# **Argus** Global Markets

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EDITORIAL: Higher prices could test the cohesion of the Opec+ grouping, just as lower prices toughened its resolve

## Market markers

- Oil prices on the rise amid signs of market tightening
- North Sea Dated up by \$2.90/bl to nearly \$41.40/bl
- Jul WTI rises by \$2.50/bl to go over \$38.80/bl
- Global diesel margins up by \$0.75-2.50/bl

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## **Price target**

Opec has preferred not to make price targets an explicit part of its production decision process in the past. But it is clear that the real conversation in the Opec+ alliance now is around price and what the market will bear without opening up too much room for competing supply, particularly US shale. "We need to be monitoring how supply and demand react to various price signals," Russian energy minister Alexander Novak says. "\$50/bl is, in principle, the price, which can be taken as the basis for balancing the market."

Opec ministers almost always publicly insisted, perhaps disingenuously, that price was not their goal. Rather the more noble stated aim was to achieve market balance. There were some exceptions. Anger at the oil majors cutting posted prices in the Mideast Gulf and Venezuela was a major catalyst for the organisation's formation in 1960. Opec also operated a price band policy in the early 2000s that was meant to trigger automatic production adjustments if Brent crude strayed either side of a \$22-28/bl range. Even this policy was not openly declared by ministers in terms of price.

But producers in Opec+ have now been given an opportunity to dislodge a large amount of competing non-Opec supply because of the lingering impact of coronavirus disruption to the global economy and the brief flood of Mideast Gulf crude in April. A successful strategy to claim this market share requires Opec+ producers to focus closely on price sensitivities. Projections put that available market at anything up to 1mn b/d of capacity each year to 2025, thanks to a drop in investment in US shale and the severe weakening of international oil companies' balance sheets. The EIA revised down its forecast for US onshore production in the lower 48 states — a proxy for the shale sector — for the end of 2021 by 2.5mn b/d between its February and June Short-Term Energy Outlook reports.

Focusing on price targets makes more sense for Opec+ because the price sensitivity of shale is a different proposition to the old days of competition from non-Opec projects with lead times of up to five years. Some US production is already returning with WTI at nearly \$40/bl, after developers shut it in during May. This is easy production to restore because US producers consciously turned it off, rather than let it wither naturally. The shale sector still needs sustained spending to offset its steep decline rates. Shale growth returned with oil prices still in a \$40-50/bl range in 2015-17 because somewhere between \$60bn of equity investment and \$20bn of debt "was thrown at shale and got it going", independent Hess chief executive John Hess says. The sector now faces a much more sceptical investment community than it did three years ago.

Opec+ is in a strong position to capture market share should the world continue to emerge from Covid 19 without a debilitating second wave of infection and double-dip slump. "We feel that reasonably priced conventional oil is going to have a chance in the near future," UAE oil minister Suhail Mohamed Faraj al-Mazrouei says. The trick, as always, will be to sustain co-operation as prices rise. The oil market operated for decades with the understanding of an "Opec put" option, a floor price that would trigger the group to restrain output, even if Opec ministers did not explicitly state that price. It may have to think in terms of an "Opec+ call" option, if the group's cohesion can survive prices reaching Novak's \$50/bl.

#### **OPEC+**

Opec+ is putting compliance centre stage in its efforts to bring the market back into some kind of balance, write Rowena Edwards and Anastasia Krasinskaya

'The committee stressed that the attainment of 100pc conformity... is not only fair and equitable, but vital for the ongoing and timely rebalancing efforts'

'Under these dynamics we are able in a relatively short period of time [to] achieve balance in the market'

## Laggards given four days to deliver cuts plans

Opec+ producers that missed their production quotas in May have until 22 June to submit plans to reduce their crude output.

Iraq and Kazakhstan presented strategies to bring their crude production in line with their quotas this month and next at a meeting of the Opec+ group's Joint Ministerial Monitoring Committee (JMMC) on 18 June. And they showed plans to compensate in July-September for overproducing last month. But some countries had not submitted reduction plans by the time of the JMMC meeting and Saudi Arabia took a hard line with states including Nigeria, Angola and Congo (Brazzaville), an Opec+ delegate says.

Countries have until 22 June to present their strategies to achieve compliance, according to a communique issued after the meeting. The Opec secretariat postponed a JMMC press conference until after all countries hand in their reduction plans. "The committee stressed that the attainment of 100pc conformity from all participating countries is not only fair and equitable, but vital for the ongoing and timely rebalancing efforts and helping deliver a sustainable oil market stability," the communique says.

Iraq is pledging to cut output to 57,000 b/d below its ceiling in July and 258,000 b/d below target in August-September, oil ministry sources say. Iraq produced 4.17mn b/d in May, according to numbers provided by secondary sources — including Argus — almost 600,000 b/d above its May-July quota of 3.59mn b/d. The quota will rise to 3.8mn b/d in August-December. But compliance laggards must compensate for excess production in May-June with larger reductions in August-September, under changes to the Opec+ deal agreed at a ministerial meeting earlier this month.

Iraq's pledges mean that it will produce 3.53mn b/d in July, and 3.54mn b/d in August and September. It will have to be fully compliant this month to avoid having to compensate further in July-September. Baghdad has already taken steps to further reduce output and exports in June.

Kazakhstan produced 1.47mn b/d, or 150,000 b/d above its target, in May. It was 71pc compliant in May, energy minister Nurlan Nogayev says, although *Argus* puts the figure at 61pc. Kazakhstan will compensate in August-September for overproducing in May, Nogayev says, but has given no details.

#### **Bringing balance**

The global oil market may rebalance by the end of this year or the middle of 2021, Russian oil minister Alexander Novak said after the JMMC meeting, citing the five-year stocks average as the benchmark. Demand is gradually reviving, although there are concerns about a second wave of the Covid-19 pandemic, Novak says. Prices at around \$40/bl "reflect the situation", he says. "Under these dynamics we are able in a relatively short period of time — by the end of this year or by the middle of next year — [to] achieve balance in the market, when stocks go down to their five-year average level," he says.

"The overall level of compliance is quite high, at 87pc," Novak says. "The reduction of output amounted to 8.4mn b/d in May while the plan was to cut by 9.7mn b/d, so several countries failed to deliver 1.3mn b/d needed for a full compliance with the agreement." Countries outside the Opec+ deal are also contributing to the output reduction with "cuts at about 3.5mn b/d", he says.

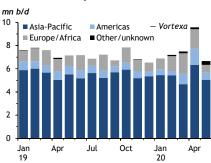
Russia is "almost fully compliant, close to 100pc" with its commitment in June, Novak says. Its crude and condensate production forecast for 2020 is "about 510mn-520mn t, from an initially planned 560mn-570mn t", he says. Russian liquids output was 556mn t last year.



#### MIDEAST GULF CRUDE

Four Asia-Pacific refiners say they received cuts of around 20pc to their July Aramco contractual volumes, write Azlin Ahmad and Ruxandra Iordache

#### Saudi crude exports



## Mideast Gulf producers maintain export cuts

Saudi Arabia is broadly maintaining supply cuts to its term customers in Asia-Pacific for July, while cutting shipments to Europe as Iraq does the same.

Saudi Aramco has reduced crude allocations to some Asia-Pacific term customers by around 20pc from contractual supplies for July after the Opec+ group extended its deeper output cuts for a month beyond June. The firm did not make any cuts for some buyers, refiners say. Saudi crude exports fell by 2.9mn b/d to under 6.7mn b/d in May, oil analytics firm Vortexa data show (see graph).

Four refiners in Asia-Pacific say they received cuts of around or slightly less than 20pc of their contractual supplies for July. One refiner had nominated below its contractual volumes and received the amount requested, and one had nominated above its contractual supply. But three northeast Asian refiners will receive their full contractual Aramco supplies for July. The firms nominated their normal contractual volumes for July and received those amounts.

The cuts in Aramco's July allocations to Asia-Pacific are within expectations, refiners say, given the 6 June Opec+ agreement to extend the first phase of its historic two-year production restraint deal to the end of July for all participants except Mexico. Aramco moved last month to cut June-loading crude supplies to some northeast Asian refiners by 20-25pc from their requested volumes, while some buyers received slightly larger cuts of up to 30pc.

Aramco had raised its official crude formula prices for July-loading cargoes to Asia-Pacific by \$5.60-7.30/bl from the previous month, exceeding buyers' expectations. Other Mideast Gulf producers raised Asia-Pacific formula prices by similar amounts. Some northeast Asian refiners are looking at buying more cargoes from the spot Atlantic basin markets, such as Russian Urals, Caspian CPC Blend and US WTI because of higher Mideast Gulf crude prices.

### Lower allocations for Europe

Refiners in Europe are braced for a drop in Mideast Gulf sour crude supplies in July. Some have been put off by the steep rise in Saudi prices. And Iraq cut allocations as it seeks to improve its Opec+ compliance.

Three European buyers did not nominate any Saudi crude in July. A fourth asked for reductions and a fifth was not approved for all it had requested. The lower nominations followed Aramco's decision to boost its formula prices for European buyers by \$3.90-5.40/bl against Ice Brent. Buyers say they are contending with weak refinery margins and that the price rises were higher than expected. Most Mideast Gulf crude term contracts oblige customers to take a monthly amount, but producers can allow buyers to skip commitments after negotiations.

Iraqi oil marketer Somo has also reduced shipments to Europe. At least four buyers have had their July term allocations reduced. Iraq produced 4.1mn b/d of crude in May, a 52pc compliance rate with its Opec+ quota. The country is taking steps to improve its record, and Somo has asked some of its clients to forgo part of their contracted June-loading allocations — a request they are unlikely to accede to given the dwindling availability of sour crude around the world and the short notice to find alternative supplies.

Iraq will this month export 2.8mn b/d of crude, the country's new oil minister Ihsan Ismael says. It was not immediately clear if this figure includes exports from the Kurdistan Regional Government (KRG), which has previously been reticent to reduce production and contribute to Iraq's cuts. The KRG has been asked to limit its June exports to 370,000 b/d, Ismael says. Somo exported 3.28mn b/d of Basrah and Kirkuk last month, while the KRG shipped out 335,000 b/d over the same period.



#### **PRICE SURVEY**

Crude prices are proving more resilient than expected, but a second wave of coronavirus infections could scupper the rebound, writes Felix Todd

'The positive start to reopening does not resolve the uncertainties about a potential second wave of infections'

## Market embarks on uncertain road to recovery

Oil analysts forecast a gradual crude price rebound as economies shake off the effects of the Covid-19 pandemic, in the latest *Argus* survey.

Atlantic basin benchmark North Sea Dated or Ice Brent futures will be nearly \$37/bl in the third quarter and close to \$41.70/bl in the fourth quarter, an average of responses in the survey suggests. This rises to \$50/bl in 2021, indicating a slow but steady recovery (see table).

The overriding consensus is that the Opec+ group's agreement to remove 9.7mn b/d of crude from the market in May-June, 9.6mn b/d in July and 7.7mn b/d over the rest of this year is proving successful in rebalancing the market and creating a bulwark against another sharp decline in prices. "We anticipated a rebound come mid-year, but our paper balances show global balances and prices running four-six weeks ahead of expectations," RBC Capital Markets says.

Concerns nevertheless remain over whether the cuts will be enough to push prices back to where they were prior to the mass outbreak of the Covid-19 contagion. "Storage also has a role to play in the rebalancing story," Dutch bank ABN Amro says. "If oil prices do not drive a sufficient supply reduction, constraints in storage capacity may prove to be a backstop solution."

China's sustained demand for crude imports, even during the worst of the outbreak, has helped absorb excess Atlantic basin supply. But the potential for shut-in Libyan production to return, which has been tentative so far, threatens to exacerbate an already oversupplied European market, Goldman Sachs analysts say. The bank forecasts Brent at \$37/bl in the third quarter and \$43/bl in the fourth, but hints at potential short-term price declines should Libyan exports resume in earnest in the near future. Weak refining margins further threaten to damage the gains made in recent months, it says.

#### Renewed outbreak

The potential for a second widespread coronavirus outbreak also has analysts tempering price expectations in the coming months. A wave of infections in Beijing since 11 June renders this more than plausible. "The positive start to reopening does not resolve the uncertainties about a potential second wave of infections or of a more difficult recovery beyond the easier gains of the first few months," Goldman Sachs says.

Morgan Stanley forecasts in its bear-case scenario that Brent prices will average just \$25/bl for the rest of this year, before staging a muted increase to an average of \$27.50/bl during 2021.

| Brent/WTI crue         | de pri | ce fore | casts |        |       |        |       |        |       |        |       | \$/bl  |
|------------------------|--------|---------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
|                        |        |         | W     | TI     |       |        |       |        |       |        |       |        |
|                        | 3Q20   | ±*      | 4Q20  | ±*     | 2021  | ±*     | 3Q20  | ±*     | 4Q20  | ±*     | 2021  | ±*     |
| ABN Amro               | 35.00  | -14.00  | 45.00 | -9.00  | 48.00 | -15.00 | 32.00 | -12.00 | 40.00 | -9.00  | 43.00 | -15.00 |
| BNP Paribas            | 35.00  | -20.00  | 43.00 | -15.00 | 54.00 | -2.00  | 31.00 | -22.00 | 41.00 | -16.00 | 52.00 | na     |
| Panmure Gordon         | 29.00  | na      | 30.00 | na     | na    | na     | 27.00 | na     | 28.00 | na     | na    | na     |
| RBC Capital<br>Markets | 43.25  | na      | 43.25 | na     | 48.00 | na     | 39.50 | na     | 39.50 | na     | 45.00 | na     |
| Goldman Sachs          | 37.00  | -7.00   | 43.00 | -3.00  | 55.60 | 2.60   | 34.00 | 6.00   | 40.00 | 3.00   | 51.40 | na     |
| Morgan Stanley         | 35.00  | na      | 40.00 | na     | 42.50 | na     | 32.50 | na     | 37.50 | na     | 40.00 | na     |
| Argus Consulting†      | 44.30  | na      | 47.50 | na     | 51.90 | na     | 41.30 | na     | 44.50 | na     | 48.90 | na     |
| Average                | 36.94  | -15.33  | 41.68 | -9.00  | 50.00 | -4.80  | 33.90 | -10.00 | 38.64 | -7.33  | 46.72 | -15.00 |

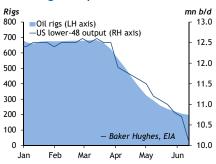
\*change from previous survey in March 2020 †Argus Consulting is a division of Argus Media. Its forecasts and analyses are separate and independent of Argus' news and price assessment business



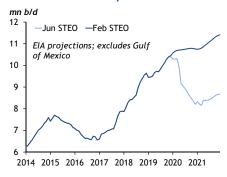
#### US PRODUCTION

Big spending cuts and rapid decline rates mean it will be a long time before the US shale sector returns to its giddy, pre-coronavirus heights, writes David Long

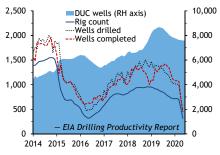
#### US oil rigs and production



#### US lower-48 oil output



#### Shale oil production drivers



## Shale producers defer output

US producers are bringing back shut-in capacity as prices return above operating costs, but output will not recover to pre-pandemic levels for several years.

Oil output will fall in the lower 48 states for the rest of this year, the EIA says in its latest *Short-Term Energy Outlook* (STEO). Shale oil producers cut spending by 40pc on average and delayed new well start-ups when benchmark WTI dropped below the \$45-50/bl breakeven range for new capacity. Prices are still too low to fully reverse spending cuts, and the EIA expects lower-48 output (excluding the Gulf of Mexico) to fall to 8.2mn b/d by December, 2.2mn b/d lower than a year earlier. Production will recover by only 470,000 b/d to nearly 8.7mn b/d by the end of 2021. This compares with a pre-pandemic forecast of 11.4mn b/d for December 2021 in the February STEO, a 2.7mn b/d revision in just four months.

Rebuilding lost shale oil capacity will take a long time. Output from new wells falls very fast, dropping by 80pc within two years in the Permian basin compared with nearly nine years for a deepwater field in the Gulf of Mexico, US bank Goldman Sachs says. Legacy decline rates for existing wells in the seven shale regions covered by the EIA's *Drilling Productivity Report* (DPR) averaged 540,000 b/d (6pc) a month in January-March. But firms cannot afford to offset the full extent of these declines — let alone expand capacity — until prices rise further.

Activity in the shale patch is at an all-time low. The number of rigs drilling for oil has fallen faster than in any previous downturn, and is now the lowest for over a decade. Drilled-and-completed wells more than halved across the DPR-7 regions in three months after prices crashed. It took over a year for well activity to halve in the 2014-15 downturn. Firms were already drilling fewer new wells last year to satisfy investor demands for cash and drawing on their "fracklog" of drilled-but-uncompleted (DUC) wells for new capacity (see graph). DUC wells cost about 25pc less to start up than drilling and completing a new well.

## Parsley stops growing

Operators are still reluctant to reverse deep spending cuts. Some are now restarting shut-in wells "to move into maintenance mode from declining mode", Goldman Sachs says. US independent Parsley will bring back most of the Permian production it curtailed last month, around 26,000 b/d of oil equivalent (boe/d), three-quarters of which was deferred start-ups. But Parsley still expects output to fall this year after a 60pc cut in 2020 spending plans. "We are not putting new capital to work — our drilling and hydraulic fracturing operations remain suspended as we evaluate market fundamentals," chief executive Matt Gallagher says.

Parsley's initial 2020 budget was based on \$50/bl WTI, with 15 rigs and 4-5 "frac" crews putting 45-50 new wells on production every quarter. But it idled rigs and suspended completions when WTI fell below \$20/bl in April. Now Parsley says it will respond dynamically to prices, adjusting activity to opportunities. With WTI at \$30/bl, the firm plans 4-5 rigs and 1-2 frac crews to deliver 15-25 new wells on production each quarter, providing enough new capacity to stabilise output by the fourth quarter, but at a lower level than in the first quarter.

Other Permian producers are also taking a disciplined approach to new capacity, restricting spending and deferring output until prices recover. EOG shut in 85,000 b/d this quarter and will restart output over the rest of this year. The firm has delayed around 150 new wells. "If your margins are way down, it does not take much of a price increase to more than double or triple your cash margins," executive vice-president of exploration and production Kenneth Boedeker says. Concho Resources and Diamondback also plan to make further cost-saving cuts in rig counts this year, using lower-cost DUC wells for new capacity as prices permit.



#### IN BRIEF

#### Gasoil exports hit six-month low

| FSU pro  | duct ex | ports |        | '00    | 00 b/d |
|----------|---------|-------|--------|--------|--------|
|          | May     | Apr   | May 19 | ytd 20 | ytd 19 |
| Gasoline | 223     | 198   | 230    | 241    | 243    |
| Naphtha  | 613     | 538   | 441    | 568    | 552    |
| Jet      | 21      | 22    | 67     | 25     | 46     |
| Gasoil   | 1,023   | 1,165 | 832    | 1,164  | 959    |
| Fuel oil | 868     | 885   | 778    | 875    | 928    |
| VGO      | 278     | 177   | 189    | 256    | 246    |
| Total    | 3,026   | 2,985 | 2,538  | 3,129  | 2,974  |

#### US Oil Fund approved to issue new shares

The US Oil Fund (USO), an exchange-traded fund popular with retail investors betting on a recovery in oil prices, has moved closer to returning to normal operations. The long oil fund, which has \$4.9bn under management and tries to track oil prices by investing primarily in the Nymex WTI crude futures contract, has won approval to issue new shares, and has contracted two brokers to buy crude futures on its behalf. Regulator the SEC on 12 June signed off its 20 April request to issue up to 1bn new shares. USO had for weeks been stuck in a holding pattern, waiting for regulators to act on a request made the day Nymex WTI prices plunged to minus \$37.63/bl. USO's only brokerage at the time, RBC Capital Markets, stopped buying oil futures on the fund's behalf because of its own risk management requirements and instructions from regulators.

#### Floating oil stocks to start drawing down 'in second half'

Floating oil stocks are likely to discharge in the second half of this year as oil demand ravaged by the Covid-19 pandemic recovers, the chief executives of ship-owners International Seaways and Diamond S Shipping say. "The [destocking] process is starting earlier than we thought. Demand is starting to pick up," Diamond S chief executive Craig Stevenson says. "I'd look for the third quarter for when barrels come out of [floating] storage," International Seaways chief executive Lois Zabrocky says. The amount of oil in floating storage was just under 260mn bl as of 16 June, down from 290mn bl on 20 May, oil analytics firm Vortexa data show. But this is still well above the more typical level of 90mn bl on 13 March.

#### **NORTH SEA CRUDE**

Firming prompt prices as demand revitalises have made the economics of storing crude for later sale less attractive, writes Michael Carolan

## North Sea floating crude storage almost clear

The amount of North Sea crude floating on stationary tankers has dropped sharply in the past week as the economics of storing oil weaken further.

Just 5.4mn bl of North Sea crude is now being held on board stationary tankers in the region, down from around 14mn bl a week ago and more than 22mn bl in early June.

The draining of North Sea floating storage has been driven by the rise in the price of prompt-loading crude relative to contracts delivering further out — which has made selling crude to refiners more attractive than storing it. North Sea Dated — which reflects the price of North Sea crude loading in the coming month — recently climbed above the Ice front-month August Brent contract for the first time since early March. In early April, North Sea Dated was priced as much as \$10/bl below the front-month Brent contract.

The clearing of the region's floating storage stocks has been helped by recovering demand in Europe as Covid-19 lockdown measures ease and by continued North Sea flows to Asia-Pacific.

The 2mn bl *Miltiadis Junior* has departed the region with a combination of Ekofisk and Brent crude on board. It is headed to Las Palmas in the Canary Islands but is likely to continue from there to a destination in Asia-Pacific. The 2mn bl *C Spirit* is again on the move, having remained stationary in the North Sea since loading Forties on 22 May. The tanker is signalling Morocco as its destination but will probably continue to Asia-Pacific.

Even when North Sea crude arrives in Asia-Pacific, it may not necessarily unload immediately. The 2mn bl *Bunga Kasturi Enam* loaded its Forties cargo at Hound Point in Scotland on 11 April and headed for China. But rather than unload at Rizhao, it has been floating nearby since 12 June.



#### IN BRIEF

#### FSU crude exports drop sharply

| FSU crude expor     | rts   |       | '00    | 00 b/d |
|---------------------|-------|-------|--------|--------|
|                     | May   | Apr   | ytd 20 | ±2019  |
| Black Sea           | 265   | 585   | 476    | -318   |
| Baltic              | 1,113 | 1,628 | 1,431  | -404   |
| Druzhba             | 785   | 863   | 927    | 27     |
| China Overland      | 727   | 761   | 784    | -103   |
| Kozmino             | 769   | 746   | 705    | 106    |
| Transneft pipeline  | 3,660 | 4,584 | 4,324  | -693   |
| Russian             | 3,233 | 4,175 | 3,955  | -732   |
| Kazakh/Turkmen      | 385   | 398   | 356    | 32     |
| Azeri               | 0     | 0     | 1      | -12    |
| Belarus             | 42    | 12    | 11     | 18     |
| Russian rail        | 23    | 35    | 31     | -13    |
| Russian by rail     | 23    | 35    | 31     | -13    |
| Far east            | 345   | 383   | 386    | -63    |
| Sakhalin Energy     | 96    | 123   | 116    | -20    |
| De Kastri (Sokol)   | 248   | 260   | 270    | -43    |
| Varandey            | 66    | 155   | 129    | -84    |
| Other Arctic        | 228   | 219   | 209    | 4      |
| Kaliningrad         | 12    | 12    | 12     | 1      |
| CPC                 | 1,189 | 1,406 | 1,401  | -112   |
| втс                 | 516   | 736   | 649    | -156   |
| Kenkiyak-Alashankou | 261   | 216   | 216    | 29     |
| Russian transit*    | 212   | 203   | 202    | 4      |
| Kazakh exports      | 49    | 12    | 14     | 25     |
| Caspian             | 60    | 100   | 85     | -7     |
| Supsa (AIOC)        | 60    | 100   | 85     | -7     |
| FSU total           | 6,125 | 7,607 | 7,208  | -1,085 |
| Russian             | 3,907 | 4,978 | 4,722  | -887   |
| *                   | cı    |       | G      |        |

<sup>\*</sup>Included in Transneft China Overland figure above

#### ExxonMobil plays down Liza falls offshore Guyana

ExxonMobil says it is "doing all it can" to repair equipment at the Liza field in the Stabroek block offshore Guyana, where crude production has plummeted in recent days. Liza output has fallen by 65pc to 27,500 b/d from early May because of technical problems at the site, casting doubt on the ExxonMobil-led consortium's June target for the field of 120,000 b/d. "The situation is a temporary, unplanned event related to project start-up," ExxonMobil says. "We are doing all we can to repair the equipment safely in order to complete final commission of the system." Liza, the first producing field in the Stabroek block, made its debut in December. Stabroek output is expected to hit 750,000 b/d by 2025.

#### Chinese blendstock demand rises

China is importing more consumption tax-free blendstock to produce transport fuels as costs fall, although demand may not be firm enough to absorb rising inventories. The country has been importing more mixed aromatics from southeast Asia in recent months. Beijing in mid-March put a floor on products prices when crude values drop below \$40/bl, allowing trading firms to gain from the difference between lower feedstock costs and higher products prices. China's mixed aromatics imports hit over 80,000 b/d in April, the highest since November's 100,000 b/d, customs data show. A similar pattern has emerged for light-cycle oil, used for blending into diesel, with imports from South Korea starting to climb since April.

#### Magellan expands Houston export terminal

US midstream firm Magellan will open a new dock at its Seabrook terminal near Houston in September that can load 1mn bl Suezmax tankers. The new dock will add 400,000 b/d of crude export capacity at Seabrook, which can already load 300,000 b/d on smaller Aframax tankers. Magellan's crude exports have risen in the second quarter compared with the first quarter, chief executive Michael Mears says, without disclosing volumes. Crude exports should continue at a steady rate "in the foreseeable future", Mears says. Magellan is also adding 750,000 bl of storage to Seabrook's 3.2mn bl capacity early next year.

#### Petrobras refusing ships with Venezuela visits

Brazil's Petrobras is no longer chartering oil tankers that have recently operated in Venezuela, as the pressure mounts on shipping market participants to distance themselves from US-sanctioned state-owned oil firm PdV. Petrobras will not accept tankers that have loaded in Venezuela or carried Venezuelan crude in the past 12 months, a shipbroker tells *Argus*. Petrobras says it recently "reinforced to its suppliers that it would not accept offers from ships that had operated in Venezuela during the sanctions period" without a licence from the US Treasury Department's Office of Foreign Assets Control. Aside from its local listing, Petrobras shares trade on the New York Stock Exchange.

| Monthly oil ou  | Monthly oil outlooks mn b/d |        |       |        |           |        |       |        |          |        |        |        | nn b/d |        |       |        |
|-----------------|-----------------------------|--------|-------|--------|-----------|--------|-------|--------|----------|--------|--------|--------|--------|--------|-------|--------|
| IEA OMR         |                             |        |       |        | Opec MOMR |        |       |        | EIA STEO |        |        |        |        |        |       |        |
|                 | 2019                        | ± prev | 2020  | ± prev | 2021      | ± prev | ±2019 | ± prev | 2020     | ± prev | 2019   | ± prev | 2020   | ± prev | 2021  | ± prev |
| Demand          | 99.84                       | -0.03  | 91.72 | 0.49   | 97.42     | na     | 99.67 | 0.00   | 90.59    | 0.00   | 100.87 | 0.13   | 92.53  | -0.06  | 99.71 | 0.18   |
| Demand growth   | 0.80                        | 0.00   | -8.11 | 0.52   | 5.70      | na     | 0.83  | 0.00   | -9.07    | 0.00   | 0.83   | 0.06   | -8.33  | -0.19  | 7.18  | 0.24   |
| Non-Opec supply | 65.55                       | 0.01   | 62.46 | 0.19   | 63.25     | na     | 65.03 | 0.00   | 61.80    | 0.30   | 65.98  | 0.01   | 63.42  | -0.19  | 64.25 | -0.13  |
| Opec NGLs       | 5.45                        | 0.00   | 5.22  | -0.01  | 5.31      | na     | 5.26  | 0.47   | 5.23     | 0.39   | 5.41   | 0.06   | 4.87   | -0.14  | 4.73  | -0.17  |
| Call on Opec    | 28.84                       | -0.04  | 24.05 | 0.32   | 28.85     | na     | 29.38 | -0.47  | 23.57    | -0.69  | 29.48  | 0.06   | 24.24  | 0.27   | 30.73 | 0.48   |

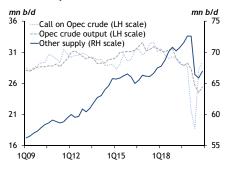
- IEA Oil Market Report, Opec Monthly Oil Market Report, EIA Short-Term Energy Outlook



#### **FUNDAMENTALS**

# The dramatic Opec+ cuts are helping to rebalance the market

#### Call on Opec crude



#### Global crude production



## Rebalancing possible in the second half

In the space of just three months, Opec+ has seen all the gains achieved over a difficult three years of production restraint vanish.

At the end of May, the OECD crude and product stock surplus to the 2010-14 average was 18pc- or 74mn bl - above the high of February 2017, Argus Consulting estimates. And 50mn-55mn bl of crude and products is being held in floating storage, with a further 230mn bl on vessels that have a floating storage option, Argus data show.

The inventory overhang is very large, but the radical April Opec+ agreement will go a long way to working it off. The early indications are that compliance is high, with only the usual suspects — Iraq and Nigeria — failing to deliver. Saudi Arabia and Russia are being unusually firm in addressing this non-compliance, insisting that the laggard countries not only fall into line, but also "repay" their overproduction in the coming months. The signs are that this hard line is bearing fruit and that output from June will be closer to where it should be — even if there is no compensation for the compliance misses.

With demand starting to rebound as Covid-19 lockdowns ease and with sharp falls in higher-cost non-Opec production, it looks as if the market will rebalance substantially during the second half of this year.

#### Non-Opec supply down sharply

Non-Opec crude and condensate output fell by 4.3mn b/d in May to an average of 47.1mn b/d as North American output continued to decline and the new round of Opec+ cuts came into force.

The 10 non-Opec participants in the Opec+ alliance pledged to reduce output by a combined 3.6mn b/d and thanks to many producers overcomplying,

| Supply and demand balan     | ce    |       |       |       |       |       |       |       |       |       |       | mn b/d |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
|                             | 4Q18  | 1Q19  | 2Q19  | 3Q19  | 4Q19  | 1Q20  | 2Q20  | 3Q20  | 4Q20  | 2018  | 2019  | 2020   |
| Total demand                | 101.1 | 100.1 | 99.9  | 100.5 | 101.3 | 94.2  | 85.2  | 94.1  | 96.3  | 100.0 | 100.5 | 92.5   |
| of which: OECD              | 47.7  | 47.5  | 46.8  | 47.9  | 47.6  | 45.3  | 38.5  | 43.7  | 44.8  | 47.7  | 47.5  | 43.1   |
| Non Opec supply*            | 64.8  | 64.1  | 64.7  | 65.4  | 66.4  | 66.6  | 60.5  | 59.9  | 61.0  | 63.1  | 65.1  | 62.1   |
| of which: crude             | 51.7  | 51.2  | 51.0  | 51.5  | 52.8  | 53.4  | 47.9  | 47.1  | 48.1  | 50.3  | 51.6  | 49.1   |
| Opec NGLs                   | 6.1   | 6.1   | 6.1   | 6.2   | 6.2   | 6.0   | 5.9   | 5.9   | 5.9   | 6.2   | 6.1   | 5.9    |
| Call on Opec crude**        | 30.2  | 29.8  | 29.0  | 28.9  | 28.6  | 21.5  | 18.7  | 28.1  | 29.3  | 30.6  | 29.1  | 24.4   |
| Opec production             | 31.7  | 30.0  | 29.4  | 28.8  | 29.3  | 28.3  | 25.7  | 24.5  | 25.4  | 31.3  | 29.4  | 26.0   |
| Global balance              | 1.4   | 0.1   | 0.3   | -0.1  | 0.6   | 6.7   | 6.9   | -3.7  | -4.0  | 0.8   | 0.2   | 1.4    |
| Total supply*               | 102.5 | 100.2 | 100.2 | 100.3 | 101.9 | 100.9 | 92.1  | 90.4  | 92.4  | 100.7 | 100.7 | 93.9   |
| OECD strategic stock change | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -0.0  | -0.0  | 0.1    |
| Atlantic basin              |       |       |       |       |       |       |       |       |       |       |       |        |
| Demand                      | 55.6  | 54.7  | 55.2  | 55.8  | 55.0  | 52.4  | 45.4  | 51.0  | 51.9  | 55.4  | 55.2  | 50.1   |
| Supply                      | 61.2  | 60.1  | 60.7  | 61.5  | 62.6  | 61.6  | 55.3  | 54.8  | 56.4  | 59.6  | 61.2  | 57.0   |
| Net surplus/deficit**       | 5.6   | 5.4   | 5.4   | 5.7   | 7.6   | 9.2   | 10.0  | 3.8   | 4.5   | 4.3   | 6.0   | 6.9    |
| Asia Pacific                |       |       |       |       |       |       |       |       |       |       |       |        |
| Demand                      | 36.9  | 37.0  | 36.1  | 35.5  | 37.5  | 33.9  | 32.4  | 34.5  | 35.9  | 35.8  | 36.5  | 34.2   |
| Supply                      | 8.5   | 8.5   | 8.5   | 8.3   | 8.4   | 8.4   | 7.9   | 8.0   | 8.0   | 8.4   | 8.4   | 8.1    |
| Net deficit**               | -28.4 | -28.5 | -27.6 | -27.2 | -29.1 | -25.5 | -24.5 | -26.6 | -27.9 | -27.4 | -28.1 | -26.1  |
| Middle East                 |       |       |       |       |       |       |       |       |       |       |       |        |
| Demand                      | 8.6   | 8.5   | 8.6   | 9.2   | 8.8   | 8.0   | 7.4   | 8.6   | 8.5   | 8.7   | 8.7   | 8.1    |
| Supply                      | 32.6  | 31.3  | 30.6  | 30.1  | 30.6  | 30.4  | 28.6  | 27.3  | 27.7  | 32.4  | 30.7  | 28.5   |
| Net surplus**               | 24.0  | 22.8  | 22.1  | 21.0  | 21.8  | 22.4  | 21.1  | 18.7  | 19.2  | 23.6  | 21.9  | 20.3   |

Opec includes Angola, Equatorial Guinea, Gabon and Congo (Brazzaville) and excludes Indonesia, Ecuador and Qatar throughout \*includes change in strategic stocks \*\* with no stock change



#### **FUNDAMENTALS**

| World oil productio   | n     |        | mn b/d |
|-----------------------|-------|--------|--------|
|                       | May   | Apr    | May 19 |
| US                    | 11.10 | 12.08  | 12.11  |
| Canada                | 4.00  | 4.00   | 4.55   |
| Total N America       | 15.10 | 16.08  | 16.67  |
| Mexico                | 1.66  | 1.73   | 1.66   |
| Brazil                | 2.91  | 2.96   | 2.74   |
| Colombia              | 0.78  | 0.80   | 0.89   |
| Other Latin America   | 1.09  | 0.92   | 1.26   |
| Total Latin America   | 6.44  | 6.41   | 6.56   |
| Russia                | 9.50  | 11.29  | 11.07  |
| Kazakhstan            | 1.47  | 1.96   | 1.70   |
| Azerbaijan            | 0.63  | 0.77   | 0.78   |
| Other FSU             | 0.32  | 0.32   | 0.36   |
| Total FSU             | 11.93 | 14.34  | 13.90  |
| Oman                  | 0.83  | 1.11   | 0.97   |
| Other Middle East     | 1.80  | 1.86   | 1.79   |
| Total Middle East     | 2.63  | 2.96   | 2.76   |
| China                 | 3.60  | 3.81   | 3.77   |
| Indonesia             | 0.78  | 0.78   | 0.75   |
| India                 | 0.60  | 0.64   | 0.68   |
| Australia             | 0.38  | 0.39   | 0.33   |
| Malaysia              | 0.50  | 0.54   | 0.64   |
| Vietnam               | 0.20  | 0.21   | 0.25   |
| Other Asia-Pacific    | 0.50  | 0.56   | 0.61   |
| Total Asia-Pacific    | 6.56  | 6.91   | 7.03   |
| UK                    | 0.91  | 1.04   | 1.05   |
| Norway                | 1.70  | 1.75   | 1.29   |
| Other Europe          | 0.47  | 0.47   | 0.56   |
| Total Europe          | 3.08  | 3.27   | 2.91   |
| Egypt                 | 0.56  | 0.58   | 0.60   |
| Ghana                 | 0.20  | 0.20   | 0.20   |
| Other Africa          | 0.64  | 0.70   | 0.69   |
| Total Africa          | 1.40  | 1.48   | 1.49   |
| Total non-Opec crude* | 47.14 | 51.45  | 51.31  |
| Non-Opec NGLs         | 7.56  | 8.08   | 7.85   |
| Non-Opec biofuels     | 2.61  | 2.32   | 3.09   |
| Processing gains      | 1.95  | 1.90   | 2.35   |
| Non-Opec oil supply   | 59.26 | 63.74  | 64.60  |
| Opec crude            | 24.22 | 30.37  | 29.26  |
| Opec NGLs & other     | 6.02  | 6.02   | 6.21   |
| World oil supply      | 89.50 | 100.13 | 100.08 |
| *includes condensates |       |        |        |

Argus estimates that overall adherence was 96pc in May. Non-Opec supply is expected to remain severely constrained in June and July as all the non-Opec participants in the Opec+ grouping — apart from Mexico — have agreed that May and June's deeper cuts will now roll into July.

Russia achieved an impressive cut of 1.8mn b/d in May, reducing its crude and condensate production to 9.5mn b/d - just over 900,000 b/d of which was condensate. The country appears to be taking its commitments seriously. Crude production was only 100,000 b/d above its target of 8.49mn b/d and Moscow has pledged to be fully compliant in June.

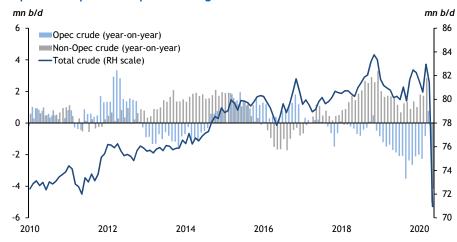
Kazakhstan stood out as the main non-Opec underachiever last month. It admitted to producing 275,000 b/d above target in the first 12 days in May, but was reportedly meeting its cut by 25 May. Nur-Sultan has committed to compensating in August and September for its previous misses.

#### North American plunge

North American production fell again last month, as US producers idled wells at shale plays and Canadian producers reduced oil sands output.

Canadian production has fallen by almost 1mn b/d this year, with bitumen output dropping to levels last recorded in 2016, when wildfires forced the evacuation and shutdown of facilities in the key oil producing province of Alberta. US crude production is estimated to have fallen by 1mn b/d on the month and on the year to an average of 11.1mn b/d in May. This continues April's decline as low oil prices, brimming storage and plummeting demand forced many producers to shut in wells.

#### Opec/non-Opec crude production growth



| Weekly US data       |           |          |      |          | mn bl  |
|----------------------|-----------|----------|------|----------|--------|
| Stocks               | 12 Jun 20 | 5 Jun 20 | ±    | 7 Jun 19 | ±20/19 |
| Crude                | 539.3     | 538.1    | 1.2  | 485.5    | 53.8   |
| Total products       | 907.4     | 901.6    | 5.9  | 826.8    | 80.6   |
| Gasoline             | 257.0     | 258.7    | -1.7 | 234.9    | 22.1   |
| Distillate           | 174.5     | 175.8    | -1.4 | 128.4    | 46.1   |
| Crude runs* (mn b/d) | 13.35     | 13.17    | 0.18 | 16.84    | -3.49  |
| Deliveries* (mn b/d) | 16.47     | 16.30    | 0.18 | 20.40    | -3.92  |
| *four-week average   |           |          |      |          | – EIA  |



#### OVERVIEW

North Sea Dated prices are three times higher than they were at their April nadir, indicating the extent of the market rebound

## Recovery continues, as Opec+ strips out supply

Prices made further gains, as rising demand and tighter global supplies offset the effects of high US inventories.

Atlantic basin benchmark North Sea Dated climbed by \$2.90/bl to \$41.38/bl in the week to 18 June, its highest since 6 March and more than triple its April low. US marker WTI added \$2.50/bl to \$38.84/bl.

US commercial crude inventories rose by 1.2mn bl to a record 539.3mn bl in the week to 12 June, EIA data show. And US Strategic Petroleum Reserve stocks increased by 1.7mn bl, as private companies leased space. Stocks rose despite lower production amid shut-ins related to tropical storm Cristobal.

But the success of the Opec+ group in stripping out large amounts of supply is helping to add balance back to the market. The coalition kicked off its two-year production restraint plan with an 87pc compliance rate in May. And this should rise further, with Iraq, Kazakhstan and Nigeria under pressure to meet their obligations. Russia is close to a 100pc adherence rate this month, oil minister Alexander Novak says. Russian Urals exports are scheduled to be 31pc below the June average in early July.

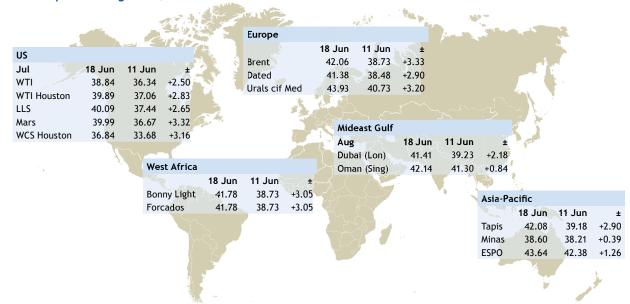
#### **Unexpected strength**

A stronger-than-expected demand recovery around the world has prompted Paris-based watchdog the IEA to soften its forecast for the global oil demand drop this year by over 500,000 b/d. The agency expects demand to be 91.7mn b/d this year and 97.4mn b/d in 2021.

European gasoline margins rose to a three-month high, with France and Spain showing a sharp lift in gasoline consumption in May. But with refinery utilisation well down compared with this time last year, the potential is there for supplies to increase.

European naphtha refining margins moved to their firmest since early December, driven by tight supplies, blending demand and Asia-Pacific buying. Light naphtha was also in demand from US gasoline blenders, petrochemical producers in Brazil and diluent buyers in Canada.

#### Global crude prices at a glance \$/bl





#### **OVERVIEW**

Northwest European diesel margins made gains, although regional stocks will need to drain somewhat for margins to re-establish their previous values. Gasoil stocks in northwest Europe are growing, boosted by the restart of the region's largest refinery — Shell's 420,000 b/d Pernis refinery in Rotterdam.

Sharp price hikes to official Mideast Gulf crude prices for July have dampened Asia-Pacific interest in the region's oil. South Korean refiners are instead turning to seaborne WTI and Kazakh CPC Blend for their September supplies. Medium and heavy sour grades have in turn benefited from demand for blending with lighter imports such as WTI. US grades such as Mars and LLS are enjoying increased export demand.

Basrah Light prices firmed in Europe, as Iraq cut availabilities to comply with its Opec+ targets. Oil marketer Somo has asked several term buyers to waive some of their contracted June-loading shipments as it seeks to meet its Opec+ targets. High official prices have already led some European buyers to abstain from nominating Saudi volumes, or ask for reductions.

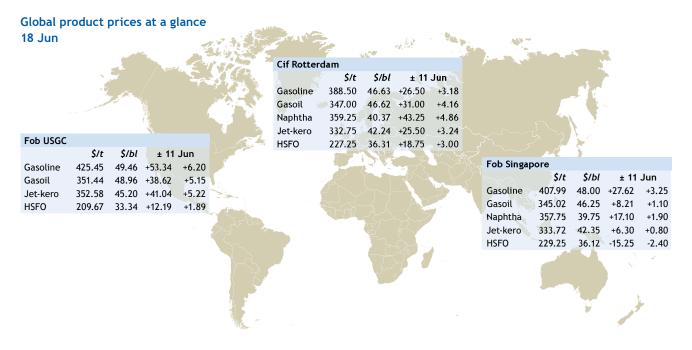
North Sea prices rose as the region's floating stocks diminished, with just 5.4mn bl of North Sea crude still aboard stationary tankers in the region, down from 22mn bl in early June.

Total drove demand for North Sea crude as it bought eight cargoes loading in late June and early July, comprising Brent, Forties and Ekofisk.

More tankers have become available for the spot market as floating storage clears, pressuring freight rates. The lower rates are supporting west African crude, with India's IOC buying at least four west African cargoes in a tender and Turkey's Tupras taking three July-loading shipments of Nigeria's Bonny Light.

#### Contango and cash

Global stocks should fall further as prompt prices rise relative to forward contracts. North Sea Dated — which reflects the price of North Sea crude loading in the coming month — recently climbed above the Ice front-month Brent contract for the first time since early March. North Sea Dated was priced as much as \$10/ bl below the Ice front-month Brent contract in early April.





#### **CRUDE MARKETS**

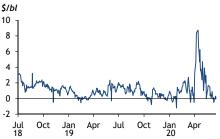
## Prices up on tightening Opec+ supply

- Crude benchmarks firmed, as the Opec+ group's chronic overproducers were told to present plans to further trim their output. Atlantic basin marker North Sea Dated rose by \$2.90/bl to \$41.38/bl while US light sweet marker WTI gained \$2.50/bl to settle at \$38.84/bl.
- Iraqi Basrah Light made gains as the country pledged to compensate for its failure to comply with its obligations in May under the latest Opec+ production deal. Oil marketer Somo will tighten crude supplies in June and July and has already asked some European and Mediterranean regional buyers to consider waiving some of their contracted June volumes.
- Light sour Abu Dhabi Murban was pressured by expectations of rising exports of competing crude to the Asia-Pacific market. August-loading Murban traded at an  $80 \matheck{\ell}/bl$  discount to its formula price, compared with an August deal at a  $10 \matheck{\ell}/bl$  discount a week earlier. July-loading Murban traded last month at premiums as high as \$1.60/bl. July Basrah Heavy held steady, trading around \$3.50/bl above its formula price.
- Russian Baltic-loading Urals rose by 15¢/bl to a \$1.55/bl premium to North Sea Dated, while Black Sea Urals gained 30¢/bl to a \$2.55/bl premium. Early July Urals exports are due to be 31pc lower than the full June plan at 950,000 b/d.
- The value of US sour grades rose on increased international demand. Medium sour Mars was valued just 10¢/bl below light sweet LLS. Prices for Loop Sour, crude sold from the Loop terminal in Louisiana, rose to \$39.51/bl following two rare trades, the first since the May delivery month.
- Spot Latin American crude prices firmed, amid higher formula prices for competing crudes. Colombian Castilla Blend was assessed at discounts of 4.75-5.25 bl to Ice October Brent,  $75 \not$  bl narrower than a week earlier.

#### WTI differential to North Sea



## North Sea premium to Dubai



| Crude marker g | rade price assessmen | ts           |                | \$/bl          |
|----------------|----------------------|--------------|----------------|----------------|
|                | 18 Jun               | ± 11 Jun     | 18 Jun         | ± 11 Jun       |
|                | Forward North Sea (I | ondon close) | WTI Cushing (F | louston close) |
| Jul            | 41.63                | +2.35        | 38.84          | +2.50          |
| Aug            | 41.42                | +2.45        | 39.05          | +2.48          |
| Sep            | 41.41                | +2.22        | 39.23          | +2.42          |
| Oct            | 41.48                | +2.01        | 39.38          | +2.38          |
|                | Dubai (I             | ondon close) | WTI Houston (H | louston close) |
| Jul            | -                    | -            | 39.89          | +2.83          |
| Aug            | 41.41                | +2.18        | 40.23          | +2.68          |
| Sep            | 40.51                | +2.08        | -              | -              |
| Oct            | 40.32                | +1.95        | -              | -              |

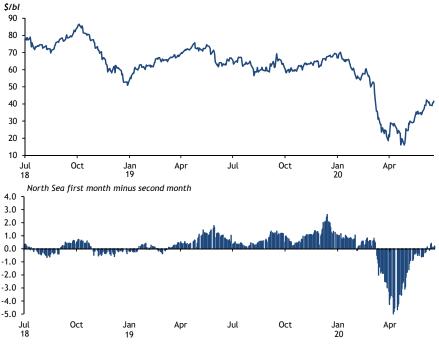
| Marker gra | Marker grades differentials \$/bl |           |        |          |                 |           |  |  |  |  |  |  |
|------------|-----------------------------------|-----------|--------|----------|-----------------|-----------|--|--|--|--|--|--|
|            | WTI                               | /N Sea    | N Sea  | /Dubai   | WTI Houston/WTI |           |  |  |  |  |  |  |
|            | (Londo                            | on close) | (Londo | n close) | (Houst          | on close) |  |  |  |  |  |  |
|            | 18 Jun                            | ± 11 Jun  | 18 Jun | ± 11 Jun | 18 Jun          | ± 11 Jun  |  |  |  |  |  |  |
| Jul        | -3.04                             | -0.24     | -      | -        | +1.05           | +0.33     |  |  |  |  |  |  |
| Aug        | -2.58                             | -0.32     | +0.01  | +0.27    | +1.18           | +0.21     |  |  |  |  |  |  |
| Sep        | -2.40                             | -0.16     | +0.90  | +0.14    | -               | -         |  |  |  |  |  |  |

#### **CRUDE MARKETS**

## Total buying supports North Sea values

- The North Sea's benchmark grades climbed against the marker as oil major Total bid for Brent, Forties, Oseberg, Ekofisk and Troll cargoes. The company bought eight cargoes loading in late June and early July, comprising Brent, Forties and Ekofisk. Prices have also risen as the region's floating stocks have diminished, with just 5.4mn bl of North Sea crude now remaining on stationary tankers in the region, down from 22mn bl in early June.
- West African cargo programmes continued to clear. India's IOC purchased at least four July and August-loading cargoes in its latest tenders, while Turkey's Tupras opted for three July-loading shipments of Nigeria's Bonny Light. Nigerian values firmed on reduced floating crude stocks and stronger gasoline, diesel and jet fuel margins. Elsewhere, Angolan crude loadings were scheduled at 1.18mn b/d in August in 38 cargoes, a preliminary programme indicates, down marginally from July's 1.21mn b/d.
- Kazakh CPC Blend fell by 45¢/bl to a 75¢/bl discount to North Sea Dated, with July exports scheduled 17pc higher at around 1.33mn b/d. BTC Blend and Azeri Light shed 45¢/bl to respective \$2.10/bl and \$1.80/bl premiums to the benchmark, with steady Asia-Pacific demand preventing further losses.
- Waterborne crudes priced at the US Gulf coast firmed on increased Asia-Pacific demand for alternatives to Mideast Gulf grades. July-loading WTI fob Houston's discount to Ice September Brent narrowed by  $20 \, \text{\rlap/e}/\text{bl}$  to \$1.73/bl, while Bakken fob Beaumont firmed by  $7 \, \text{\rlap/e}/\text{bl}$  to a \$1.78/bl discount to Ice September Brent.
- Asia-Pacific crudes firmed on rising demand as Covid-19 restrictions eased.
   August-loading Vietnamese medium sweet Sutu Den sold at a premium of more than \$3/bl to North Sea Dated, up from July sales at premiums of \$2/bl.







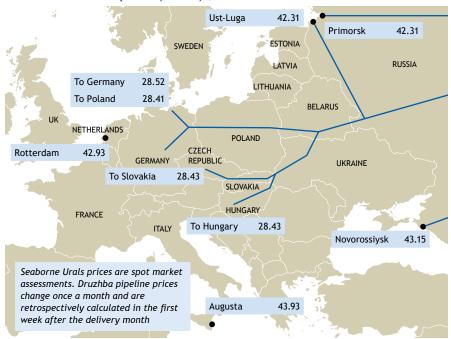
#### **CRUDE MARKETS**

#### Crude price assessments \$/bl Differential 18 Jun ± 11 Jun 18 Jun ± 11 Jun Basis North Sea (London close) Dated 41.38 +2.90 Sep N Sea -0.03 +0.68 42.06 42.03 +0.68 +0.65 Brent +3.33 Dtd +0.43 **Forties** +3.25 Dtd +0.35 Flotta Gold 40.38 +2.90 Dtd -1.00 nc Ekofisk 42.63 +1.25 +0.44 +3.34 Dtd Oseberg 42.63 +3.35 Dtd +1.25 +0.45 42.41 41.75 Statfjord +2.90 Dtd +1.03 nc North Sea Reference Price +2.67 FSU (London close) +3.05 Urals NWE 42.93 Dtd +1.55 +0.15 Urals cif Mediterranean 43.93 +3.20 Dtd +2.55 +0.30 Siberian Light cif Med CPC Blend cif Med 43.43 40.63 +2.10 Dtd +2.05 -0.80+2.45 -0.75 -0.45 Dtd BTC 43.48 +2.45 +2.10 -0.45 Dtd Mediterranean (London close) Es Sider 41.28 +2.90 Dtd -0.10 Iran Heavy Sidi Kerir Iran Light Sidi Kerir 39.56 42.36 +3.20 Dtd -1.82 +0.98 +0.30 +3.20Dtd +0.30Suez Blend 42.23 +3.20 Dtd +0.85 +0.30 Saharan Blend 41.83 -0.15 Dtd Kirkuk 40.38 +2.90 Dtd -1.00 nc West Africa (London close) 41.78 +3.05 Dtd +0.40 +0.15 Bonny Light 42.03 +3.05 Escravos Dtd +0.65 +0.15 Brass River 41.33 +3.05 Dtd -0.05 +0.15 Forcados 41.78 +3.05 Dtd +0.40 +0.15 Qua Iboe 41.63 +2.90 Dtd +0.25 +2.10 nc +2.90 43.48 Dtd Cabinda nc Girassol 44.38 +2.90 Dtd +3.00 nc Zafiro 42.13 +2.90 Dtd +0.75 nc Hungo 42.58 +2.90 Dtd +1.20 nc Mideast Gulf (Singapore close) 40.89 +0.11 Dubai Aug Adnoc -0.70 Murban 40.00 -0.82 -0.80 Aug Adnoc Das 40.20 -0.37 -0.25 -0.25 Aug Oman Aug 42.14 +0.84 Dubai swaps +2.34 +0.96 Qatar Land Aug 41.72 +0.36 ÓР even nc Qatar Marine +0.36 Aug even nc

#### Urals: NWE diff to Mediterranean



#### Russian Urals crude prices (18 Jun) \$/bl



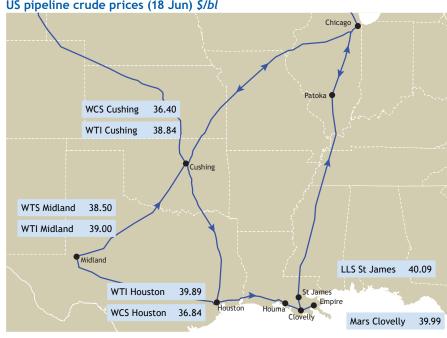


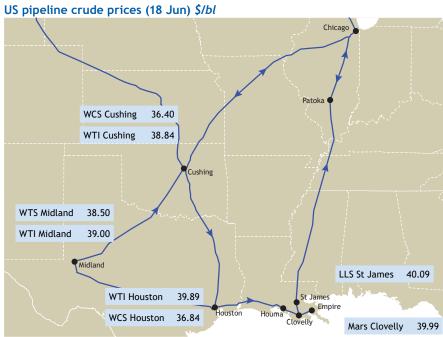
## **CRUDE MARKETS**

| Crude price assessments        |        |        |          |                        |        | \$/bl    |
|--------------------------------|--------|--------|----------|------------------------|--------|----------|
|                                |        |        |          |                        | Diffe  | rential  |
|                                |        | 18 Jun | ± 11 Jun | Basis                  | 18 Jun | ± 11 Jun |
| Asia-Pacific (Singapore close) |        |        |          |                        |        |          |
| ESPO Blend                     |        | 43.64  | +1.26    | Dubai swaps            | +3.84  | +1.44    |
| Minas                          |        | 38.60  | +0.39    | ICP                    | +1.00  | nc       |
| Duri                           |        | 35.10  | +0.39    | ICP                    | +1.00  | nc       |
| Cinta                          |        | 37.60  | +0.39    | ICP                    | +0.30  | nc       |
| Widuri                         |        | 37.80  | +0.39    | ICP                    | +0.30  | nc       |
| Ardjuna                        |        | 35.85  | +0.39    | ICP                    | even   | nc       |
| Belida                         |        | 37.55  | +0.39    | ICP                    | +1.00  | nc       |
| Bach Ho                        |        | 44.98  | +4.00    | Dtd                    | +3.60  | +1.10    |
| Tapis                          |        | 42.08  | +2.90    | Dtd                    | +0.70  | nc       |
| Cossack                        |        | 36.38  | +2.90    | Dtd                    | -5.00  | nc       |
| Kutubu                         |        | 36.38  | +2.90    | Dtd                    | -5.00  | nc       |
| NW Shelf                       |        | 36.88  | +2.90    | Dtd                    | -4.50  | nc       |
| Dar Blend                      |        | 42.38  | +2.90    | Dtd                    | +1.00  | nc       |
| Americas seaborne (Houston o   | lose)  |        |          |                        |        |          |
| WTI fob                        |        | 39.75  | +2.79    | Jul WTI                | -0.15  | -0.04    |
| Bakken fob                     |        | 39.70  | +2.67    | Jul WTI                | -0.20  | -0.17    |
| ANS USWC                       | Aug    | 43.01  | +2.38    | Aug WTI                | +3.73  | -0.03    |
| Castilla Blend                 | Dtd    | 36.51  | +3.38    | Oct WTI                | -2.87  | na       |
| Vasconia                       | Dtd    | 39.01  | +3.88    | Oct WTI                | -0.37  | na       |
| Escalante                      | Dtd    | 39.26  | +3.88    | Oct WTI                | -0.12  | na       |
| US/Canada pipeline (Houston    | close) |        |          |                        |        |          |
| Bakken Beaumont-Nederland      | Jul    | 39.75  | +2.96    | Jul CMA WTI + WTI diff | +0.93  | +0.48    |
| WTI Midland                    | Jul    | 39.00  | +2.90    | Jul WTI                | +0.16  | +0.40    |
| WTI Houston                    | Jul    | 39.89  | +2.83    | Jul WTI                | +1.05  | +0.33    |
| LLS St James                   | Jul    | 40.09  | +2.65    | Jul WTI                | +1.25  | +0.15    |
| HLS Empire                     | Jul    | 39.49  | +2.65    | Jul WTI                | +0.65  | +0.15    |
| Mars Clovelly                  | Jul    | 39.99  | +3.32    | Jul WTI                | +1.15  | +0.82    |
| Poseidon Houma                 | Jul    | 38.94  | +3.39    | Jul WTI                | +0.10  | +0.89    |
| WTS Midland                    | Jul    | 38.50  | +3.06    | Jul WTI                | -0.34  | +0.56    |
| WCS Cushing                    | Jul    | 36.40  | +3.89    | Jul WTI                | -2.73  | +1.43    |
| WCS Houston                    | Jul    | 36.84  | +3.16    | Jul CMA WTI            | -2.28  | +0.70    |
| WCS Hardisty                   | Aug    | 30.15  | na       | Aug WTI                | -9.13  | na       |
| ASCI                           | Jul    | 39.72  | +3.25    | Jul WTI                | +0.88  | +0.75    |
|                                |        |        |          |                        |        |          |

## LLS diff to North Sea Dated







#### **EUROPEAN PRODUCTS MARKETS**

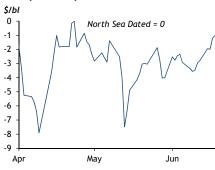
## Rising demand lifts margins

- European products margins drew support from steadily increasing demand and heavily diminished refinery run rates.
- Eurobob oxy gasoline premiums to North Sea Dated rose by 31¢/bl to \$2.76/bl, briefly topping \$3/bl for the first time since April. A steady return of demand, easing onshore and offshore stocks, and low refinery output lent support.
- Northwest European naphtha's premium to the front-month swap rose to its highest since January, at \$8.50/t from \$1.25/t a week ago, on keen gasoline blending demand and Asia-Pacific interest. Its discount to crude narrowed to almost \$1/bl (see graph).
- Northwest European diesel cargo premiums to North Sea Dated rose by \$1.72/bl to \$6.37/bl. Baltic flows are thinning and demand rising. But the market is oversupplied, with gasoil held in independent Amsterdam-Rotterdam-Antwerp tanks at 10-month highs. Jet fuel margins rose by 30¢/bl to 85¢/bl. Mideast Gulf supplies are more likely to go east than to Europe, but slim European demand is capping gains.
- Very-low sulphur fuel oil's premium to Ice August Brent jumped to \$2.10/bl from \$1.14/bl. Signs of a quicker recovery in the shipping industry have lent support, but plentiful supply is limiting the impact. High-sulphur fuel oil's discount to Urals crude was relatively steady at \$8.16/bl. Rising Saudi demand during the peak cooling season is underpinning values.
- Northwest European low-sulphur vacuum gasoil (VGO) premiums to Ice August Brent gained 25¢/bl to \$2.25/bl, while high-sulphur VGO was unchanged at \$1.50/bl. Refining margins for secondary units are gaining, although refiners could be hesitant to ramp up output too soon, given the tentative rebound in global oil demand.

| European product price assessments        |           |            |             | \$/t    |
|---|-----------|------------|-------------|---------|
|   | Northwest | Europe cif | Mediterrane | ean cif |
| cif                                       | 18 Jun    | ± 11 Jun   | 18 Jun ±    | 11 Jun  |
| Gasoline and blendstocks                  |           |            |             |         |
| Gasoline 95 Ron                           | 388.50    | +26.50     | 385.25      | +24.00  |
| MTBE*                                     | 441.25    | +18.38     | -           | -       |
| Middle distillates                        |           |            |             |         |
| Jet†                                      | 332.75    | +25.50     | 319.25      | +26.25  |
| French diesel                             | 356.25    | +34.50     | 359.25      | +36.50  |
| French heating oil                        | 347.00    | +31.00     | 351.50      | +35.75  |
| Cracked fuel oil                          |           |            |             |         |
| - 1% sulphur                              | 254.50    | +25.00     | 260.25      | +23.00  |
| - 3.5% sulphur                            | 227.25    | +18.75     | 229.00      | +21.00  |
| LPG and feedstocks                        |           |            |             |         |
| Propane                                   | 294.50    | +10.50     | 287.00      | +10.50  |
| Butane                                    | 314.75    | +38.00     | 343.00      | +38.00  |
| Naphtha 65% para                          | 359.25    | +43.25     | 351.75      | +43.75  |
| Vacuum gasoil 0.5% sulphur†               | 300.00    | +18.25     | 294.88      | +20.00  |
| Vacuum gasoil 2% sulphur                  | 291.75    | +16.50     | -           | -       |
| Straight-run fuel oil 0.5% sulphur \$/bl‡ | 1.50      | +0.25      | -           | -       |

\*Rotterdam barges †fob Mediterranean price replaced by cif price from 5 January ‡differential to Brent crude futures

### European naphtha vs North Sea Dated



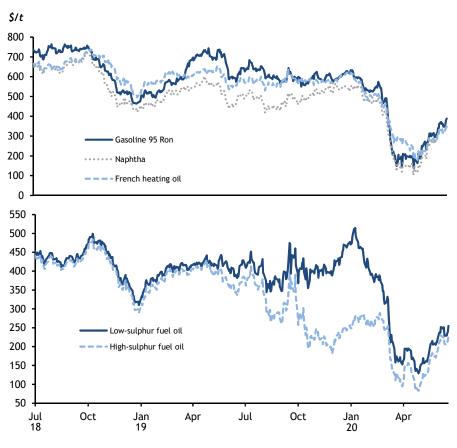
## **EUROPEAN PRODUCTS MARKETS**

| Gasoline and | gasoil deriva | tives      |     |                    | \$/t       |
|--------------|---------------|------------|-----|--------------------|------------|
|              | Gasoline b    | arge swaps |     | Ice gasoil futures | settlement |
| fob NWE      | 18 Jun        | ± 11 Jun   |     | 18 Jun             | ± 11 Jun   |
| Jul          | 385.00        | +43.50     | Jul | 353.75             | +31.00     |
| Aug          | 391.00        | +40.50     | Aug | 357.75             | +27.50     |
| Sep          | 392.25        | na         | Sep | 361.75             | +24.75     |

| Fuel oil derivatives |             |             |                | \$/t                     |  |  |
|----------------------|-------------|-------------|----------------|--------------------------|--|--|
|                      | Low-sulphur | cargo swaps | High-sulphur b | High-sulphur barge swaps |  |  |
| fob NWE              | 18 Jun      | ± 11 Jun    | 18 Jun         | ± 11 Jun                 |  |  |
| Jul                  | 246.75      | +15.25      | 222.00         | +12.25                   |  |  |
| Aug                  | 249.75      | +13.25      | 221.25         | +12.50                   |  |  |
| Sep                  | 252.25      | na          | 218.75         | na                       |  |  |

| River Rhine barge price assessments (18 Jun) |                     |              |        |                 |  |  |  |
|--|---------------------|--------------|--------|-----------------|--|--|--|
|  | Rotterdam<br>barges | Ru<br>tank w |        | Basel<br>barges |  |  |  |
|  | \$/t                | \$/t         | €/t    | \$/t            |  |  |  |
| Heating oil                                  | 341.50              | 353.50       | 314.90 | 376.80          |  |  |  |
| Gasoline Eurobob oxy                         | 367.80              | 379.80       | 338.20 | 395.70          |  |  |  |
| Diesel 10ppm                                 | 346.50              | -            | -      | -               |  |  |  |

## Northwest Europe cif cargoes





#### **US PRODUCTS MARKETS**

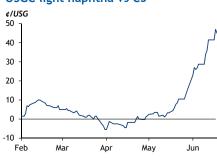
## Prices, demand rise as activity gathers pace

- Products prices rose as the country continues to push out of Covid-19 stay-athome quarantine orders.
- Atlantic coast distillate margins firmed, with diesel barges holding an average premium of \$8.49/bl to benchmark North Sea Dated crude, a gain of \$1.67/bl. Jet fuel rose by \$2.33/bl to a \$4.39/bl premium to North Sea Dated.
- Gulf coast distillate values are rising, with jet fuel at a  $3.7 \epsilon/\text{USG}$  premium to WTI crude and diesel prices hitting a three-month high.
- Gulf coast gasoline prices hit 14-week highs before abating slightly. The arbitrage from the Gulf coast to New York Harbor is closed but higher prices in Chicago opened up that route from Houston.
- Light naphtha rose to its highest premium to natural gasoline since *Argus* began assessing this grade in May 2014 (*see graph*). Demand from the gasoline blending sector increased, as well as from petrochemical producers in Brazil and diluent buyers in Canada.
- Vacuum gasoil (VGO) markets firmed as cracker margins followed gasoline up. Cargoes rose to sharper premiums to the barge market, where multiple refineries made offers amid planned and unplanned cracker shutdowns.
- Prompt Gulf coast 0.5pc sulphur fuel oil swaps held a \$2.52/bl discount to third-month swaps, the widest such contango in the region since 12 May. This helped lead to an increase in barge trading in the region, despite generally scant bunker fuel demand.

| 18 Jun | US Gulf fob  | NY I          | Harbor cif  |
|--------|--|---------------|---|
| 18 Jun | 44 1   |               | iui boi cii   |
|        | ± 11 Jun   | 18 Jun        | ± 11 Jun  |
|        |  |               |   |
| 124.22 | +13.09   | 132.15        | +13.89  |
| 117.77 | +14.76   | 119.77        | +15.19  |
| -      | -  | 126.52        | +16.14  |
| -      | -  | 145.00        | +11.38  |
|        |  |               |   |
| 107.86 | +12.43   | 115.99        | +12.94  |
| 116.56 | +12.26   | 120.23        | +13.19  |
| 101.36 | +14.31   | 106.36        | +11.06  |
|        |  |               |   |
| -      | -  | 37.03         | +2.66   |
| 33.34  | +1.89  | 33.94         | +1.89   |
|        |  |               |   |
| 50.94  | +2.00  | -             | -   |
| 50.75  | -0.88  | -             | -   |
| -16.00 | -1.00  | -             | -   |
| -8.46  | -6.29  | -             | -   |
| -10.85 | -6.29  | -             | -   |
|        | 117.77<br>- 107.86<br>116.56<br>101.36<br>- 33.34<br>- 50.94<br>50.75<br>-16.00<br>-8.46<br>-10.85 | 117.77 +14.76 | 117.77       +14.76       119.77         -       -       126.52         -       -       145.00         107.86       +12.43       115.99         116.56       +12.26       120.23         101.36       +14.31       106.36         -       -       37.03         33.34       +1.89       33.94         50.94       +2.00       -         50.75       -0.88       -         -16.00       -1.00       -         -8.46       -6.29       -         -10.85       -6.29       - |

\*Mont Belvieu ‡barges, vs 70:30 conventional gasoline 87/heating oil †vs conventional gasoline

## USGC light naphtha vs C5

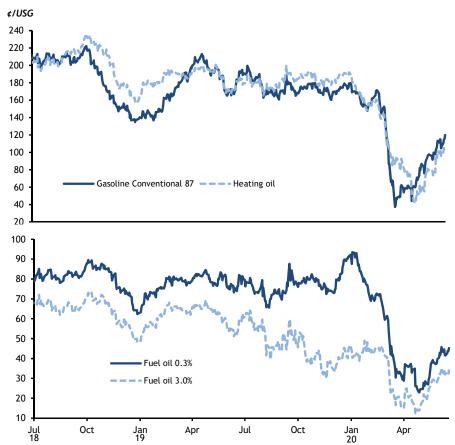


## **US PRODUCTS MARKETS**

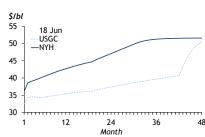
| Products derivatives |        |          |        |             |  |  |
|----------------------|--------|----------|--------|-------------|--|--|
|                      | 18 Jun | ± 11 Jun | 18 Jun | ± 11 Jun    |  |  |
| Nymex close ¢/USG    | Rbob   | gasoline | Heat   | Heating oil |  |  |
| Jul                  | 125.77 | +13.89   | 119.86 | +11.06      |  |  |
| Aug                  | 125.75 | +12.22   | 121.09 | +9.78       |  |  |
| Sep                  | 124.56 | +10.96   | 122.75 | +9.09       |  |  |

| West coast price assessments |        |          |                 |
|------------------------------|--------|----------|-----------------|
|                              | 18 Jun | ± 11 Jun | 18 Jun ± 11 Jun |
| Pipeline ¢/USG               | Los    | Angeles  | San Francisco   |
| Carbob 84                    | 136.77 | +8.39    | 137.27 +12.39   |
| Carb diesel                  | 124.34 | na       | 124.86 na       |
| Jet                          | 116.86 | +12.43   | 115.36 +12.43   |
| Bunkers \$/t                 | Los    | Angeles  | Seattle         |
| HSFO 380                     | 233.00 | -7.00    | 228.50 -6.50    |

## **New York Harbor cif cargoes**



## Fuel oil futures curve



Apr

Jul 18

Jan 19

Apr

#### **ASIA-PACIFIC PRODUCTS MARKETS**

## Drivers help buoy transport fuels

- Transport fuel margins firmed as more Asian economies returned to a measure of normality. Naphtha drew support from stronger petrochemical margins, while fuel oil margins bucked the trend as inventories built.
- The 92 Ron gasoline margin pushed past \$4/bl for the first time in three months (see graph). Lower refinery runs reduced gasoline production, while driving activity resumed, supporting values.
- Naphtha margins firmed to a more-than month high, driven by a strong petrochemical sector. Ethylene margins rose to their highest this year, prompting naphtha crackers to keep runs high, supporting naphtha demand.
- Singapore 180cst margins fell as inventories climbed again. Singapore residual fuel oil stocks built for a third week, adding more than 940,000 bl to 26.63mn bl, the highest in over three years.
- Jet fuel refining margins rose to their strongest in more than two and a half months as stocks dropped. Singapore onshore middle distillate inventories fell to a two-month low of around 13.9mn bl in the week to 17 June, after lingering above 14mn bl from mid-April, tightening supplies.
- The Singapore 500ppm sulphur gasoil differential to Singapore assessments stood at 65¢/bl on 16 June, a more than 30-month high. South Korean refiners could have offered no spot 500ppm sulphur gasoil cargoes for June loading, and a similar trend is expected in July.

| Singapore and Japan price as | ssessments |          |        | \$/bl    |
|------------------------------|------------|----------|--------|----------|
|                              | Fob S      | ingapore | C+F    | Japan    |
|                              | 18 Jun     | ± 11 Jun | 18 Jun | ± 11 Jun |
| Light distillates*           |            |          |        |          |
| Gasoline 95 Ron              | 48.00      | +3.25    | -      | -        |
| Gasoline 92 Ron              | 45.05      | +2.90    | -      | -        |
| Naphtha                      | 39.75      | +1.90    | 365.50 | +14.12   |
| Middle distillates           |            |          |        |          |
| Jet-kerosine                 | 42.35      | +0.80    | 44.20  | +0.65    |
| Gasoil 50ppm sulphur         | 47.65      | +0.85    | 49.90  | +1.45    |
| Gasoil 0.5% sulphur          | 46.25      | +1.10    | -      | -        |
| Fuel oil                     |            |          |        |          |
| LSWR (fob Indonesia)         | 43.57      | -0.99    | -      | -        |
| HSFO 180cst (\$/t)           | 229.25     | -15.25   | 237.50 | -16.20   |
| HSFO 380cst (\$/t)           | 219.00     | -9.50    | •      | -        |
| *Japan \$/t                  |            |          |        |          |

| Singapore swaps |        |                    |        |           |  |  |
|-----------------|--------|--------------------|--------|-----------|--|--|
|                 | 18 Jun | ± 11 Jun           | 18 Jun | ± 11 Jun  |  |  |
|                 | Gas    | soil \$/bl         | J      | Jet \$/bl |  |  |
| Jul             | 47.10  | +1.00              | 43.15  | +0.70     |  |  |
| Aug             | 46.80  | +0.80              | 43.80  | +0.65     |  |  |
| Sep             | 47.10  | na                 | 44.50  | na        |  |  |
|                 | Napl   | ntha \$/ <i>bl</i> | H      | HSFO \$/t |  |  |
| Jul             | 38.45  | +2.10              | 233.75 | -10.50    |  |  |
| Aug             | 38.00  | +1.85              | 238.00 | -8.00     |  |  |
| Sep             | 37.65  | na                 | 239.75 | na        |  |  |

#### Asia-Pacific gasoline vs Ice Brent



## **ASIA-PACIFIC PRODUCTS MARKETS**

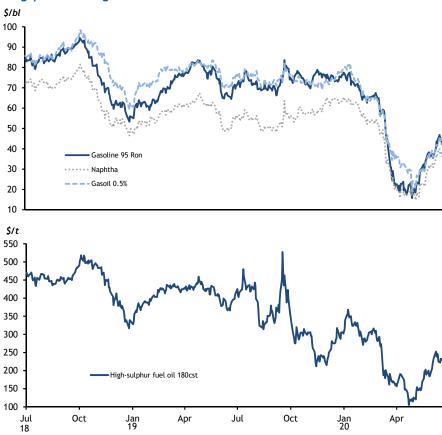
| Mideast Gulf cargo price assessments |        |          | \$/bl                        |
|--------------------------------------|--------|----------|------------------------------|
|                                      | 18 Jun | ± 11 Jun | Premium to Platts*<br>18 Jun |
| Light distillates                    |        |          |                              |
| Gasoline 95 Ron                      | 45.90  | +3.25    | +2.80                        |
| Naphtha (\$/t)                       | 343.80 | +11.32   | +20.50                       |
| Middle distillates                   |        |          |                              |
| Kerosine                             | 40.55  | +0.45    | +0.55                        |
| Gasoil 0.2% sulphur                  | 43.60  | +0.30    | -1.45                        |
| Gasoil 0.5% sulphur                  | 42.75  | +0.30    | -2.30                        |
| Fuel oil $(\$/t)$                    |        |          |                              |
| HSFO 180cst                          | 219.25 | -12.85   | nc                           |
| HSFO 380cst                          | 208.90 | -7.30    | -9.25                        |

<sup>\*</sup>Platts mean of Mideast Gulf assessment

| East of Suez LPG |               |          |                | \$/t             |  |  |  |
|------------------|---------------|----------|----------------|------------------|--|--|--|
|                  | C+F           | Japan    | Fob M          | Fob Mideast Gulf |  |  |  |
|                  | 18 Jun        | ± 11 Jun | 18 Jun         | ± 11 Jun         |  |  |  |
| Propane*         | -11.00 /-7.50 | -0.50    | -30.00 /-20.00 | -5.00            |  |  |  |
| Butane*          | -11.00 /-7.50 | -0.50    | -30.00 /-20.00 | -5.00            |  |  |  |

 $<sup>^*</sup>$ differentials to Saudi Aramco selling price

## Singapore fob cargoes

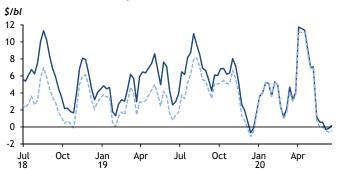


## **NETBACKS**

| Netback values ( | 12 - 18 Ju | n)            |            |               |         |        |          |       |        |               |          | \$/Ы          |
|------------------|------------|---------------|------------|---------------|---------|--------|----------|-------|--------|---------------|----------|---------------|
|                  |            | Refinery      | gate value |               | Freight | Netba  | ck value | Crude |        | Netbac        | k margin |               |
|                  | Simple     | ±             | Complex    | ±             |         | Simple | Complex  | Spot  | Simple | ±             | Complex  | ±             |
|                  | yield      | 5 - 11<br>Jun | yield      | 5 - 11<br>Jun |         | yield  | yield    | Price | yield  | 5 - 11<br>Jun | yield    | 5 - 11<br>Jun |
| Northwest Europe |            |               |            |               |         |        |          |       |        |               |          |               |
| Brent            | 40.50      | +0.39         | 41.12      | +0.56         | 0.55    | 39.95  | 40.57    | 40.42 | -0.47  | +0.16         | +0.15    | +0.33         |
| Forties          | 40.26      | +0.44         | 40.69      | +0.59         | 0.54    | 39.72  | 40.15    | 40.40 | -0.68  | +0.27         | -0.25    | +0.42         |
| Arab Light       | 39.60      | +0.30         | 39.97      | +0.48         | 1.29    | 38.31  | 38.68    |       |        |               |          |               |
| Arab Heavy       | 36.93      | -0.12         | 37.60      | +0.13         | 1.34    | 35.59  | 36.26    |       |        |               |          |               |
| Urals NWE*       | 39.64      | +0.23         | 40.13      | +0.45         | -       | 39.64  | 40.13    | 41.29 | -1.65  | +0.35         | -1.16    | +0.57         |
| Bonny Light      | 42.26      | +0.39         | 42.59      | +0.52         | 1.13    | 41.13  | 41.46    | 40.17 | +0.96  | +0.89         | +1.29    | +1.02         |
| BTC              | 41.72      | +0.41         | 42.20      | +0.62         | 0.94    | 40.78  | 41.25    | 41.57 | -0.79  | +0.85         | -0.32    | +1.06         |
| Basrah Light     | 37.17      | -0.04         | 37.56      | +0.17         | 1.33    | 35.84  | 36.23    | 42.64 | -6.80  | -2.23         | -6.41    | -2.03         |
| US Gulf          |            |               |            |               |         |        |          |       |        |               |          |               |
| Mars*            | 39.55      | +0.40         | 42.33      | +0.94         | -       | 39.55  | 42.33    | 38.61 | +0.94  | +1.04         | +3.72    | +1.58         |
| Basrah Light     | 38.65      | +0.32         | 41.37      | +0.94         | 1.72    | 36.93  | 39.64    | 42.64 | -5.71  | -1.86         | -3.00    | -1.25         |
| LLS*             | 42.29      | +0.77         | 44.16      | +1.15         | -       | 42.29  | 44.16    | 38.96 | +3.33  | +1.50         | +5.20    | +1.88         |
| Bonny Light      | 41.13      | +1.10         | 45.42      | +1.19         | 1.30    | 39.83  | 44.12    | 40.17 | -0.34  | +1.62         | +3.95    | +1.71         |
| Arab Light       | 40.78      | +0.60         | 43.04      | +1.05         | 1.68    | 39.10  | 41.36    |       |        |               |          |               |
| Arab Medium      | 39.69      | +0.46         | 42.20      | +1.00         | 1.70    | 37.99  | 40.51    |       |        |               |          |               |
| Maya             | 35.65      | -0.02         | 38.63      | +0.63         | 1.22    | 34.43  | 37.41    | 35.09 | -0.66  | +0.73         | +2.32    | +1.38         |
| WTI              | 42.56      | +0.78         | 44.22      | +1.11         | 0.00    | 42.56  | 44.22    | 37.71 | +4.85  | +1.59         | +6.51    | +1.92         |
| Singapore        |            |               |            |               |         |        |          |       |        |               |          |               |
| Oman             | 37.18      | -0.87         | 42.29      | -0.13         | 1.92    | 35.26  | 40.37    | 40.74 | -5.48  | +0.26         | -0.37    | +1.00         |
| Basrah Light     | 37.30      | -0.72         | 41.20      | -0.19         | 1.94    | 35.36  | 39.26    | 42.64 | -7.28  | -2.96         | -3.38    | -2.43         |
| Minas            | 38.12      | -0.94         | 43.33      | +0.02         | 1.36    | 36.76  | 41.97    | 37.53 | -0.77  | +0.51         | +4.44    | +1.47         |
| ESPO Blend       | 38.83      | -0.74         | 43.61      | +0.13         | 0.73    | 38.10  | 42.88    | 42.22 | -4.12  | -0.07         | +0.66    | +0.80         |
| Arab Light       | 39.23      | -0.43         | 42.98      | +0.12         | 1.88    | 37.35  | 41.10    |       |        |               |          |               |
| Arab Heavy       | 36.53      | -0.95         | 41.06      | -0.24         | 1.94    | 34.59  | 39.11    |       |        |               |          |               |
| Murban           | 39.70      | -0.25         | 43.59      | +0.31         | 1.80    | 37.90  | 41.79    | 39.49 | -1.59  | +0.55         | +2.30    | +1.11         |

<sup>\*</sup>quotes are FIP, and therefore freight is implicit in the spot price

## **Brent northwest Europe**



## LLS US Gulf



## **ESPO Blend Singapore**



Visit www.argusmedia.com/netbacks for details of the Argus Netback Model

## **Basrah Light Singapore**



## **FUTURES MARKETS**

Nymex gasoline first month

175

155 135

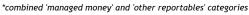
35

Oct Jan

| Futures: volumes and open interest '00 |           |           |          |               |  |  |
|--|-----------|-----------|----------|---------------|--|--|
|  | Provision | al volume | Орег     | Open interest |  |  |
| Nymex:                                 | 12-18 Jun | 5-11 Jun  | 17 Jun   | 10 Jun        |  |  |
| Sweet crude                            | 4,515.44  | 4,827.36  | 2,061.00 | 2,124.00      |  |  |
| Heating oil                            | 636.10    | 672.42    | 380.00   | 386.00        |  |  |
| Rbob                                   | 885.95    | 797.53    | 372.00   | 359.00        |  |  |
| Ice:                                   |           |           |          |               |  |  |
| Brent                                  | 3,527.48  | 3,882.26  | 2,695.00 | 2,663.00      |  |  |
| Gasoil                                 | 1,194.14  | 1,698.68  | 881.00   | 885.00        |  |  |

| Settlement prices          |        |         |              |              |        |         |              |             |
|----------------------------|--------|---------|--------------|--------------|--------|---------|--------------|-------------|
|                            |        | First m | onth         | Second month |        |         |              |             |
| Nymex:                     | 18 Jun | ±11 Jun | Week<br>high | Week<br>low  | 18 Jun | ±11 Jun | Week<br>high | Week<br>low |
| Sweet crude (\$/bl)        | 38.84  | +2.50   | 38.84        | 36.26        | 39.05  | +2.48   | 39.05        | 36.51       |
| Heating oil (¢/USG)        | 119.86 | +11.06  | 119.86       | 110.14       | 121.09 | +9.78   | 121.09       | 112.39      |
| Rbob (¢/USG)               | 125.77 | +13.89  | 125.77       | 112.43       | 125.75 | +12.22  | 125.75       | 113.67      |
| Ice:                       |        |         |              |              |        |         |              |             |
| Brent (\$/bl)              | 41.51  | +2.96   | 41.51        | 38.73        | 41.47  | +2.59   | 41.47        | 38.98       |
| Brent weighted avg (\$/bl) | 41.09  | +1.89   |              |              | 41.06  | +1.59   |              |             |
| Gasoil (\$/t)              | 353.75 | +31.00  | 353.75       | 328.50       | 357.75 | +27.50  | 357.75       | 334.75      |

#### Net long positions: futures only '000 Producer-merchant-refiner-user Swaps dealers Non-commercial\* 9 Jun 9 Jun 9 Jun 2 Jun 2 Jun 2 Jun -170 -430 Nymex light sweet crude -177 -431 568 568 Ice WTI -24 -25 -116 -118 144 146 Ice Brent -343 -301 342 330 -12 -39 3 Nymex heating oil -97 -96 86 85 3 -107 50 47 Nymex Rbob -111 52 53 Ice gasoil† -209 -217 255 256 -49 -43 -957 174 701 689



†Positions converted to mn bl equivalent

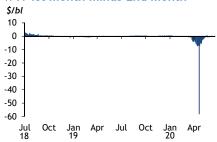


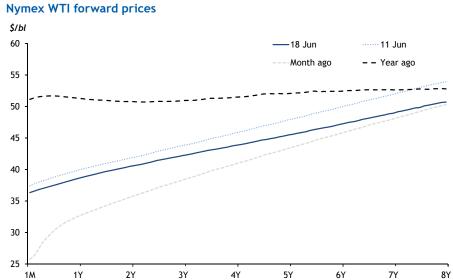


Jul Oct Jan Apr 20

Apr

#### WTI 1st month minus 2nd month





- CFTC, Ice

## **CRUDE SPOT MARKETS**

| Crude marker grade spot prices   |       |       |       |       |        |       |       |       |            |             | \$/bl        |
|----------------------------------|-------|-------|-------|-------|--------|-------|-------|-------|------------|-------------|--------------|
| Date is date of assessment       | 2Q19  | 3Q19  | 4Q19  | 1Q20  | Feb 20 | Mar   | Apr   | May   | 1-5<br>Jun | 8-12<br>Jun | 15-18<br>Jun |
| Forward North Sea (London close) |       |       |       |       |        |       |       |       |            |             |              |
| First month                      | 69.23 | 62.78 | 63.37 | 50.87 | 56.06  | 32.49 | 22.86 | 31.47 | 39.48      | 40.29       | 40.53        |
| Second month                     | 68.38 | 62.17 | 62.29 | 50.96 | 55.65  | 33.95 | 26.36 | 32.18 | 39.61      | 40.17       | 40.42        |
| Third month                      | 67.62 | 61.63 | 61.59 | 51.27 | 55.55  | 35.65 | 29.28 | 32.89 | 39.74      | 40.39       | 40.53        |
| WTI (Houston close)              |       |       |       |       |        |       |       |       |            |             |              |
| First month                      | 59.89 | 56.40 | 56.88 | 45.57 | 50.53  | 29.89 | 16.52 | 28.57 | 37.30      | 37.87       | 38.08        |
| Second month                     | 60.02 | 56.39 | 56.88 | 46.14 | 50.71  | 31.34 | 23.31 | 29.24 | 37.59      | 38.09       | 38.34        |
| Third month                      | 60.08 | 56.21 | 56.72 | 46.60 | 50.92  | 32.57 | 27.08 | 30.23 | 37.88      | 38.32       | 38.55        |
| Dubai (London close)             |       |       |       |       |        |       |       |       |            |             |              |
| First month                      | 67.39 | 61.04 | 61.97 | 49.91 | 54.22  | 32.86 | 21.18 | 31.18 | 39.10      | 40.36       | 40.28        |
| Second month                     | 66.32 | 60.15 | 60.44 | 50.03 | 54.06  | 34.48 | 26.63 | 33.03 | 38.82      | 39.63       | 39.61        |
| Third month                      | 65.52 | 59.28 | 59.31 | 50.29 | 54.20  | 35.87 | 29.42 | 33.34 | 38.95      | 39.58       | 39.53        |
| Crude spot prices                |       |       |       |       |        |       |       |       |            |             | \$/bl        |
| Date is date of assessment       | 2Q19  | 3Q19  | 4Q19  | 1Q20  | Feb 20 | Mar   | Apr   | May   | 1-5<br>Jun | 8-12<br>Jun | 15-18<br>Jun |
| North Sea (London close)         |       |       |       |       |        |       |       |       |            |             |              |
| Dated                            | 68.74 | 61.84 | 63.06 | 50.02 | 55.45  | 31.71 | 18.57 | 29.00 | 37.91      | 39.54       | 40.13        |
| Brent                            | 69.54 | 62.15 | 64.09 | 50.32 | 56.23  | 31.41 | 14.79 | 27.63 | 37.41      | 39.81       | 40.72        |
| Ice Brent weighted average       | 68.16 | 62.08 | 62.08 | 51.16 | 55.47  | 34.73 | 27.02 | 32.37 | 39.54      | 40.16       | 39.96        |
| Forties                          | 69.48 | 62.07 | 63.96 | 50.07 | 55.81  | 31.08 | 15.12 | 27.81 | 37.76      | 39.84       | 40.69        |
| Flotta                           | 67.94 | 61.46 | 62.93 | 49.26 | 54.45  | 30.71 | 17.57 | 28.00 | 36.91      | 38.54       | 39.13        |
| Ekofisk                          | 69.91 | 62.50 | 64.91 | 51.97 | 58.45  | 32.64 | 15.55 | 28.54 | 38.81      | 40.40       | 41.23        |
| Oseberg                          | 70.11 | 62.56 | 65.01 | 52.11 | 58.30  | 32.35 | 15.21 | 28.73 | 38.16      | 40.35       | 41.20        |
| Statfjord                        | 69.08 | 62.19 | 64.28 | 51.73 | 57.20  | 33.35 | 20.17 | 28.24 | 37.10      | 39.83       | 41.16        |
| Russia (London close)            |       |       |       |       |        |       |       |       |            |             |              |
| Urals NWE                        | 68.20 | 60.80 | 61.63 | 47.68 | 53.95  | 28.39 | 16.03 | 29.93 | 39.56      | 40.94       | 41.57        |
| Urals Mediterranean              | 68.77 | 61.84 | 63.40 | 48.97 | 55.11  | 29.51 | 16.50 | 30.84 | 40.34      | 41.27       | 42.46        |
| Siberian Light                   | 70.00 | 63.10 | 65.45 | 50.70 | 57.73  | 30.12 | 13.20 | 31.51 | 41.41      | 42.52       | 42.18        |
| BTC Blend                        | 71.70 | 65.15 | 67.50 | 53.37 | 59.99  | 32.48 | 16.09 | 31.51 | 40.80      | 42.03       | 42.42        |
| CPC Blend                        | 67.45 | 60.66 | 62.25 | 47.66 | 53.55  | 27.58 | 10.95 | 26.96 | 37.78      | 39.21       | 39.83        |
| Mediterranean (London close)     |       |       |       |       |        |       |       |       |            |             |              |
| Es Sider                         | 68.82 | 61.79 | 63.62 | 49.94 | 55.35  | 31.61 | 18.47 | 28.90 | 37.81      | 39.44       | 40.03        |
| Iran Heavy Sidi Kerir            | 64.40 | 57.47 | 59.03 | 44.60 | 50.74  | 25.14 | 12.13 | 26.47 | 35.97      | 36.90       | 38.09        |
| Iran Light Sidi Kerir            | 67.20 | 60.27 | 61.83 | 47.40 | 53.54  | 27.94 | 14.93 | 29.27 | 38.77      | 39.70       | 40.89        |
| Kirkuk                           | 66.16 | 58.94 | 59.01 | 45.60 | 51.05  | 27.32 | 12.14 | 25.35 | 37.29      | 38.54       | 39.13        |
| Suez Blend                       | 67.07 | 60.14 | 61.70 | 47.27 | 53.41  | 27.81 | 14.80 | 29.14 | 38.64      | 39.57       | 40.76        |
| Saharan Blend                    | 68.96 | 61.75 | 64.05 | 51.44 | 57.76  | 31.73 | 13.99 | 28.82 | 38.41      | 40.12       | 40.61        |
|                                  |       |       |       |       |        |       |       |       |            |             |              |



## **CRUDE SPOT MARKETS**

| Date is date of assessment        | 2Q19  | 3Q19  | 4Q19  | 1Q20  | Feb 20 | Mar   | Apr   | May   | 1-5   | 8-12  | 15-18 |
|-----------------------------------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| rate is date of assessment        | 2Q19  | 3Q19  | 4Q19  | IQZU  | reb 20 | Mai   | Арі   | may   | Jun   | Jun   | Jui   |
| West Africa (London close)        |       |       |       |       |        |       |       |       |       |       |       |
| Bonny Light                       | 70.70 | 63.71 | 65.24 | 51.21 | 57.27  | 31.08 | 12.67 | 26.57 | 38.66 | 39.99 | 40.4  |
| Escravos                          | 70.62 | 64.08 | 65.82 | 51.69 | 57.82  | 31.65 | 13.57 | 27.10 | 38.91 | 40.24 | 40.7  |
| Brass River                       | 70.64 | 63.63 | 65.05 | 51.13 | 57.07  | 31.29 | 13.17 | 26.54 | 37.71 | 39.34 | 40.0  |
| Forcados                          | 70.62 | 64.02 | 65.47 | 51.34 | 57.17  | 31.27 | 12.92 | 26.60 | 38.41 | 39.84 | 40.4  |
| Qua Iboe                          | 70.75 | 63.73 | 65.44 | 51.21 | 57.27  | 31.08 | 12.67 | 26.51 | 38.66 | 39.99 | 40.3  |
| Cabinda                           | 69.73 | 63.46 | 65.03 | 51.54 | 57.59  | 32.03 | 13.52 | 28.69 | 39.47 | 41.64 | 42.2  |
| Girassol                          | 70.57 | 64.38 | 65.34 | 51.53 | 57.25  | 32.45 | 14.41 | 28.90 | 41.03 | 42.54 | 43.1  |
| Zafiro                            | 70.14 | 63.68 | 65.09 | 50.79 | 56.65  | 30.95 | 13.15 | 27.05 | 38.46 | 40.29 | 40.8  |
| Mideast Gulf (Singapore close)    |       |       |       |       |        |       |       |       |       |       |       |
| Murban                            | 68.09 | 62.66 | 63.61 | 52.61 | 57.06  | 35.60 | 23.94 | 28.82 | 34.43 | 40.92 | 39.6  |
| Das                               | 67.48 | 62.04 | 62.91 | 51.91 | 56.41  | 34.86 | 23.59 | 28.47 | 34.08 | 40.61 | 39.7  |
| Oman                              | 67.78 | 62.04 | 62.78 | 51.21 | 54.61  | 34.85 | 23.65 | 33.95 | 40.46 | 41.43 | 41.1  |
| Qatar Land                        | 66.79 | 61.42 | 62.74 | 52.20 | 56.38  | 35.35 | 20.33 | 28.22 | 34.52 | 37.90 | 41.0  |
| Qatar Marine                      | 66.82 | 61.09 | 61.77 | 51.83 | 56.04  | 35.30 | 21.25 | 28.86 | 35.07 | 38.23 | 41.0  |
| Asia-Pacific (Singapore close)    |       |       |       |       |        |       |       |       |       |       |       |
| ESPO Blend                        | 69.92 | 65.14 | 66.96 | 54.73 | 57.87  | 38.03 | 25.84 | 33.63 | 41.14 | 42.41 | 42.7  |
| Minas                             | 65.13 | 59.89 | 60.08 | 48.99 | 53.39  | 32.40 | 24.24 | 30.09 | 37.22 | 38.23 | 37.9  |
| Duri                              | 61.65 | 56.39 | 56.58 | 45.49 | 49.89  | 28.90 | 20.74 | 26.59 | 33.72 | 34.73 | 34.4  |
| Cinta                             | 64.15 | 58.89 | 59.08 | 47.99 | 52.39  | 31.40 | 23.24 | 29.09 | 36.22 | 37.23 | 36.9  |
| Widuri                            | 64.35 | 59.09 | 59.28 | 48.19 | 52.59  | 31.60 | 23.44 | 29.29 | 36.42 | 37.43 | 37.1  |
| Bach Ho                           | 72.93 | 66.01 | 69.21 | 56.50 | 62.65  | 37.71 | 18.76 | 29.51 | 40.41 | 42.04 | 43.7  |
| Tapis                             | 72.91 | 66.63 | 70.08 | 56.06 | 62.67  | 35.38 | 17.91 | 26.40 | 38.61 | 40.24 | 40.8  |
| Cossack                           | 69.17 | 61.45 | 64.61 | 51.07 | 57.95  | 30.46 | 14.92 | 22.29 | 32.91 | 34.54 | 35.1  |
| Kutubu                            | 69.18 | 61.40 | 65.68 | 50.25 | 55.68  | 30.33 | 13.80 | 21.90 | 32.91 | 34.54 | 35.1  |
| NW Shelf                          | 64.49 | 57.89 | 62.72 | 49.01 | 54.51  | 29.87 | 8.78  | 17.35 | 26.91 | 33.74 | 35.6  |
| Americas seaborne (Houston close) |       |       |       |       |        |       |       |       |       |       |       |
| WTI fob                           | 66.71 | 59.77 | 60.15 | 47.89 | 53.64  | 30.22 | 19.31 | 30.96 | 38.26 | 38.56 | 38.9  |
| Bakken fob                        | 66.55 | 59.72 | 60.09 | 47.80 | 53.55  | 30.09 | 18.92 | 30.89 | 38.47 | 38.69 | 39.0  |
| ANS USWC                          | 68.28 | 63.02 | 64.35 | 51.03 | 54.49  | 34.76 | 20.10 | 28.93 | 40.09 | 41.76 | 42.4  |
| Vasconia                          | 65.85 | 59.25 | 58.44 | 45.41 | 50.44  | 28.65 | 19.39 | 26.88 | 36.23 | 36.71 | 37.7  |
| JS pipeline (Houston close)       |       |       |       |       |        |       |       |       |       |       |       |
| Bakken Beaumont/Nederland         | 66.06 | 59.45 | 59.68 | 47.23 | 53.21  | 29.44 | 17.85 | 30.63 | 38.19 | 38.46 | 38.8  |
| WTI Midland                       | 57.62 | 56.12 | 57.80 | 45.51 | 51.44  | 28.17 | 15.95 | 30.00 | 37.52 | 37.80 | 38.1  |
| WTI Houston                       | 66.47 | 59.75 | 60.04 | 47.81 | 53.60  | 30.19 | 18.46 | 30.94 | 38.53 | 38.75 | 39.   |
| LS St James                       | 67.15 | 60.58 | 60.68 | 47.63 | 53.88  | 29.07 | 19.87 | 31.57 | 38.71 | 39.00 | 39.3  |
| HLS Empire                        | 67.36 | 61.47 | 60.65 | 46.92 | 53.46  | 27.92 | 19.38 | 30.70 | 38.55 | 38.65 | 38.7  |
| VTS Midland                       | 57.98 | 55.92 | 57.21 | 44.99 | 51.37  | 27.43 | 15.19 | 30.58 | 37.17 | 37.33 | 37.6  |
| Mars                              | 65.14 | 59.18 | 57.84 | 45.68 | 51.52  | 27.97 | 18.76 | 30.37 | 38.42 | 38.50 | 39.0  |
| NCS Cushing                       | 55.30 | 51.01 | 50.27 | 39.73 | 45.05  | 24.14 | 15.77 | 27.94 | 34.46 | 34.04 | 35.3  |
| VCS Houston                       | 61.06 | 53.36 | 51.98 | 41.20 | 46.71  | 24.92 | 16.63 | 28.48 | 35.14 | 35.01 | 35.8  |
| WCS Hardisty                      | 47.44 | 43.65 | 37.76 | 28.72 | 34.22  | 18.29 | 12.67 | 23.32 | 29.72 | 29.40 | 29.7  |



## **OFFICIAL CRUDE PRICE FORMULAS**

| Formula pricing                                   | A 10   | _      | <b>C</b> : |        |        | l 20   |        | A.4    |        |        |       | \$/bl |
|---|--------|--------|------------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
|   | Aug 19 | Sep    | Oct        | Nov    | Dec    | Jan 20 | Feb    | Mar    | Apr    | May    | Jun   | Jul   |
| Saudi Arabia fob Ras Tanura to US: ASCI           |        |        |            |        |        |        |        |        |        |        |       |       |
| Berri (Extra Light)                               | +4.50  | +4.50  | +4.50      | +4.50  | +5.00  | +5.10  | +5.10  | +4.90  | -2.10  | +0.40  | +1.40 | +2.00 |
| Arab Light  | +2.85  | +2.85  | +2.95      | +2.95  | +3.35  | +3.35  | +3.55  | +3.25  | -3.75  | -0.75  | +0.75 | +1.35 |
| Arab Medium                                       | +1.25  | +1.25  | +1.35      | +1.35  | +1.55  | +1.55  | +1.75  | +1.45  | -5.55  | -1.55  | +0.05 | +0.55 |
| Arab Heavy  | +0.50  | +0.50  | +0.60      | +0.60  | +0.80  | +0.80  | +1.00  | +0.70  | -6.30  | -2.10  | -0.30 | +0.10 |
| Saudi Arabia delivered USGC: ASCI                 |        |        |            |        |        |        |        |        |        |        |       |       |
| Arab Light  | +4.15  | +4.15  | +4.25      | +4.25  | +4.65  | +4.65  | +4.85  | +4.55  | -2.45  | +0.55  | +2.05 | +2.65 |
| Arab Medium                                       | +2.55  | +2.55  | +2.65      | +2.65  | +2.85  | +2.85  | +3.05  | +2.75  | -4.25  | -0.25  | +1.35 | +1.85 |
| Arab Heavy  | +1.80  | +1.80  | +1.90      | +1.90  | +2.10  | +2.10  | +2.30  | +2.00  | -5.00  | -0.80  | +1.00 | +1.40 |
| Saudi Arabia to NW Europe: Ice Bwave              |        |        |            |        |        |        |        |        |        |        |       |       |
| Berri (Extra Light)                               | -1.55  | +1.40  | +1.10      | -0.40  | +3.30  | +2.10  | -0.40  | -0.10  | -8.10  | -8.90  | -3.10 | +0.80 |
| Arab Light  | -2.70  | -0.05  | -1.25      | -2.85  | -0.05  | -1.85  | -4.05  | -2.25  | -10.25 | -10.25 | -3.70 | +0.30 |
| Arab Medium                                       | -4.05  | -1.60  | -3.80      | -5.20  | -3.40  | -5.50  | -7.50  | -4.60  | -12.60 | -10.60 | -4.20 | 0.00  |
| Arab Heavy  | -5.50  | -3.25  | -5.95      | -7.20  | -6.20  | -8.70  | -10.30 | -6.00  | -13.00 | -11.00 | -4.40 | -0.50 |
| Saudi Arabia to Mediterranean: Ice Bwave          |        |        |            |        |        |        |        |        |        |        |       |       |
| Berri (Extra Light)                               | -1.50  | +1.35  | +2.05      | +1.05  | +3.45  | +3.90  | +0.40  | +1.20  | -5.80  | -10.30 | -3.40 | +1.90 |
| Arab Light  | -2.30  | +0.40  | -0.10      | -1.70  | 0.00   | -0.40  | -3.30  | -1.60  | -8.60  | -10.30 | -3.50 | +1.20 |
| Arab Medium                                       | -3.95  | -1.45  | -2.55      | -4.20  | -2.90  | -3.40  | -6.20  | -3.40  | -10.40 | -11.40 | -3.90 | +0.50 |
| Arab Heavy  | -4.80  | -2.45  | -4.35      | -6.05  | -5.25  | -6.10  | -8.60  | -4.70  | -10.70 | -11.40 | -4.20 | 0.00  |
| Saudi Arabia to Asia-Pacific: average Oman/Dubai  |        |        |            |        |        |        |        |        |        |        |       |       |
| Arab Super Light                                  | +4.45  | +3.05  | +4.15      | +4.35  | +6.75  | +8.45  | +7.85  | +5.85  | +1.85  | -3.65  | -5.65 | +1.65 |
| Berri (Extra Light)                               | +2.65  | +1.70  | +2.90      | +3.60  | +5.10  | +5.80  | +4.60  | +2.90  | -3.10  | -7.40  | -6.50 | +0.20 |
| Arab Light  | +2.45  | +1.70  | +2.30      | +3.00  | +3.40  | +3.70  | +3.70  | +2.90  | -3.10  | -7.30  | -5.90 | +0.20 |
| Arab Medium                                       | +1.75  | +1.25  | +1.65      | +2.35  | +2.15  | +2.05  | +2.45  | +1.95  | -4.05  | -7.40  | -5.70 | +0.20 |
| Arab Heavy  | +0.85  | +0.65  | +0.35      | +0.95  | +0.45  | -0.15  | +0.55  | +0.55  | -4.45  | -7.40  | -5.70 | -0.10 |
| Iran fob Sidi Kerir to Mediterranean: Ice Bwave   |        |        |            |        |        |        |        |        |        |        |       |       |
| Iranian Light                                     | na     | na     | na         | na     | na     | na     | na     | na     | na     | na     | na    | na    |
| Iranian Heavy                                     | na     | na     | na         | na     | na     | na     | na     | na     | na     | na     | na    | na    |
| Foroozan Blend                                    | na     | na     | na         | na     | na     | na     | na     | na     | na     | na     | na    | na    |
| Iran fob Kharg Island to Mediterranean: Ice Bwave |        |        |            |        |        |        |        |        |        |        |       |       |
| Iranian Light                                     | -5.60  | -2.90  | -3.50      | -4.95  | -3.45  | -3.60  | -6.40  | -4.60  | -9.60  | -11.00 | -4.20 | +0.70 |
| Iranian Heavy                                     | -8.80  | -6.30  | -7.50      | -8.90  | -7.70  | -7.95  | -10.50 | -7.60  | -12.40 | -12.40 | -4.90 | -0.50 |
| Foroozan Blend                                    | -8.65  | -6.15  | -7.35      | -8.75  | -7.55  | -7.80  | -10.35 | -7.45  | -12.25 | -12.25 | -4.75 | -0.3  |
| Soroush   | -12.40 | -10.25 | -12.05     | -13.45 | -12.50 | -12.75 | -15.15 | -11.40 | -14.90 | -14.90 | -8.50 | -4.30 |
| Nowruz  | -12.40 | -10.25 | -12.05     | -13.45 | -12.50 | -12.75 | -15.15 | -11.40 | -14.90 | -14.90 | -8.50 | -4.30 |
| Iran fob Kharg Island to NWE: Ice Bwave           |        |        |            |        |        |        |        |        |        |        |       |       |
| Iranian Light                                     | -5.10  | -2.50  | -3.80      | -5.25  | -2.70  | -4.35  | -6.45  | -4.65  | -10.65 | -9.90  | -3.80 | +0.20 |
| Iranian Heavy                                     | -8.10  | -5.70  | -7.90      | -9.15  | -7.10  | -8.70  | -10.55 | -7.65  | -13.45 | -11.30 | -4.90 | -1.00 |
| Foroozan Blend                                    | -7.95  | -5.55  | -7.75      | -9.00  | -6.95  | -8.55  | -10.40 | -7.50  | -13.30 | -11.15 | -4.75 | -0.85 |
| Iran fob Kharg Island: average Oman/Dubai         |        | ,      |            |        |        |        |        |        |        |        |       |       |
| Iranian Light                                     | +1.95  | +1.25  | +1.80      | +2.40  | +2.90  | +3.25  | +3.35  | +2.55  | -3.10  | -7.20  | -4.90 | +0.30 |
| Iranian Heavy                                     | +0.40  | -0.05  | +0.05      | +0.65  | +0.45  | +0.40  | +0.90  | +0.45  | -4.15  | -7.50  | -4.70 | +0.10 |
| Foroozan Blend                                    | +0.55  | +0.10  | +0.20      | +0.80  | +0.60  | +0.55  | +1.05  | +0.60  | -4.00  | -7.35  | -4.55 | +0.25 |
| Soroush   | -6.20  | -6.45  | -6.90      | -6.90  | -7.50  | -7.95  | -7.15  | -7.15  | -11.75 | -11.75 | -7.90 | -3.20 |
| Nowruz  | -6.20  | -6.45  | -6.90      | -6.90  | -7.50  | -7.95  | -7.15  | -7.15  | -11.75 | -11.75 | -7.90 | -3.2  |



## **OFFICIAL CRUDE PRICE FORMULAS**

| Formula pricing                                   |           |       |       |       |       |        |        |       |        |        |       | \$/bl |
|---|-----------|-------|-------|-------|-------|--------|--------|-------|--------|--------|-------|-------|
|   | Aug 19    | Sep   | Oct   | Nov   | Dec   | Jan 20 | Feb    | Mar   | Apr    | May    | Jun   | Jul   |
| Iraq to Europe: Dated Brent                       |           |       |       |       |       |        |        |       |        |        |       |       |
| Kirkuk (Ceyhan)                                   | -2.40     | -0.65 | -1.25 | -2.75 | -2.35 | -2.75  | -4.20  | -2.35 | -6.85  | -6.85  | -1.85 | +2.65 |
| Basrah Light (Basrah oil terminal)                | -4.05     | -2.00 | -3.60 | -5.00 | -3.35 | -4.25  | -5.80  | -3.80 | -8.80  | -8.30  | -2.30 | +2.10 |
| Basrah Heavy (Basrah oil terminal)                | -6.65     | -4.70 | -7.10 | -8.75 | -7.90 | -9.40  | -10.85 | -7.85 | -11.85 | -11.10 | -4.30 | -0.30 |
| Iraq to US: ASCI                                  |           |       |       |       |       |        |        |       |        |        |       |       |
| Kirkuk (Ceyhan)                                   | +0.75     | +0.75 | +0.55 | +0.55 | +0.70 | +0.60  | +0.70  | +0.60 | -2.40  | -0.10  | +0.90 | +1.60 |
| Basrah Light (Basrah oil terminal)                | +1.25     | +1.25 | +1.35 | +1.40 | +1.50 | +1.50  | +1.60  | +1.45 | -1.05  | -1.05  | +0.30 | +0.85 |
| Basrah Heavy (Basrah oil terminal)                | -1.25     | -1.25 | -1.15 | -1.15 | -1.05 | -1.05  | -0.95  | -1.00 | -3.50  | -2.50  | -1.05 | -0.65 |
| Iraq to Asia-Pacific: average Oman/Dubai          |           |       |       |       |       |        |        |       |        |        |       |       |
| Basrah Light (Basrah oil terminal)                | +1.75     | +1.35 | +1.65 | +2.45 | +2.25 | +2.10  | +2.55  | +1.80 | -3.20  | -6.55  | -4.55 | +1.25 |
| Basrah Heavy (Basrah oil terminal)                | -0.60     | -0.75 | -1.25 | -0.70 | -1.25 | -1.70  | -1.05  | -1.30 | -5.30  | -8.30  | -6.20 | -0.60 |
| Kuwait fob Mina al-Ahmadi destination Asia: avera | ge Oman/D | ubai  |       |       |       |        |        |       |        |        |       |       |
| Kuwait  | +1.40     | +1.00 | +1.30 | +2.00 | +1.65 | +1.55  | +1.95  | +1.35 | -4.65  | -7.80  | -6.00 | 0.00  |
| Dubai: fob Dubai: Oman MOG OSP                    |           |       |       |       |       |        |        |       |        |        |       |       |
| Dubai   | -0.25     | 0.00  | -0.25 | -0.30 | -0.30 | -0.40  | -0.45  | -0.25 | -0.20  | -0.10  | -1.00 | -4.00 |
| Libya: to Dated Brent                             |           |       |       |       |       |        |        |       |        |        |       |       |
| Es Sider  | -0.45     | -0.25 | +0.05 | +0.40 | +0.70 | +0.25  | +0.25  | -0.25 | -4.25  | -4.25  | -1.40 | na    |
| Bu Atiffel  | +0.95     | +0.95 | +1.05 | +1.05 | +1.20 | +1.10  | +1.10  | +0.95 | -3.05  | -3.05  | -0.05 | na    |
| Sirtica   | -1.30     | -1.30 | -1.10 | -0.90 | -0.70 | -0.95  | -0.95  | -0.95 | -4.95  | -4.95  | -2.10 | na    |
| Zueitina  | -0.60     | -0.60 | -0.40 | -0.15 | +0.15 | 0.00   | 0.00   | -0.25 | -4.25  | -4.25  | -1.25 | na    |
| Brega   | -0.60     | -0.50 | -0.25 | -0.25 | +0.05 | -0.05  | -0.05  | -0.35 | -4.35  | -4.35  | -1.35 | na    |
| Sarir   | -2.50     | -2.30 | -2.00 | -2.00 | -1.80 | -2.05  | -2.05  | -2.30 | -7.50  | -7.50  | -4.60 | na    |
| Amna  | -0.40     | -0.20 | -0.05 | +0.25 | +0.55 | +0.40  | +0.40  | 0.00  | -4.25  | -4.25  | -1.35 | na    |
| Esharara  | -0.85     | -0.60 | -0.30 | +0.20 | +0.60 | +0.30  | +0.30  | +0.05 | -3.85  | -3.85  | -0.75 | na    |
| Libya: spot Urals cif Augusta                     |           |       |       |       |       |        |        |       |        |        |       |       |
| Bouri   | -2.15     | -2.25 | -2.15 | -2.05 | -2.05 | -2.30  | -2.30  | -2.30 | -2.30  | -3.30  | -2.80 | na    |
| Al-Jurf   | -0.35     | -0.45 | -0.35 | -0.35 | -0.35 | -0.55  | -0.55  | -0.55 | -0.55  | -1.55  | -1.05 | na    |
| Algeria: Dated Brent                              |           |       |       |       |       |        |        |       |        |        |       |       |
| Saharan Blend*                                    | -0.60     | -0.10 | +0.75 | +0.75 | +1.20 | +1.90  | +2.46  | +2.52 | -1.75  | -2.50  | +0.40 | na    |
| *middle of contract price range                   |           |       |       |       |       |        |        |       |        |        |       |       |
| Nigeria: Dated Brent                              |           |       |       |       |       |        |        |       |        |        |       |       |
| Bonny Light                                       | +1.63     | +1.45 | +1.72 | +0.58 | +1.28 | +2.51  | +2.32  | +1.70 | -3.29  | -3.95  | -1.05 | na    |
| Brass River                                       | +1.58     | +1.44 | +1.51 | +0.35 | +1.20 | +2.28  | +1.98  | +1.70 | -3.16  | -3.82  | -0.88 | na    |
| Amenam  | +0.23     | +0.31 | +0.20 | -1.06 | +0.06 | +0.70  | +0.48  | +0.25 | -3.60  | -3.95  | -2.32 | na    |
| Qua Iboe  | +1.57     | +1.44 | +1.67 | +0.63 | +1.50 | +2.66  | +2.37  | +1.85 | -3.10  | -3.92  | -1.05 | na    |
| Pennington  | +1.80     | +1.79 | +2.14 | +1.22 | +2.34 | +3.41  | +2.74  | +1.90 | -2.79  | -3.60  | -1.85 | na    |
| Forcados  | +1.78     | +1.60 | +2.20 | +1.28 | +1.71 | +2.96  | +2.70  | +2.16 | -3.00  | -3.91  | -0.81 | na    |
| Escravos  | +1.65     | +1.64 | +2.15 | +1.14 | +1.89 | +3.19  | +2.77  | +2.27 | -2.74  | -3.70  | -0.67 | na    |
| Premium for deferred pricing                      | +0.07     | +0.07 | +0.07 | +0.07 | +0.07 | +0.07  | +0.07  | +0.07 | +0.07  | +0.07  | na    | na    |
| Mexico to US: Mexican formula                     |           |       |       |       |       |        |        |       |        |        |       |       |
| Olmeca  | +4.45     | +4.45 | +4.45 | +2.90 | -1.55 | -1.95  | -0.35  | -0.60 | -2.75  | -1.80  | -0.55 | na    |
| Isthmus   | +1.60     | +2.75 | +2.75 | +1.10 | -2.50 | -4.40  | -5.75  | -4.95 | -9.95  | -5.45  | -3.90 | na    |
| Maya  | -0.75     | +3.75 | +0.50 | +1.50 | -8.00 | -8.00  | -8.05  | -8.05 | -10.05 | -5.85  | -4.20 | na    |

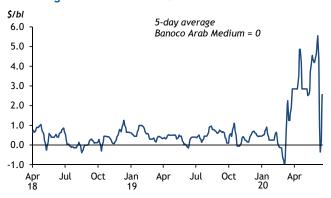


## **OFFICIAL CRUDE PRICES**

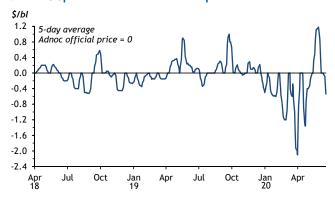
| Official crude prices at a glance                       |        |        |       |       |       |       |        |       |       |       |       | \$/bl |
|---|--------|--------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|
|   | Jul 19 | Aug    | Sep   | 0ct   | Nov   | Dec   | Jan 20 | Feb   | Mar   | Apr   | Мау   | Jun   |
| Abu Dhabi   |        |        |       |       |       |       |        |       |       |       |       |       |
| Murban (differential to Dubai from Apr 2020)            | 66.15  | 62.30  | 65.20 | 63.60 | 66.60 | 69.25 | 67.80  | 56.10 | 35.58 | -2.75 | -6.95 | -4.45 |
| Das (differential to Murban from Apr<br>2020)           | 65.55  | 61.75  | 64.60 | 62.90 | 65.90 | 68.55 | 67.05  | 55.35 | 34.83 | -0.25 | -0.35 | -0.35 |
| Upper Zakum (differential to Murban                     | 65.10  | 61.10  | 63.65 | 62.25 | 65.10 | 68.25 | 66.85  | 55.15 | 34.63 | -0.30 | +0.10 | +0.50 |
| from Apr 2020)<br>Umm Lulu (differential to Murban from | 66.25  | 62.40  | 65.40 | 63.90 | 66.90 | 69.55 | 68.10  | 56.40 | 35.88 | +0.10 | 0.00  | 0.00  |
| Apr 2020)<br>Oman                                       | 00.23  | 02.10  | 03.10 | 03.70 | 00.70 | 07.55 | 00.10  | 30.10 | 33.00 |       | 0.00  | 0.00  |
| Oman  | 69.99  | 61.72  | 63.87 | 59.68 | 61.81 | 60.26 | 62.81  | 65.49 | 64.89 | 54.61 | 34.85 | 23.65 |
| Qatar   | 0,,,,  | 0.1.72 | 00107 | 57.00 | 0.10. | 00.20 | 02.0   | 001.7 | 0.107 | 5     | 55    | 25.00 |
| Dukhan/Land   | 64.95  | 61.30  | 64.00 | 62.80 | 65.95 | 68.90 | 67.70  | 56.45 | na    | na    | na    | na    |
| Premium to Dubai  | 1.70   | 2.19   | 2.88  | 3.43  | 3.98  | 4.01  | 3.41   | 2.23  | 2.40  | -2.65 | -7.30 | -5.15 |
| Marine  | 64.75  | 60.75  | 63.05 | 61.75 | 64.85 | 68.05 | 67.20  | 55.95 | na    | na    | na    | na    |
| Premium to Dubai  | 1.50   | 1.64   | 1.93  | 2.38  | 2.88  | 3.16  | 2.91   | 1.73  | 2.10  | -2.90 | -7.10 | -4.60 |
| Indonesia   |        |        |       |       |       |       |        |       |       |       |       |       |
| Minas   | 61.98  | 57.97  | 61.06 | 59.98 | 63.64 | 67.61 | 65.77  | 57.18 | 35.78 | 22.07 | 27.44 | na    |
| Duri  | 60.95  | 60.04  | 67.88 | 67.19 | 70.70 | 75.38 | 78.61  | 68.83 | 43.10 | 30.90 | 35.50 | na    |
| Widuri  | 60.91  | 56.94  | 60.00 | 58.90 | 62.56 | 66.45 | 64.61  | 56.02 | 34.62 | 20.91 | 26.28 | na    |
| Belida  | 64.83  | 60.16  | 63.13 | 61.48 | 64.49 | 68.25 | 65.68  | 56.65 | 33.70 | 20.67 | 25.33 | na    |
| Attaka  | 64.42  | 60.40  | 63.37 | 62.06 | 64.53 | 68.34 | 65.95  | 57.12 | 34.19 | 20.72 | 25.36 | na    |
| Ardjuna   | 63.00  | 58.33  | 61.87 | 60.51 | 64.06 | 67.89 | 65.65  | 56.74 | 34.64 | 21.41 | 25.95 | na    |
| Cinta   | 60.77  | 56.79  | 59.85 | 58.75 | 62.41 | 65.90 | 64.06  | 55.47 | 34.07 | 20.36 | 25.73 | na    |
| Senipah   | 58.44  | 53.94  | 57.47 | 56.59 | 61.20 | 65.26 | 62.07  | 53.52 | 32.30 | 15.87 | 20.23 | na    |
| Malaysia  |        |        |       |       |       |       |        |       |       |       |       |       |
| Tapis   | 68.74  | 63.30  | 67.17 | 64.42 | 68.92 | 73.92 | 70.50  | 63.24 | 39.73 | 22.85 | 29.78 | na    |
| Tapis "Alpha" premium*                                  | 6.10   | 5.70   | 5.80  | 6.10  | 7.30  | 8.30  | 8.40   | 9.20  | 9.30  | 5.70  | 2.20  | na    |
| Labuan  | 70.14  | 64.70  | 68.57 | 65.82 | 70.32 | 75.32 | 71.90  | 64.64 | 41.13 | 24.25 | 31.18 | na    |
| Miri  | 70.14  | 64.70  | 68.57 | 65.82 | 70.32 | 75.32 | 71.90  | 64.64 | 41.13 | 24.25 | 31.18 | na    |
| Bintulu   | 68.74  | 63.30  | 67.17 | 64.42 | 68.92 | 73.92 | 69.70  | 62.44 | 38.93 | 22.05 | 28.98 | na    |
| * to North Sea Dated                                    |        |        |       |       |       |       |        |       |       |       |       |       |
| Brunei  |        |        |       |       |       |       |        |       |       |       |       |       |
| Seria Lt  | 68.74  | 63.30  | 67.17 | 64.45 | 68.92 | 73.92 | 70.50  | 63.24 | 39.73 | na    | na    | na    |
| Opec Basket †   | 64.71  | 59.62  | 62.36 | 59.88 | 62.94 | 66.48 | 65.10  | 55.49 | 33.92 | 17.64 | 24.97 | na    |

†Saharan Blend, Iranian Heavy, Basrah Light, Kuwait Export Blend, Es Sider, Bonny Light, Qatar Marine, Arab Light, Murban, Merey, Girassol and Oriente

### Basrah Light vs Banoco Arab Medium



## Murban: Spot differential to Adnoc price



## **PRODUCT SPOT PRICES**

| Product cargo spot prices                    |                  |        |        |        |        |        |        |        |            |             |              |
|--|------------------|--------|--------|--------|--------|--------|--------|--------|------------|-------------|--------------|
| Date is date of assessment                   | 2Q19             | 3Q19   | 4Q19   | 1Q20   | Feb 20 | Mar    | Apr    | May    | 1-5<br>Jun | 8-12<br>Jun | 15-18<br>Jun |
| Northwest Europe \$/t (cif)                  |                  |        |        |        |        |        |        |        |            |             |              |
| Propane                                      | 399.34           | 310.34 | 396.55 | 326.09 | 327.13 | 212.52 | 231.38 | 251.41 | 298.95     | 297.15      | 294.38       |
| Butane                                       | 409.26           | 329.51 | 439.15 | 373.43 | 414.83 | 217.74 | 148.03 | 208.72 | 278.55     | 283.00      | 300.88       |
| Gasoline 95 Ron unleaded                     | 674.30           | 615.24 | 591.60 | 464.76 | 531.40 | 285.80 | 185.88 | 268.86 | 335.30     | 361.40      | 371.56       |
| Naphtha (65% paraffin)                       | 527.25           | 477.34 | 519.34 | 412.16 | 465.69 | 247.74 | 140.25 | 226.80 | 314.20     | 323.15      | 343.50       |
| Jet  | 646.57           | 628.70 | 627.88 | 483.11 | 522.53 | 322.30 | 181.46 | 219.97 | 289.80     | 317.45      | 325.44       |
| French diesel                                | 615.75           | 586.15 | 593.75 | 473.29 | 500.76 | 349.60 | 251.15 | 262.70 | 312.90     | 332.85      | 346.81       |
| French heating oil                           | 602.12           | 576.43 | 581.98 | 465.44 | 493.11 | 340.20 | 234.30 | 249.75 | 305.80     | 327.10      | 338.19       |
| Vacuum gasoil                                |                  |        |        |        |        |        |        |        |            |             |              |
| - 0.5% sulphur                               | 512.80           | 475.89 | 475.63 | 404.45 | 445.39 | 255.35 | 174.59 | 214.01 | 275.18     | 279.70      | 283.81       |
| - 2% sulphur                                 | 502.98           | 468.41 | 457.50 | 387.52 | 427.63 | 248.19 | 170.07 | 208.03 | 266.05     | 272.98      | 276.47       |
| Cracked fuel oil                             |                  |        |        |        |        |        |        |        |            |             |              |
| - 1% sulphur                                 | 415.60           | 398.94 | 412.71 | 348.00 | 373.91 | 212.13 | 162.58 | 185.30 | 238.65     | 241.25      | 239.38       |
| - 3.5% sulphur                               | 387.92           | 333.51 | 231.65 | 229.90 | 268.10 | 153.30 | 116.76 | 150.28 | 214.35     | 218.20      | 215.00       |
| Straight-run fuel oil                        |                  |        |        |        |        |        |        |        |            |             |              |
| - North Sea 0.5% sulphur‡ (\$/bl)            | 3.58             | 5.06   | 7.20   | 8.31   | 9.46   | 2.84   | -1.10  | -0.95  | 0.70       | 0.80        | 1.12         |
| M-100  | 405.40           | 350.97 | 282.36 | 277.06 | 317.35 | 183.71 | 118.76 | 169.59 | 241.35     | 243.20      | 237.00       |
| ‡fob, premium to Ice Brent futures           |                  |        |        |        |        |        |        |        |            |             |              |
| Mediterranean \$/t (cif)                     |                  |        |        |        |        |        |        |        |            |             |              |
| Propane                                      | 412.71           | 307.22 | 389.78 | 316.21 | 316.33 | 203.57 | 224.13 | 243.42 | 290.90     | 289.60      | 286.88       |
| Butane                                       | 412.76           | 334.63 | 455.97 | 406.29 | 448.35 | 248.01 | 178.50 | 239.61 | 307.60     | 311.70      | 329.12       |
| Gasoline 95 Ron unleaded                     | 656.09           | 608.45 | 600.71 | 471.06 | 538.83 | 290.51 | 195.05 | 271.49 | 340.10     | 361.75      | 370.25       |
| Naphtha (65% paraffin)                       | 517.80           | 469.83 | 506.50 | 398.70 | 452.96 | 234.60 | 117.49 | 214.70 | 303.95     | 314.75      | 335.88       |
| Jet*   | 628.25           | 614.28 | 602.48 | 457.57 | 498.45 | 297.51 | 137.29 | 197.03 | 270.90     | 302.15      | 311.75       |
| French diesel                                | 614.48           | 586.22 | 596.13 | 474.05 | 503.60 | 348.33 | 239.96 | 262.50 | 317.50     | 334.00      | 348.00       |
| French heating oil                           | 602.84           | 580.66 | 584.92 | 467.20 | 494.86 | 342.84 | 223.34 | 239.28 | 304.80     | 327.75      | 342.12       |
| Vacuum gasoil                                |                  |        |        |        |        |        |        |        |            |             |              |
| Vacuum gasoil (0.5% sulphur)*                | 512.51           | 480.30 | 482.73 | 410.08 | 452.01 | 261.62 | 171.83 | 216.46 | 280.28     | 282.82      | 285.97       |
| Vacuum gasoil (2% sulphur)*                  | 502.45           | 468.69 | 468.78 | 392.86 | 430.97 | 253.07 | 168.96 | 206.68 | 272.53     | 275.35      | 278.22       |
| Cracked fuel oil                             |                  |        |        |        |        |        |        |        |            |             |              |
| - 1% sulphur                                 | 421.17           | 405.75 | 430.39 | 364.27 | 391.66 | 225.34 | 176.20 | 197.28 | 247.90     | 249.55      | 245.50       |
| - 3.5% sulphur                               | 390.56           | 339.72 | 251.20 | 240.33 | 276.35 | 159.58 | 116.13 | 153.13 | 210.45     | 216.45      | 214.69       |
| *fob VGO prices have been replaced by cif pr | ices from 5 Janu | ıary   |        |        |        |        |        |        |            |             |              |
| New York Harbor ¢/USG (cif)                  |                  |        |        |        |        |        |        |        |            |             |              |
| Gasoline conventional 93                     | 209.58           | 194.99 | 190.28 | 151.68 | 173.70 | 99.91  | 78.09  | 103.60 | 120.74     | 123.99      | 127.53       |
| Gasoline conventional 87                     | 190.23           | 177.29 | 172.27 | 135.04 | 158.36 | 85.55  | 59.21  | 87.47  | 104.99     | 110.36      | 115.15       |
| Gasoline Rbob 83.7                           | 194.31           | 176.61 | 166.65 | 130.72 | 153.62 | 80.78  | 57.89  | 93.99  | 111.67     | 115.87      | 121.65       |
| Ethanol                                      | 154.19           | 153.43 | 161.13 | 132.52 | 141.80 | 116.64 | 94.59  | 118.01 | 128.50     | 134.72      | 141.19       |
| Diesel (ULSD)                                | 198.13           | 188.78 | 195.05 | 154.39 | 162.21 | 118.51 | 86.34  | 87.16  | 104.81     | 111.19      | 118.09       |
| Jet  | 206.36           | 197.36 | 202.78 | 154.43 | 168.97 | 105.72 | 61.12  | 80.47  | 97.36      | 105.99      | 113.18       |
| Heating oil                                  | 187.24           | 180.21 | 185.04 | 142.79 | 152.47 | 105.77 | 67.03  | 67.93  | 92.17      | 99.27       | 103.99       |
| No 6 fuel \$/bl                              |                  |        |        |        |        |        |        |        |            |             |              |
| 1% sulphur                                   | 65.76            | 60.34  | 65.82  | 54.17  | 58.39  | 33.00  | 25.77  | 27.09  | 35.70      | 35.42       | 35.85        |
| 3% sulphur                                   | 61.37            | 51.97  | 40.49  | 36.80  | 44.12  | 24.44  | 17.61  | 24.48  | 32.72      | 33.12       | 32.79        |



## **PRODUCT SPOT PRICES**

|  | 2040             | 3040         | 4040        | 4000   | E-1 22 | 44     |        |        | 1-5    | 8-12   | 15-1 |
|--|------------------|--------------|-------------|--------|--------|--------|--------|--------|--------|--------|------|
|  | 2Q19             | 3Q19         | 4Q19        | 1Q20   | Feb 20 | Mar    | Apr    | May    | Jun    | Jun    | Ju   |
| JS Gulf ¢/USG (fob)                        |                  |              |             |        |        |        |        |        |        |        |      |
| Propane*                                   | 55.69            | 44.57        | 49.48       | 37.00  | 39.41  | 29.34  | 32.65  | 41.13  | 49.98  | 49.75  | 50.2 |
| Butane*                                    | 53.65            | 47.12        | 66.54       | 52.92  | 56.42  | 31.41  | 31.26  | 38.88  | 51.99  | 53.61  | 51.9 |
| Sasoline conventional 93                   | 208.49           | 195.26       | 181.06      | 144.22 | 165.17 | 97.00  | 68.97  | 98.06  | 113.04 | 119.17 | 119. |
| Gasoline conventional 87                   | 193.74           | 177.44       | 164.04      | 131.17 | 152.69 | 84.71  | 56.48  | 84.79  | 103.91 | 108.79 | 113. |
| Ethanol                                    | 151.94           | 150.22       | 160.08      | 131.64 | 142.05 | 116.91 | 100.08 | 121.33 | 131.55 | 136.28 | 141. |
| let  | 193.87           | 187.67       | 186.97      | 140.21 | 152.27 | 93.93  | 59.91  | 75.48  | 92.66  | 99.07  | 104. |
| Diesel (ULSD)†                             | 194.88           | 186.45       | 188.06      | 148.41 | na     | 148.41 | na     | na     | 101.32 | 107.93 | 113. |
| Heating oil                                | 181.64           | 175.49       | 176.93      | 136.76 | 145.72 | 98.78  | 59.61  | 66.80  | 86.46  | 91.67  | 98.  |
| lo 6 fuel \$ <i>/bl</i>                    |                  |              |             |        |        |        |        |        |        |        |      |
| 3% sulphur                                 | 60.32            | 50.83        | 39.32       | 35.91  | 43.49  | 23.84  | 17.02  | 23.88  | 32.12  | 32.52  | 32.  |
| Mont Belvieu †Diesel ULSD 61 has been repl | aced by Diesel L | ILSD 62 froi | m 23 Septer | mber   |        |        |        |        |        |        |      |
| Vest coast ¢/USG                           |                  |              |             |        |        |        |        |        |        |        |      |
| os Angeles (pipeline)                      |                  |              |             |        |        |        |        |        |        |        |      |
| Carbob 88.5                                | 234.92           | 212.17       | 221.05      | 167.56 | 200.19 | 105.25 | 66.25  | 126.77 | 144.24 | 147.92 | 151. |
| Carb diesel                                | 213.69           | 193.80       | 204.73      | 162.10 | 174.31 | 125.46 | 80.53  | 91.25  | 112.66 | 117.42 | 122. |
| let  | 206.62           | 190.78       | 202.61      | 150.37 | 163.71 | 102.61 | 57.67  | 81.09  | 106.28 | 107.87 | 115  |
| Bunkers \$/t                               |                  |              |             |        |        |        |        |        |        |        |      |
| HSFO 380cst                                | 413.38           | 395.99       | 443.34      | 317.61 | 304.68 | 210.92 | 170.36 | 173.88 | 225.70 | 241.00 | 233. |
| ingapore \$/bl (fob)                       |                  |              |             |        |        |        |        |        |        |        |      |
| Gasoline 95 Ron unleaded                   | 75.06            | 72.76        | 75.03       | 56.85  | 64.34  | 36.42  | 20.49  | 33.44  | 42.09  | 44.88  | 46.  |
| let-kerosine                               | 79.77            | 77.00        | 75.99       | 58.88  | 63.05  | 39.39  | 21.35  | 28.94  | 38.78  | 41.10  | 41.  |
| Gasoil 50ppm sulphur (high pour)           | 80.27            | 77.18        | 76.85       | 62.07  | 65.67  | 45.22  | 31.16  | 35.83  | 43.04  | 45.96  | 47.  |
| Gasoil 0.5% sulphur (high pour)            | 78.11            | 75.04        | 73.77       | 59.98  | 63.43  | 43.17  | 27.77  | 33.19  | 41.21  | 44.32  | 45.  |
| SWR Indonesia (V-500)                      | 71.34            | 66.74        | 54.62       | 60.33  | 65.52  | 46.83  | 31.51  | 34.29  | 39.80  | 43.59  | 42.  |
| Naphtha                                    | 58.68            | 53.64        | 60.13       | 47.72  | 52.56  | 30.60  | 17.86  | 26.49  | 36.43  | 37.83  | 38   |
| HSFO 180cst \$/t                           | 413.99           | 395.57       | 276.15      | 273.82 | 296.13 | 199.63 | 148.25 | 169.61 | 225.05 | 241.55 | 229. |
| HSFO 380cst \$/t                           | 402.39           | 389.87       | 270.56      | 264.74 | 286.03 | 193.88 | 143.38 | 160.75 | 214.50 | 227.35 | 218. |
| Japan \$/bl (C+F)                          |                  |              |             |        |        |        |        |        |        |        |      |
| let-kerosine                               | 81.68            | 78.83        | 78.31       | 61.28  | 65.29  | 41.88  | 25.14  | 32.85  | 40.96  | 43.12  | 43.  |
| Gasoil 50ppm (low pour)                    | 81.19            | 77.85        | 78.32       | 63.14  | 66.37  | 46.13  | 30.71  | 36.73  | 44.33  | 47.57  | 49.  |
| 5/t  |                  |              |             |        |        |        |        |        |        |        |      |
| Naphtha                                    | 542.43           | 494.78       | 538.74      | 437.11 | 478.42 | 290.29 | 193.50 | 267.24 | 338.98 | 351.43 | 358. |
| HSFO 180cst                                | 424.33           | 405.12       | 293.58      | 289.02 | 308.39 | 214.38 | 167.11 | 185.51 | 236.09 | 251.13 | 237. |
| Aideast Gulf \$/bl (fob)                   |                  |              |             |        |        |        |        |        |        |        |      |
| Gasoline 95 Ron unleaded                   | 72.85            | 70.57        | 72.22       | 53.89  | 61.70  | 33.27  | 15.47  | 29.34  | 39.53  | 42.73  | 43.  |
| let-kerosine                               | 77.74            | 75.01        | 73.16       | 56.14  | 60.82  | 36.18  | 15.40  | 23.50  | 36.46  | 39.50  | 39.  |
| Gasoil 0.5% sulphur                        | 75.22            | 72.27        | 71.06       | 55.92  | 60.01  | 38.83  | 21.82  | 26.72  | 37.82  | 41.47  | 42.  |
| 5/t  |                  |              |             |        |        |        |        |        |        |        |      |
| Naphtha                                    | 516.72           | 469.75       | 501.20      | 401.60 | 450.51 | 248.43 | 112.47 | 197.18 | 309.36 | 331.27 | 338. |
| HSFO 180cst                                | 399.12           | 381.02       | 251.27      | 251.56 | 279.06 | 180.07 | 122.05 | 148.16 | 209.72 | 228.73 | 218  |
| 15. 5 100050                               |                  |              |             |        |        |        |        |        |        |        |      |



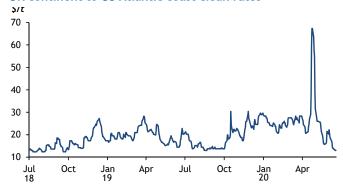
#### FREIGHT RATES AND ARBITRAGE

| Route rates               |          |             |            |             | 18 Jun      |
|---------------------------|----------|-------------|------------|-------------|-------------|
|                           | Clea     | ın          | Dirt       | y           | \$/t        |
|                           | 30,000-3 | 8,000t      | 70,000-8   | 0,000t      | clean/dirty |
|                           | WS       | ± 11<br>Jun | WS         | ± 11<br>Jun |             |
| Med-UK continent          | 110.0    | -5.0        | 52.5       | -7.5        | 13.13/12.76 |
| Med-US Atlantic           | 85.0     | -15.0       | 50.0       | -5.0        | 17.66/23.12 |
| Med-US Gulf               | 85.0     | -15.0       | 50.0       | -5.0        | 17.66/23.12 |
| Cross Med                 | 100.0    | -5.0        | 57.5       | -7.5        | 7.20/7.36   |
| UK-UK continent           | 85.0     | nc          | 67.5       | -2.5        | na          |
| UK-US Atlantic            | 85.0     | -7.5        | 40.0       | nc          | 15.30/15.25 |
| UK-US Gulf                | 85.0     | -7.5        | 40.0       | nc          | 15.30/15.25 |
| S'pore-Asia-Pacific       | 115.0    | -10.0       | 67.5       | -7.5        | 12.46/14.52 |
| Black Sea-Med             | 110.0    | -10.0       | 62.5       | -7.5        | 11.16/9.97  |
| Baltic-UKC                | 95.0     | nc          | 40.0       | -2.5        | 9.05/9.19   |
| Carib-UK continent        | 60.0     | -22.5       | 62.5       | +2.5        | 18.15/18.16 |
| Carib-USAC                | 110.0    | -20.0       | 70.0       | -2.5        | 10.44/10.00 |
|                           |          |             | 130,000-13 | 35,000t     |             |
| W Africa-UK continent     | -        | =           | 47.5       | -2.5        | 17.33       |
| W Africa-US Gulf          | -        | -           | 42.5       | -2.5        | 22.32       |
| UK cont-US Atlantic       | =        | =           | 40.0       | -5.0        | 20.27       |
|                           | 50,000-  | 55,000t     | 26         | 60,000t     |             |
| UK-US Gulf                | -        | -           | 65.0       | -5.0        | 20.27       |
| Mideast Gulf-US Gulf      | -        | -           | 30.0       | -3.0        | 38.27       |
| Mideast Gulf-UKC/Med      | =        | -           | 30.0       | -3.0        | 29.47       |
| Mideast Gulf-Asia-Pacific | 77.5     | +10.0       | 57.0       | -3.0        | 25.05/23.45 |

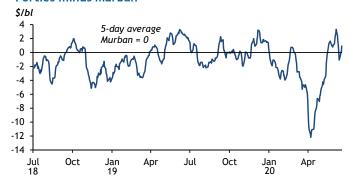
Routes to the US exclude oil pollution liability insurance premium  $\,$ 

#### Mideast Gulf westbound VLCC rates \$/bl 12 10 8 6 4 2 0 Oct Jul 18 Apr Jul Oct Jan 20 Apr Jan 19

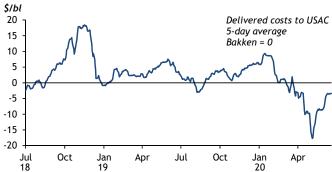




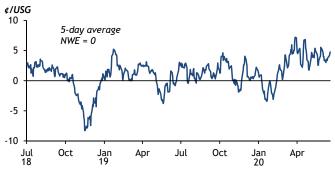




#### **USAC: Bonny Light minus Bakken**



## Diesel: USGC minus NWE



HSFO swaps: NWE mth 1 minus Singapore mth 2



<sup>\*</sup>Indonesia-Japan †Primorsk-UK continent 100,000t

#### LOOKING AHEAD

#### 22 Jun

Nymex Jul WTI futures expire Euroilstock Refinery Report

#### 24 Jun

IMF World Economic Outlook Update published

#### 30 Jun

Ice Aug Brent futures expire Nymex Jul products futures expire

#### 7 Jul

EIA Short-Term Energy Outlook published

#### 9 Jul

Euroilstock Inventory Report

#### 10 Jul

Ice Jul gasoil futures expire IEA Oil Market Report

#### 14 Jul

Opec Monthly Oil Market Report

#### 16 Jul

Jodi Oil World Database update

#### 21 Jul

Nymex Aug WTI futures expire Euroilstock Refinery Report

#### 31 Jul

Ice Sep Brent futures expire
Nymex Aug products futures expire

#### 11 Aug

EIA Short-Term Energy Outlook Euroilstock Inventory Report

#### 12 Aug

Ice Aug gasoil futures expire Opec Monthly Oil Market Report published

#### 13 Aug

IEA Oil Market Report

#### 20 Aug

Nymex Sep WTI futures expire Jodi Oil World Database update

#### 21 Aug

Euroilstock Refinery Report

#### 28 Aug

Ice Oct Brent futures expire

#### 31 Aug

Nymex Sep products futures expire

#### 9 Sei

EIA Short-Term Energy Outlook Euroilstock Inventory Report

#### 10 Sep

Ice Sep gasoil futures expire

#### 14 Sec

Opec Monthly Oil Market Report published

#### 15 Sep

IEA Oil Market Report

#### 17 Sep

Jodi Oil World Database update

#### 21 Sep

Euroilstock Refinery Report

#### 22 Sep

Nymex Oct WTI futures expire

#### 30 Sep

Ice Nov Brent futures expire
Nymex Oct products futures expire

#### 6 Oct

**EIA Short-Term Energy Outlook** 

#### 9 Oct

Euroilstock Inventory Report

#### 12 Oct

Ice Oct gasoil futures expire



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