40.74
-August	45.02	42.39
-September	41.84	39.54
-October	41.52	39.55
-November	43.98	41.52
-December	50.23	47.07
2021		
-January	55.32	52.10
-February	62.27	59.11
- March	65.65	62.32

- April	65.33	61.71

Source: Calculated by the author based on data from http://www.wtrg.com/index.html

NYMEX panic also affected the price of Brent crude oil, which fell by 6% on April 20, and by 20% on April 21, reaching the level of $ 18-20/barrel, after which it rose slightly in the next days. Some varieties of Canadian crude oil also entered a negative territory on April 20 and 21 in terms of prices, as did the price of the Mexican basket. While the global supply of crude oil was planned to decrease by a record level of 12 million barrels/day in May, the level of demand in April was estimated to be 29 million barrels/day lower than a year ago, to a monthly level last recorded in 1995.

At the beginning of May, oil prices doubled in just over a week in the context of declining supply and hopes of a demand recovery. Global oil production would have fallen by 17 million barrels/day in the second quarter, the largest decline in history, to which not only the states in the OPEC+ alliance but also the US and Canada have contributed consistently. On June 6, OPEC President Mohamed Arkab announced the extension of the OPEC+ agreement for the third quarter, following talks by Saudi Arabia with other OPEC members and Russia, Kazakhstan and Azerbaijan. After oil prices continued to rise in the second half of June, in July they stabilized slightly above $ 40/barrel. Oil prices remained virtually stagnant at around $ 40/barrel for WTI oil and $ 43/barrel for Brent oil, pending several directions/signals of future developments, more related to OPEC+ decisions and these low levels have become familiar to the market in July and August. The economic stimulus measures announced by the US and the EU, the data published by the Energy Information Administration on the level of US oil stocks, the IEA estimates for the global market, the evolution of the dollar exchange rate and the announcements from OPEC+ and Saudi Arabia were the main factors influencing the price level.

After they firstly declined and then increased in September, crude oil prices were falling at the end of the month and at the beginning of October amid a sharp resurgence of the pandemic and its impact on economic activity, the dispute between US presidential candidates, the uncertain situation of China's import demand, the uncertainty regarding the OPEC+ supply reduction policy. In December 2020 and January 2021, crude oil prices rose amid Saudi Arabia's commitment to further cut its supply by 1 million barrels/day. At the same time, there were other elements, including the decrease of dollar exchange rate, the prospects for a deeper fiscal stimulus in the US and the optimism induced by the appearance of the Covid-19 vaccine. In mid-January 2021, oil prices rose to a 10-month high, gaining new advances from the supply cuts announced by OPEC+ alliance, but prices were also boosted by the falling dollar.

OPEC+ surprised the world in 2021 with its determination to finally raise prices. Using its position as one of the world's top three crude oil producers and its undisputed position as the world's largest low-cost producer, Saudi Arabia has unilaterally chosen to withdraw another 1 million barrels/day from global markets beyond its commitments within OPEC+. This action brought oil market prices above $ 50/barrel for the first time since early March 2020, strongly suggesting the OPEC cartel nevertheless resumed its traditional role as a decisive influence actor on global crude oil price dynamics. In addition, the decline in US crude oil production/supply, where production fell from 13 million barrels/day in 2019 to 11 million barrels/day in 2020, with definite effects on global supply, has helped to firmly restore price-fixing capacity of OPEC+ alliance. The $ 50/barrel level, which was subsequently exceeded, will probably be a minimum price in the future. The supply surplus that the market has faced in recent years will continue to dissipate as the retention for capital investment by US shale oil producers will maintain the general downward trend in supplementing oil supply. OPEC+ really has a single mission, to ensure high revenues and profits for its members by balancing supply with demand. The current policy of developed countries to promote climate changes is less a motivating factor for the key countries that make up OPEC+, because their economies are primarily based on crude oil exports and they all want higher prices and higher incomes.

After mid-January, crude oil quotations on international futures markets declined slightly, with Brent crude oil falling below $ 55/barrel and WTI crude oil below $ 52. Increasing travel restrictions have led to market pessimism regarding the level of demand, and a temporary rise in the dollar exchange rate has also left its mark on price developments. As expected, President Biden has signed several executive orders on energy and climate, including the cancellation of the Keystone XL project, re-accession to the Paris Climate Agreement and the start of the process of cancelling a long list of regulatory actions taken under the Trump Administration. The United States will be firmly committed to the priority development of renewable energy at the expense of fossil fuels. The US re-entry into the Paris Climate Agreement will only exacerbate this trend. Fossil fuels will become less used and this induces optimism about the evolution of their prices.

Price forecasts released by the IEA and the IMF at the end of January were invalidated by subsequent price developments. The International Energy Agency (IEA) has set up a Global Commission to manage the impact on human societies of the transition to renewable energy. The global summit organized by IEA will try to address the consequences of the decline in fossil fuels, especially as the Biden Administration puts an end to overseas financing of fossil fuels. The pandemic did not break, but intensified the global energy trends that emerged on the eve of the COVID-19 Pandemic, whether it was the collapse of coal production, the growing surplus of crude oil production and supply, or growing global interest for renewable energy sources.

In the first half of February, oil prices rose under the influence of declining oil inventories in the US and China, the reduction of the supply of the OPEC+ alliance, the financial incentives granted by the Biden Administration. The Energy Information Administration estimated that US shale oil production would increase. The EIA said that once WTI crude oil exceeded $50/barrel, the American shale production will return to growth again later this year. EIA increases its US supply forecast for 2022 to 11.53 million barrels/day, up from 11.49 million barrels/day in January. In mid February, unusual winter conditions in South Texas, USA, led to a 40% decrease in US oil production, eliminating 4 million barrels/day of crude oil and helping the price of Brent crude to reach over $ 65/barrel for the first time in more than a year. The interruption in oil supply was strong enough to raise prices, which gained 6% in just one week, continuing a rally of almost 19% recorded in February. Any serious climate shock calls into question energy security involving green energy, and the great frost in the Southern United States has been serious enough to shake the global oil market. Towards the end of February, oil prices rose moderately, mainly reflecting the fact that US crude oil production and refineries were still affected by the strong cold snap.

At the beginning of March 2021, the quotations of crude oil on the representative international futures markets registered a slight decline. Crude oil prices fell, despite the fact that OPEC+ decided to give up the intended decreases in supply reduction. OPEC+ extended the existing cuts until April, except for a slight increase of production allowed for Russia and Kazakhstan, due to seasonal consumption pattern. US shale oil production is not expected to pick up again, and total US crude oil production is likely to see “very little growth” in the future, after remaining largely constant in 2021 at around 11 million barrels/day, said Scott Sheffield, CEO at Pioneer Natural Resources. The further rise in prices in March could significantly slow down demand recovery. While the unexpected decision to maintain OPEC+ production cuts brought Brent crude oil prices to $ 70/barrel, higher oil prices in more than a year could slow the recovery in world oil demand and affect the supply/demand balance, which the OPEC+ group still considers to be fragile. While the biggest oil trader Vitol believes that OPEC+ has a strong control over oil market, investment bank Standard Chartered declared that OPEC+ applies an excessive and surprising supply control which may continue and it will only be corrected after a significant gap.

OPEC+ is looking for a "fair" price for its crude oil, Saudi Arabia's Foreign Minister Prince Faisal bin Farhan said in March after a meeting with his Russian counterpart Sergei Lavrov. "I would like to assure you that we and Russia want a fair price for oil for consumers and producers," said Faisal bin Farhan, adding: "This is what OPEC+ aims to achieve and there is good coordination in this initiative and we continue to work to support the benefits of the global economy”. Lavrov, for his part, noted that the OPEC+ alliance is strong and there is nothing that can undermine the good working relationship between Russia and Saudi Arabia. Lavrov also said the aim of the OPEC+ agreement was to restore balance in global oil markets and reduce volatility, stressing that he hoped the extended alliance would "find a way to coordinate actions in a way that balances the interests of both producers and of consumers ".

After midMarch crude oil quotations on international markets in the long term showed a slight to moderate decline due to profit-making by commodity market speculators through massive sales of long positions, appreciation of the dollar and diminished hopes around the pace of vaccinations in Europe, after which oil prices resumed their slightly upward cycle that continued in early April. OPEC+ has decided to add over 2 million barrels day in the next few months, relying on increased demand. The agreement provides for an increase of 350,000 bpd in May, followed by the same amount in June, then 450,000 bpd in July. At the same time, Saudi Arabia will diminish its voluntary reductions by 1 million barrels/day in July. But a price war is not ruled out, if American producers, especially shale producers, increase production too much, then OPEC+ may decide to significantly increase its supply and flood the market with plenty of oil, and prices may fall again (Paraskova 5, 2021). In April 2021, crude oil prices rose and fell amid strong volatility due to various influencing factors, such as lockdowns, vaccination progress, increased oil supply, including shale oil, inventory levels, high uncertainty related to the future of oil market.

4. The short term perspectives of oil prices

On March 17, the IEA invalidated the assessments of Wall Street bankers, led by Goldman Sachs, referring to a period of dramatic increases in oil prices. Raising the price of Brent to $ 70/barrel has led to speculations about a new price supercycle and a close supply deficit, but IEA data and analysis suggest otherwise (IEA, 2021). Those who support a return to prices of $ 100/barrel from 2011-2014 period rely on the effects of huge fiscal incentives that would increase demand and fuel a long-term upward trend. In March 2021, the Brent average was double compared to May 2020, the optimism about the effects of vaccines and the reductions in supply of large exporters being the explanation. The IEA showed that oil inventories are still very high, although the surplus accumulated in 2020 is gradually dissipating. The recovery in demand and the narrowing of supply by OPEC+ may lead to a sharp decline in oil inventories this year, but only towards the end of the period. In April, there were enough inventories in tanks and underground to ensure an adequate supply on the market. OPEC+ hasn't rushed to cut the reductions and increase the supply so as not to affect prices. A high degree of uncertainty persists regarding the evolution of prices, which will remain volatile, and regarding the demand situation, the global demand was 100 million barrels/day (5 billion tons) in 2019, and will not return to this level until in 2023, and in 2026 it will reach 104.1 million barrels/day (5.2 billion tons).

In April, analysts at the Oxford Institute for Energy Studies estimated that markets are not heading for a new oil price supercycle, and a level of $ 100/barrel or above is unlikely, provided major unforeseen shocks occur in the market (Paraskova 6, 2021). Increased prices and optimistic expectations for rising demand are not supporting the hypothesis of a new price supercycle, although JP Morgan and Goldman Sachs launched it in February. On the contrary, there is talk of a possible price war if shale oil producers in the Permian Basin significantly increase production (Kimani, 2021).

OPEC+ continues to bet on boosting consumer demand. The cut of OPEC+ production reductions shows that the group/alliance believes the demand will continue to grow. The oil market and oil prices are recovering on a stronger economic outlook. The IMF has updated in April its GDP forecast for 2021 after that from January, noting the speed at which vaccines are being launched. The US is now, along with China, the focal point and engine of the global economic recovery with a rapid launch of vaccination and substantial fiscal incentives. The pandemic could continue to have an impact on global oil demand until 2024, while decarbonisation plans in major European economies could emerge as a new threat to the oil industry, especially to traditional EU suppliers such as Russia. This year, however, world oil demand is expected to increase by 5.9 million barrels/day compared to last year's demand, which was 90.4 million barrels/day, according to OPEC estimates in its monthly March market report.

Ahead of the April 1 OPEC+ ministerial meeting, the Joint Technical Committee (JTC) has forecasted in its latest baseline scenario an increase in demand of 5.6 million barrels/day for 2021, lower by 300,000 barrels/day than it estimated in March OPEC report. Oil inventories in OECD countries fell for the seventh consecutive month, but remained above the 2015-2019 average. The meeting welcomed the positive performance of the participating countries. Overall compliance reached 115% in February 2021, reinforcing the trend of high aggregate compliance by participating countries. Ministers noted that since the April 2020 meeting, OPEC+ and other states have contributed to the downward adjustment of the global oil supply by 2.6 billion barrels of oil (356 million tonnes) by the end of February 2021, which accelerated the rebalancing of the oil market. On 26 April, 2021, it was the meeting of Joint Technical Committee (JTC) where it was forecast global oil consumption to rebound by 6 million barrels/day this year.

Morgan Stanley recently estimated that oil prices are likely to remain in the range of $ 65-70/barrel this summer, tempering its previous forecast for a price of $ 70/barrel, due to increased US drilling activity and against the potential return of Iranian exports (Paraskova 7, 2021). Instead, Goldman Sachs persists in forecasting a price of $ 80/barrel for the third quarter of 2021 (Ashcroft, 2021), perhaps also under the influence of the increase in gasoline deliveries to the US market at the level of 8.9 million barrels/day. In mid-April, the IEA and OPEC revised upwards their forecasts for the increase in global crude oil demand for 2021 to 5.7 million barrels/day and 5.95 million barrels/day, respectively, and the EIA reported a notable decrease of the previous week's inventories by 5.9 million barrels in the US, noting that on the East Coast the level of inventories was quite low. In oil market report released April 13, OPEC raised its demand forecast by 190,000 barrels/day from its March estimate, expecting consumption to average 96.46 million barrels/day this year, citing economic stimulus programs and a further easing of COVID-19 lockdown measures.

Vitol Group CEO Russell Hardy, the world's largest independent oil trader who handled more than 7 million barrels/day of crude oil and petroleum products in 2020, said in April he expected crude oil demand to

rise in 2021 and 2022, as the world emerges from the pandemic (Hoffman, 2021). Demand for crude oil will increase by 7 million to 8 million barrels/day by the end of 2022, compared to the level in the first quarter 2021, and producers will be in a difficult position to cope with these increases. "We believe that a price of 70 to 75 dollars/barrel is a completely possible result for the third quarter," said Russel Hardy.

5. Conclusions

A slow recovery in demand and prices is forecast for the next 3-4 years, Rystad Energy, a London consultant, predicted relatively recently that global demand for crude oil (99.6 million barrels/ day in 2019 and 89.3 million in 2020), will be 100.1 million in 2023 and 102 million (5.1 billion tons) in 2028. Prices for Brent are estimated to evolve in the range of $ 50-60/barrel. In its last report from February 2021 consultant McKinsey envisages an OPEC-control scenario on long term, under which OPEC maintains its market share, and foresees a $ 50 to $ 60/barrel equilibrium price range in the long term (McKinsey, 2021), which may support a production of 10-11 milion barrels/day of US shale oil and a deepwater production of 11-13 million barrels/day related to pre-financial-investment-decision (FID) projects.

In the medium and long term, competition from natural gas and renewable energies, the last ones advancing extremely fast, is seen as an important driver in the energy transition and is announced as a major factor influencing the oil market and prices. Bio-methane, hydrogen and carbon capture technologies could play an important role in decarbonizing sectors of the economy. The proliferation of electric cars will drastically reduce fuel consumption but it will significantly increase electricity consumption.

Major oil companies are increasingly turning to natural gas, including LNG, and renewable energy, with a stronger trend in the EU than in the US. For example, the French Total, which today has an operational mix focused on oil (55%), natural gas (40%) and less electricity from renewable sources (5%), intends that in 2050 its operations will be divided as follows: 20% oil, 40% natural gas and 40 % renewable energy. The thorny issue for both oil and natural gas is related to greenhouse gas emissions, with carbon capture being a key issue for an emissions-free future, an EU target for 2050.

High price volatility, commodity market speculations, new economic crises and important geopolitical events, heavy oil and petroleum products oversupply will continue to characterize and influence the oil market and in the current economic environment, any price forecast has a high dose of uncertainty.

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