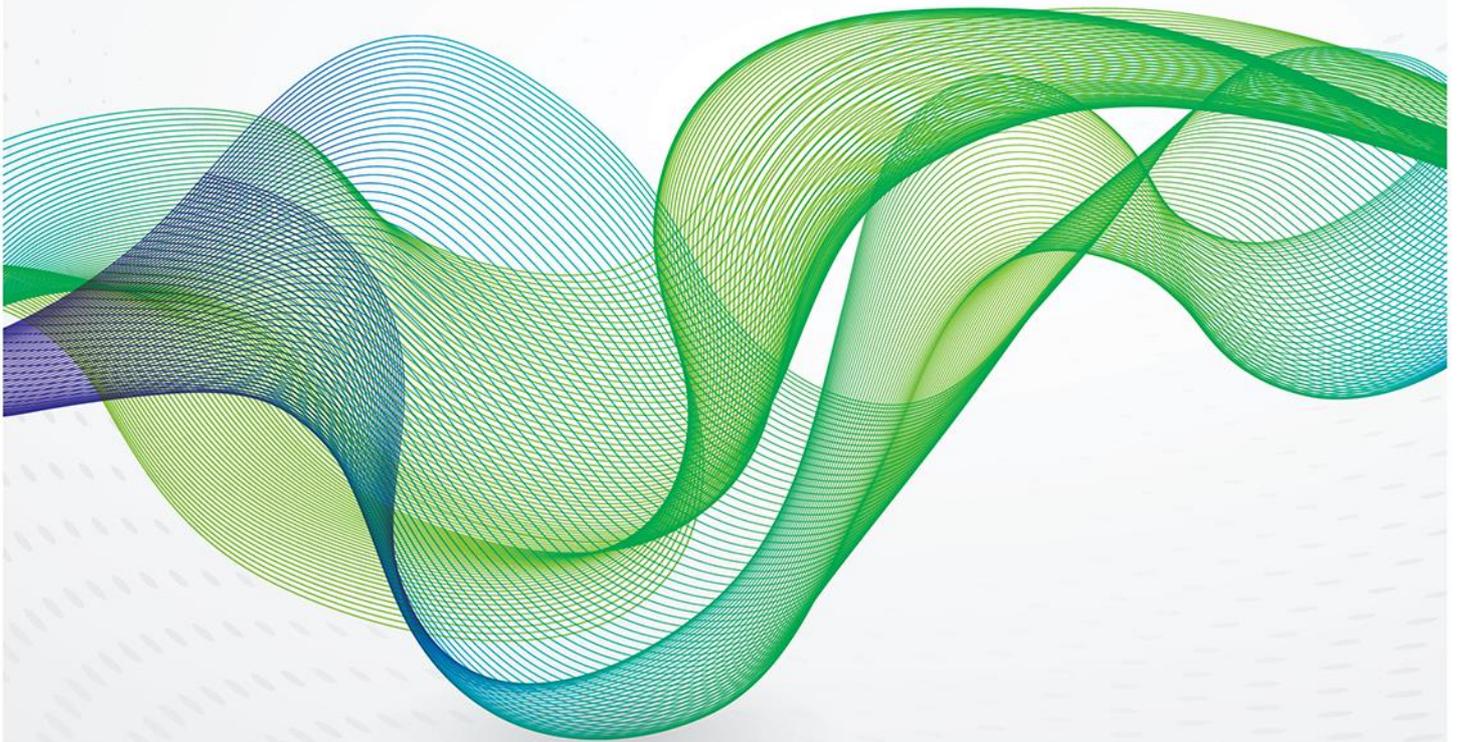




THE OXFORD
INSTITUTE
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Middle East Benchmark Pricing and the Oil Crisis



OXFORD ENERGY COMMENT

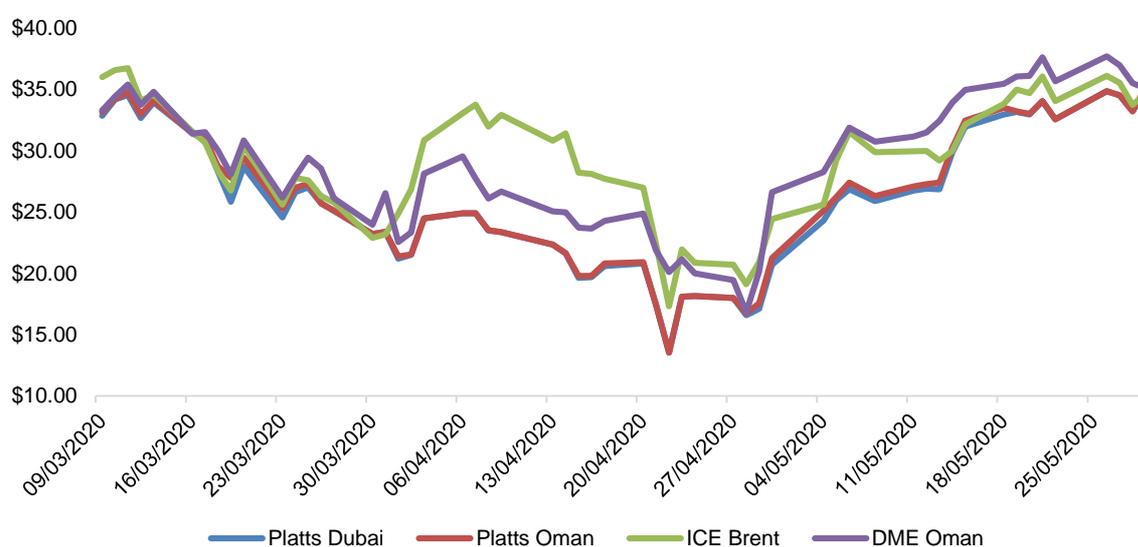
Ahmed Mehdi, OIES, Research Associate



Introduction

The oil market context has fundamentally changed in the past few weeks. The price of key benchmarks such as Brent, Oman, and Dubai have doubled from their low levels in April (see Figure 1) and concerns about the oil market reaching storage limits have faded. The recovery has not only been confined to futures prices: physical markets have also witnessed massive improvement, for instance, as reflected in Dated Brent which has narrowed relative to futures Brent, but also in physical differentials which have recovered from their historic lows and some have been trading at record premiums. Many organisations including the EIA, IEA and OPEC are predicting the market to shift from surplus to deficit as soon as H2 2020 as oil demand recovers from its low levels in April. Supply-side adjustments have also played a key role, including OPEC+ historical cuts, and the sharp supply reductions/shut ins, particularly in North America.

Figure 1: Benchmark Crude prices (\$/barrel)



Source: Exchange data, S&P Global Platts

However, the process of market rebalancing has just begun, and the wide range of uncertainties implies that the price recovery will be far from smooth. Over the last few months, crude and products stocks have risen sharply and alongside the rise in spare capacity as a result of the OPEC+ cuts, these will continue to put a cap on the oil price. Also, the recent rally in oil prices has put pressure on refining margins. As the market embarks on its long path to recovery, Middle East benchmark pricing offers a useful snapshot of the current health of the oil market, particularly given the following:

- **Twin-track nature of demand recovery:** China being the first country to suffer from Covid-19 has also been the first to recover. Middle East benchmarks such as Dubai Mercantile Exchange (DME) futures Oman reflect medium-sour fundamentals, given the underlying role of physical Oman cargoes which are highly sought by Chinese refiners given their destination free status, blend-able quality and large secondary market. This explains why over 80% of the grade flows to China in any given month. The strength/weakness of the benchmark provides strong signals on Chinese economic and speculative activity particularly given the role of physical Oman as a deliverable crude in China's sour crude contract, Shanghai International Energy Exchange (INE¹);

¹The medium-sour Shanghai INE contract was launched in 2018. Several factors underpin its status as a regional marker: yuan-denomination, crude delivered to bonded storage, buyer credit quality, and anxieties surrounding China's geopolitical status. Alongside physical Oman, Iraqi Basra Light is also deliverable into the contract.



- **Light-medium quality spreads:** Lighter crude grades typically command a steady premium over crudes with heavier API gravities. With global light crude production ramping higher every year, while heavier streams are restricted through sanctions or lack of investment, crude oils are now diverging along quality lines, with premiums for lighter grades flattening out against historically lower quality crudes. As an example, Urals has been trading at a premium to North Sea grades (Forties and Oseberg) and is also at a premium (~\$2.5/bbl) to West African grades (WAF) such as Bonny Light and Qua Iboe.
- **Future direction of OPEC policy:** OPEC supply restraint has supported Middle East benchmark pricing and helped clear the glut of distressed cargoes in the physical market. Throughout May, DME Oman traded at a consistent premium to ICE Brent futures (and on 1 June, the benchmark traded above \$40 per barrel), a trend which is likely to continue throughout 2020.² Alongside OPEC cuts, helping support Middle East spot price valuations are heavy crude production shut-ins (e.g. Canada, Colombia) which are further tightening medium-heavy balances. On the other end of the crude quality spectrum, US light tight crude (LTO) crude and WAF volumes are largely being held in floating storage and slowly being cleared, a dynamic likely to amplify the crude quality imbalance in coming weeks.
- **Refinery economics and benchmark methodologies:** Covid-19 related lockdown restrictions exposed the weakness of gasoline and naphtha. For the Middle East's two major benchmarks DME Oman and Platts Dubai/Oman, light-end weakness resulted in a historic spread between the two benchmarks as DME Oman reflects medium-sour fundamentals whereas Platts Dubai is a brand, reflecting a basket of crudes, including lighter Murban³. While this may be seen as a temporary phenomenon given that the historical gap between DME futures and physical Oman has been less than \$0.20/b, uncertainty continues to govern future Asian oil product balances and refinery margin economics.

This Comment examines how Middle East benchmarks have reacted to the recent shocks hitting the oil market and their future evolution. Given the role of the Gulf producers as the world's largest crude exporters and Asia's growing crude import requirement, the pricing mechanisms available for East of Suez crude trading has grown in importance. Indeed, even before Covid-19, changes to how the Middle East price their crude exports to Asia were already high on the agenda.⁴ In this light, the extent to which Covid-19 has upended or exposed vulnerabilities to benchmark methodologies⁵ will continue to dominate debate over the next several years.

The Comment is split into the following sections: **Section 2** assesses the evolution of Middle East crude pricing since the March OPEC+ meeting; **Section 3** examines Dubai-Oman dynamics; and finally, **Section 4** aims to identify future factors set to influence Middle East crude pricing over the short-medium term and the potential consequences of the crisis on the future evolution of Middle East pricing.

Early signs of trouble

Two main factors caused a flip in Asian crude market structures from long-standing backwardation to contango earlier this year. First, markets saw sharp contractions in economic activity across Asia, the first continent to feel the impact from Covid-19 related curbs. Following closely on its heels, the OPEC+ coalition's initial lack of agreement to extend production cuts in March sent crude prices and spreads for Dubai M1/M3 (this spread is the value of physical Dubai, as the Dubai 'basket' crudes are normally

² Over May 2020, ICE Brent futures averaged a discount of \$1.73/b under DME Oman, while this relationship was reversed over April 2020, when Aramco was striving to pump at maximum capacity. In April 2020, the DME Oman averaged a discount of \$2.80/b against Brent.

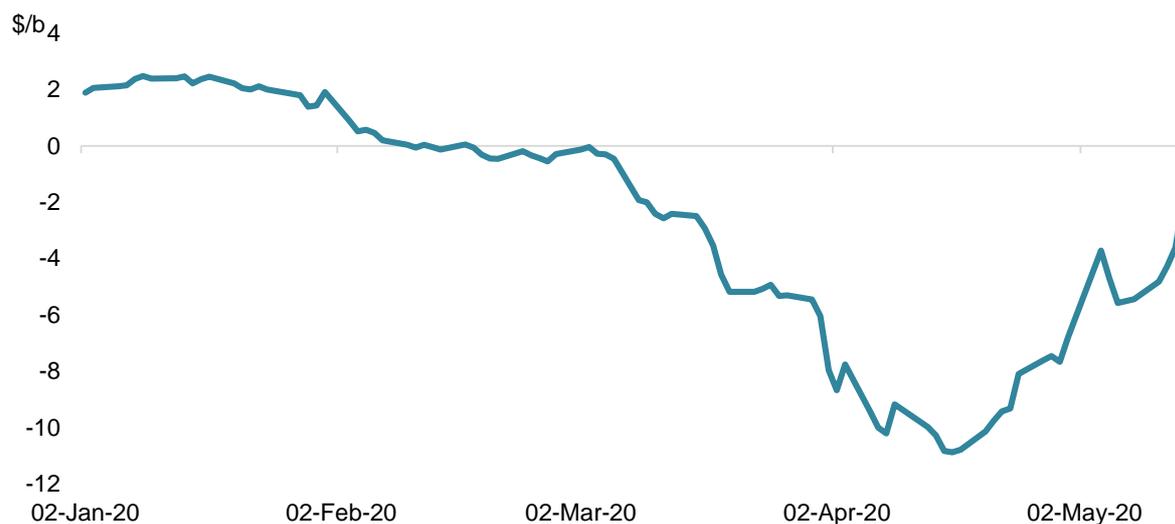
³ Murban – a light high-sulphur crude oil (40° API gravity and 0.7% sulphur) is produced onshore in Abu Dhabi.

⁴ A. Mehdi, E. Muneeb, A. Imsirovic, and B Fattouh (2019), 'Murban: A benchmark for the Middle East?' OIES Energy Comment, Oxford: Oxford Institute for Energy Studies.

⁵ For a discussion on the subject, see: B. Fattouh and A. Imsirovic: 'Oil Benchmarks Under Stress' OIES Energy Comment, Oxford: Oxford Institute for Energy Studies.

traded on Platts Dubai quotes during the month of loading) and DME Oman sharply lower. By the end of January 2020, backwardation in the Gulf spreads began narrowing sharply toward parity and eventual contango (see Figure 2). The spread for Platts Dubai cash/paper (M1/M3) averaged \$2.11/b over January 2020, but by the end of February it had already flipped to minus 2 cents/b as turbulent oil markets decimated by Covid-19 sent a clear signal to producers ahead of the March 5 OPEC+ meeting.

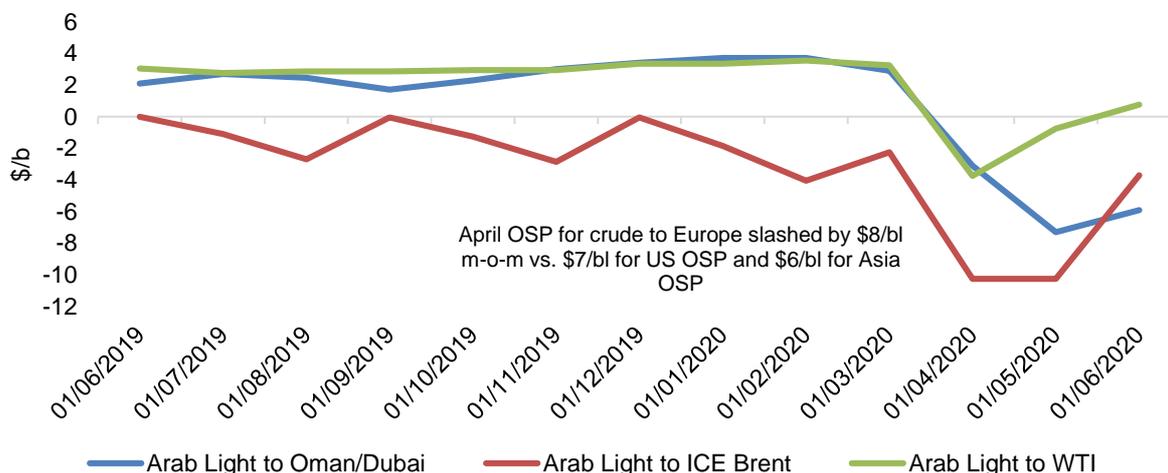
Figure 2: Dubai M1/M3 spreads flip into contango in Feb 2020 (\$/barrel)



Source: S&P Global Platts, OIES

The breakup of the OPEC+ agreement in March resulted in individual countries ramping up production and slashing their own prices heavily in order to remain competitive in the face of a global demand drop. Together, Saudi Arabia, the UAE and Kuwait contributed to OPEC pumping a three-month high of 28.97 million b/d in March, and compliance among the 10 OPEC countries with quotas collapsed to 6% from 113% in February. Aramco offered to its term customers \$5-\$8/b price cuts for April loading (see Figure 3) and although the price cuts were welcomed by end-users, they undercut global crude oil prices, eroding producer revenues and deepening oil market contango. The resulting dramatic drop in oil prices forced producers back to the negotiating table to hash out a much-needed production cut agreement in April.

Figure 3: Arab Light OSP differentials (\$/barrel)



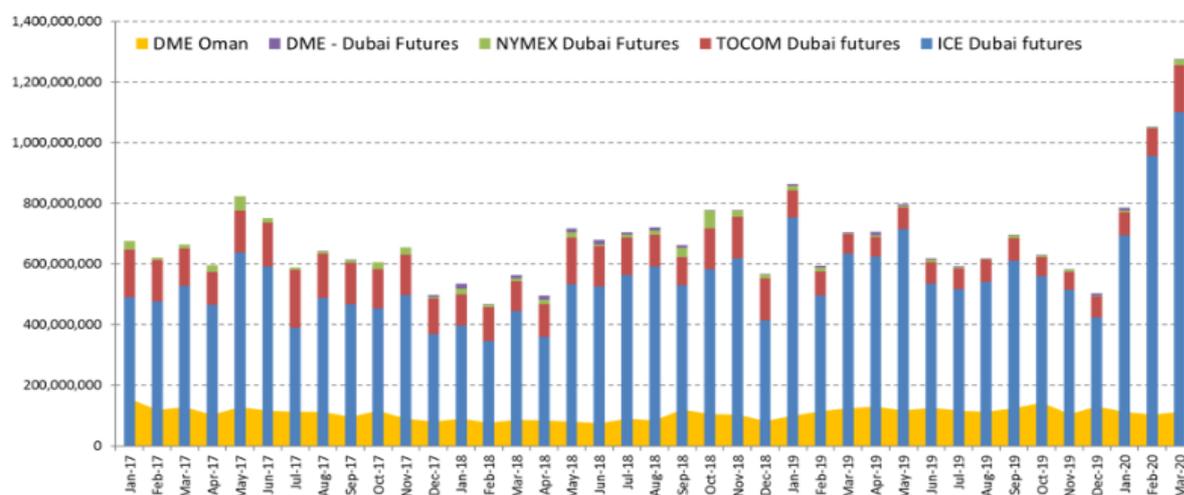
Source: S&P Global Platts, OIES

Meanwhile, refiners took advantage of cheap prices from the Middle East producers, such as Aramco, Kuwait Petroleum and Iraq's State Oil Marketing Organisation (SOMO), to maximize their term volumes to what little demand they did have over the two months. Producers had told refiners they could nominate incremental volumes over and above their contractual stipulations, which several refiners in Europe and Asia reportedly took advantage of, but yet others declined, as they idled their Crude Distillation Units (CDUs) or saw storage capacity topping out.

The contango in Middle East crude markets also saw a big spike in related derivatives activity for Dubai-linked crude contracts on Intercontinental Exchange (ICE) and other exchanges, as crude traders and refiners across Asia took advantage of 18-year low prices in the Middle East to put in large floating storage positions for the mid-to-long term (see Figure 4). A subset of this storage demand was a direct consequence of demand destruction caused by the spread of the Covid-19 that forced refiners to cut run rates and push oil into storage.

While low flat prices reduced overall financial costs, a contango market structure initiated widespread oil storage by traders playing the arbitrage in time (buying cheap, prompt oil and selling their hedges at a higher price in the future). Volumes of Dubai derivatives traded on ICE, touched new highs as early as February when spreads initially began to turn toward contango. Trading in the first line Dubai futures⁶ on ICE hit a record 695,351 lots in February, surpassing the previous record of 616,310 lots in May 2017. February's volume was also up around 40% from 497,975 lots in January. Total volumes traded for all related Dubai derivatives in February, including Dubai first line, Brent/Dubai Exchange of Futures for Swaps, Dated Brent versus Dubai futures and Dubai-related crack spreads, also hit a record of 886,420 lots in February, surpassing the previous record of 744,081 lots in May 2017. Dubai derivatives traded on the Tokyo Commodity Exchange surged 313.63% year-on-year from 205,688 trades in the corresponding period of 2019. A strategic move by ICE to shift the derivatives into a more open market pool helped drive up hedging activity as well⁷. A growing volume of oil going into storage is likely to continue to drive interest in Dubai futures as companies look to manage their storage dynamics by hedging risk on the forward curve.

Figure 4: Middle East crude derivatives (barrels)



Source: S&P Global Platts

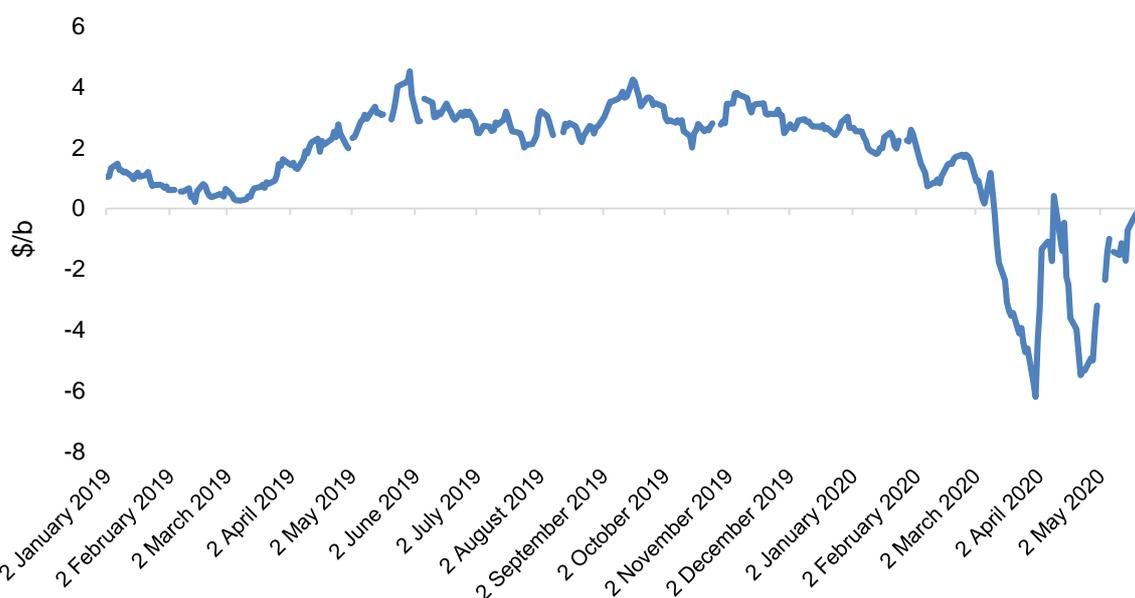
The Covid-19 pandemic also triggered an unravelling of light crude premiums, the first indicator of this being the inversion of the Brent/Dubai Exchange of Futures for Swaps (EFS). Historically, the EFS spread had always been substantially positive, due to the Brent basket of crudes being substantially

⁶ Strictly speaking, these are not futures, but swaps traded on the exchange.

⁷ In April 2019, ICE transitioned Dubai Crude first line futures to the "legacy" market basket alongside Brent futures, opening the contract to a wider audience, including the financial players attracted by volatility and liquidity of the contract.

better quality than the Dubai one. A weakening of Brent relative to Dubai is normally a market signal for North Sea barrels to move to Asia. In April 2020, for the first time ever, the Brent-Dubai EFS traded negative (see Figure 5), indicating the extreme stress the demand shock caused to both benchmarks. There are several reasons for this, but the main one is the sheer extent of the market contango. By definition, June EFS is a spread between the June Brent futures contract and June Dubai swaps. While June Brent futures contract represents the oil loading in June, Dubai June swaps reflect the value of August loading Dubai. The severity of the contango due to the demand shock was sufficient enough to wipe out any quality differential between the two grades, severely punishing June versus August loading crude oil.

Figure 5: Brent-Dubai EFS (\$/barrel)



Source: S&P Global Platts

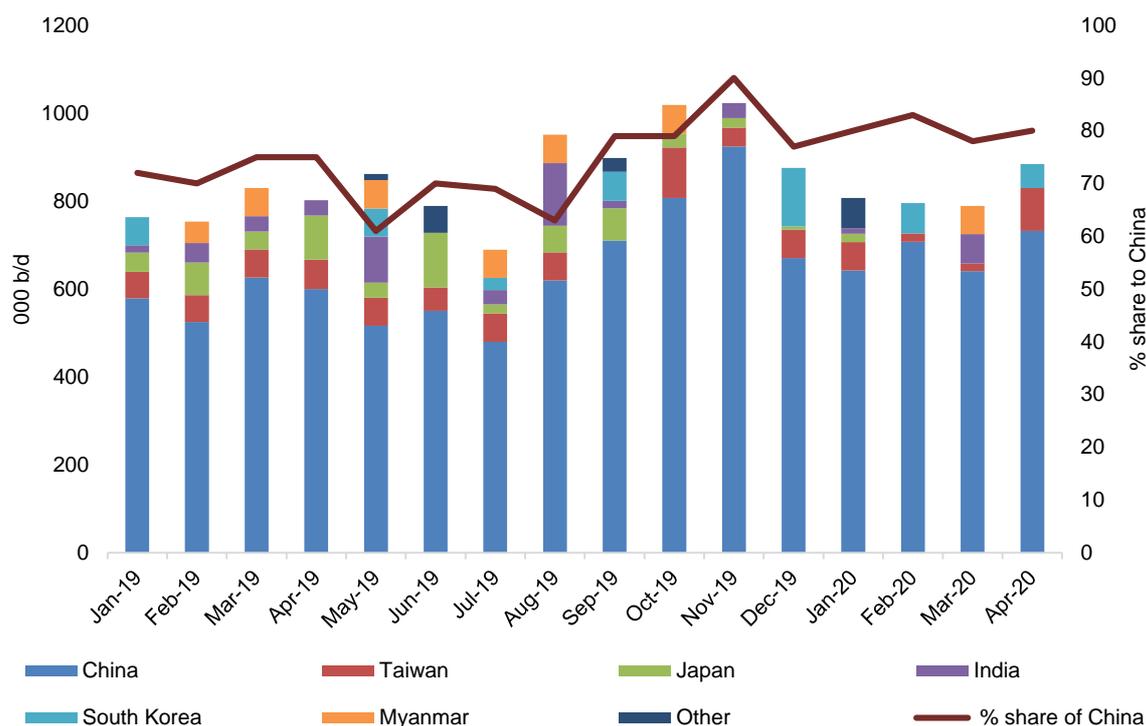
By March 2020, the Asian crude spot markets began to trade Murban at discounts to Dubai and Oman. Dubai (as valued by the M1/M3 spread) sank down to record lows, (past -\$10/b during 15-20, April 2020) in the face of collapsing crude demand (see Figure 2).

A subset of this drastic fall was the inversion of crude quality premiums, when light Middle East crude saw itself being priced under heavier grades. Lighter crude grades, (such as Murban or Saudi Arab Extra Light in the Middle East, Brent in Europe or WTI in the US) historically command a steady premium over crudes with heavier API gravities. This is because lighter crudes in general yield a higher percentage of more valuable products such as gasoline, naphtha or diesel and jet, while heavier crudes (Venezuelan or Iraqi grades) produce a higher proportion of relatively cheaper fuel oil and residual products such as bitumen when refined. The demand shock hit the transportation sector hard with jet, gasoline and naphtha leading the falls. Jet differentials (versus gas oil swaps) hit record negative numbers (close to -\$70/ MT in Europe) and gasoline cracks turned deeply negative, just before the start of the gasoline season, when they are normally strongest. Refinery margins were hit hard and processing light grades was making them no money.

Even with lower sulphur IMO standards in place, fuel oil rich, heavier crude oil is still a baseline requirement for many refineries in Asia, having been built to operate on a medium, high sulphur slate readily available from the Middle East. Japan is a key example of this. Nearly all of the country's refineries are set up to run crude that fits Middle East specifications, requiring a steady mix of medium and heavier, high sulphur grades. In the same vein, Chinese refiners have an insatiable appetite for Oman, a medium, high sulphur crude they find highly suitable for blending with a variety of other grades

from the world over.⁸ Similarly, Oman's status as a fully tradeable grade in the region (without destination restrictions and a large secondary market) makes it highly accessible to independent refiners who typically buy the grade via major commodity trading houses. Both of these factors help explain why between 70-90% of Oman's monthly exports flow almost exclusively into China (see Figure 6).

Figure 6: Oman crude exports (kbd) and % share to China



Source: KPLER

With global light crude production ramping higher every year, while heavier streams are restricted through sanctions or lack of investment, the emergence of the Covid pandemic pushed market equilibria for crude oil to diverge along quality lines, and in the Middle East, it was led by the Murban spot market discounts. Deeply discounted Murban traded on the Dubai quotes on several occasions. This had major implications for the Platts Dubai/Oman basket, where Murban is one of the deliverable grades (see Figure 7⁹).

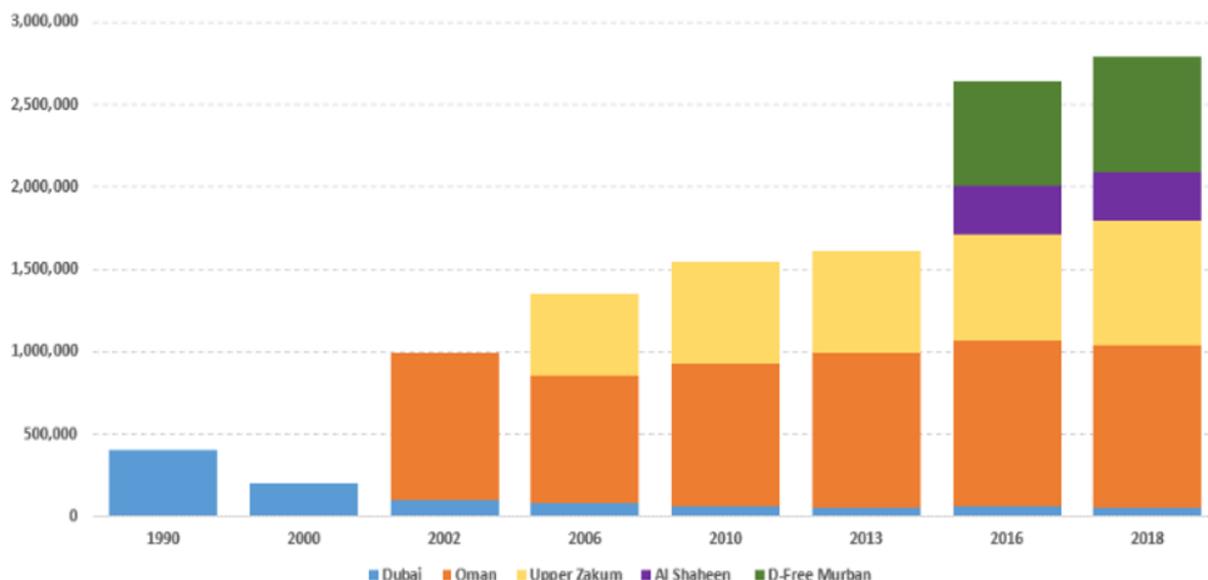
In 2016, Platts added Murban to the list of deliverable crudes in the Dubai basket with the view that the premium crude would significantly add the volume of deliverable oil and thus prevent anyone player having the ability to influence the market. Murban deliverability into Platts Dubai and Oman saw the two benchmarks price in heavy discounts for the grade through March, April and May, when Murban was the cheapest crude, frequently setting the price for the benchmark¹⁰. Prior to the demand shock, Murban normally traded at a healthy premium over the rest of the Dubai basket of crudes.

⁸ Middle Eastern Petro-states' reliance on China surges with Covid, Bloomberg, June 2020

⁹ Interestingly, the DME also considered adding Murban as an alternative delivery in 2019 (following a spike in DME Oman prices in Sept 2018). However, after lengthy consultations with the market and other stakeholders, the exchange decided against it.

¹⁰ The other grades being Dubai, Upper Zakum, Al-Shaheen and Oman.

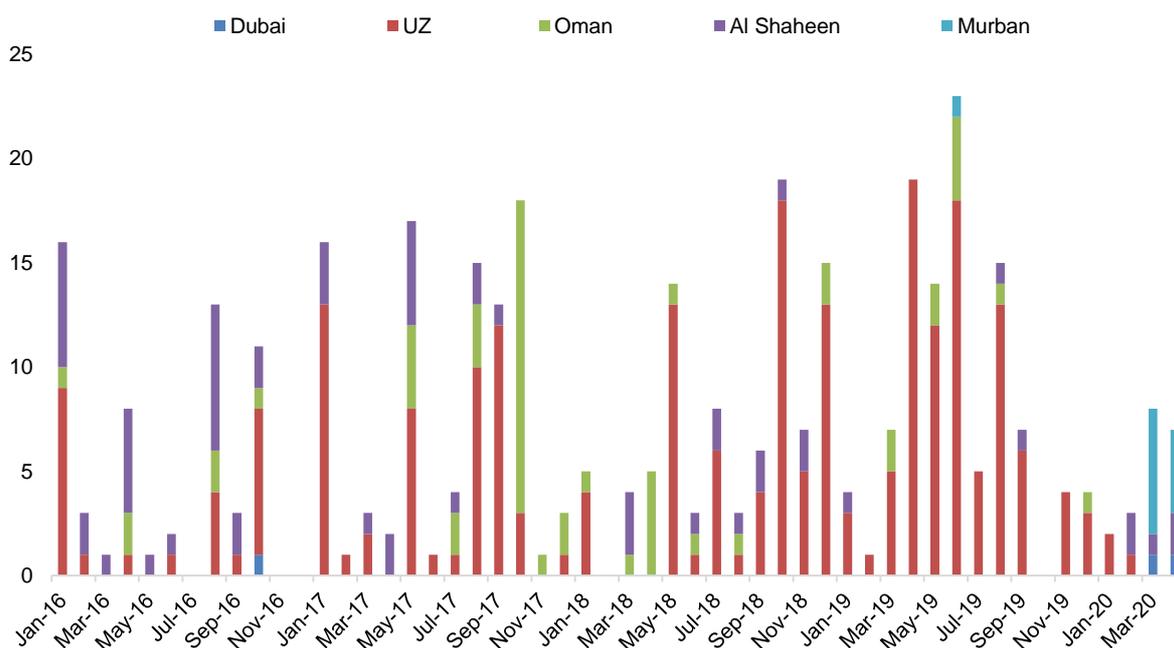
Figure 7: Deliverable crudes in the Dubai basket (barrels)



Source: S&P Global Platts

With physical Murban trading at differentials at least a dollar or more below Upper Zakum or Oman, it became the grade of choice for delivery in the Platts MOC (see Figure 8). In Asia, sellers on the Platts MOC took advantage of sparse pockets of buying interest to offload several million barrels of Murban, otherwise difficult to sell. In March 2020, six out of eight convergences were for Murban (as well as 1 for Dubai and 2 for Al-Shaheen). In April four out of seven saw the buyer receive Murban as the deliverable grade.

Figure 8: Cargoes declared in MOC, Jan 2016-Apr 20



Source: S&P Global Platts

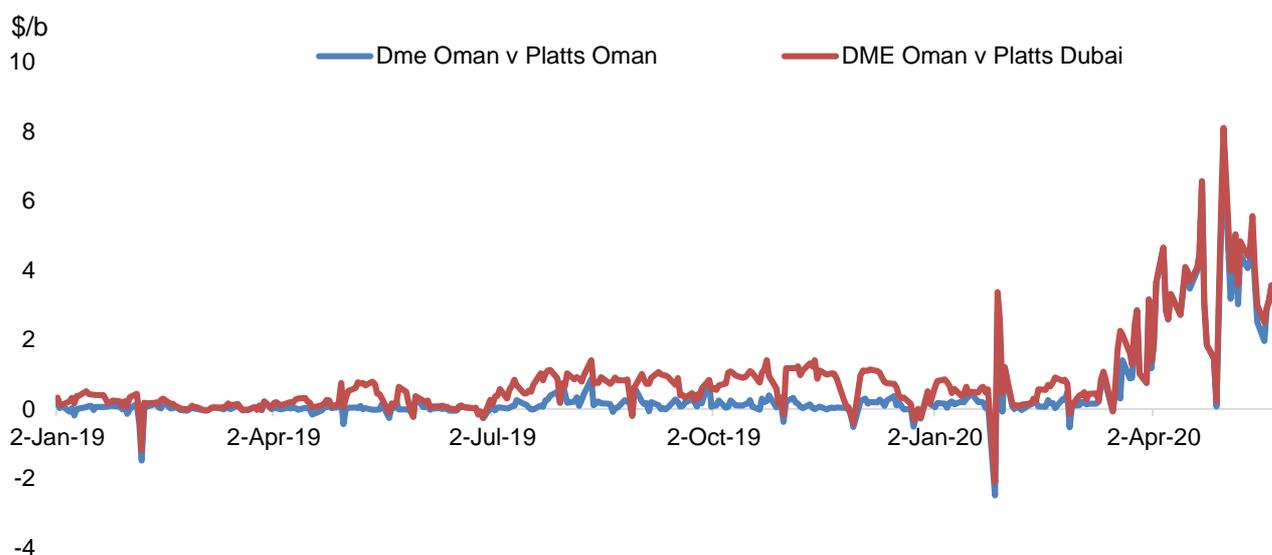
The light/heavy crude inversion reverberated across Middle East markets, and was significant enough for all stakeholders, including producers and Price Reporting Agencies (PRAs) to stand up and take notice. In March, Platts changed its methodology for computing a quality premium (QP)¹¹ for Murban deliveries, allowing for market conditions where that premium would be annulled. Prior to April 2020, this threshold had been at 25 cents/b, meaning that if 60% of the difference between Murban and Oman in a given month was 25 cents/b or lower, the QP would be set to 0. After April 2020, that threshold was raised to 50 cents/b – a reflection of light crude weakness in the market.¹²

ADNOC also took notice. For its May OSP (issued in April), ADNOC flipped Murban 10 cents/b under Upper Zakum for the first time ever. A few years ago, pushing the light premium crude under the price of a medium grade would have been unfathomable. By its June OSP, ADNOC set Murban 50 cents/b under Upper Zakum. Market reports depicted a much deeper gap, even as low as \$1.50/b under Oman at one point.

Dubai-Oman Dynamics

The light/heavy inversion was also apparent in a divergence between DME Oman and Platts Oman benchmarks. As the DME Oman contract has no alternative delivery, it saw its spread to Platts Oman benchmark rise. The wedge between the two reference markers blew out in the face of the demand shock, with the spread averaging \$3.27/b over April (with a maximum of \$6.56/ bbl on April 22nd), its widest ever by a big margin (see Figure 9).

Figure 9: DME Oman diverges from Platts Oman (\$/barrel)



Source: S&P Global Platts

The divergence exposed the vulnerabilities of the Platts Oman contract. In May, Platts registered zero convergences (with the lowest number of partials traded since December 2013). Liquidity also proved challenging: with just two participants in the window – TOTSA and Unipet (see: Table 1), bid/offer levels were very wide, including a closing bid/offer spread of \$1.55/b registered on May 28.

¹¹ The QP for Murban represents the additional amount a buyer agrees to pay a seller for the nomination and delivery of a cargo of Murban into a physical convergence of Dubai, Al Shaheen, UZ, or Oman in the Platts MOC process. See: [Specification guide: Asia Pacific and Middle East Oil](#), S&P Global Platts

¹² The QP adjustment raised an important question: if a QP is effectively a mechanism to align the value of a crude within the pricing basket and Murban's QP adjustment was not in sync with its market weakness, why was a negative QP not considered?

Table 1: Platts window for Dubai and Oman, May 28, 2020

12:30:13 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 57: Platts Oman Partial Jul20, TOTSA withdraws bid \$32.20 for 25 8:30:13.251 GMT
12:29:56 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 56: Platts Oman Partial Jul20, TOTSA raises bid \$32.20 for 25 8:29:56.805 GMT
12:29:54 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 55: Platts Dubai Partial Jul20, TOTSA raises bid \$32.20 for 25 8:29:53.825 GMT
12:29:48 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 54: Platts Oman Partial Jul20, TOTSA raises bid \$32.15 for 25 8:29:47.997 GMT
12:29:44 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 53: Platts Dubai Partial Jul20, TOTSA raises bid \$32.15 for 25 8:29:44.457 GMT
12:29:42 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 52: Platts Oman Partial Jul20, TOTSA raises bid \$32.10 for 25 8:29:42.012 GMT
12:29:35 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 51: Platts Oman Partial Jul20, TOTSA raises bid \$32.05 for 25 8:29:35.766 GMT
12:29:32 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 50: Platts Oman Partial Jul20, UNIPECASIA lowers offer \$33.75 for 25 8:29:31.944 GMT
12:29:22 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 49: Platts Dubai Partial Jul20, TOTSA raises bid \$32.10 for 25 8:29:22.144 GMT
12:29:13 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 48: Platts Dubai Partial Jul20, TOTSA raises bid \$32.05 for 25 8:29:13.074 GMT
12:29:12 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 47: Platts Oman Partial Jul20, UNIPECASIA lowers offer \$33.80 for 25 8:29:12.134 GMT
12:29:06 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 46: Platts Oman Partial Jul20, UNIPECASIA lowers offer \$33.85 for 25 8:29:06.030 GMT
12:28:32 PM	PLTS	PGA003 PGA0003	PLATTS: 3--New York 45: Platts Dubai Partial Jul20, UNIPECASIA lowers offer \$33.75 for 25 8:28:32.294 GMT

Source: S&P Global Platts

The divergence shed light on some oft-overlooked differences between the assessment of the two benchmarks. Given physical Oman as a highly tradeable grade in the region, DME Oman has many buyers and sellers (including trading houses and majors) and is heavily influenced by Chinese fundamentals. As a result, DME Oman's physical delivery and flow into China saw the price of the contract rise significantly in a low-demand market with China as the only buyer. Whilst the rest of Asia was shuttering its CDUs, Chinese refiners actually increased their run rates through the first half of 2020, with demand for crude oil sustained by a floor on domestic crude and product sales.¹³ But more importantly, DME Oman pricing dynamics reflected medium-sour fundamentals in the market which Platts Oman did not.

The Shanghai crude oil futures contract traded on its own path during these times, and the INE saw a doubling of storage capacity set aside for crude coming on warrant for the futures contract.¹⁴ Specifically, over April, INE designated storage more than doubled to approximately 48 million barrels, from 22 million barrels at the end of March. Less discussed but just as important, the buying push witnessed on INE also saw arbitrage paper opportunities develop for Middle East barrels, particularly Oman, Upper Zakum, Basra Light, and Qatar Marine – the arbitrage window widened throughout May as freight rates dropped and INE buying interest surged (see Figure 10).

Why does this matter? Until recently, physical deliveries into INE have been historically very low with contracts closing out before expiry. However, as noted above, the expansion of storage facilities (and cheap storage cost) for INE delivery has increased the possibilities for physical settlement and amplified China's pricing power in the region. Likewise, the rush of Chinese hedge-fund money into the contract also supported contract purchases.¹⁵ The recent premiums for Basra Light for June loading trading at a record premium of \$4.70/bbl above OSP reflected this dynamic – with Basra Light (along with Oman) arbitraging into China.

Higher underlying DME prices also had an impact on refiners' bottom line costs for procuring crude barrels priced against that benchmark. Despite Saudi Aramco making the deepest cuts to its OSPs over

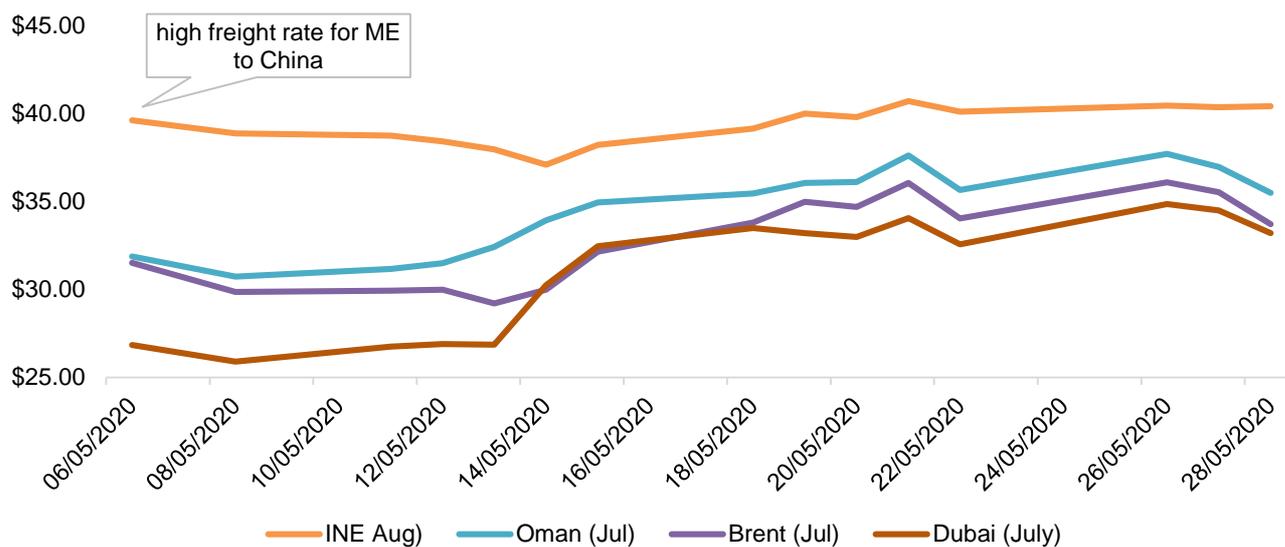
¹³ Michal Maidan, China's mixed message to the oil market, Financial Times, May 2020

¹⁴ From late Apr-end of June, approximately 50 million barrels of crude is expected to be pumped into various delivery points managed by INE. See: China's 'hermit' investors fill doubled oil storage with crude bet, Reuters, May 2020

¹⁵ China's 'hermit' investors fill doubled oil storage with crude bet, Reuters, May 2020

March and April, a higher DME spread to other benchmarks meant the country's final crude price was relatively more costly for refiners in Asia.¹⁶

Figure 10: Middle East crude arbitrage opportunities into Shanghai INE contract (\$/barrel)



Source: DME, INE, S&P Global Platts, ICE

The dynamics highlighted above have now raised some serious questions around the usefulness of Platts Oman and more importantly the role of Murban in the Dubai/Oman basket especially at a time when ADNOC has plans to launch a Murban futures contract. Indeed, until Murban recovers above Middle East sour crude, these dynamics (divergence between DME/Platts) are expected to continue and will raise debate about the integrity of benchmark pricing in the region and the growing role of Asia's pricing power.

Strategic trends to watch

Shifts in pricing methodologies

Over the past several years, the region has seen a few big and unprecedented shuffles in its well-entrenched pricing mechanisms (Saudi shift to DME,¹⁷ ADNOC announcement of Murban futures). Aramco's move from Platts Oman to DME was followed by Kuwait and it is widely expected that other producers may at least evaluate the same option, if not follow through completely. Even before Aramco's shift, Iraq was surveying its customers in Asia on a switch to DME Oman but was discouraged to take the step at the time due to Asian refiner resistance unwilling to take the pricing risk of Iraq's planned loading and delivery schedule.¹⁸

The current crisis has re-opened debate¹⁹ within Iraq's SOMO on switching its pricing methodology, particularly given the importance of using a marker which accurately reflects the underlying (and growing) value of medium-sour Basra Light cargoes. The recent record premiums fetched for Basra

¹⁶ Asian customers paid \$18.92/b for a cargo of Saudi Arab Light loading over April, while paying \$17.34/b for Upper Zakum, and \$17.53/b for Qatar Marine crude loading in the same month.

¹⁷ Fattouh, B. (2018), 'What Next for Asian Benchmarks?', Oxford Energy Comment, Oxford: Oxford Institute for Energy Studies.

¹⁸ Iraq faces resistance from Asian buyers on 'ambitious' oil price change, Reuters, August 2017. The move was also never taken due to a management reshuffle at SOMO in September 2017, following the appointment of a new Director General (DG).

¹⁹ Authors' discussion with SOMO

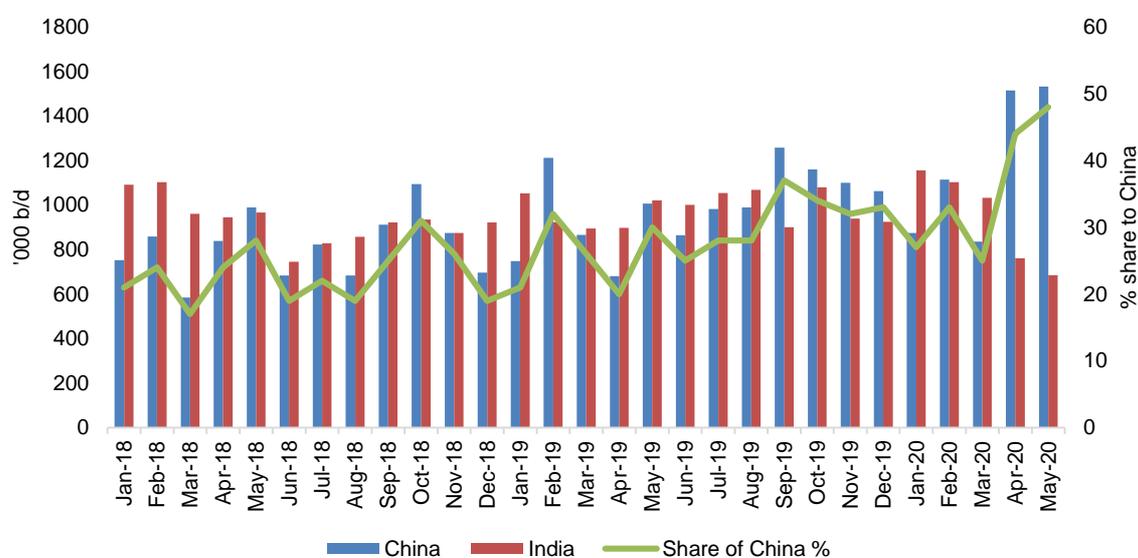
Light cargoes above its OSP (+\$4.70/bbl) has raised questions around Iraq's underlying benchmark pricing.

First, while Iraq can try and 'convert' its exposure to Platts Dubai/Oman by raising the OSP differential (as it did recently in May for June-loading barrels), its ability to predict the forward spread between Murban and Oman/Dubai is a serious challenge going forward.

Secondly, Asian resistance back in 2017 is less of an issue now given the alignment of Middle East OSP methodologies (discussed below) – making it easier to allow Asian refiners to compare crude values within the trading cycle.

Finally, Iraqi flows into China have increased significantly over the past several years (see Figure 11), with the majority of bonded INE crude being Basra Light volumes. As previously discussed, the changing nature of the INE contract (with greater trading volumes and more sophisticated participants) and expanded storage could lead to more regular flows of Basra Light into China's INE contract –which raises an interesting question: with the crisis having exposed the weakness of Platts Oman and highlighted the growing role of the INE, should Iraq not now consider following Saudi Arabia, Kuwait and others to include DME Oman in its pricing formulae, particularly given the benchmark's reflection of medium-sour fundamentals and the growing role of physical Oman and Basra Light underpinning INE.

Figure 11: Growing share of Iraqi crude exports to China (k b/d)



Source: KPLER

As discussed, one of the biggest externalities from the events of 2020 is the alignment of OSP chronology across the group of Middle East producers (see Table 2). ADNOC and Qatar, conventionally pricing retroactively, moved swiftly to update their pricing strategies to match Saudi, Iraq and others in the face of disappearing demand. This is a change crude traders and buyers in Asia have been looking forward to for years, as it eliminates several gaps and unknowns when comparing values of comparable crude grades within a trading cycle.

The main frustration for buyers lays in holding a two-month equivalent pricing risk on their books if they purchase crude priced retroactively. Making a purchase for a March-loading cargo of Murban, for instance, in January meant making an educated guess of what the March OSP for Murban would be. In a retrospective mechanism, the March OSP would only be known in April, meaning a crude refiner in Asia purchasing Murban (or Upper Zakum, Qatar Marine etc) at a differential to the March OSP will

carry the risk of market fundamentals – crude supply/demand, storage and freight costs and product margins – changing drastically between January and April, a gap of two to three months minimum.

Table 2: Middle East OSP methodologies

Entity	Formula to Asia	Type	Issue Date vs Loading
SOMO	Platts Dubai + Platts Oman	Forward	One month before
NIOC	Platts Dubai + Platts Oman	Forward	One month before
KPC	Platts Dubai + DME Oman	Forward	One month before
QP	Platts Dubai + Platts Oman	Forward	One month before
ADNOC	Platts Dubai	Forward	One month before
DPA	DME Oman	Forward	Two months before
ARAMCO	Platts Dubai + DME Oman	Forward	One month before
MOG	DME Oman	Forward	Two months before

Source: S&P Global Platts, OIES

With the alignment of pricing of Middle East crude in Asia, market dynamics automatically become more transparent and competitive. Indeed, underlying nuances that were previously masked by chronological idiosyncrasies have now become more transparent and aligned.

In this light, the main difference facing producers rests less in their OSP methodologies but in the underlying benchmarks used to price their crudes. With DME and Platts Oman on a divergent trend (being two different contracts), and light crude setting the quote for the Dubai basket, these large underlying differences, previously being only a few cents apart, will become more important to the market going forward.

The future of Murban contract

As part of its ambition to launch a new futures contract, ADNOC, in partnership with ICE, made public in late 2019 its intention to roll out a new Murban futures contract. To date, ICE has worked toward establishing a new exchange (ICE Futures Abu Dhabi Exchange or IFAD) as well as courting high-profile companies as shareholders (BP, GS Caltex, Inpex, JXTG, PetroChina, PTT, Shell, Total and Vitol).²⁰ To that end, the Abu Dhabi Supreme Petroleum Council authorised ADNOC to remove destinations-restrictions and introduce forward pricing for its crude oil contracts, including Murban. So far, IFAD has received licensing to allow members in several jurisdictions to access and clear IFAD markets (with further regulatory approvals pending). However, in May this year, the pandemic as well as the market volatility led ADNOC to officially announce a delay to the contract to H2 2020.²¹ This new time table may still be optimistic.

Even with the delay, ADNOC has made some strides toward furthering its benchmarking ambitions. It's swift move to a forward pricing mechanism in April revealed its readiness for change, undoubtedly after months of engagement, discussion and feedback from its stakeholders. Additionally, with Umm Lulu,

²⁰ Intercontinental Exchange to launch new platform in Abu Dhabi, Financial Times, November 2019

²¹ ICE delays launch of Murban crude futures contract, Argus, May 2020

Upper Zakum and Das Blend pricing as differentials to Murban, ADNOC has prepared the market well in advance for its eventual pricing strategy under the futures contract, with Murban being the pivot. But most importantly perhaps, ADNOC's issuance of a Murban OSP discounted under Upper Zakum depicts that the entity is in step with the market and is willing to accept atypical and challenging notions that crude trading could lead its prized futures contract into. Whether ADNOC's launch of the futures contract will prove fruitful for the development of a light crude benchmark in the East still remains to be seen.

Key messages

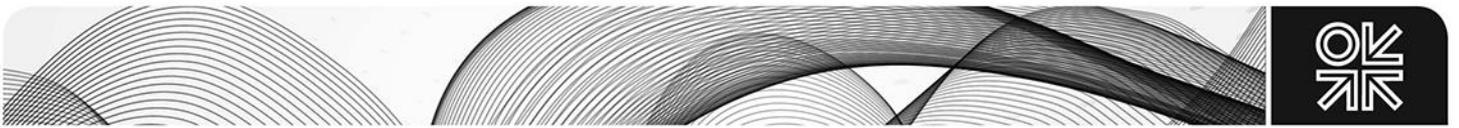
Undoubtedly, the demand shock due to Covid-19 has exposed some key weaknesses with the pricing methodologies used for the multi-billion dollar East of Suez crude trading market. For trading participants, PRAs, governments and exchanges, the crisis has laid bare (and reinforced) some pre-existing anxieties surrounding Middle East benchmark pricing, as well as introducing new ones.

These include:

- **The paradox of alternative delivery:** the addition of Murban as an alternative delivery crude in Platts Oman was designed to protect the integrity of the benchmark and improve the price discovery process (by acting as a 'safety valve' in the event of a market squeeze). The unravelling of the DNA²² of the Platts Oman benchmark during the crisis has revealed a paradox likely to persist for the foreseeable future: the very same alternative delivery mechanism intended to protect the benchmark's price discovery process, undermined it. While covid-19 is an exceptional event, another major light/heavy inversion is very much possible and likely to recur in the future – putting the spotlight on the role of Murban in the Platts Oman/Dubai basket.
- **The divergent pathways for Platts Oman/DME Oman will feed into Gulf producer decision-making:** Even before the arrival of Covid-19, major changes to Gulf pricing systems were underway: Saudi Aramco shifted its pricing formulae to a DME + Platts mechanism in 2018; Bahrain followed later in the same year and Kuwait Petroleum Corporation (KPC) in late 2019. Other major producers such as Iraq – having initially touted a move in 2017 – continue to use Platts Oman/Dubai. These differences will amplify over the next decade. With the crisis seeing all major Gulf producers align their OSPs to a forward-pricing mechanism, the major differences between them will be their underlying benchmarks. As these differences become clearer, the structural divergence in DME Oman/Platts Oman pricing is likely to feed into producer decision-making.
- **The growing role of Asian (particularly Chinese) pricing power:** Covid-19 oil market dynamics have provided a useful window into the pricing power of China. Ever since Asian (particularly Chinese) participants became more active participants in the Platts trading window, the strategic theme of Asian pricing power has unnerved Gulf producers and – in many ways – heavily influenced pricing formulae adjustments. Covid-19 has simply reinforced the role of Asian pricing power, with the Shanghai INE seeing a surge in trading volumes and Middle East crude grades arbitraging into China. While INE will find it difficult to escape its status as a regional marker, growing participation on the contract and its use of popular grades such as Oman and Basra Light will increase China's influence over Middle East benchmark pricing over the coming years.
- **The future prospects of a Murban contract:** We have previously argued that ADNOC's plan to launch a new ICE Murban futures contract has many of the hallmarks priming it for success:²³ sizeable production volumes (~50 million barrels per month); consistent chemical qualities; strong support from major trading houses (Vitol) and oil majors (BP, Total); a diverse user base;

²² Dave Ernsberger, One crude, two prices: Oman puts benchmark DNA in the spotlight, The National, October 2018

²³ A. Mehdi, E. Muneeb, A. Imsirovic, and B Fattouh (2019), 'Murban: A benchmark for the Middle East?' OIES Energy Comment, Oxford: Oxford Institute for Energy Studies.



and excellent logistical capabilities (Fujairah). The oil crisis has also demonstrated ADNOC's ability to shift to a forward pricing basis, a move widely welcomed by its term customers. ADNOC's preparedness to narrow the spread between Murban and Upper Zakum also demonstrated its willingness to accept market realities. Despite this, the stress-test to ADNOC marketing through the crisis and changes such as forward pricing, OSP adjustment, but more generally the role of the Murban futures contracts in the universe of Middle East pricing is likely to focus minds and further delay the timetable for the roll-out of the futures contract.