

EHSAN KHOMAN

Head of Emerging Markets Research
– EMEA

DIFC Branch – Dubai
T: +971 (0)4 387 5033
E: ehsan.khoman@ae.mufg.jp

MUFG Bank, Ltd.

A member of MUFG, a global financial group

02 September 2021

OPEC+ sticks to the script in a low stakes meeting

Oil market focus: In what was a low stakes meeting, OPEC+ unified around a singular message and maintained its incremental 0.4m b/d monthly production hikes on 1 September. This will uphold the market in deficit over the autumn months, keeping timespreads in backwardation – bullish structure where near-dated contracts trade at a premium to later-dated ones – signalling supply tightness. This strikes at the heart of the OPEC+ optimisation strategy in achieving fiscal stability through higher revenues and market share. In essence, backwardation favours OPEC+ as it eliminates the financial incentive to store oil over time and discourages higher cost producers, such as shale, from locking-in prices for future production (as low “deferred” prices through the backwardation structure can restrain higher cost producer’s ability to secure future cash flows and attract funding).

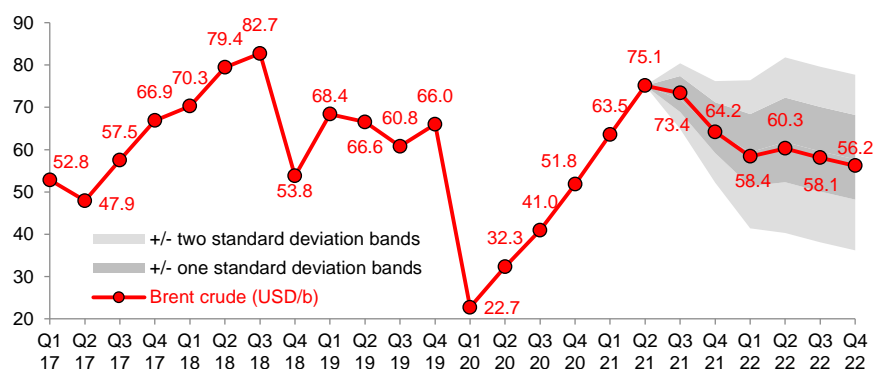
Week in review and week ahead: Oil prices staged a rally earlier this week amid the arrival of Hurricane Ida, causing temporary shutdowns of ~1.7m b/d of oil production in and along the Gulf coast. Prices have since remained directionless with markets digesting a further rise in OPEC+ output as well as in anticipation of the US August nonfarm payrolls reading due today (2 September). We remain tactically neutral for the week ahead given counterbalancing forces – (i) a physically tight oil market; (ii) the global macro momentum navigating the delta variant, whilst mobility easings continue apace; and (iii) how markets steer the Fed’s tapering strategy made during Jackson Hole (see [here](#) for our analysis of why global oil markets are less reactionary than financial risk assets to inflation risks and/or interest rates guidance).

Oil price forecast: Oil prices are expected to remain range bound with hesitancy to push the market in either direction for the remainder of this quarter, but near-term volatility may overshoot on both ends temporarily. Looking ahead, the balancing of cyclical demand headwinds with structural supply tailwinds, leads us to remain neutral-to-bearish on oil prices for the rest of 2021. Our quarterly profile remains for Brent to regress lower from USD75/b in Q2 to end Q3 and Q4 2021 at USD73/b and USD64/b, respectively, and to average USD58/b in 2022. Under the weight of higher OPEC+ output, steadily rising shale, the eventual return of Iranian supply, juxtaposed with a more normalised demand profile, we lean short oil further out along the curve.

Core indicators: Prices, market positioning, timespreads, futures, inventories, storage and products performance over the previous week are covered below.

CHART OF THE WEEK: WE LEAN SHORT OIL FURTHER OUT THE CURVE

MUFG’S BRENT PRICE (USD/B) WITH ONE AND TWO STANDARD DEVIATION BANDS



Source: Bloomberg, MUFG Research

Oil market focus

OPEC+ sticks to the script in a low stakes meeting

OPEC+ sticks to script

In what was a low stakes meeting, OPEC+ members unified around a singular message and maintained its incremental 0.4m b/d monthly production hikes on 1 September. A dip in oil prices in August (Brent down -4.4% m/m), with apprehensions that the global economy is struggling to contain the spread of the delta variant of COVID-19 in conjunction with mobility restrictions in core geographies, may have given some OPEC+ members doubts, but analysis presented by the OPEC secretariat to the group's Joint Technical Committee (JTC), signalled no need for a pause. The group's delicate stewardship of the oil market has kept prices high enough to support the revival of the market throughout this year and largely avoided the spike that could stymie the global economic recovery. With OPEC+ staying the course at its latest meeting keeps this rhythm flowing.

Current OPEC+ strategy to taper production

In what was a tumultuous first two weeks in July, OPEC+ finally reached an agreement after negotiations started, with production targets for H2 2021, a deal extension through end-2022 and higher baselines from May 2022 (see [here](#) and [here](#)). The agreement had three core outcomes:

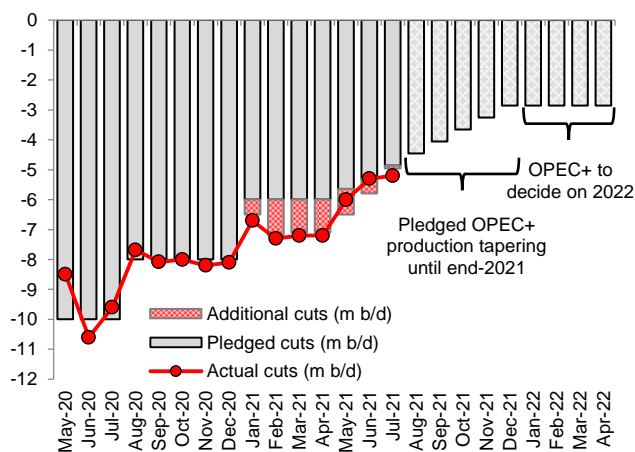
1. An extension of the agreement through to end-2022.
2. Monthly incremental easing of existing curbs by 0.4m b/d through to end-2021, and potentially beyond until the entire 5.8m b/d is phased out (theoretically by September or October 2022).
3. An increase in the baseline from which cuts are allocated of 1.63m b/d in total, spread across Saudi Arabia and Russia (both 0.5m b/d), the UAE (0.33m b/d) Iraq (0.15m b/d) and Kuwait (0.15m b/d).

Important implications of the current OPEC+ strategy

The prevailing OPEC+ agreement has a number of implications. First, it offers those higher baselines to those OPEC+ members which have the available spare capacity, resolving an issue which threatened to destabilise the agreement in July. Second, a steady incremental increase in production will keep the market in deficit in the coming months as 2m b/d of easing between August-December 2021 is not suffice to prevent the market continuing to tighten, according to our models. Third, raising the baseline by a combined 1.63m b/d does not signal 1.63m b/d of higher supply than before –

OPEC+ COMPLIANCE ON ITS LARGEST CUTS IN HISTORY HAS BEEN PRUDENT AND IMPRESSIVE

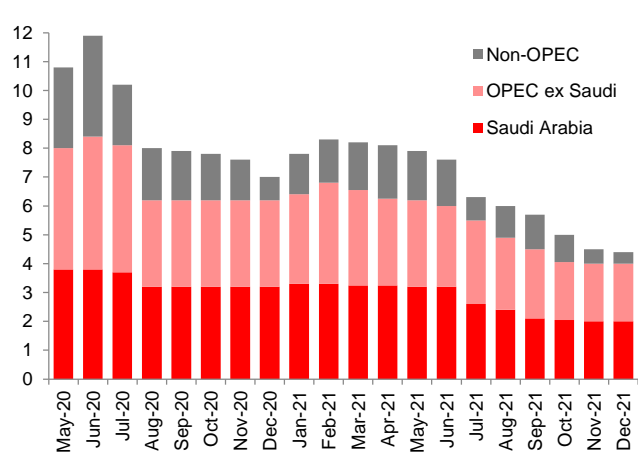
OPEC+ PLEDGED AND ACTUAL OUTPUT CUTS SINCE MAY 2020 (M B/D)



Source: Bloomberg, OPEC, MUFG Research

SAUDI'S IMMENSE SPARE CAPACITY HAS BEEN VITAL IN ENSURING STERN ADHERANCE TO OPEC+ CUTS

OPEC+ SPARE CAPACITY (UNDER PROPOSED ALLOCATIONS) (M B/D)



Source: Bloomberg, OPEC, MUFG Research

the group still plans to unwind the 5.0m b/d of cuts relative to where we are today, and thus the agreement merely acknowledges available capacity in the five countries concerned in higher proportional allocations from May 2022. Finally, guidance for higher capacity will be needed in coming years given growing underinvestment in the oil industry.

OPEC+ compliance rate in July at 108% was the highest so far in 2021

OPEC+ discipline remains resolutely stern. This is primarily driven by the leadership of Saudi Arabia which remains prudent surrounding the demand recovery, alongside its leverage it enjoys by virtue of its immense spare capacity. The latest reading suggests that OPEC+ compliance with agreed production cuts reached 108% in July, with monthly compliance rates ranging from 99-108% so far this year, according to secondary sources. Angola and Nigeria have consistently been the key contributors to the group's overcompliance since January. In July, both countries exceeded their supply cut targets by over 0.2m b/d, and OPEC+ collectively overcut production by almost 0.5m b/d. Russia remains the largest overproducer, exceeding its production quota by 0.13m b/d in July, whilst Iraq was one of the largest overproducers in H1 2021, wherein it complied with its output targets in June and July.

The OPEC+ strategy has been working

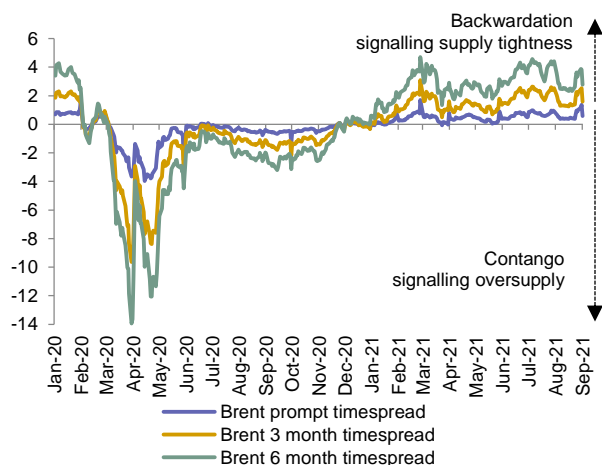
The OPEC+ supply strategy has been working because of its unexpectedness and suddenness. Year-to-date, oil prices are up ~40% and excess inventories continue to be drawn down, meanwhile OPEC+ production is rising and the US oil rig count at 410 still remains ~40% below pre-virus levels. This stands in sharp contrast to the strategy prior to 2020, when OPEC+ viewed itself as the central bank of the oil market, reassuring too much with predictable but never large enough cuts.

OPEC+ optimisation is for backwardation – and it has been successful

With global oil balances remaining in deficit, timespreads remained in backwardation – bullish structure where near-dated contracts trade at a premium to later-dated ones – signalling supply tightness throughout this year. This strikes at the heart of the OPEC+ optimisation strategy in achieving fiscal stability through higher revenues and market share. In essence, backwardation favours OPEC+ as it eliminates the financial incentive to store oil over time and discourages US shale producers from locking-in prices for future production (as low “deferred” prices through the backwardation structure can restrain higher cost producer's ability to secure future cash flows and attract funding). Furthermore, backwardation maximises low cost producers' (namely, OPEC+) revenues relative to higher cost producers (such as shale) that hedge, as they instead sell higher production levels at spot prices. Key to this view is our belief that backwardation can rationalise shale growth by reducing returns expectations and increasing leverage expectations, both of which drive

BRENT TIMESPREADS SHOW MARKET CONTINUES TO REBALANCE WITH ONGOING BACKWARDATION LEVELS

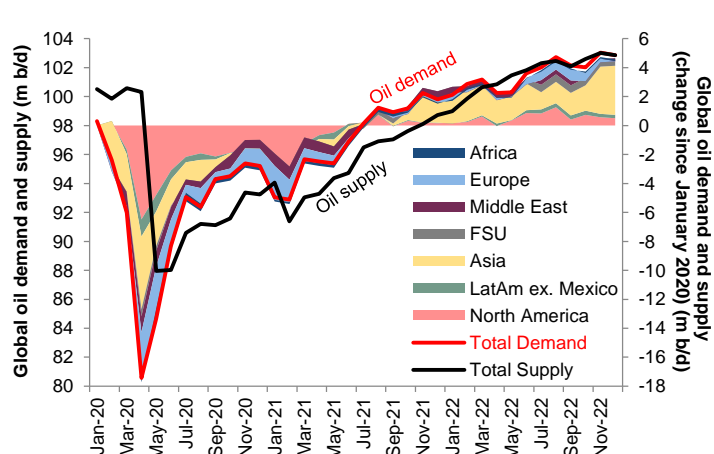
BRENT TIMESPREADS – FRONT, 3 AND 6 MONTHS (USD/B)



Source: Bloomberg, MUFG Research

OUR CONSTRUCTIVE DEMAND OUTLOOK LEADS US TO FORECAST A TIGHT OIL MARKET UNTIL Q1 2022

GLOBAL OIL DEMAND AND SUPPLY, CHANGE VS. JANUARY 2020 (M B/D)



Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

funding costs higher and slow capital allocation.

2022 oil market surplus looms

The oil market outlook for 2022 looks precariously uncertain. Oil demand, projected by the IEA, is set to get close to pre-virus levels and consumption growth will slow substantially by H2 2022, to just 2m b/d on average compared with more than 5.3m b/d expected for this year. Our own estimate put global oil demand at 101.7m b/d on average in 2022 from 97.1m b/d in 2021 – in fact, we forecast demand to reach the pre-virus run rate in Q4 2021 (100.1m b/d). Beyond a more normalised demand profile, it is however on the supply-side that we see market's attention being geared towards in 2022. We, alongside OPEC, IEA and EIA, believe the market will tilt from a market deficit that has remained the case since June 2020 towards oversupply next year. This stems from a confluence of higher OPEC+ output, steadily rising shale, the steady build-up of oil inventories and – perhaps the most contentious upside supply risk – the return of Iranian supply. Specifically, non-OPEC+ supply will recover all its lost output by the end of 2022 with the IEA projecting supply of 67.4m b/d by Q4 2022 (our estimates are slightly below that at 67.0m b/d), higher than pre-virus run rate of 66.8m b/d registered in Q4 2019.

We continue to lean neutral-to-bearish on oil

From an oil price perspective, there appears to be hesitancy to push the market in either direction, leaving the front-end likely in a holding pattern in the weeks ahead given two counterbalancing forces. First, fundamentals remain supportive of a tight global oil market in the near-term, owing to the marked velocity of the vaccine-induced demand acceleration (notably across developed markets), alongside inelastic supply (tepid shale growth, delayed Iranian barrels to market and only steady OPEC+ production increases). Second, there remains downside risks to emerging markets demand (where vaccination rates lag) stemming from the still highly contagious delta-variant, alongside steadily rising US shale, the prospect of (eventual) higher Iranian supply and potential weaker OPEC+ compliance (or higher production pledges in line with US pressure – see [here](#)). On net, as we have recently catalogued (see [here](#) and [here](#)) we continue to lean neutral-to-bearish on oil, with Brent to regress lower and end Q3 and Q4 2021 at USD73/b and USD64/b, respectively. Key behind our bearish oil price narrative is that the focus will shift from demand to supply which will increasingly become a source of negative impulses.

Week in review and week ahead

Volatile week due to Hurricane Ida and OPEC+ meeting; we remain tactically neutral for the week ahead

Oil prices staged a rally earlier this week amid the arrival of Hurricane Ida, causing temporary shutdowns of ~1.7m b/d of oil production in and along the Gulf coast. Prices have since remained directionless with markets digesting a further rise in OPEC+ output as well as in anticipation of the US August nonfarm payrolls reading due today (2 September). We remain tactically neutral for the week ahead given counterbalancing forces – (i) a physically tight oil market; (ii) the global macro momentum navigating the delta variant, whilst mobility easings continue apace; and (iii) how markets steer the Fed's tapering strategy made during Jackson Hole (see [here](#) for our analysis of why global oil markets are less reactionary than financial risk assets to inflation risks and/or interest rates guidance).

Global oil markets are not reactionary to inflation risks

As we recently catalogued (see [here](#)), oil markets do not respond to inflation risks and/or Central Bank forward guidance. As spot physical (anchored) assets, oil only depends on the prevailing level of demand and supply and thus oil's trajectory is driven by scarcity and physical demand. Thus, oil markets are mostly void of expectations and so talk of potential rate hikes two years from now are, by and large, insignificant. Furthermore, the US Federal Reserve (Fed) continues to make it clear that it would continue to purchase bonds at an unprecedented rate and has articulated that it would taper only towards the end of this year. This signals that the Fed would, in effect, be buying bonds at a marginally slower rate.

Oil markets vs financial markets responses to rate hikes

The pandemic recovery has been characterised by a stop-start pattern, interrupted by labour and capital shortages, supply chain issues as well as the availability of vaccines all of which impact the rate of growth. However, the level of demand remains above the level of supply which is supporting cyclical commodities, notably oil. That explains why as spot assets, oil is not impacted by discussions of interest rate hikes – in the context of the construed Fed hawkish pivot – in the same way that forward-looking financial assets like equities, bonds and credit (see [here](#)). In essence, oil is an attractive asset class to protect against short-term unanticipated inflation that is created in response to a rapidly expanding global economy, where the level of demand for key inputs (predominantly capital and labour), is exceeding the level of supply – which is what global markets are currently experiencing. Hence, as spot assets, oil is not vulnerable to rising rates so long as demand remains above supply (which we foresee until Q1 2022).

Oil will remain a central pillar of the global economy until its share of energy mix materially diminishes

The confluence of accommodative monetary and fiscal policy, inflation and our FX house view of a still weaker trade weighted USD over the medium-term, has set up a strong macro backdrop, supportive of commodities, notably, oil. As we have catalogued previously (see [here](#)), large-scale infrastructure spending and green capex plans will only strengthen the strong outlook for oil markets in the near-term. In other words, green initiatives helps near-term oil demand, long before it hurts oil demand, and thus from an oil price perspective, until we reach a point in the market wherein oil's importance as a feedstock source of energy for the global economy becomes diminished to the extent that it is alternative and renewable sources of energy become increasingly utilised, we view the near to medium term impact of the energy transition as in fact oil price supportive.

Positive feedback loop for oil from EM reserve recycling

Furthermore, oil remains the fundamental link between growing demand, a weaker US dollar and inflation. Oil is mostly produced in emerging markets (EM), leading rising prices to enhance their current account surpluses. These surpluses end up as additional USD reserves at EM central banks, which are then required to diversify these holdings into other developed markets (DM) currencies, selling their excess

USD, which in-turn drives down the USD – i.e. reserve recycling. Moreover, excess reserves raise the availability of credit in EMs, further spurring demand growth, oil prices, and USD depreciation, all of which creates a feedback loop (and thus tailwind) for oil.

Oil price forecasts and ranges

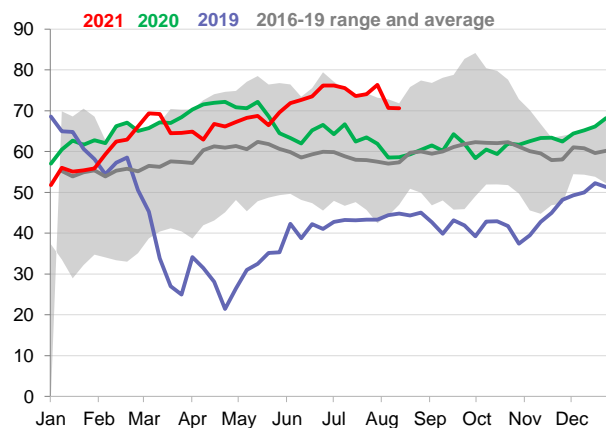
BRENT – NEUTRAL BIAS – (66.00-76.00)

WTI – NEUTRAL BIAS – (62.00-73.00)

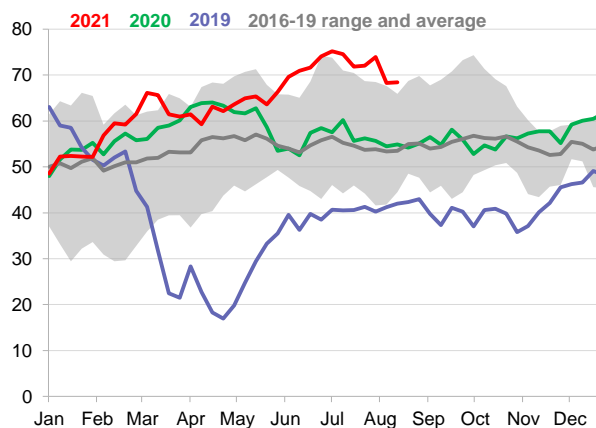
Quarter End (USD/b)	Spot close 02.09.21	Q3 2021	Q4 2021	Q1 2022	Q2 2022
Brent	71.30	73.40	64.20	58.40	60.30
NYMEX	68.59	69.10	60.90	55.10	58.40
		Range	Range	Range	Range
Brent		62.90-83.90	50-70-77.70	42.65-74.15	44.55-76.05
NYMEX		55.60-81.60	45.15-75.65	39.35-70.85	42.65-74.15

Core indicators – prices and market positioning

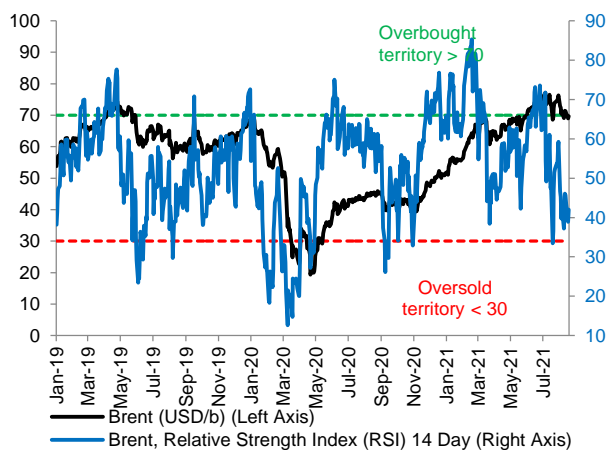
BRENT SPOT
USD/B



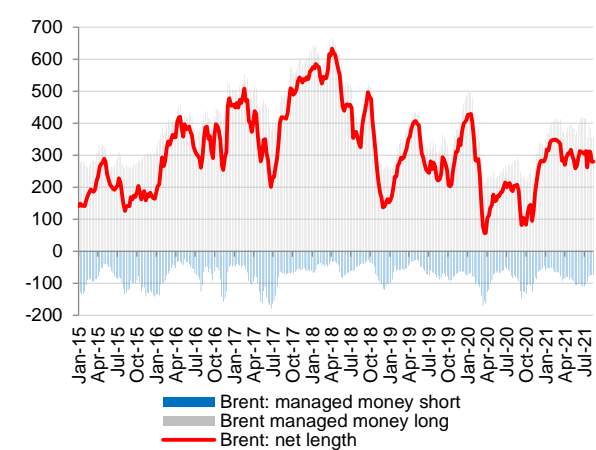
NYMEX WTI SPOT
USD/B



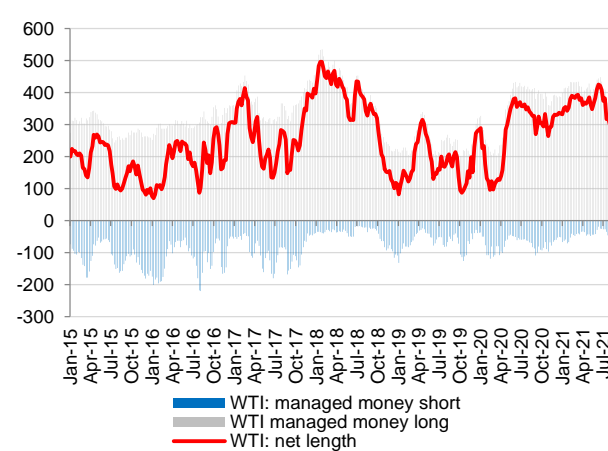
14 DAY RELATIVE STRENGTH INDEX (RSI) AND WTI
USD/B AND 0-100 INDEX (<30 = OVERSOLD; >70 = OVERBOUGHT)



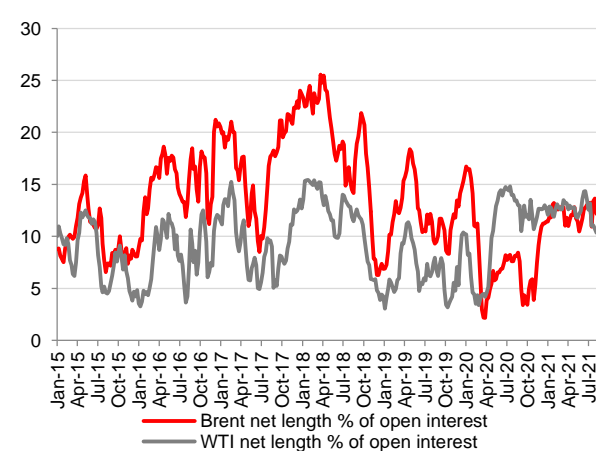
BRENT NET LENGTH MANAGED MONEY
CONTRACTS (THOUSANDS)



WTI NET LENGTH MANAGED MONEY
CONTRACTS (THOUSANDS)



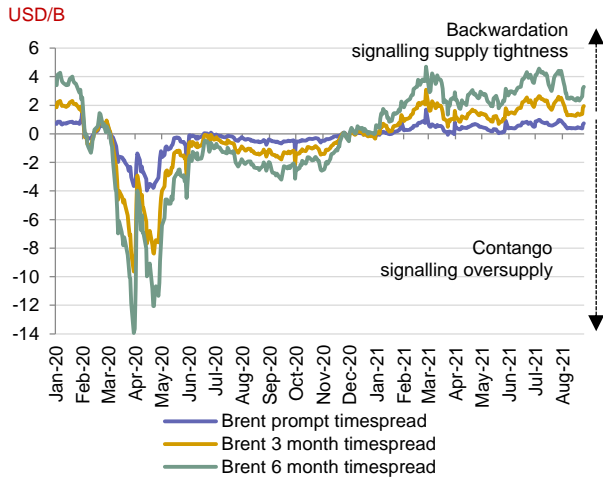
NET LENGTH MANAGED MONEY / OPEN INTEREST
%



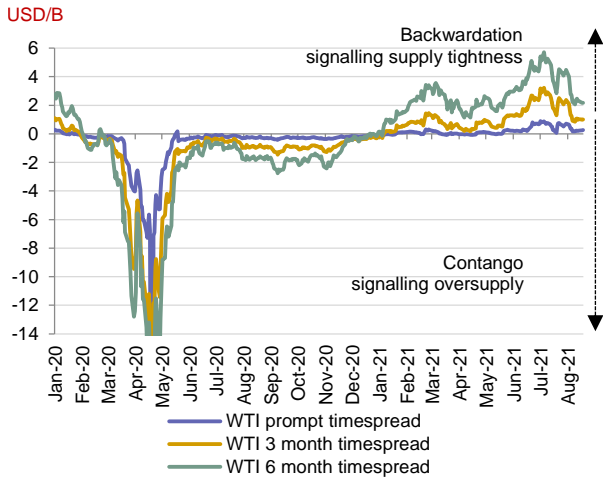
Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – timespreads and futures

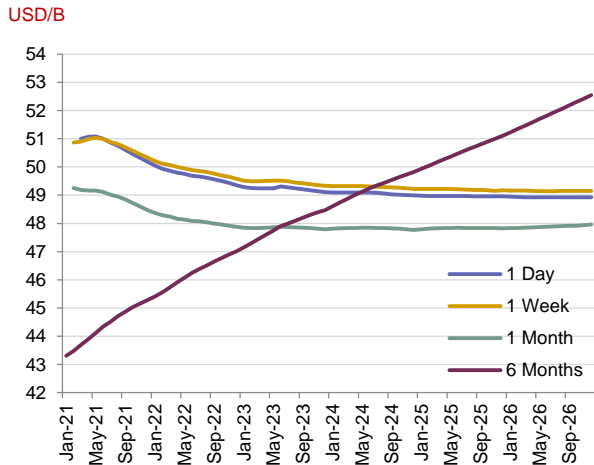
BRENT TIMESPREADS – FRONT, 3 AND 6 MONTHS



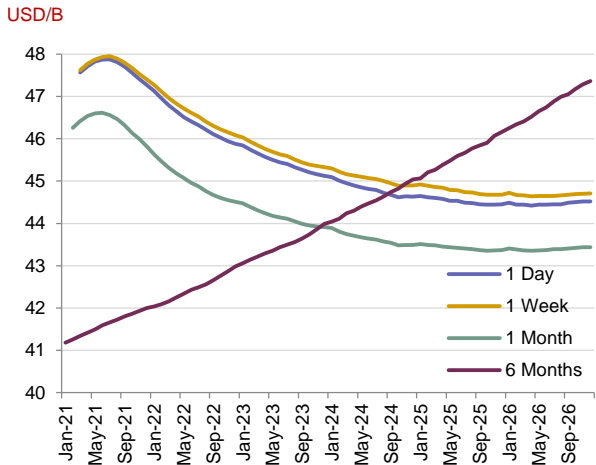
WTI TIMESPREADS – FRONT, 3 AND 6 MONTHS



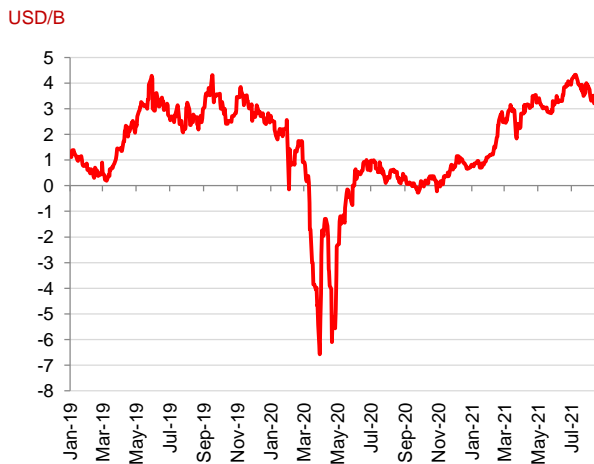
BRENT FUTURES CURVE



WTI FUTURES CURVE



BRENT-DUBAI SPREAD



BRENT-MURBAN SPREAD

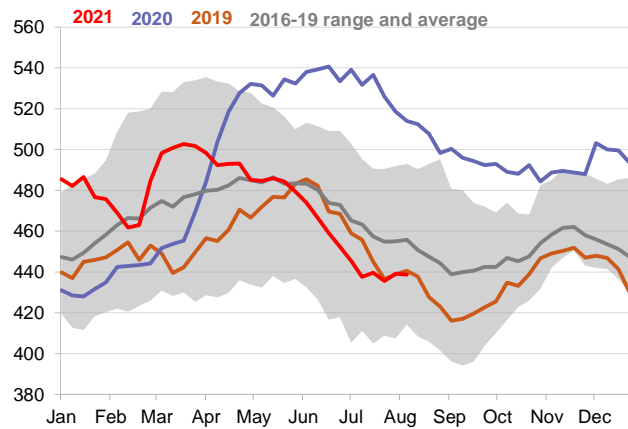


Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – inventories, storage and products

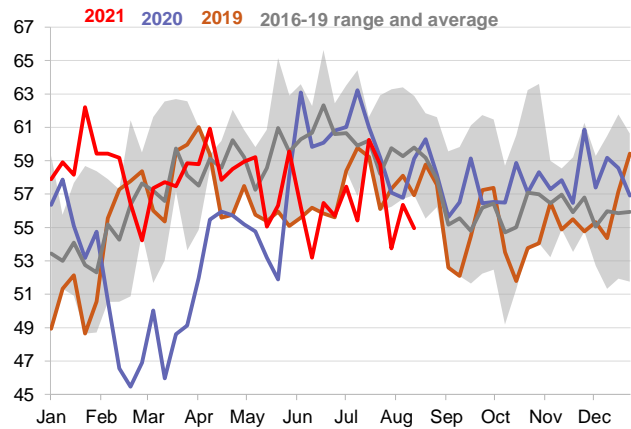
US CRUDE INVENTORIES

MILLION BARRELS



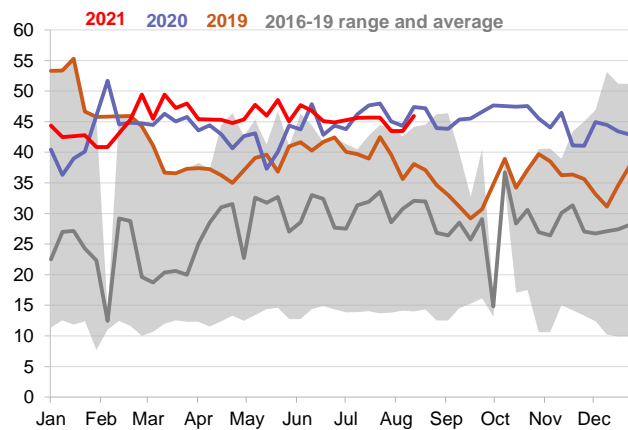
ARA CRUDE INVENTORIES

MILLION BARRELS



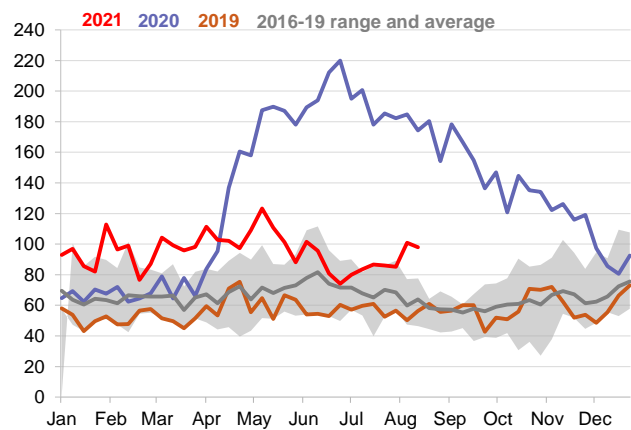
CHINA SHANDONG CRUDE INVENTORIES

MILLION BARRELS



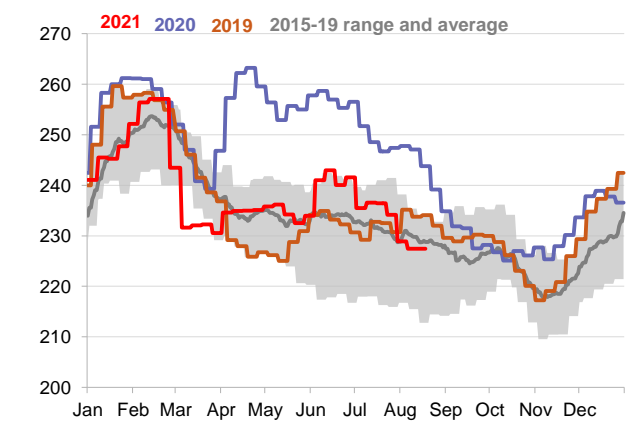
GLOBAL CRUDE FLOATING STORAGE

MILLION BARRELS



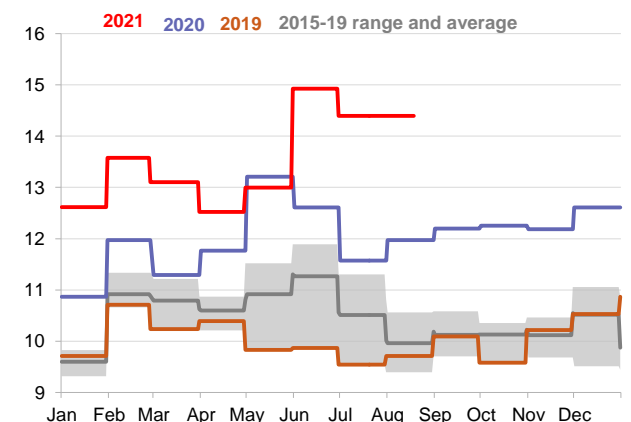
US GASOLINE INVENTORIES

MILLION BARRELS



JAPAN GASOLINE INVENTORIES

MILLION BARRELS



Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Research

London:

MR DEREK HALPENNY

*Head of Research, Global Markets EMEA
& International Securities*

E: derek.halpenny@uk.mufg.jp

MR LEE HARDMAN

Currency Analyst

E: lee.hardman@uk.mufg.jp

MS MOMOKO MIYACHI

Research Assistant

E: momoko.miyachi@uk.mufg.jp

Shanghai:

MR MARCO SUN

Chief Financial Markets Analyst

E: wu_wun@cn.mufg.jp

Hong Kong:

MS LIN LI

Head of Global Markets Research Asia

E: lin_li@hk.mufg.jp

Dubai:

MR EHSAN KHOMAN

Head of Emerging Markets Research – EMEA

E: ehsan.khoman@ae.mufg.jp

Tokyo

MR MINORI UCHIDA

Tokyo Head of Global Markets Research

E: minori_uchida@mufg.jp

MR TOSHIYUKI SUZUKI

Senior Market Economist

E: toshiyuki_4_suzuki@mufg.jp

MR TAKAHIRO SEKIDO

Chief Japan Strategist

E: takahiro_sekido@mufg.jp

MS SUMINO KAMEI

Senior Analyst

E: sumino_kamei@mufg.jp

MR TEPPEI INO

Senior Analyst

E: teppei_ino@mufg.jp

MR TOMOKI HIRAMATSU

Research Assistant

E: tomoki_hiramatsu@mufg.jp

Singapore:

MS SOOK MEI LEONG

Asean Head of Global Markets Research

E: leongsm@sg.mufg.jp

MS SOPHIA NG

Analyst

E: sophia_ng@sg.mufg.jp

Sao Paulo:

MR CARLOS PEDROSO

Senior Economist

E: cpedroso@br.mufg.jp

MR MAURICIO NAKAHODO

Economist

E: mnakahodo@br.mufg.jp

Disclaimer

This document has been prepared by MUFG Bank, Ltd. (the "Bank") for general distribution. It is only available for distribution under such circumstances as may be permitted by applicable law and is not intended for use by any person in any jurisdiction which restricts the distribution of this document. The Bank and/or any person connected with it may make use of or may act upon the information contained in this document prior to the publication of this document to its customers.

Neither the information nor the opinions expressed in this document constitute or are to be construed as, an offer, solicitation or recommendation to buy, sell or hold deposits, securities, futures, options or any other derivative products or any other financial products. This document has been prepared solely for informational purposes and does not attempt to address the specific needs, financial situation or investment objectives of any specific recipient. This document is based on information from sources deemed to be reliable but is not guaranteed to be accurate and should not be regarded as a substitute for the exercise of the recipient's own judgment. Historical performance does not guarantee future performance. The Bank may have or have had a relationship with or may provide or has provided financial services to any company mentioned in this document. Our group affiliates, from time to time, may have interests and/or underwriting commitments in the relevant securities mentioned in this document or related instruments and/or may have positions or holdings in such securities or related instruments.

All views in this document (including any statements and forecasts) are subject to change without notice and none of the Bank, its head office, branches, subsidiaries and affiliates is under any obligation to update this document. The information contained in this document has been obtained from sources the Bank believed to be reliable but the Bank does not make any representation or warranty nor accepts any responsibility or liability as to its accuracy, timeliness, suitability, completeness or correctness. The Bank, its head office, branches, subsidiaries and affiliates and the information providers accept no liability whatsoever for any loss or damage of any kind arising out of the use of or reliance upon all or any part of this document.

The Bank retains copyright to this document and no part of this document may be reproduced or re-distributed without the written permission of the Bank. The Bank expressly prohibits the distribution or re-distribution of this document to private or retail clients, via the Internet or otherwise, and the Bank, its head office, branches, subsidiaries and affiliates accept no liability whatsoever to any third parties resulting from such distribution or re-distribution.

MUFG Bank, Ltd. ("MUFG Bank") is a limited liability stock company incorporated in Japan and registered in the Tokyo Legal Affairs Bureau (company no. 0100-01-008846). MUFG Bank's head office is at 7-1 Marunouchi 2-Chome, Chiyoda-Ku, Tokyo 100-8388, Japan. MUFG Bank's London branch is registered as a UK establishment in the UK register of companies (registered no. BR002013). MUFG Bank is authorised and regulated by the Japanese Financial Services Agency. MUFG Bank's London branch is authorised by the Prudential Regulation Authority (FCA/PRA no. 139189) and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of MUFG Bank London branch's regulation by the Prudential Regulation Authority are available from us on request.

MUFG Bank, Ltd. ("MUFG Bank") is a limited liability stock company incorporated in Japan and registered in the Tokyo Legal Affairs Bureau (company no. 0100-01-008846). MUFG Bank's head office is at 7-1 Marunouchi 2-Chome, Chiyoda-Ku, Tokyo 100-8388, Japan. MUFG Bank's London branch is registered as a UK establishment in the UK register of companies (registered no. BR002013). MUFG Bank is authorised and regulated by the Japanese Financial Services Agency. MUFG Bank's London branch is authorised by the Prudential Regulation Authority (FCA/PRA no. 139189) and subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of MUFG Bank London branch's regulation by the Prudential Regulation Authority are available from us on request.

This Presentation has been prepared by MUFG Bank. This Presentation is not intended for Retail Clients within the meaning of the United Kingdom PRA/FCA rules and should not be distributed to Retail Clients. This Presentation has been prepared for information purposes only and for the avoidance of doubt, nothing expressed or implied in this Presentation constitutes any commitment by MUFG Bank or any of its subsidiaries or affiliates to arrange and/or provide any party with any services and/or financing. This Presentation does not constitute legal, tax, accounting or investment advice.

MUFG Bank retains copyright to this Presentation and no part of this Presentation may be reproduced or redistributed without the prior written permission of MUFG Bank. MUFG Bank and its subsidiaries and affiliates accept no liability whatsoever to any third parties resulting from any unauthorised distribution. MUFG Bank and its subsidiaries, affiliates, directors and employees accept no liability whatsoever for any reliance on the information contained in the Presentation and make no representation or warranty as to its accuracy and completeness. This Presentation is based on information from sources deemed by MUFG Bank to be reliable but is not guaranteed to be accurate and should not be regarded as a substitute for the exercise of the recipient's own judgement.

The views contained in this Presentation (including any statements and forecasts) are solely those of MUFG Bank and are subject to change without notice. MUFG Bank is under no obligation to correct any inaccuracies in the Presentation or update the information contained therein.

The provision of the service described in this Presentation is or will be subject to an agreement constituting terms of business ("the Agreement"). In the event of a conflict between information in this Presentation and the Agreement, the latter shall prevail. The MUFG Bank Presentation and all claims arising in connection with it are governed by, and to be construed in accordance with, English law.

The Bank's DIFC branch - Dubai is part of the Mitsubishi UFJ Financial Group and is located at Level 3, East Wing, The Gate, Dubai International Financial Centre, Dubai, UAE. The Bank's Dubai branch is regulated by the Dubai Financial Services Authority (DFSA) (License number: F000470) and the Japanese Financial Services Agency.

The Bank's Doha office is part of the Mitsubishi UFJ Financial Group and is located at Suite A3, Mezzanine floor, Tornado Tower, West Bay, Doha, Qatar. The Bank's Doha branch is regulated by the Qatar Financial Centre Regulatory Authority (QFCRA) (Licence number: 00103) and the Japanese Financial Services Agency.

The Bank's Abu Dhabi branch is part of the Mitsubishi UFJ Financial Group and is located at 1st Floor, IPIC Square, Muror Street, PO Box 2174, Abu Dhabi, UAE. The Bank's Abu Dhabi branch is regulated by the Central Bank of the U.A.E (CBAUE) (License number: CN-1002032) and the Japanese Financial Services Agency.

The Bank's Bahrain branch is part of the Mitsubishi UFJ Financial Group and is located at 12th Floor, West Tower, Bahrain Financial Harbor, Bahrain. The Bank's Bahrain branch is regulated Bahrain by the Central Bank of Bahrain (CBB) (License number WB/020) and the Japanese Financial Services Agency.

This presentation has been prepared by the Bank and is not intended for Retail Clients within the meaning of the PRA/FCA, the DFSA, QFCRA, CBB and CBAUE rules and should not be distributed to Retail Clients. This presentation has been prepared for information purposes only and, for the avoidance of doubt, nothing expressed or implied in this presentation constitutes any commitment by the Bank, its subsidiaries or affiliates to arrange and/or provide any party with any services and/or financing. This presentation does not constitute legal, tax, accounting or investment advice. The Bank retains copyright to this presentation and no part of this presentation may be reproduced or redistributed without the prior written consent of the Bank. The Bank and its subsidiaries and affiliates accept no liability whatsoever to any third party resulting from any unauthorised distribution. The Bank, its subsidiaries, affiliates and each of their respective directors and employees accept no liability whatsoever for any reliance on the information contained in the presentation and make no representation or warranty as to its accuracy and completeness. This presentation is based on information from sources considered by the Bank to be reliable but is not guaranteed to be accurate and should not be regarded as a substitute for the exercise of the recipient's own judgement. The views, opinions and other information contained in this presentation (including, without limitation, any statements or forecasts) are solely those of the Bank and are subject to change without notice.

Notwithstanding the foregoing, nothing contained herein shall be deemed to limit or exclude liability on the part of the Bank to the extent it is not permitted to exclude in accordance with the laws administered by the Dubai Financial Services Authority (DFSA). The Bank is under no obligation to correct any inaccuracies or update the information contained in this presentation. The provision of the service described in this presentation is, or will be, subject to an agreement constituting terms of business. In the event of a conflict between information contained in this presentation and such terms of business, the latter shall prevail. This disclaimer is governed by English law.

This report shall not be construed as solicitation to take any action such as purchasing/selling/investing in financial market products. In taking any action, the reader is requested to act on the basis of his or her own judgment. This report is based on information believed to be reliable, but the Bank does not guarantee or accept any liability whatsoever for its accuracy. The Bank, its affiliates and subsidiaries and each of their respective officers, directors and employees accept no liability whatsoever for any loss or damage of any kind arising out of the use of all or any part of this report. The contents of the report may be revised without advance notice. The Bank retains copyright to this report and no part of this report may be reproduced or re-distributed without the Bank's written consent. The Bank expressly prohibits the re-distribution of this report to Retail Customers (within the meaning of the PRA/FCA, the DFSA, QFCRA, CBB, CBAUE rules), via the internet or otherwise and the Bank, its subsidiaries and affiliates accept no liability whatsoever to any third parties resulting from such re-distribution.

CERTIFICATION

The author(s) mentioned on the cover of this report hereby certify(ies) (or, where multiple authors are responsible, individually certify with respect to each security that the author covers in this report) that the views expressed in this report accurately reflect their personal views about the subject company(ies) and its (their) securities, and also certify(ies) that they have not been, are not, and will not be receiving direct or indirect compensation in exchange for expressing any specific recommendation(s) or view(s) in this report.

DISCLAIMERS

This report has been prepared by the Global Markets Research, US Rates and Credit Strategy desks within MUFG Bank, Ltd. ("MUBK") and MUFG Securities EMEA plc ("MUS(EMEA)") and may be distributed to you either by MUBK, MUS(EMEA) or by another subsidiary of the Mitsubishi UFJ Financial Group ("MUFG").

Legal entities and branches

The securities related businesses within MUFG (together referred to in this presentation as "MUFG Securities") are: (1) MUFG SECURITIES EMEA PLC ("MUS(EMEA)") which is authorised in the United Kingdom by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA (FS Registration Number 124512). MUS(EMEA) has a branch office that is registered at Level 3, East Wing, The Gate, Dubai International Financial Centre, PO Box 506894, Dubai, UAE ("Dubai Branch"). The Dubai Branch is authorised to operate in the Dubai International Financial Centre ("DIFC") as a Non-DIFC Entity (Commercial License Number CL1666) and is regulated by the Dubai Financial Services Authority (Reference Number F002623); (2) MUFG Securities (Europe) N.V. ("MUS (EU)") which is authorized and regulated in the Netherlands by the Dutch Authority for the Financial Markets (AFM) and also regulated by De Nederlandsche Bank (DNB). MUS (EU) Paris Branch is regulated in France by the Autorité de contrôle prudentiel et de résolution (ACPR) and the Autorité des marchés financiers (AMF); (3) MUFG SECURITIES AMERICAS INC. ("MUS(USA)") which is registered in the United States with the Securities and Exchange Commission ("SEC") and regulated by the Financial Industry Regulatory Authority ("FINRA") (SEC# 8-43026; CRD# 19685); (4) MUFG SECURITIES (CANADA), LTD. ("MUS(CAN)") which is registered in Canada with the Ontario Securities Commission ("OSC") and regulated by the Investment Industry Regulatory Organization of Canada ("IIROC"); (5) MUFG SECURITIES ASIA LIMITED ("MUS(ASIA)") which is incorporated in Hong Kong, licensed under the Hong Kong Securities and Futures Ordinance and regulated by the Hong Kong Securities and Futures Commission (Central Entity Number AAA889). MUS(ASIA) is registered as a foreign company under the Corporations Act 2001 of Australia ARBN No. 169 329 453; and (6) MUFG Securities Asia (Singapore) Limited ("MUS(SPR)") which is licensed as an approved merchant bank by the Monetary Authority of Singapore. In respect of the financial services provided to wholesale clients in Australia, MUS(ASIA), MUS(EMEA), MUS(USA) and MUS(SPR) are each exempt from the requirement to hold an Australian financial services licence under the Corporations Act 2001 of Australia under the Australian Securities and Investments Commission Class Order Exemption CO 03/1099, CO 03/1103, CO 03/1100, and CO 03/1102, respectively. Each of MUS(ASIA), MUS(EMEA), MUS(USA), MUS(CAN), and MUS(SPR) are regulated under the laws of Hong Kong, the United Kingdom, the United States, Canada and Singapore respectively, which differ from Australian laws.

MUFG Bank Ltd ("MUBK") is a limited liability stock company incorporated in Japan and registered in the Tokyo Legal Affairs Bureau (company no. 0100-01-008846). MUBK's head office is at 7-1 Marunouchi 2-Chome, Chiyoda-Ku, Tokyo 100-8388, Japan. MUBK's London branch is at Ropemaker Place, 25 Ropemaker Street, London EC2Y 9AN, and is registered as a UK establishment in the UK register of companies (registered no. BR002013). MUBK is authorised and regulated by the Japanese Financial Services Agency. MUBK's London branch is authorised by the UK Prudential Regulation Authority ("PRA") and regulated by the UK Financial Conduct Authority ("FCA") with limited regulation by the PRA.

General disclosures

This report is for information purposes only and should not be construed as investment research as defined by MFID 2 or a solicitation of any offer to buy or sell any security, commodity, futures contract or related derivative (hereafter "instrument") or to participate in any trading strategy. This report does not constitute a personal recommendation and does not take into account the individual financial circumstances, needs or objectives of the recipients. Recipients should therefore seek their own financial, legal, tax or other advice before deciding to invest in any of the instruments mentioned in this report.

Certain information contained in this report has been obtained or derived from third party sources and such information is believed to be correct and reliable but has not been independently verified. MUFG Securities does not make any guarantee, representation, warranty or undertaking, express or implied, as to the fairness, accuracy, reliability, completeness, adequacy or appropriateness of any information or comments contained in this report. Furthermore the information may not be current due to, among other things, changes in the financial markets or economic environment. MUFG Securities has no obligation to update any such information contained in this report.

This report is not intended to forecast or predict future events. Past performance is not a guarantee or indication of future results. Any prices provided herein (other than those identified as being historical) are indicative only and do not represent firm quotes as to either price or size. This report is proprietary to MUFG Securities and may not be quoted, circulated or otherwise referred to without our prior written consent. Notwithstanding this, MUFG Securities shall not be liable in any manner whatsoever for any consequences or loss (including but not limited to any direct, indirect or consequential loss, loss of profits and damages) arising from any reliance on or usage of this report and accepts no legal responsibility to any investor who directly or indirectly receives this material.

Country and region specific disclosures

This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or is located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to any law, regulation or rule.

In this regard, please note the following in relation to the jurisdictions in which MUFG Securities has a local presence:

* United Kingdom / European Economic Area (EEA): This report is intended for distribution to a "professional client" or "eligible counterparty" as those terms are defined in the rules of the FCA and PRA. In other EEA countries, this report is intended only for persons regarded as professional investors (or equivalent) in their home jurisdiction.

* United States of America: This report, when distributed by MUS(USA), is intended for Institutional Investors ("Institutional Accounts" as defined by FINRA Rule 4512(c)). When distributed by a non-US affiliate of MUS(USA), this report is intended for distribution solely to "major U.S. institutional investors" or "U.S. institutional investors" pursuant to Rule 15a-6 under the U.S. Securities Exchange Act of 1934, as amended. Securities referenced in this report may have been underwritten by MUS(USA) and/or its affiliates. Nothing in this report should be considered an offer or solicitation of an offer to buy or sell securities or any other financial product or a commitment of any kind with respect to any transaction.

IRS Circular 230 Disclosure: MUFG Securities does not provide tax advice. Accordingly, any discussion of U.S. tax matters included herein (including any attachments) is not intended or written to be used, and cannot be used, in connection with the promotion, marketing or recommendation by anyone not affiliated with MUS(USA) of any of the matters addressed herein or for the purpose of avoiding U.S. tax-related penalties.

* Hong Kong: This report is only intended for distribution to a "professional investor" as that term is defined in the Securities and Futures Ordinance and should not be passed onto any other person.

* Singapore: This report is only intended for distribution to an "institutional investor", "accredited investor" or "expert investor" as those terms are defined under regulation 2 of the Financial Advisers Regulation. It is solely for the use of such investors and shall not be distributed, forwarded, passed on or disseminated to any other person. Investors should note that, as a result of exemptions that apply when this report is distributed to "accredited investors" and "expert investors", MUS is exempt from complying with certain requirements under the Financial Advisers Act, including section 25 of the Financial Advisers Act (which requires a financial adviser to disclose all material information on certain investment products), section 27 (which requires a financial adviser to have a reasonable basis for making recommendations on investments) and section 36 (which requires a financial adviser to disclose any interests that it holds in securities that it recommends).

* Canada: When distributed in Canada, this report is distributed by MUS(EMEA) or MUSA. MUS(EMEA) operates under an International Dealer Exemption from registration with the securities regulators in Alberta, British Columbia, Manitoba, Ontario and Québec. MUSA operates under an International Dealer Exemption from registration with the securities regulators in all Canadian Provinces and Territories. This report is only intended for a "permitted client" as that term is defined under the National Instrument 31-103 in Canada and is not intended for re-distribution to any other person. The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Under no circumstance is the information contained herein to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient.

* Japan: This Note, when distributed by MUFG Securities affiliates located outside of Japan, is intended for distribution in accordance with Article 58-2 of the Financial Instruments Exchange Act 1948 ("FIEA") to a "Financial Instruments Business Operator" engaged in "Securities-Related Business" as defined in the FIEA or to the government, the Bank of Japan, a qualified financial institution defined in Article 209 of the Cabinet Office Ordinance Concerning Financial Instruments Business, etc., or an Investment Manager.

When distributed by Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., this Note is intended for distribution to a "Professional Investor (tokutei-toushika)" as defined in the FIEA.

* United Arab Emirates: This report is only intended for distribution to a "Professional Client" or "Market Counterparty" as those terms are defined under the rules of the Dubai Financial Services Authority and only a person meeting the criteria for these terms should act upon this report.

* Australia: This Note is only intended for distribution to persons in Australia who are sophisticated or professional investors for the purposes of section 708 of the Corporations Act of Australia, and are wholesale clients for the purposes of section 761G of the Corporations Act of Australia. This Note is not intended to be distributed or passed on, directly or indirectly, to any other class of persons in Australia.

Other jurisdictions

MUFG Securities also relies on local registrations or regulatory exemptions in order to undertake certain securities business in other countries. In Thailand, MUS(EMEA) has a derivatives dealer registration with the Securities and Exchange Commission, Thailand. In Canada, MUS(EMEA) and MUS(USA) each operate under an international dealer exemption registered with the securities regulators. MUS(EMEA) operates under the exemption in Alberta, Quebec, Ontario, British Columbia and Manitoba. MUS(USA) operates under the exemption in all Canadian Provinces and Territories.