

EY Price Point: global oil and gas market outlook

Q3 | July 2021



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Q2 in review

It's hard not to look back on the second quarter of this year and forward to the third quarter with a sense of (guarded, as always) optimism about the future. WTI and Brent crude oil are trading 19% and 16% higher, respectively, than at the beginning of the quarter. Natural gas is trading 18% higher during the second quarter and the spread between futures contracts for the Platts LNG Japan/Korea Marker and Henry Hub gas futures almost doubled from US\$4.41/MMBtu to US\$8.66/MMBtu. Equity markets rewarded pure-play upstream companies this quarter. The stocks of North American independent producers were up 7%, OFS company equities were up 10% and IOC stocks were on-par with the broader markets.

Optimism is easy to understand. The pandemic is receding, businesses are reopening and travel is on the rise. Oil demand is responding in a typical fashion and there's no sign of energy transition in the numbers. In fact, the emerging narrative in oil markets is that the risk scarcity could re-emerge due to underinvestment.

Notwithstanding the positive near-term economic picture for oil and gas, there is an air of uncertainty. In May, three separate events rocked the oil and gas landscape. In the Netherlands, a court ordered a major to reduce its 2019 carbon emissions (including those from suppliers and customers' use of products) 45% by 2030. In the US, a second major's shareholders elected Board members nominated by an activist investor and committed to changing the company's decarbonization strategy. A third major's (also in the US) shareholders adopted a resolution urging the company to adopt Scope 3 greenhouse gas emissions targets, in effect pushing the company toward divestment of oil and gas assets and investment in low or no-carbon alternatives.



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Q3 theme

The theme for this quarter is **restoration**. Oil, natural gas and LNG prices have continued to climb. Following a tragic surge of cases in India and a spike in Japan, the pandemic is in retreat, possibly for the last time. Demand is on the upswing, supply continues to be managed with remarkable precision and prices appear to be stable at sustainable levels. Earnings reports for the first quarter of 2021 brought mostly good news. Financials for the second quarter are likely to be even better and a vigorous debate about how to use revived cash flows is sure to ensue. The climate agenda and increasing corporate attention to ESG matters will complicate the equation. Usually, companies have to choose between reinvestment and return of capital. Now, growing commitments to fund alternative energy investments will compete with both of those objectives.

As of now, there's no sign of a return of upstream investment to pre-pandemic levels. Worldwide rig counts are up 24% from the pandemic lows, but are still 39% lower than in January of 2020 with oil and gas prices now almost exactly where they were at that point. With scarce capital and growing demand, prices could continue to rise offering attractive returns to those willing to venture into the sector.

Q2 also brought gas market developments that could have implications for how we think about the energy mix. The inventory rebuild in Europe and Asia after cold winters coincided with extreme heat and drought in Brazil, Chile and the western United States. Hydroelectric output fell at the same time electricity demand soared. Gas fired generation has stepped in and markets have responded. Hydroelectricity was the original renewable power and this episode highlights the potential complementarity between renewables and natural gas.



- ▶ How will inflationary expectations evolve, how will central banks respond, will the dollar devalue and what impact will that have on oil markets?
- ▶ Was the latest COVID-19 surge the last one and will international travel return to normal slowly or quickly?
- ▶ How will capital markets resolve the push and pull between rising prices and ESG pressures?
- ▶ If capital continues to be scarce and production lags, how high will prices go?

Oil and gas stocks beat the broader markets

Oil company stocks were particularly hard hit during the pandemic. That trend has reversed as commodity prices and profits have recovered. Values are up, but still below pre-pandemic levels.

The macroeconomy takes center stage

Fiscal stimulus and expansionary monetary policy have kept the economy moving. Inflationary pressures were inevitable and market awareness of the potential for tightening money and higher interest rates are at a peak.

Supply and demand back in balance

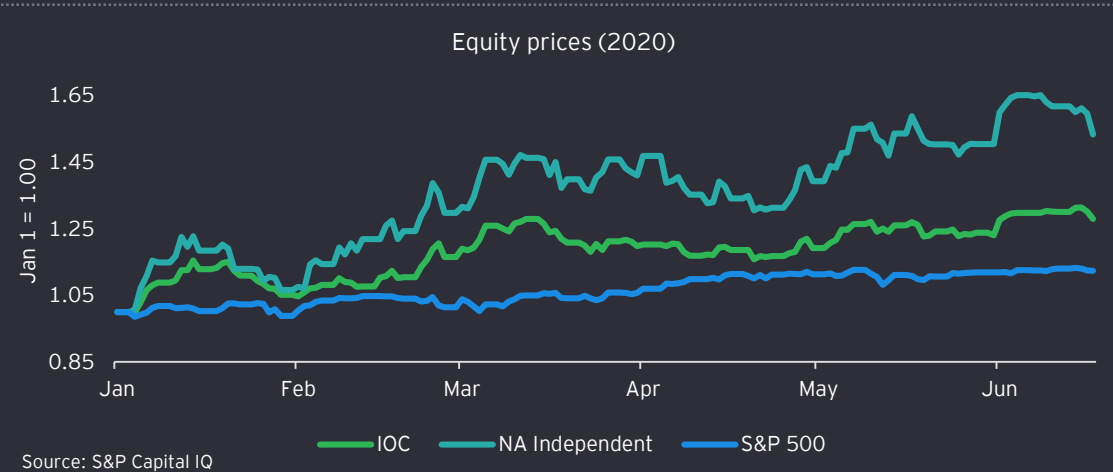
Since the beginning of the pandemic, supplies have been precisely managed to restore normal inventory levels. That goal has been largely achieved and producers are increasingly focused on revenue growth and market share.

Capital spending

A return to normal demand and growth is imminent. New projects will need to attract funding, capital may be scarce, supplies may tighten and markets will respond.

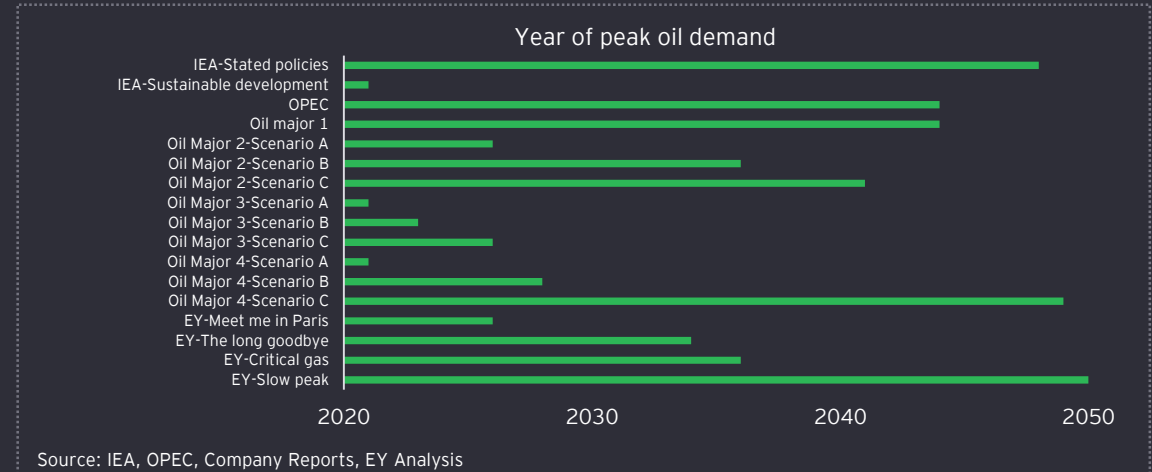
Market fundamentals

Oil prices drive oil equities



- ▶ Oil company equities were hit hard by the COVID-19 pandemic. The leading index of industry stocks fell by 59% between the first trading day of 2020 and mid-March. While liquidity and cash flow risks triggered the fall, analysts had already begun questioning the future of hydrocarbons and the role of oil and gas companies in a decarbonized energy complex.
- ▶ Commodity market fundamentals and improving financials have fuelled a rally in oil equities. WTI and Brent crude prices have gone up 49% and 43%, respectively, since the beginning of the year. IOCs reported a cumulative net income of US\$20 billion in the first quarter of 2021, after reporting net losses consecutively for four consecutive quarters while North American independents reported the highest net income in two years.
- ▶ As always, opposing forces will be at work in the equity market. Capital investment has lagged for some time now and there is a risk of market tightness as economies reopen and demand returns to normal. If that happens, profits could soar. Alternatively, investor reluctance to accept ESG risk could continue to be a drag on stocks.

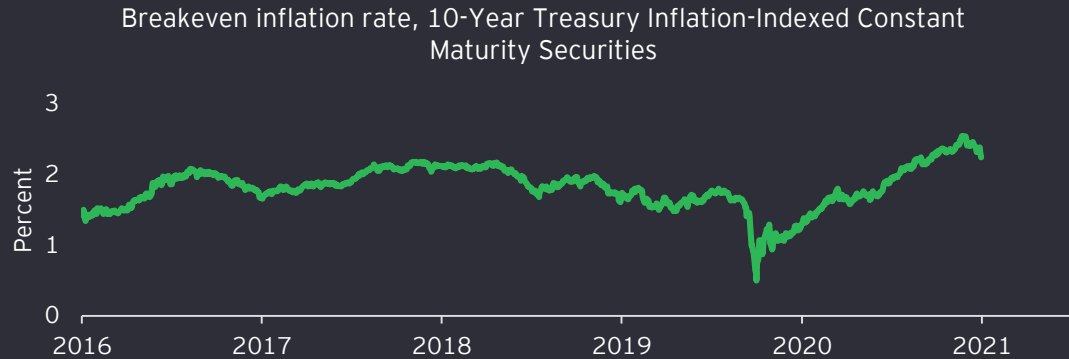
“Peak oil demand” forecasts vary widely



- ▶ There is a growing consensus that oil demand will peak. Electric vehicles (EVs) are increasingly cost- and performance-competitive, auto manufacturers are committing large amount of capital to product development, manufacturing, marketing and consumers appear receptive.
- ▶ Consumer acceptance and market share are still a source of considerable uncertainty. Globally, EV sales are 4.2% of total vehicle sales and that share has roughly doubled in the last two years. Aggressive forecasts, such as the IEA Net Zero Emissions scenario, assumes the share will grow to 64% by 2030 and 100% by 2035. There are also important questions about the viability of non-oil substitutes in sectors like aviation and chemicals.
- ▶ Forecasts of peak oil vary wildly from organization to organization and between scenarios produced by the same organization. There are predictions peak oil demand has already occurred while there are credible estimates demand will not peak until well into the 2040s. Policies, technology and consumer behavior will evolve, all of those scenarios are possible and portfolio management will be challenging.

Market fundamentals

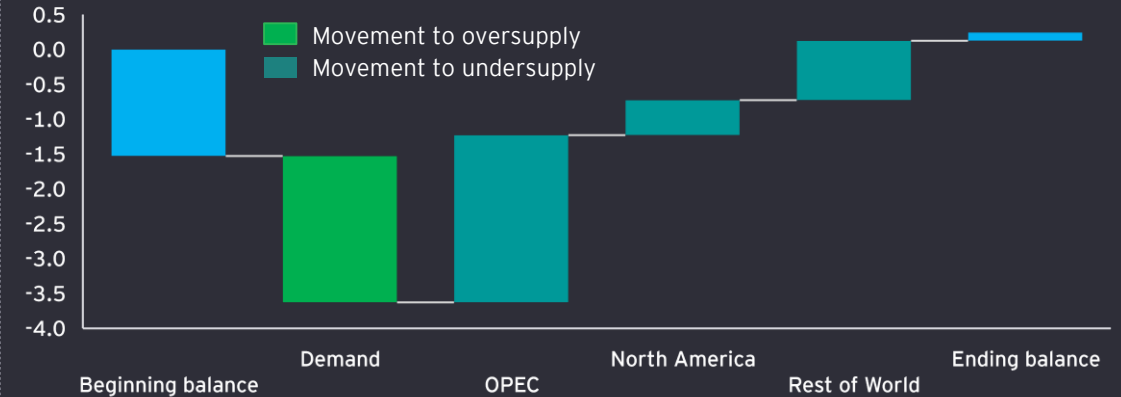
Inflation concerns may affect oil markets



Source: US EIA and Federal Reserve Bank of St. Louis (FRED)

- ▶ COVID-19 stimulus funds have been accumulated by consumers. Savings rates have skyrocketed and there is considerable pent up demand. Not surprisingly, inflationary pressures have emerged and the US Bureau of Labor Statistics Consumer Price Index increased by 4.2% from April 2020 to April 2021, the highest rate since September 2008. Inflation expectations have ratcheted up consistently since the depths of the pandemic and the inflation rate implied by the rates on Treasury Inflation Protected Securities is the highest it has been in 5 years.
- ▶ The Federal Reserve has indicated that monetary policy will continue to be geared toward reducing recession risk. Market commentary has increasingly tilted toward tight commodity markets, rising demand, supply chain constraints and labour shortages. Investor expectation could move toward increasing interest rates.
- ▶ In addition to improving demand, crude oil prices have been underpinned by market liquidity, low real interest rates, fiscal stimulus, and a weaker trade-weighted US dollar. Speculation that the Federal Reserve may respond to rising inflation by increasing interest rates could prompt investors to reduce exposure to oil and other commodities.

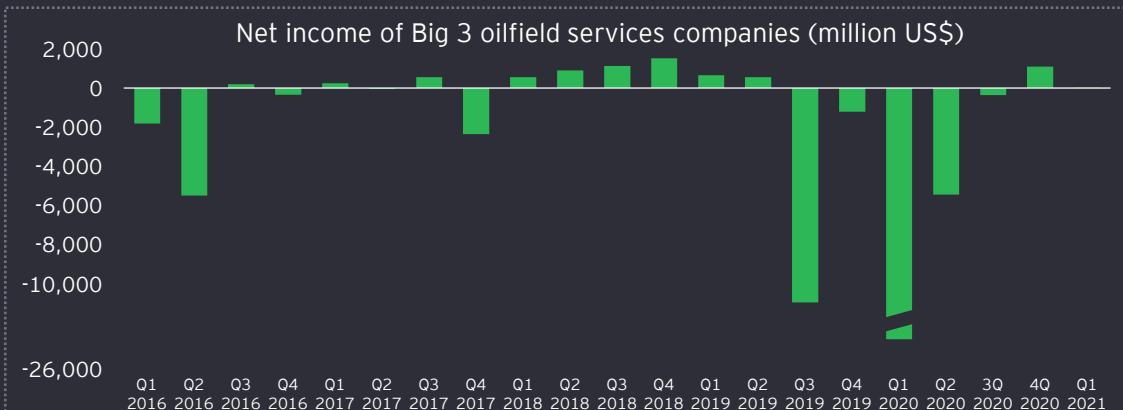
Strengthening oil demand leading to growing supply



Source: US EIA, EY analysis

- ▶ In the second quarter, oil market balance shifted from an undersupply deliberately engineered by OPEC to work down inventories to a state of near perfect balance. Demand continued to recover, and OPEC, North American producers and oil producers outside North America have gradually increased oil output.
- ▶ Demand is currently below pre-pandemic levels, but most forecasters expect robust growth through 2021. The IEA and OPEC expect global oil demand to expand by 5.4 mmbpd and 5.9 mmbpd, respectively, in 2021, due to accelerated vaccination programs and expected improvements in mobility. Notwithstanding, questions linger about how completely aviation demand will recover and when EV penetration will be high enough to bend the growth curve.
- ▶ Supply concerns have also begun to take over the conversation, with one analyst suggesting that prices could reach US\$100/bbl with the persistence of COVID-19-driven production cuts, the accumulated impact of reduced upstream spending and capital market pressures to accelerate the energy transition which continues to suppress output.

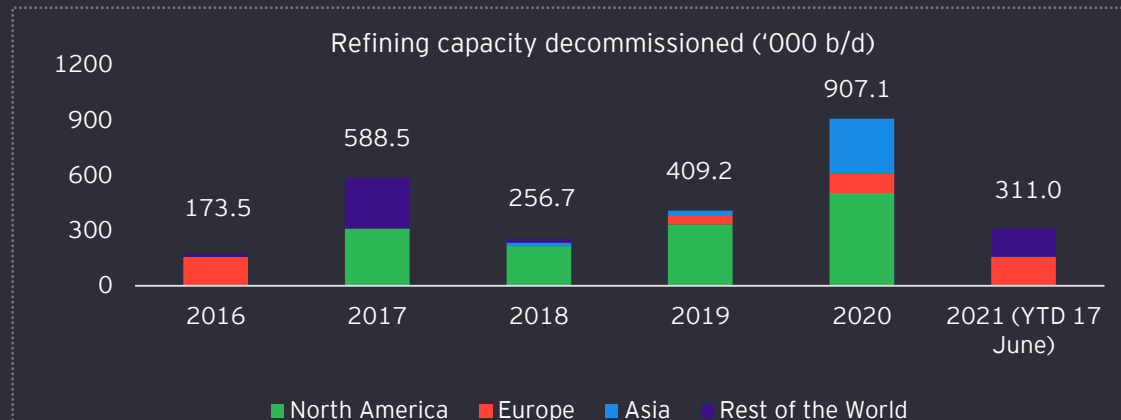
Big three OFS financial performance improves



Source: S&P Capital IQ, Baker Hughes, Halliburton and Schlumberger company reports

- ▶ The three biggest oilfield service companies reported a combined net income of US\$17 million and US\$1.1 billion in the first quarter of 2021 and the last quarter of 2020, after reporting a combined net loss for five successive quarters. Modest improvement in revenue combined with aggressive cost cutting were the driving actors.
- ▶ The top executives of these firms believe oil demand and drilling activity will grow through 2021 and 2022. There is some cause for optimism, but there are risks. Rig counts have gone up since they bottomed out last summer but are substantially below where they were when the pandemic started. In addition, assessments of upstream capital spend (largely issued before the recent runup in commodity prices), while showing some growth, are lower than pre-pandemic levels that hadn't fully recovered from the 2014-2015 downturn.
- ▶ While the short-term outlook for OFS firms looks positive, there are lingering concerns around their long-term future. A role for these companies in a low or no carbon energy world has yet to be defined and may prove to be elusive.

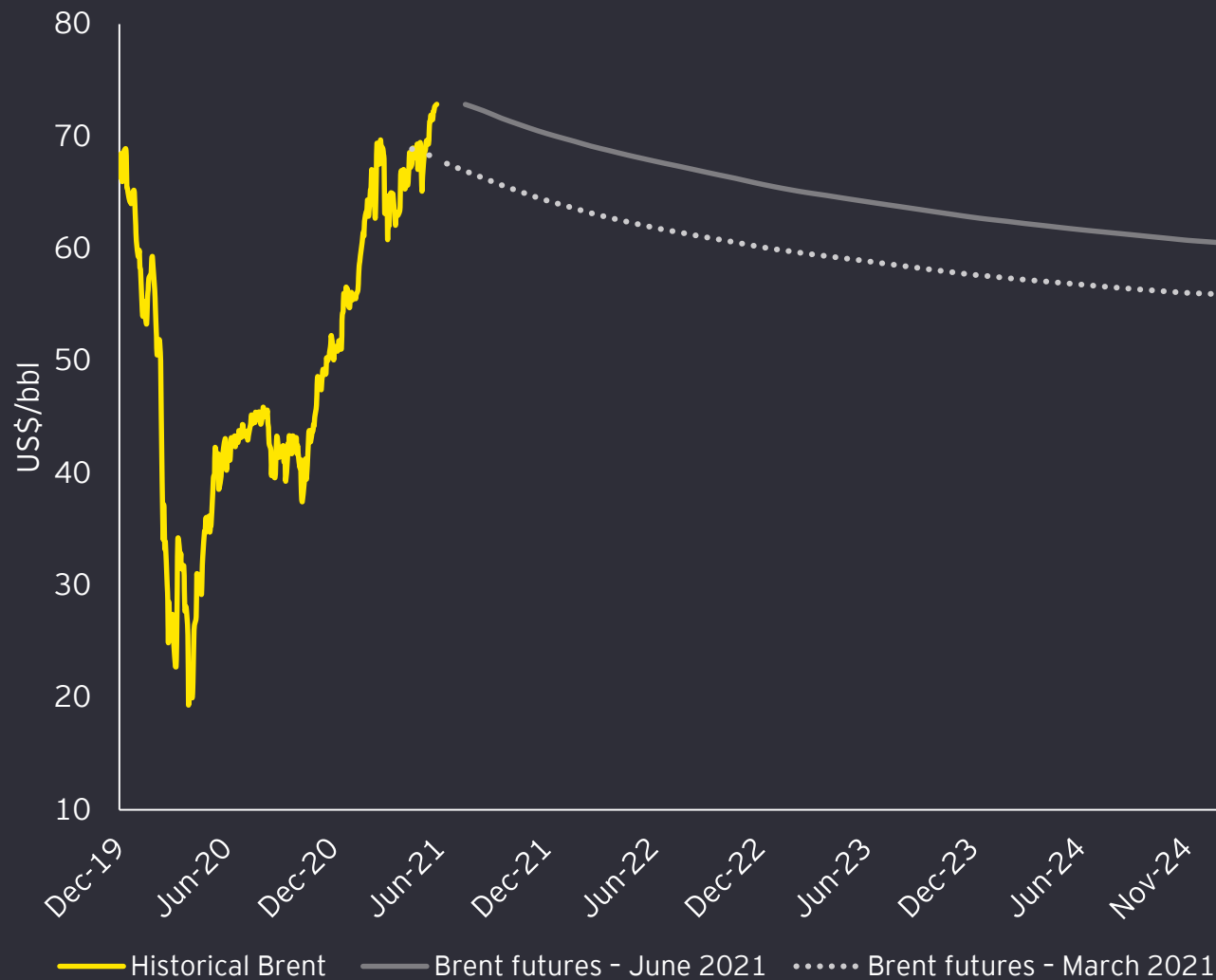
COVID19-led demand shock accelerates refinery closures



Source: GlobalData

- ▶ In 2020, COVID-19-led demand destruction created refining capacity overhang and pressure on refiners to close less competitive refineries with narrow margins. According to the IEA, the pandemic resulted in a 13% drop in transport fuel demand and a 10% decrease in refinery throughput resulting in a 10-year low. Average refining margins fell to their lowest level in over two decades.
- ▶ Decommissioning increased more than two-fold in 2020 from 0.4 mb/d in 2019 to 0.9 mb/d in 2020. Regionally, North America experienced 55% of the decommissioned volumes. Asia followed with a share of 33% and Europe accounted for the remaining 12%.
- ▶ So far, 2021 has witnessed over 0.3 mb/d of capacity decommissioning, 51% of which is in Europe. Capacity rationalisation activity is set to continue into 2021 amid expectations of a long-term structural decline in consumption. IEA forecasts that combined demand for gasoline, kerosene and diesel in 2026 will be 170,000 b/d lower than it was in 2019.
- ▶ New capacity additions planned in Asia and the Middle East will intensify competition. European and North American refiners will respond either by closing more refineries or converting them to import terminals or biofuel refineries.

Brent futures



Source: Bloomberg

Brent futures have increased given global COVID-19 vaccination programs coupled with the continued supply discipline of the OPEC+.

Going forward, there will be continued scrutiny on global vaccine distribution, changes in mobility patterns, decarbonization and capital allocation that will continue to impact medium- to long-term oil demand.

Futures data is effective as of 14 June 2021.

Oil price outlook

For both benchmarks, banks and brokers (on average) forecast a wider range of oil prices throughout the forecast period.

Consultants focus primarily on the analysis of a long-term sustainable oil price, whereas banks and brokers balance their views on the basis of current market conditions.

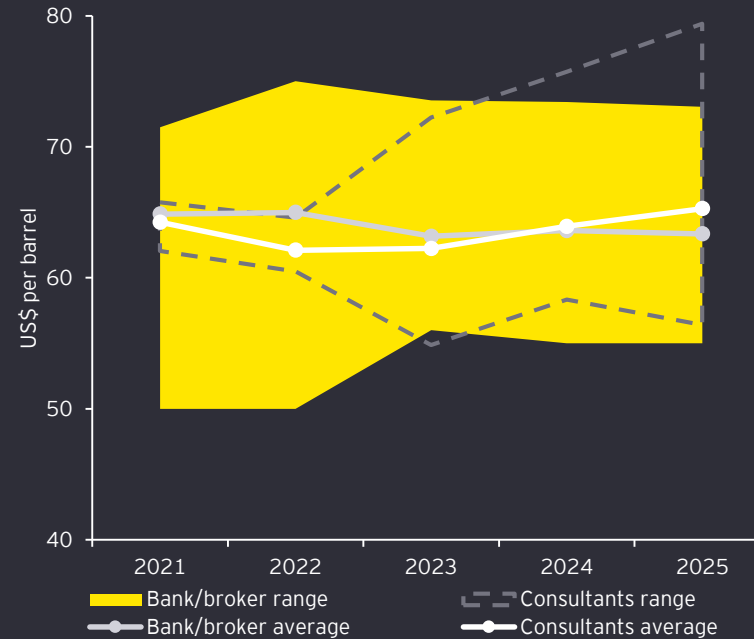
Consultant ranges include estimates of recognized market consultants. Where consultant estimates are updated only annually (for example, the EIA and the IEA), such estimates are included within the range of estimates from 2023 onward (or combined with short-term estimates published by the same consultant) to prevent near-term ranges being impacted by estimates that are not considered to reflect current market dynamics. Brent price estimates derived under the IEA's "Stated Policies" and "Sustainable Development" scenarios (inflation adjusted to reflect nominal pricing) are reflected within the consultant ranges from 2023 onward.

Consultant forecasts result in averages of US\$65.3/bbl and US\$60.6/bbl for Brent and WTI, respectively, in 2025.

This data is effective as of 14 June 2021.

Brent

Bank/broker and consultant price estimates, ranges and averages



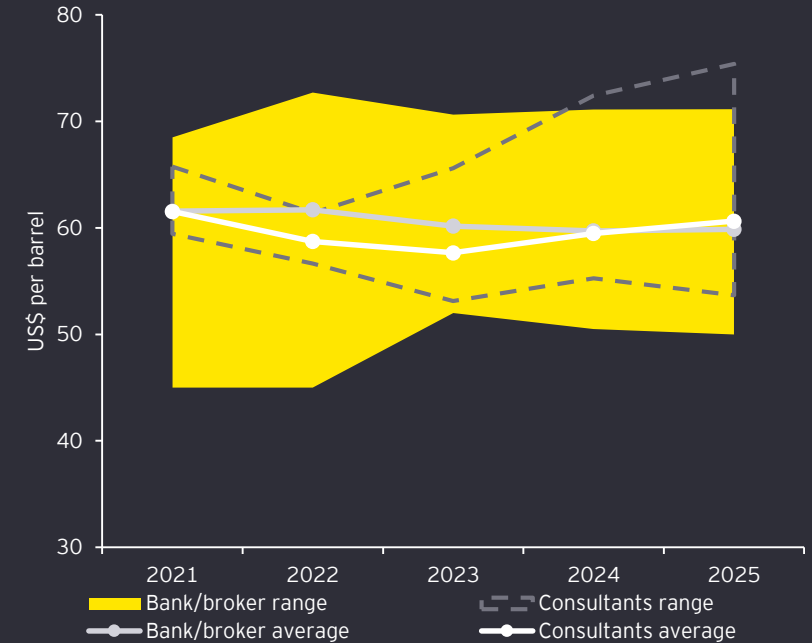
Brent: US\$65.3

Average price per bbl forecast in 2025 – consultants

Source: Bloomberg; bank/broker reports; consultants' websites and reports

WTI

Bank/broker and consultant price estimates, ranges and averages



WTI: US\$60.6

Average price per bbl forecast in 2025 – consultants

Note: The wide range of long-term price estimates reflects the degree of uncertainty within the market. Both the lower and upper end of the range provided are supported by the estimates of credible market participants. Given the width of the range, the average of estimates should be used as a starting point for the assessment or generation of estimates.

Gas price outlook

The consultants forecasts (on average) is wider for Henry Hub. The consultants forecast for NBP is generally lower than the banks and brokers (except in 2025).

Consultants focus primarily on the analysis of a long-term sustainable gas price, whereas banks and brokers balance their views on the basis of current market conditions.

Consultant ranges include estimates of recognized market consultants. Where consultant estimates are updated only annually (for example, the EIA and the IEA), such estimates are included within the range of estimates from 2023 onward (or combined with short-term estimates published by the same consultant) to prevent near-term ranges being impacted by estimates that are not considered to reflect current market dynamics. Henry Hub price estimates derived under the IEA's "Stated Policies" and "Sustainable Development" scenarios (inflation adjusted to reflect nominal pricing) are reflected within the consultant ranges from 2023 onward.

NBP price estimates are scarce, with only three and four forecasts released by banks and brokers and consultants, respectively.

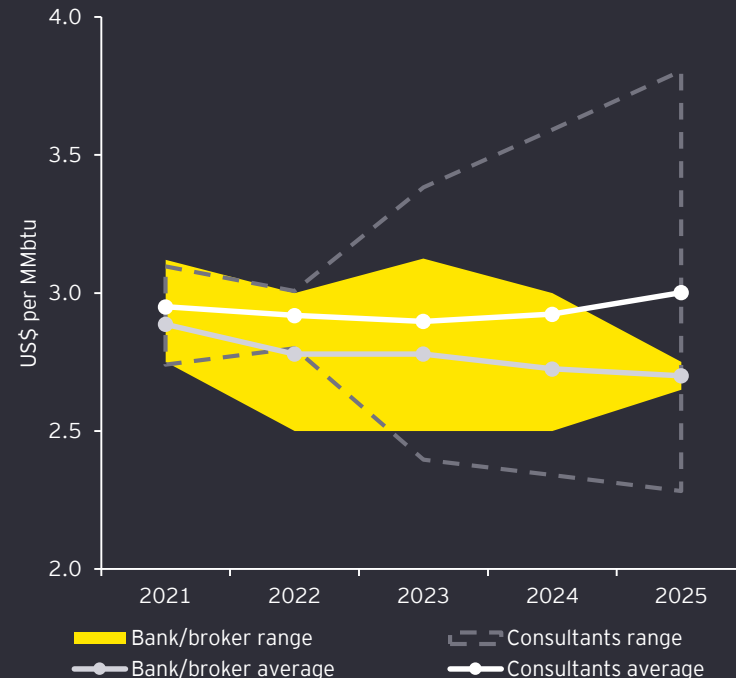
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*NBP: National Balancing Point

Henry Hub

Bank/broker and consultant price estimates, ranges and averages



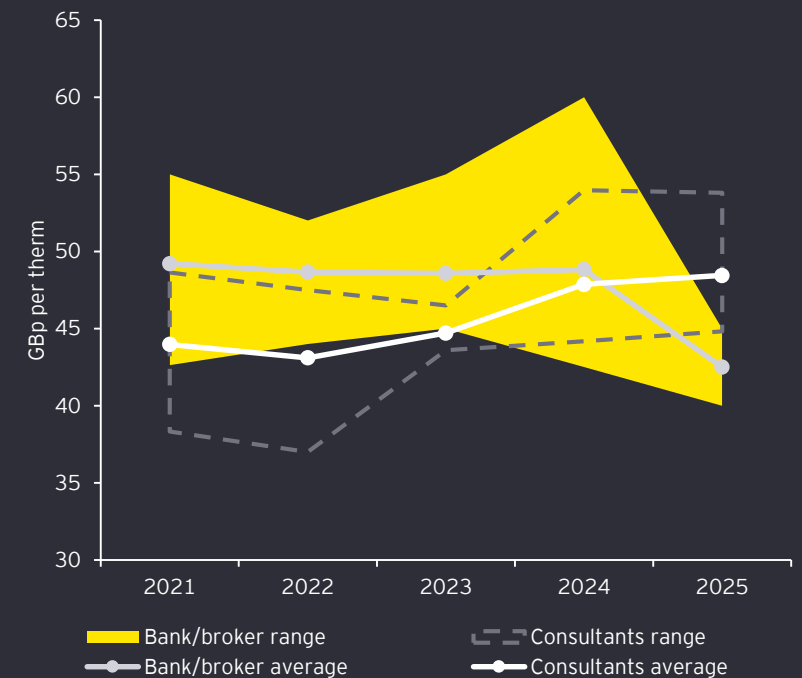
Henry Hub: US\$3.0

Average price per MMBtu forecast in 2025 – consultants

Source: Bloomberg; bank/broker reports; consultants' websites and reports.

UK NBP

Bank/broker and consultant price estimates, ranges and averages



UK NBP: GBp48.4

Average price per therm forecast in 2025 – consultants

Appendix

Brent oil price estimates

This data is effective as of 14 June 2021.

Bank/broker	2021 (US\$/bbl)	2022 (US\$/bbl)	2023 (US\$/bbl)	2024 (US\$/bbl)	2025 (US\$/bbl)
High	71.5	75.0	73.5	73.4	73.1
Average	64.9	65.0	63.2	63.6	63.3
Median	65.3	65.0	60.0	62.7	63.7
Low	50.0	50.0	56.0	55.0	55.0

Source: Bloomberg; bank/broker reports

*Certain price estimates included within the summary above may reflect real vs. nominal pricing as the bank/broker assumptions are not explicitly stated within Bloomberg or the respective reports.

Consultant	2021 (US\$/bbl)	2022 (US\$/bbl)	2023 (US\$/bbl)	2024 (US\$/bbl)	2025 (US\$/bbl)
High	65.8	64.6	72.2	75.7	79.4
Average	64.2	62.1	62.2	63.9	65.3
Median	64.4	62.1	61.0	62.2	62.8
Low	62.1	60.5	54.9	58.3	56.4

Source: Consultants' websites and reports; Oxford Economics

Note: Consultant ranges include estimates of recognized market consultants. Where consultant estimates are updated only annually (for example, the EIA and the IEA), such estimates are included within the range of estimates from 2023 onward (or combined with short-term estimates published by the same consultant) to prevent near-term ranges being impacted by estimates that are not considered to reflect current market dynamics. Price estimates derived under the IEA's "Stated Policies" and "Sustainable Development" scenarios (inflation adjusted to reflect nominal pricing) are reflected within the consultant ranges from 2023 onward.

Appendix

WTI oil price estimates

This data is effective as of 14 June 2021.

Bank/broker	2021 (US\$/bbl)	2022 (US\$/bbl)	2023 (US\$/bbl)	2024 (US\$/bbl)	2025 (US\$/bbl)
High	68.5	72.7	70.6	71.1	71.2
Average	61.6	61.7	60.2	59.7	59.9
Median	62.1	62.3	59.0	59.3	60.5
Low	45.0	45.0	52.0	50.5	50.0

Source: Bloomberg; banks and brokers reports

*Certain price estimates included within the summary above may reflect real vs. nominal pricing as the bank/broker assumptions are not explicitly stated within Bloomberg or the respective reports.

Consultant	2021 (US\$/bbl)	2022 (US\$/bbl)	2023 (US\$/bbl)	2024 (US\$/bbl)	2025 (US\$/bbl)
High	65.8	61.4	65.6	72.4	75.4
Average	61.5	58.7	57.7	59.5	60.6
Median	61.1	58.7	56.8	57.3	59.3
Low	59.4	56.6	53.1	55.3	53.7

Source: Consultants' websites and reports; Oxford Economics; EY analysis

Note: Consultant ranges include estimates of recognized market consultants. Where consultant estimates are updated only annually (for example, the EIA), such estimates are included within the range of estimates from 2023 onward (or combined with short-term estimates published by the same consultant) to prevent near-term ranges being impacted by estimates that are not considered to reflect current market dynamics.

Appendix

Henry Hub gas price estimates

This data is effective as of 14 June 2021.

Bank/broker	2021 (US\$/MMBtu)	2022 (US\$/MMBtu)	2023 (US\$/MMBtu)	2024 (US\$/MMBtu)	2025 (US\$/MMBtu)
High	3.1	3.0	3.1	3.0	2.8
Average	2.9	2.8	2.8	2.7	2.7
Median	2.9	2.8	2.8	2.7	2.7
Low	2.8	2.5	2.5	2.5	2.7

Source: Bloomberg; banks and brokers reports

* Where brokers have reported figures in US\$/mcf, we have used a conversion ratio of 1.037 for mcf conversion to MMBtu.

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Consultant	2021 (US\$/MMBtu)	2022 (US\$/MMBtu)	2023 (US\$/MMBtu)	2024 (US\$/MMBtu)	2025 (US\$/MMBtu)
High	3.1	3.0	3.4	3.6	3.8
Average	3.0	2.9	2.9	2.9	3.0
Median	3.0	2.9	2.9	2.9	3.0
Low	2.7	2.8	2.4	2.3	2.3

Source: Consultants' websites and reports; Oxford Economics

Note: Consultant ranges include estimates of recognized market consultants. Where consultant estimates are updated only annually (for example, the EIA and the IEA), such estimates are included within the range of estimates from 2023 onward (or combined with short-term estimates published by the same consultant) to prevent near-term ranges being impacted by estimates that are not considered to reflect current market dynamics. Price estimates derived under the IEA's "Stated Policies" and "Sustainable Development" scenarios (inflation adjusted to reflect nominal pricing) are reflected within the consultant ranges from 2023 onward.

Appendix

NBP gas price estimates

This data is effective as of 14 June 2021.

Bank/broker	2021 (GBp/therm)	2022 (GBp/therm)	2023 (GBp/therm)	2024 (GBp/therm)	2025 (GBp/therm)
High	55.0	52.0	55.0	60.0	45.0
Average	49.2	48.7	48.6	48.8	42.5
Median	50.0	50.0	45.8	44.0	42.5
Low	42.6	44.0	45.0	42.5	40.0

Source: Bloomberg; banks and brokers reports

* Where brokers have reported figures in US\$/mcf, we have used a conversion ratio of 1.037 for mcf conversion to MMBtu and the brokers' forecasted FX rates.

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Consultant	2021 (GBp/therm)	2022 (GBp/therm)	2023 (GBp/therm)	2024 (GBp/therm)	2025 (GBp/therm)
High	48.6	47.5	46.5	54.0	53.8
Average	44.0	43.1	44.7	47.9	48.4
Median	44.5	44.0	44.4	46.6	47.6
Low	38.3	37.0	43.6	44.2	44.8

Source: Consultants' websites and reports; Oxford Economics

*Where consultants have reported figures in US\$/MMBtu, we have used the particular consultants' forecast FX rate for the purpose of our conversion.

Note: Consultant ranges include estimates of recognized market consultants. Where consultant estimates are updated only annually, such estimates are included within the range of estimates from 2023 onward (or combined with short-term estimates published by the same consultant) to prevent near-term ranges being impacted by estimates that are not considered to reflect current market dynamics.

Key contacts

Important notice

Price outlook data included in this publication is effective as of 14 June 2021. Given the rapidly evolving nature of the market and views of market participants, analysis can quickly become outdated. It should be noted that EY analysis is not for the purpose of providing an independent view of the outlook for oil and gas prices. Instead, we are collating the views of market participants.

Price outlook data should not be applied mechanistically. Instead, careful consideration should be given to the purpose of any value assessment, with price forecasts assessed in the context of other key assumptions, such as resources and reserves classification, production rates, discount rates and cost escalation rates, together with an appreciation of the key sensitivities in any such analysis.



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