



# Commodity market outlook

## Crude oil focus – Summer 2020

August 2020

# Investment recommendations

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- **All commodities** – *Overweight*. Raw material prices should recover further on improved global mobility, stronger industrial activity in China and a weaker US dollar. We maintain absolute and relative overweight positions for one-year holdings.
- **Crude oil** – *Overweight*. OPEC production cuts have helped restore the market balance. A recovery in road traffic and stronger industrial activity should lift consumption to ~ 98M / bbl by 2021. We now expect Brent to exceed \$60 / bbl by mid-2021.

# 1. All commodities

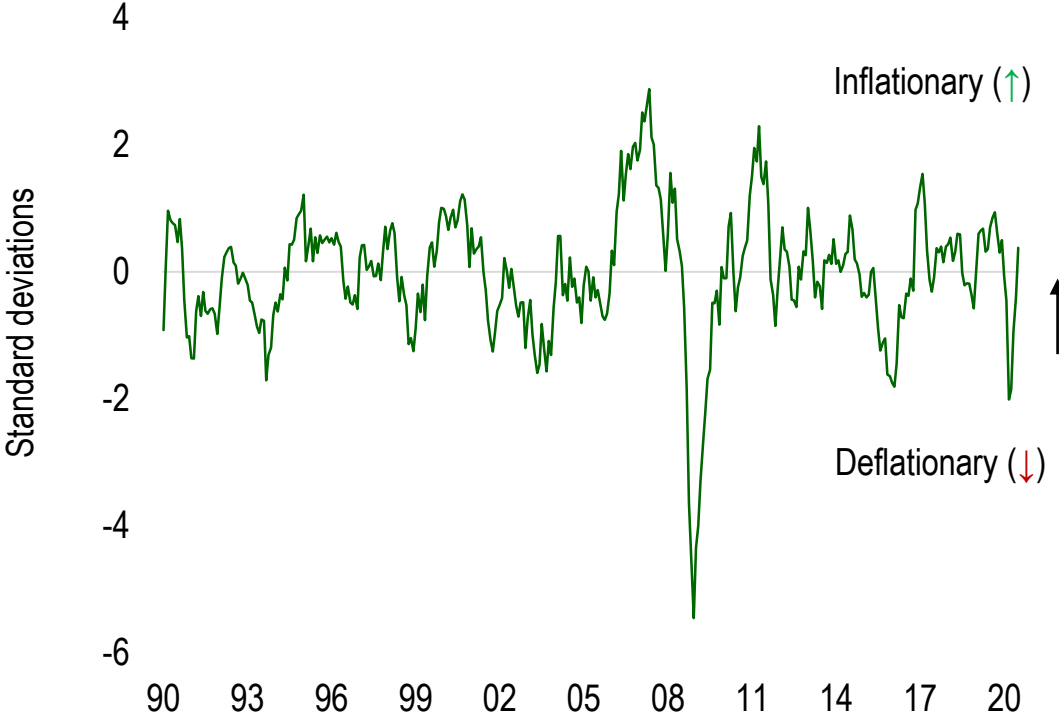
# Broad commodity outlook

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- Demand for industrial commodities has improved markedly in June and July, fueled by stronger cyclical conditions in China. This also helps explain differences in performance across commodities.
- A pick-up in global mobility and stronger industrial activity in China should support commodity prices over the next 12 months.
- The dollar is weakening on stronger risk sentiment and monetary stimulus. USD depreciation is now the most likely outcome.
- Both factors should lift overall commodity prices. There is a 76% chance that the S&P GSCI benchmark will strengthen 12M out.

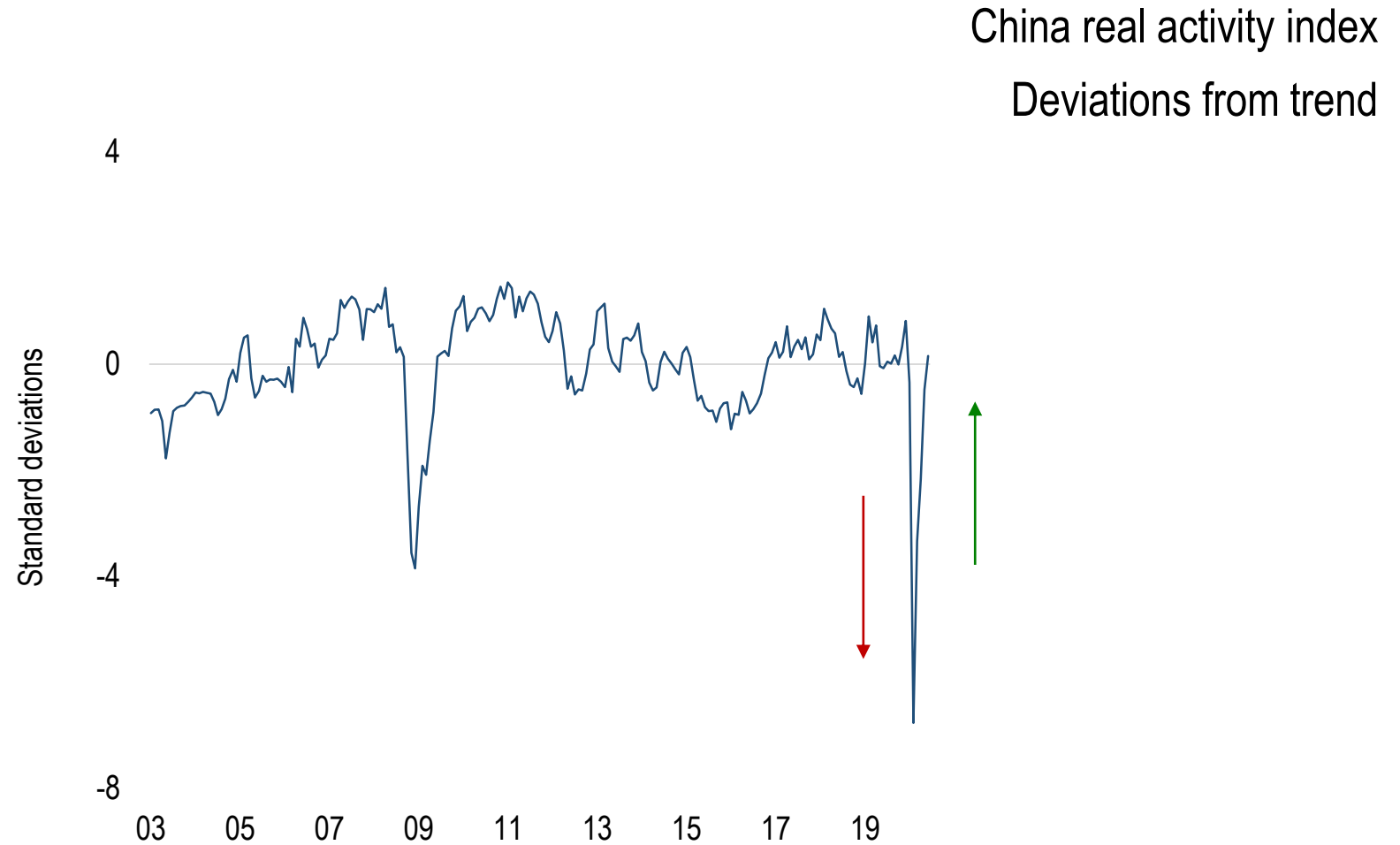
# Commodities demand is on the rise

Commodities activity index  
Deviations from trend



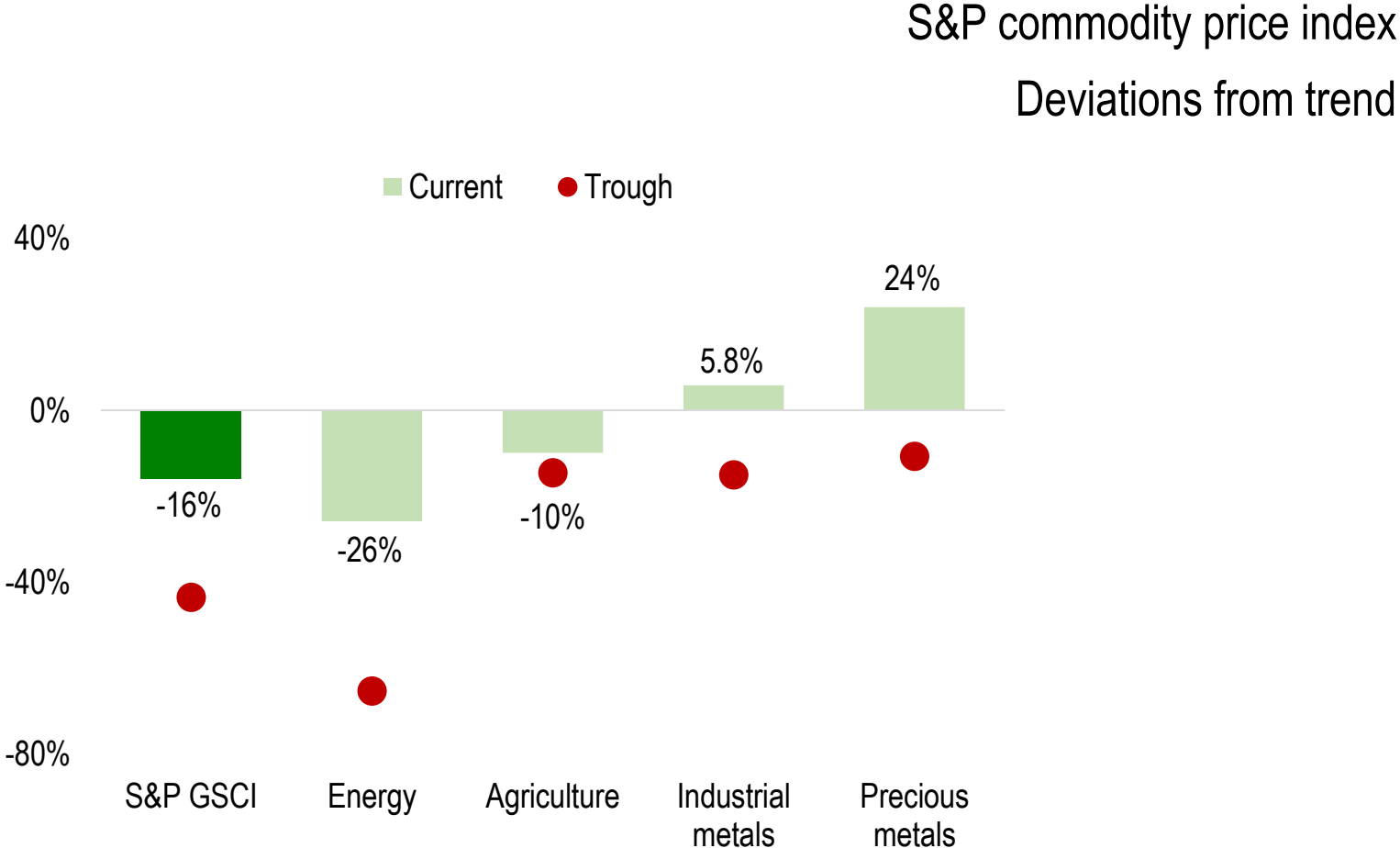
Note: Index isolates common fluctuations across a panel of 18 industrial commodities, thereby abstracting from market-specific (idiosyncratic) supply shocks. Index adjusts for USD moves.

# Fueled by stronger activity in China



Note: Index isolates common fluctuations across a panel of 20 CN economic indicators, thus abstracting from industry-specific (idiosyncratic) supply shocks.

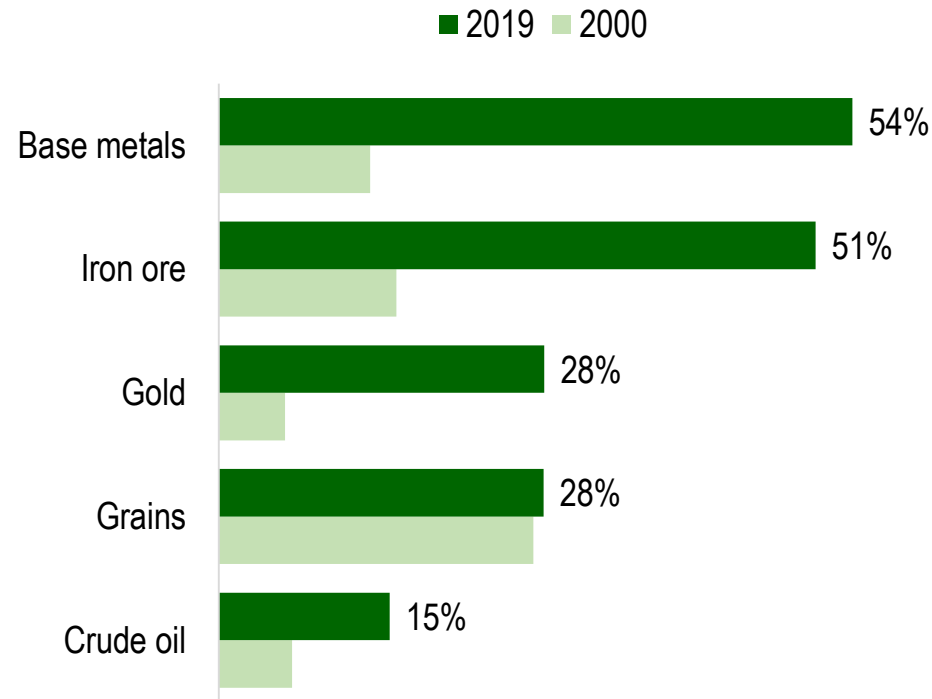
# Which explains differences in performance



Note: Energy represents 62% of the S&P GSCI index (of which crude oil is 59%). Agriculture and metals are roughly 15% each.

# Given China's greater influence on metals

China raw materials demand  
% of global consumption

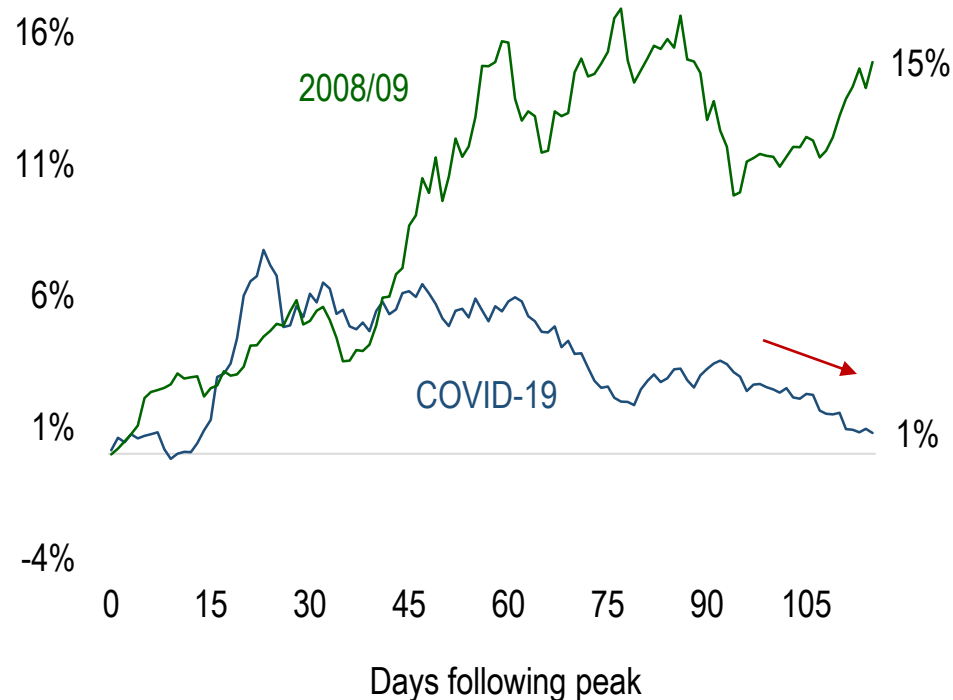


Note: Base (non-ferrous) metals are the sum of aluminum, copper, nickel, lead and zinc. Grains include corn, wheat, soybean and rice.



# The US dollar continues to weaken

USD during deep recessions  
Broad dollar appreciation

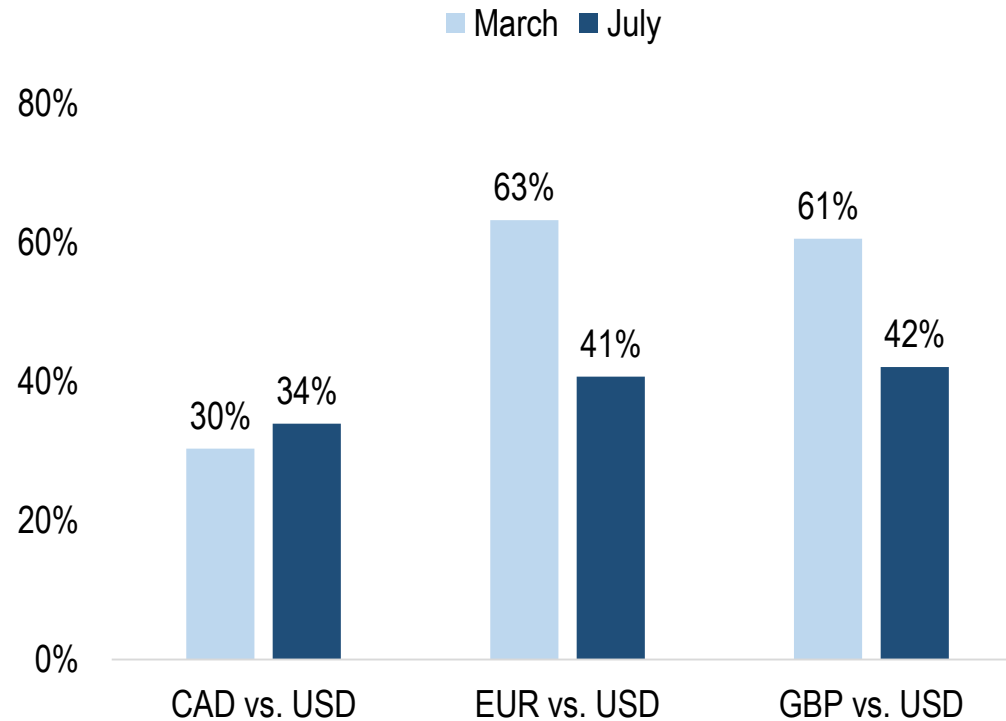


Dollar has depreciated 4% since mid-May on improved risk sentiment

Note: Change in US dollar against currencies of major trading partners. Grey line shows change versus mid-February. Green line shows evolution following Lehman bankruptcy.

# And should depreciate further 12M out

## USD appreciation probabilities 12-months ahead (%)

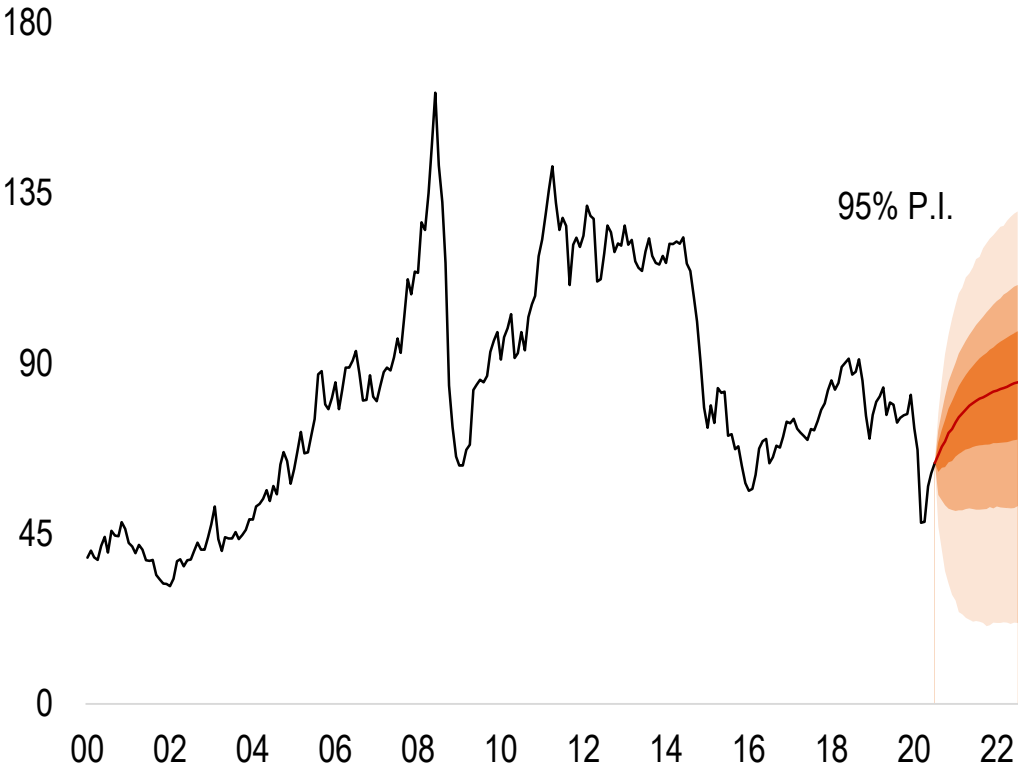


US dollar appreciation  
much less likely than  
early in the pandemic

Note: Likelihood of USD strengthening against the CAD, EUR and GBP 12M out. Probabilities above 50% indicate USD appreciation is the most likely outcome.

# Overall commodity prices should recover

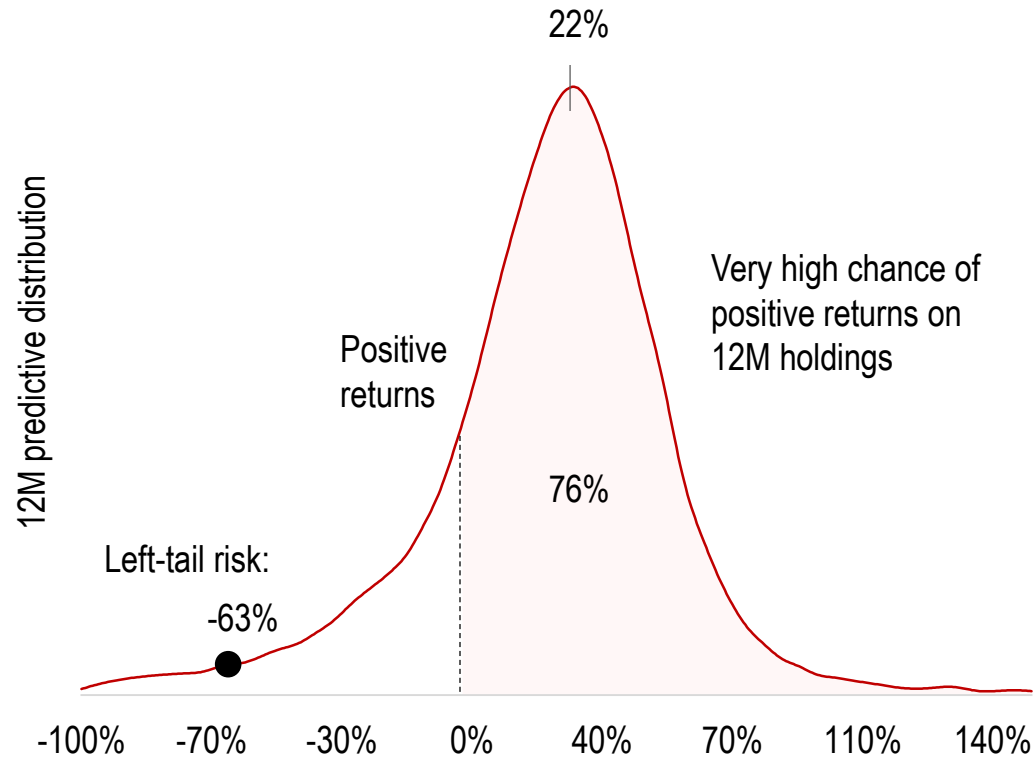
S&P commodity price index  
2010 = 100



Note: Fan chart shows 50 / 80 / 95% prediction intervals.

# High likelihood of positive returns 12M out

S&P commodity price index  
12M probability forecast (%)



Note: Expected returns are the mean of the predictive distribution. Black dot is the 5% conditional value-at-risk, expected future losses below the 5% quantile. Shaded area denotes likelihood of positive returns.

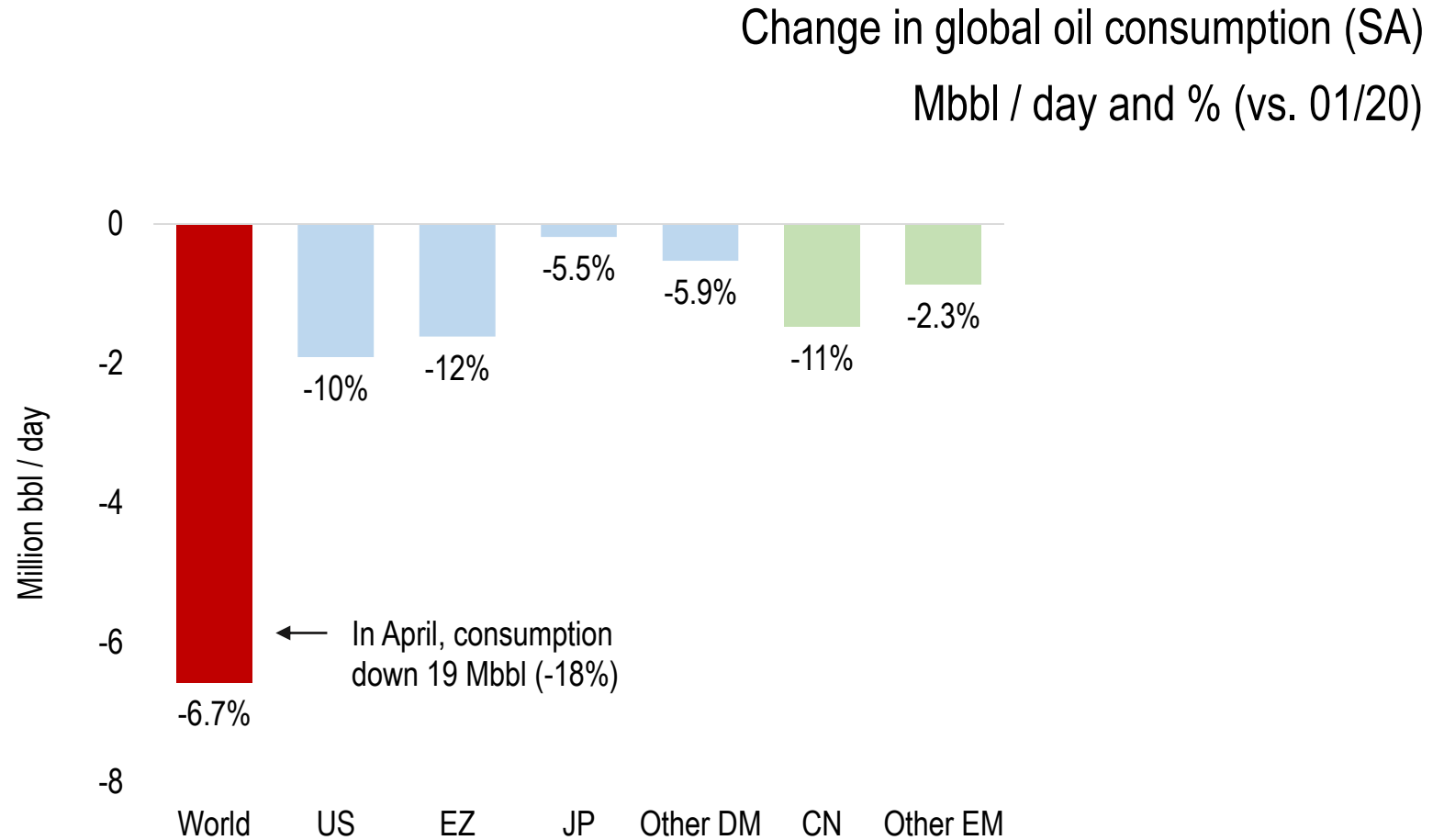
## 2. Crude oil

# Market review

# Oil market review: Demand

- Global oil consumption has increased sharply since bottoming out in April, but remains ~7M bbl / day (6.7%) below pre-COVID levels.
- The pick up in demand is directly related to stronger global mobility, as transportation accounts for 60% of worldwide oil usage.
- Within transportation, the bulk of the improvement reflects a recovery in road travel, although traffic levels are far from normalizing. Jet fuel demand is exceptionally low due to a collapse in air travel.
- Global industrial activity (16% of demand) also bottomed out in April, improving in May and June as production in China normalized.

# Demand still far from pre-COVID levels

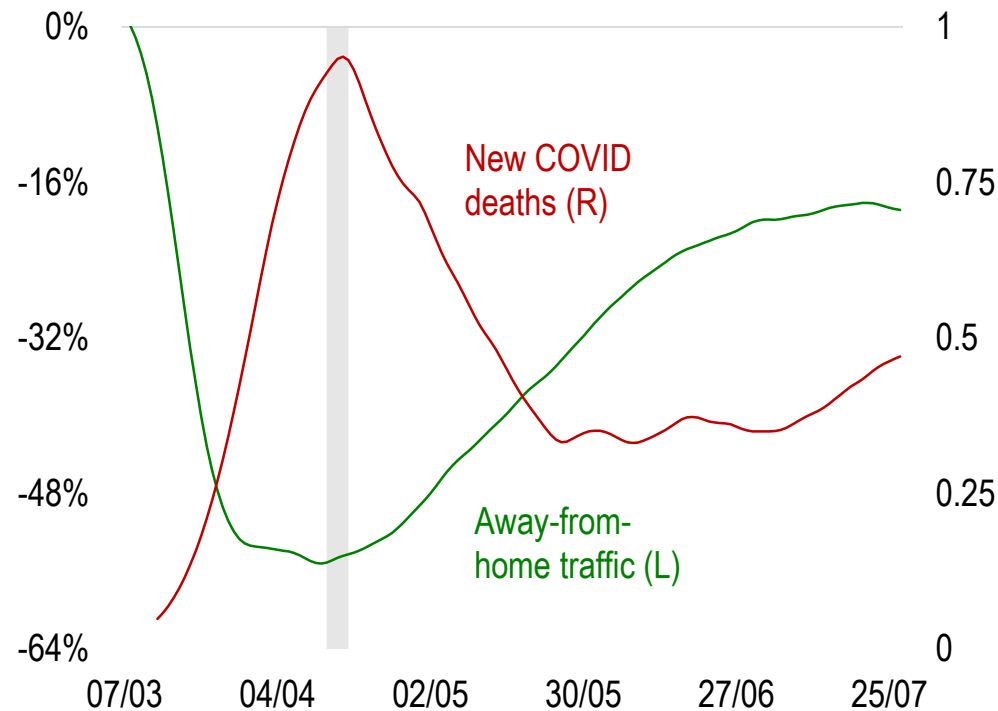


Note: Chart breaks down change in global oil consumption (SA) between January and July 2020. Bars measure change in million bbl / day.



# Evolution mirrors global mobility trends

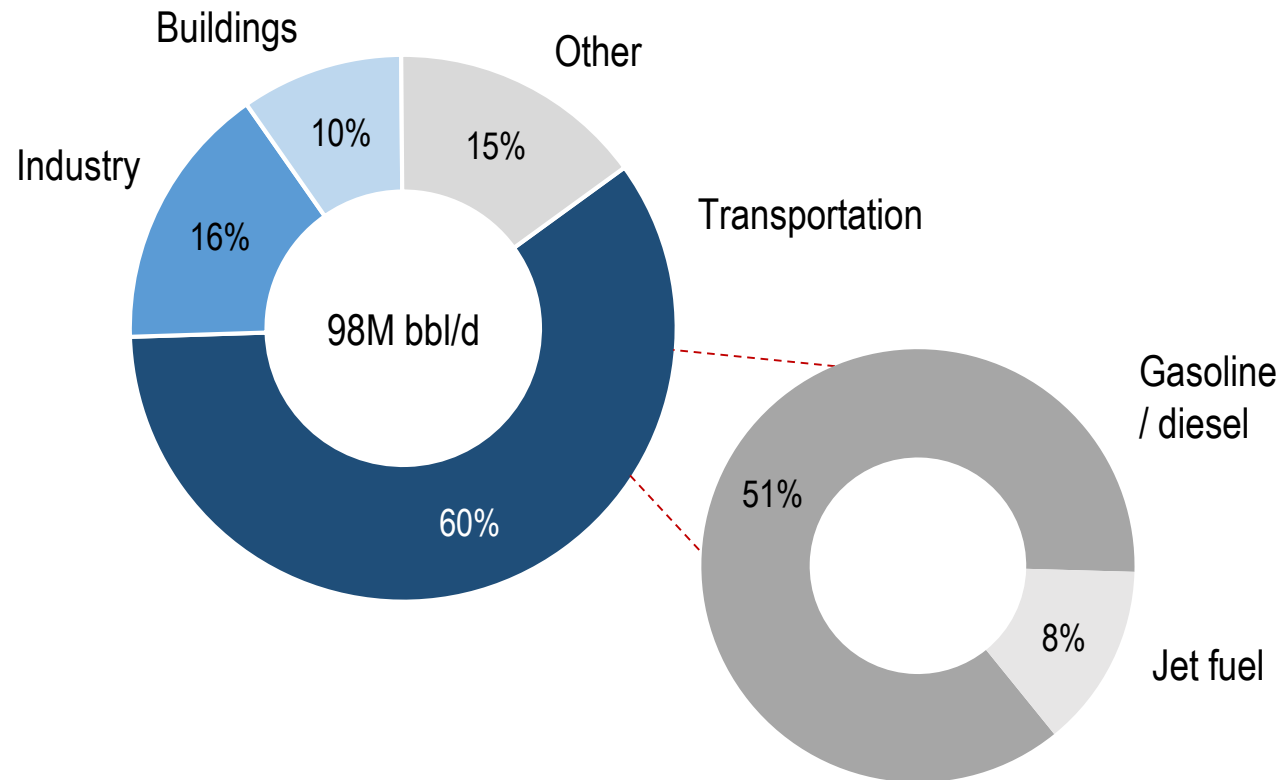
## Mobility and COVID deaths World ex. Latin America



Note: Green line shows changes in retail and recreation traffic versus Jan. 2020. Red line shows new COVID deaths per million. Figures correspond to global aggregate excluding Latin America.

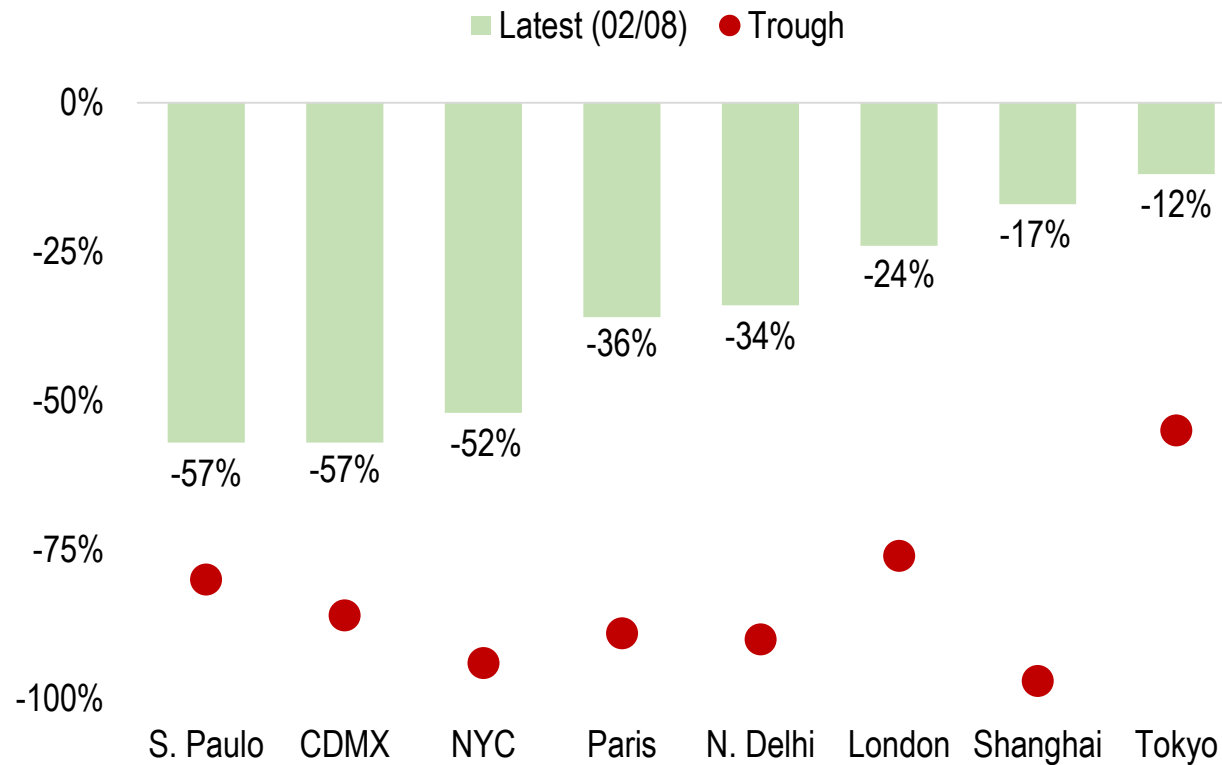
# As 60% of demand tied to transportation

Global oil demand by end-use  
% of total, 2019



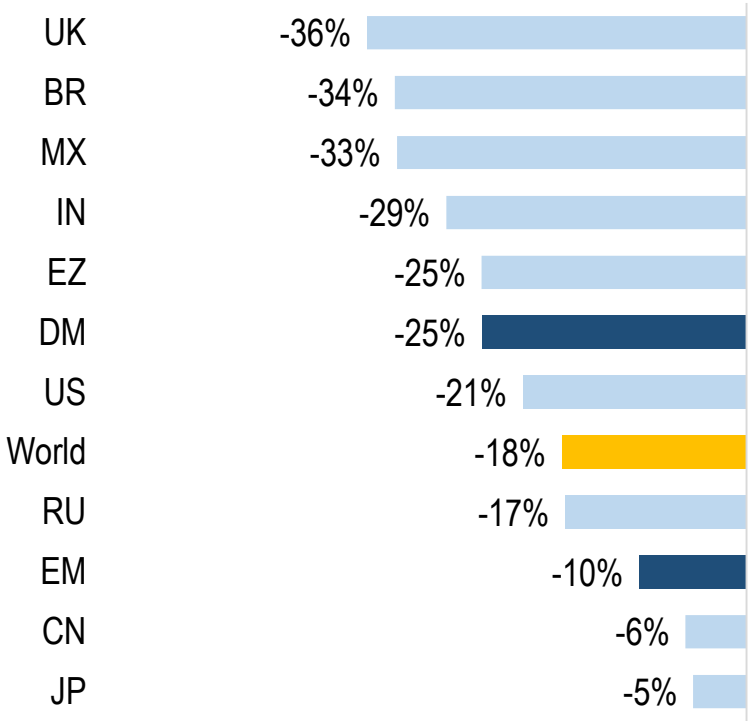
# Road traffic has yet to fully recover

Traffic congestion in metropolis  
Year-on-year (%)



# While dismal auto sales restrict growth

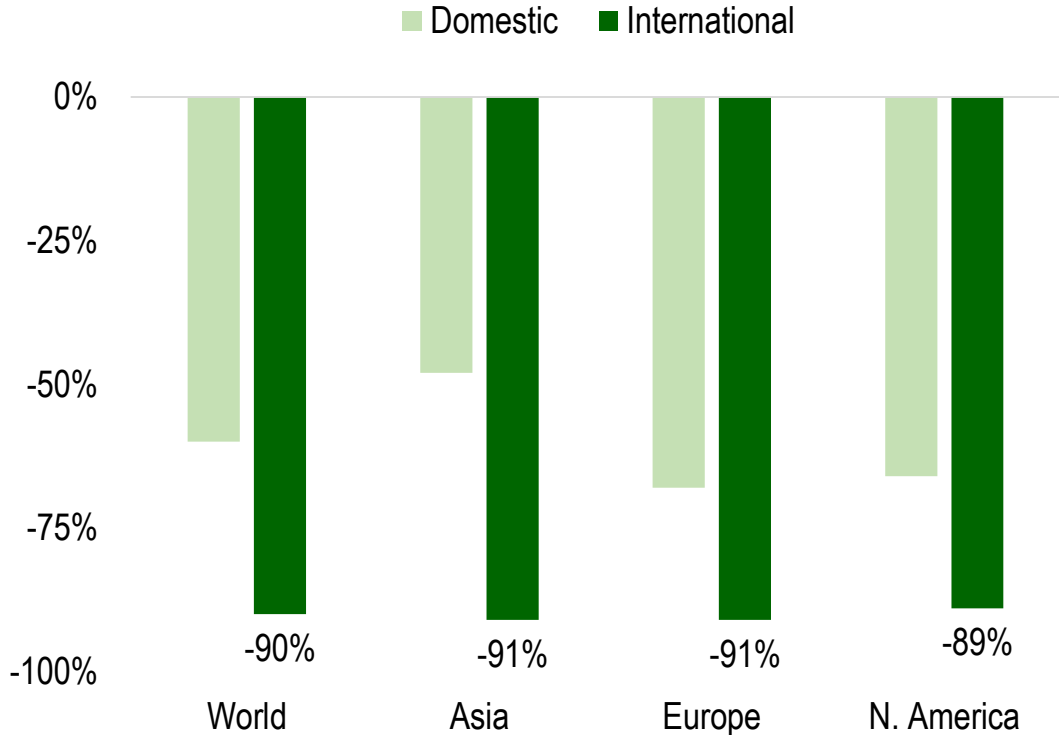
Vehicle sales by country  
6M year-to-date, SA (%)



Note: Bars compare seasonally adjusted change in light vehicle (car + truck) sales by country between 12/19 and 06/20.

# Jet fuel is the hardest hit end-use

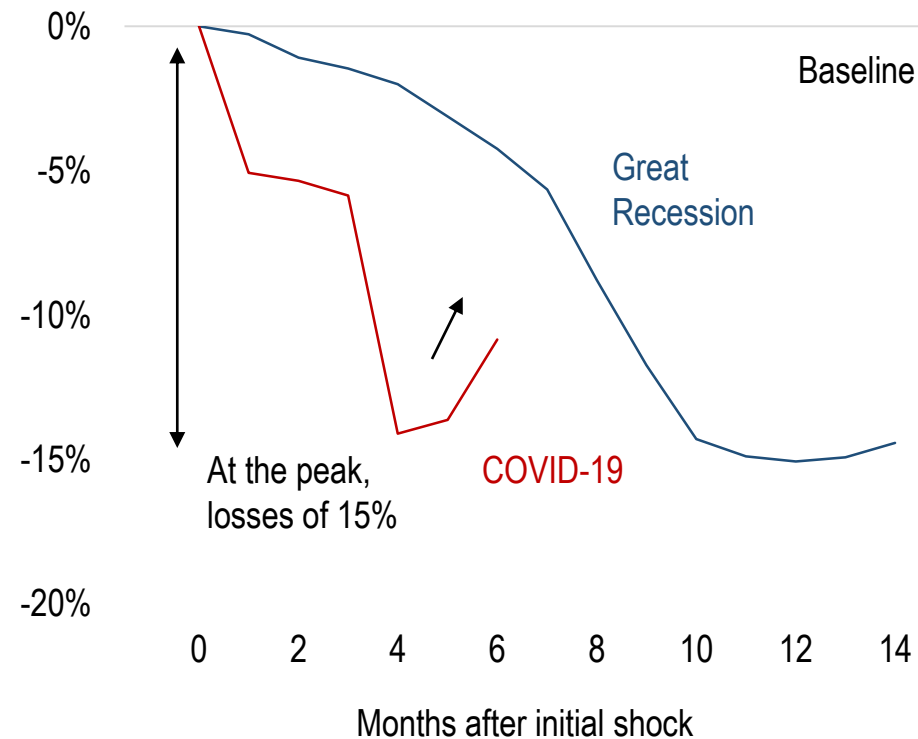
COVID impact on global air traffic  
Change in seating capacity (%)



Note: Bars compares seating capacity in international and domestic flights in June 2020 versus 'business as usual' (the ICAO baseline).

# Industrial activity is slowly recovering

## COVID impact on industrial activity Global output losses (%)



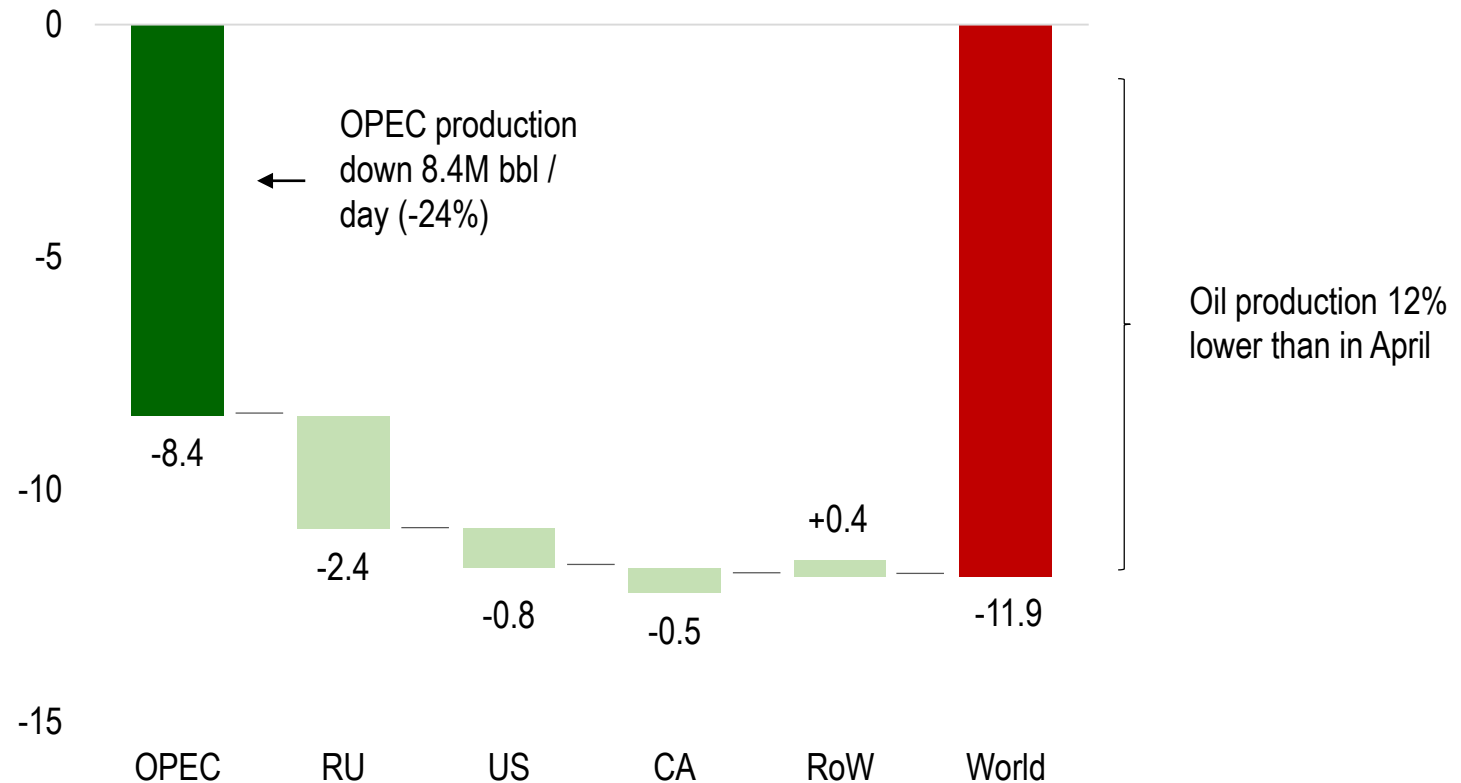
Note: Chart shows the realized performance of global industrial production during deep recessions. Output losses measured as deviations from a no-shock baseline.

# Oil market review: Supply

- Oil production has fallen sharply since the OPEC+ April agreements. OPEC output is now roughly 9M / bbl below capacity.
- In combination with stronger consumption, pledged and voluntary production cuts have now restored the market balance.
- Despite tighter market conditions, above-ground inventories remain exceptionally high, continuing to weigh on oil prices.
- Shale production in North America is down 2M bbl / day since March, reflecting a sharp decline in active drilling rigs. With WTI in the low \$40s, shale producers are still at a high risk of bankruptcy.

# Production down sharply since April

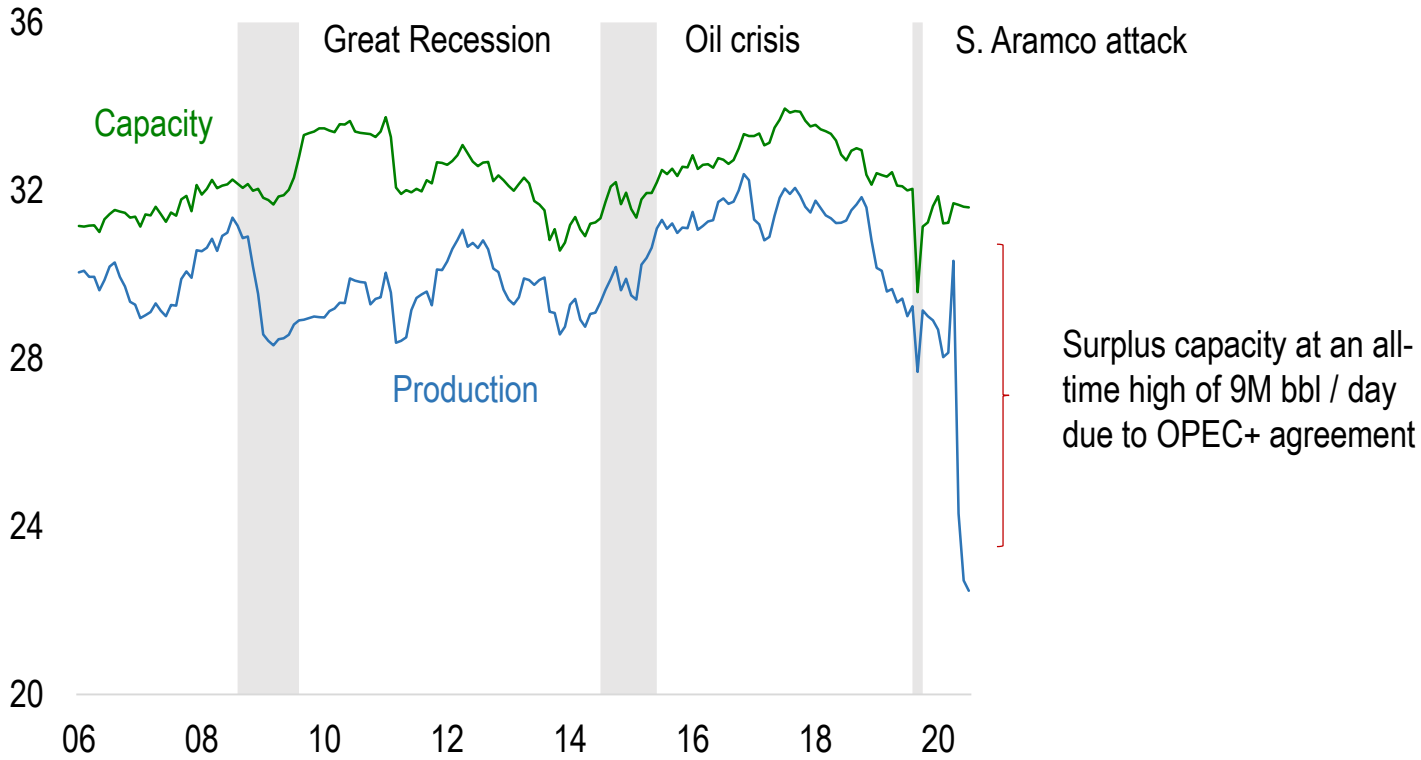
Change in global oil production  
April – July (million bbl/day)



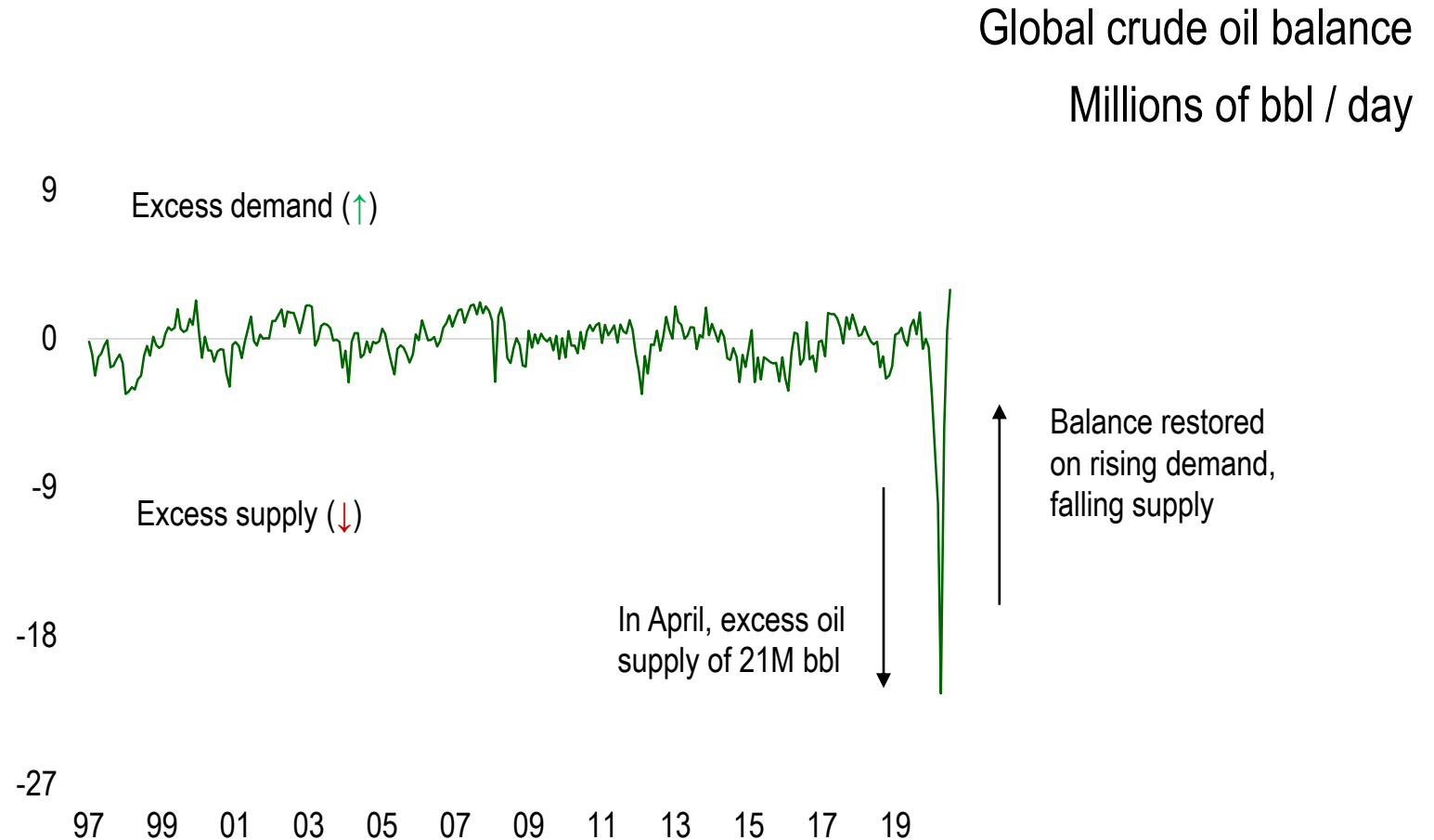


# OPEC operating well below capacity

OPEC crude oil supply  
Million bbl / day

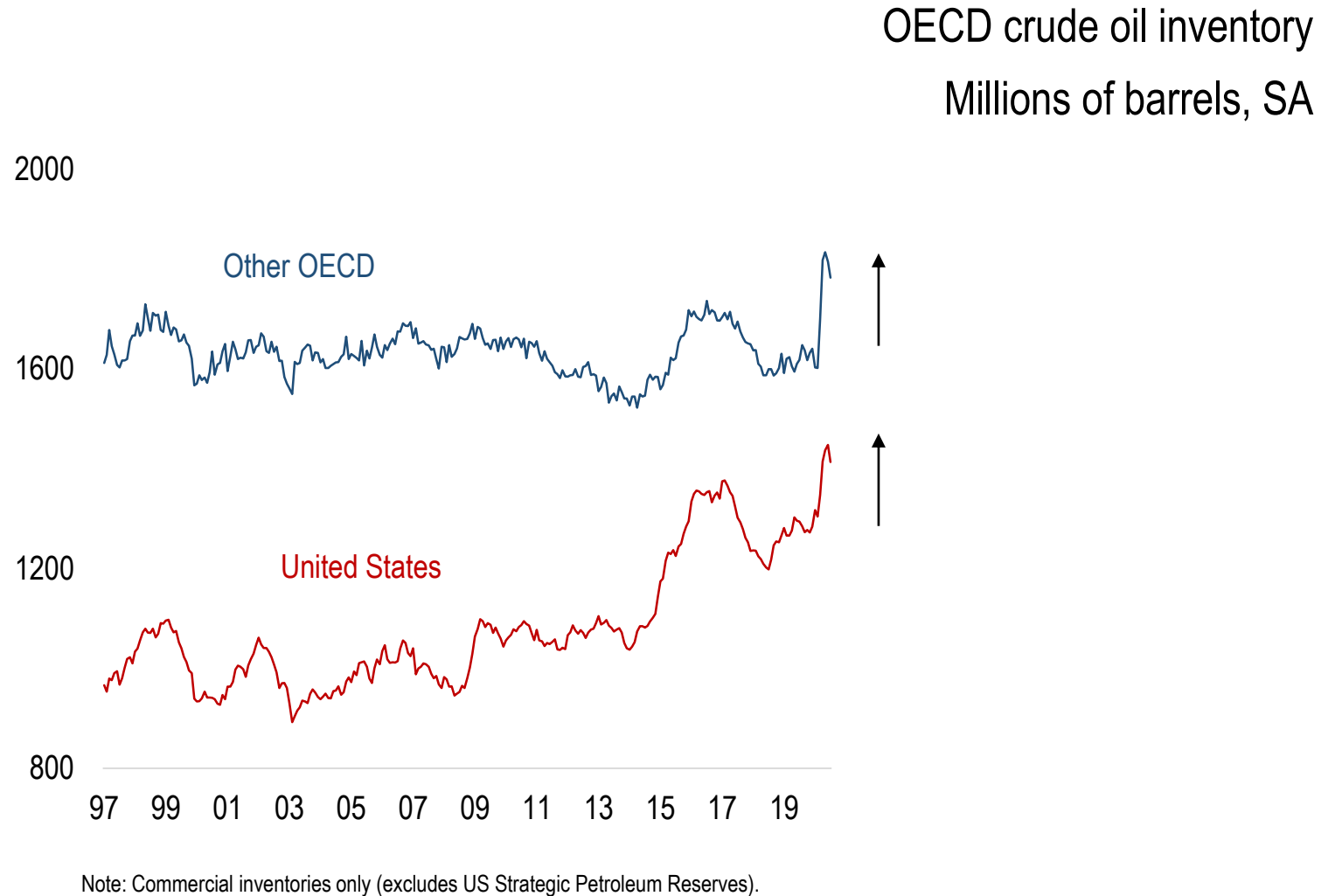


# Supply cuts have helped restore balance



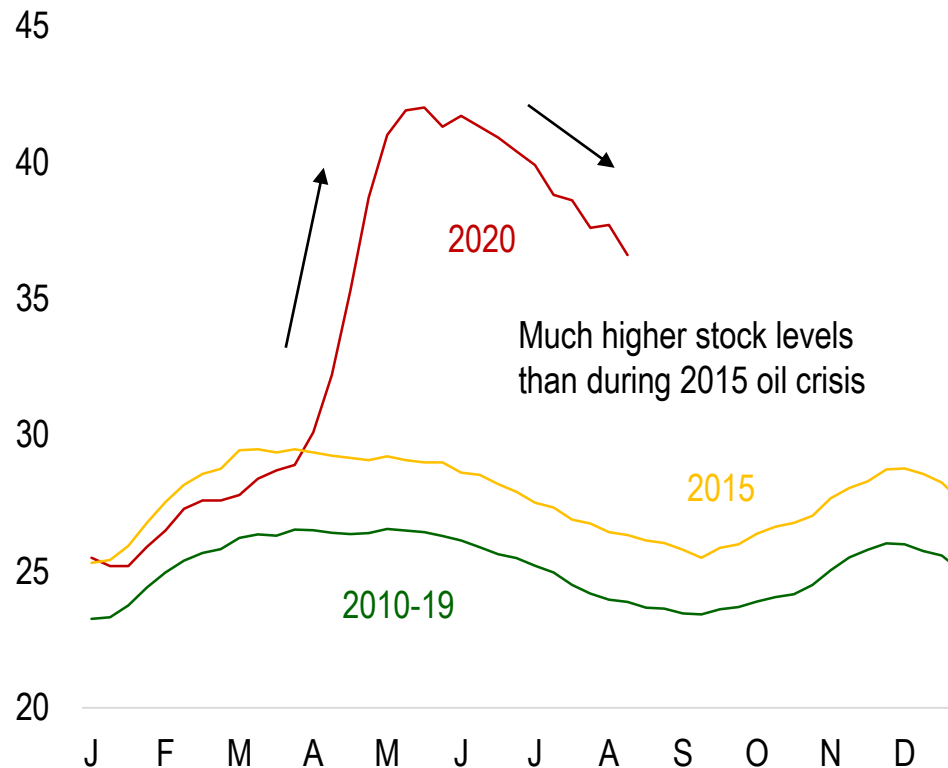
The crude oil balance is computed as the difference between global consumption and production. Positive figures indicate excess demand.

# Inventories remain exceptionally high



# Although days of supply now diminishing

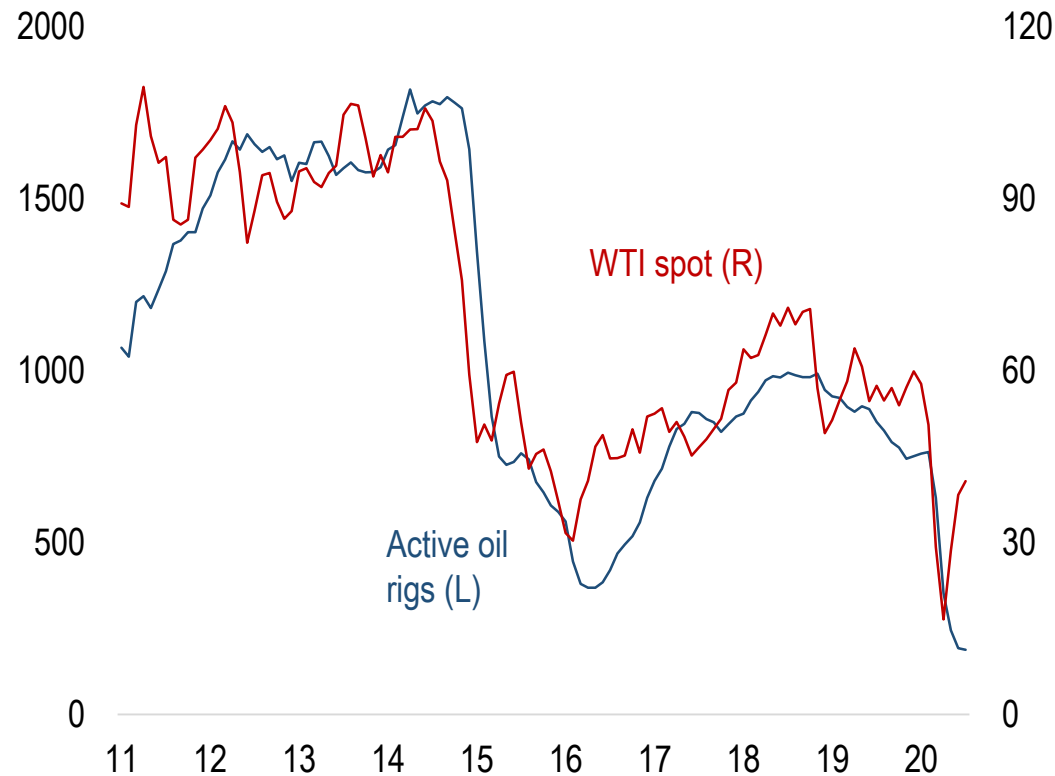
US crude oil inventories  
Weekly days of supply



Note: Commercial inventories only (excludes US Strategic Petroleum Reserves).

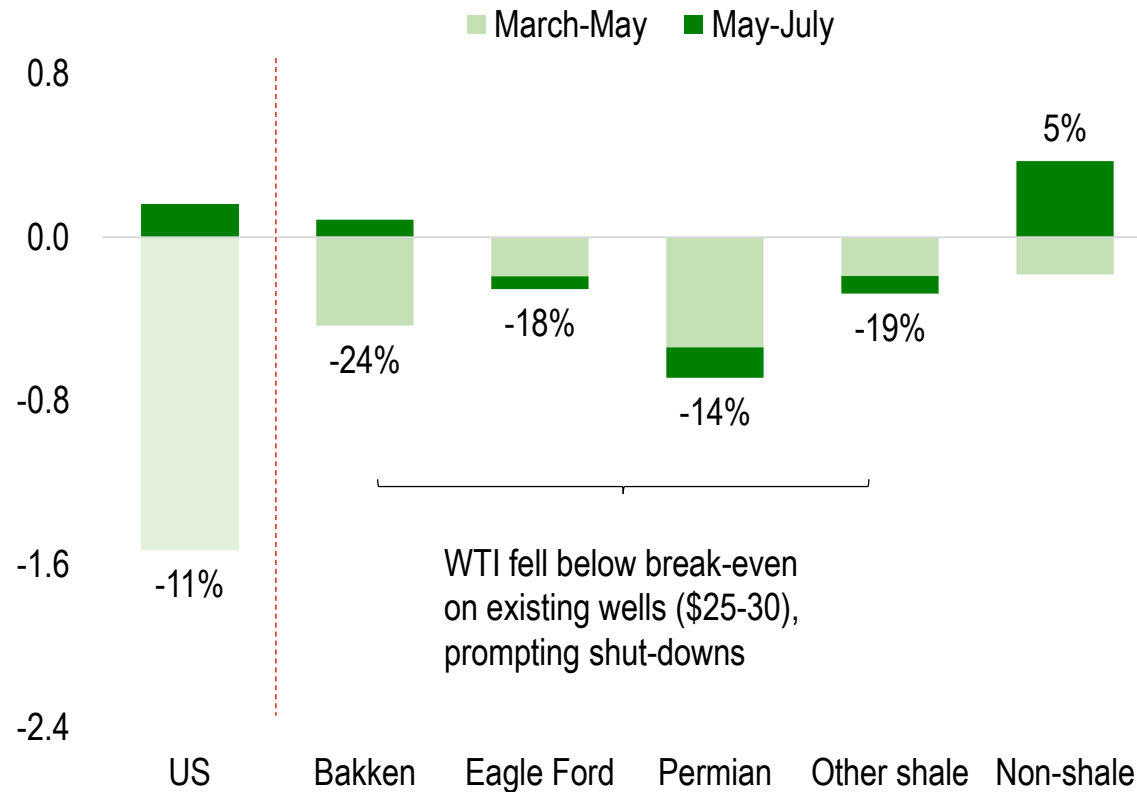
# NA supply impacted by low oil prices

NA oil rigs and WTI spot  
Rig count (SA) and USD / bbl



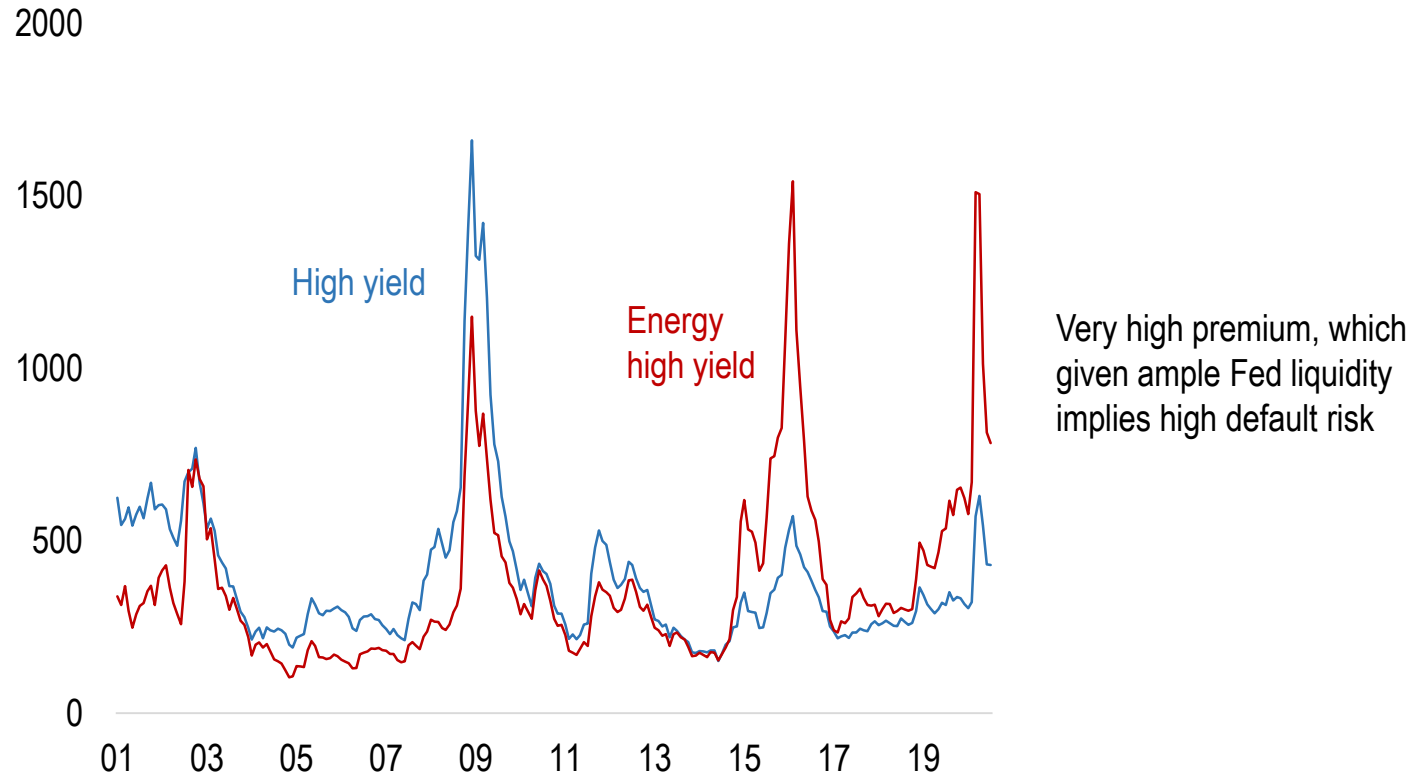
# Shale production has been hard-hit

US oil production by region  
March - July (millions bbl/day)



# Bankruptcy risk is still very high

## US high yield bond spreads Basis points (bps)



Very high premium, which given ample Fed liquidity implies high default risk

Note: Spreads computed against the Moody's Aaa investment-grade benchmark.

# Oil market review: Prices

- Oil prices have risen \$25 since late April as improved mobility and OPEC production cuts have helped restore the market balance.
- Trader sentiment remains bearish (as indicated by e.g. net short positions), but is less of a drag on prices than in March and April.
- Weak economic activity and ample inventories explain most of the drop in real oil prices year-to-date (-37% through 6M).
- We estimate Brent is currently trading at a ~ \$10 discount versus its 'fair' value. The wedge is explained by bearish sentiment and low precautionary purchases by end-users, given high stock volumes.



# Oil prices up \$25 since late April

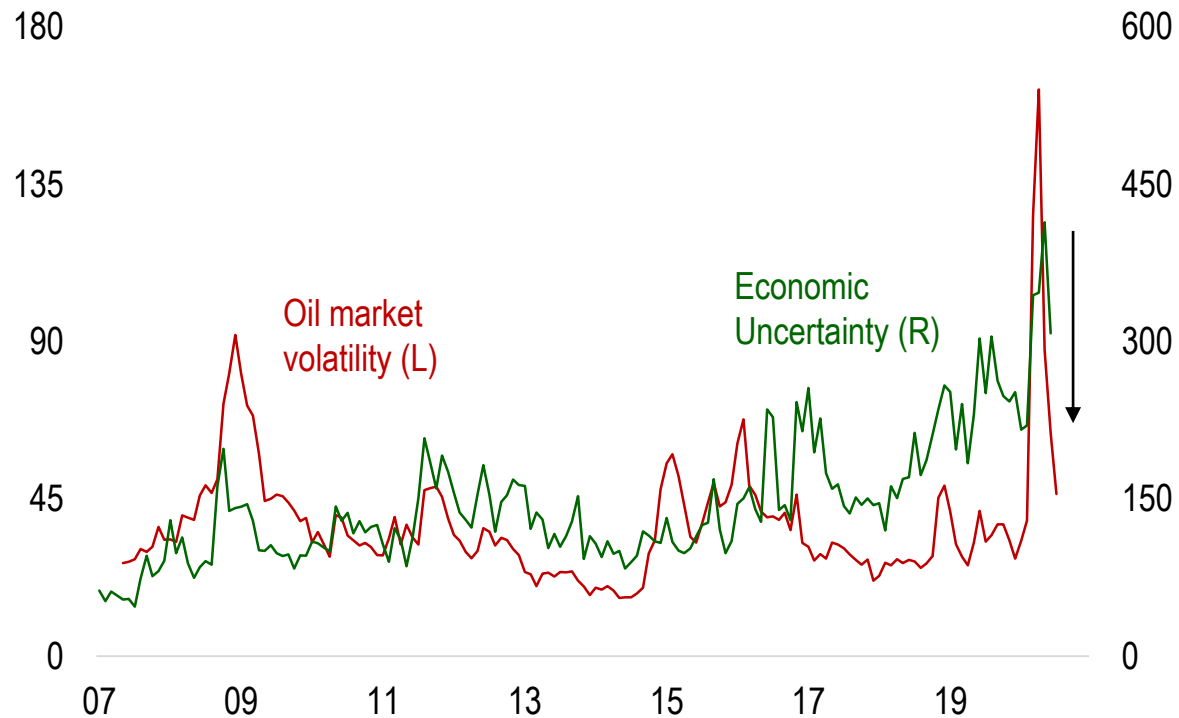
Oil market events timeline

Brent spot price (USD / bbl)



# Market volatility has diminished

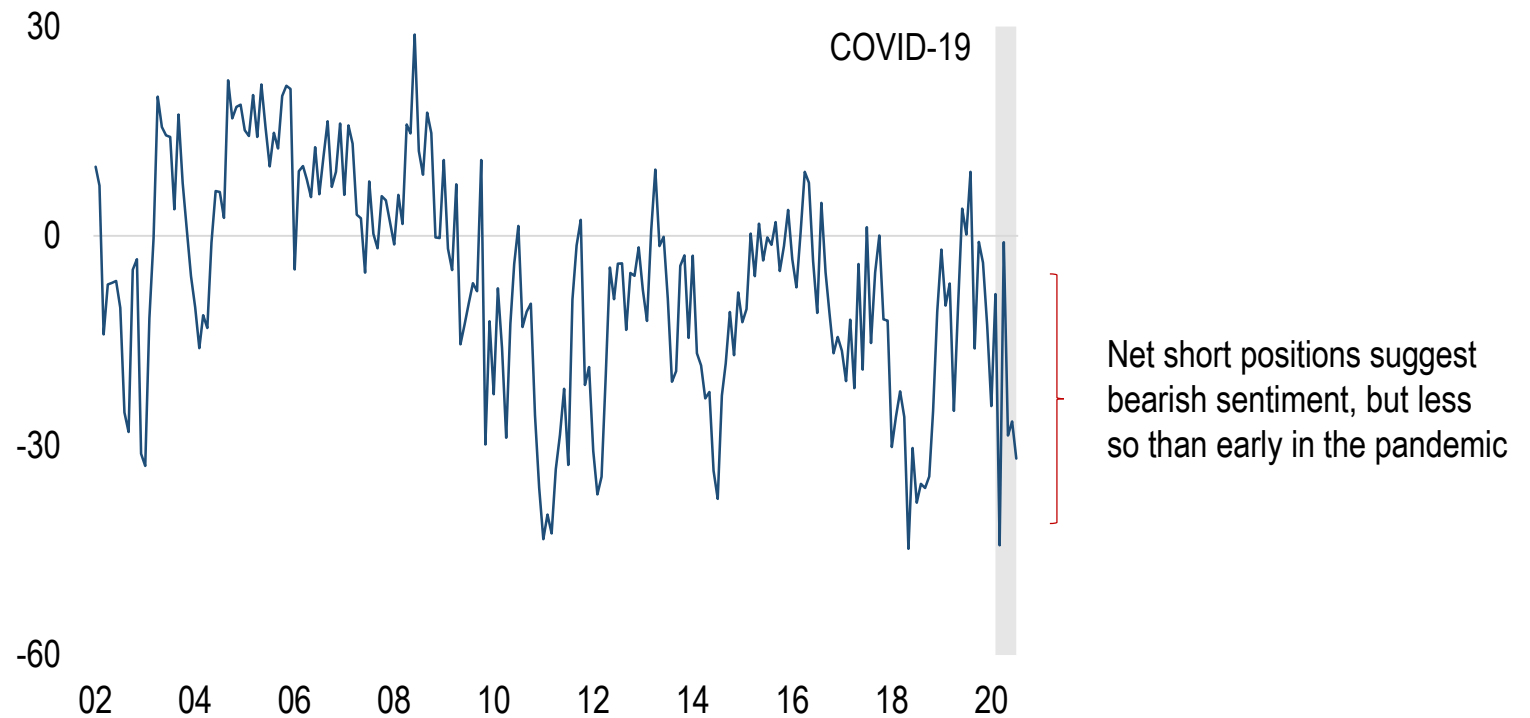
## Oil volatility and economic uncertainty OVX index and World EPU



Note: Red line is the CBOEs crude oil ETF volatility index (OVX). Green line shows the GDP-weighted global economic policy uncertainty index of Baker, Bloom and Davis.

# But trader sentiment remains 'bearish'

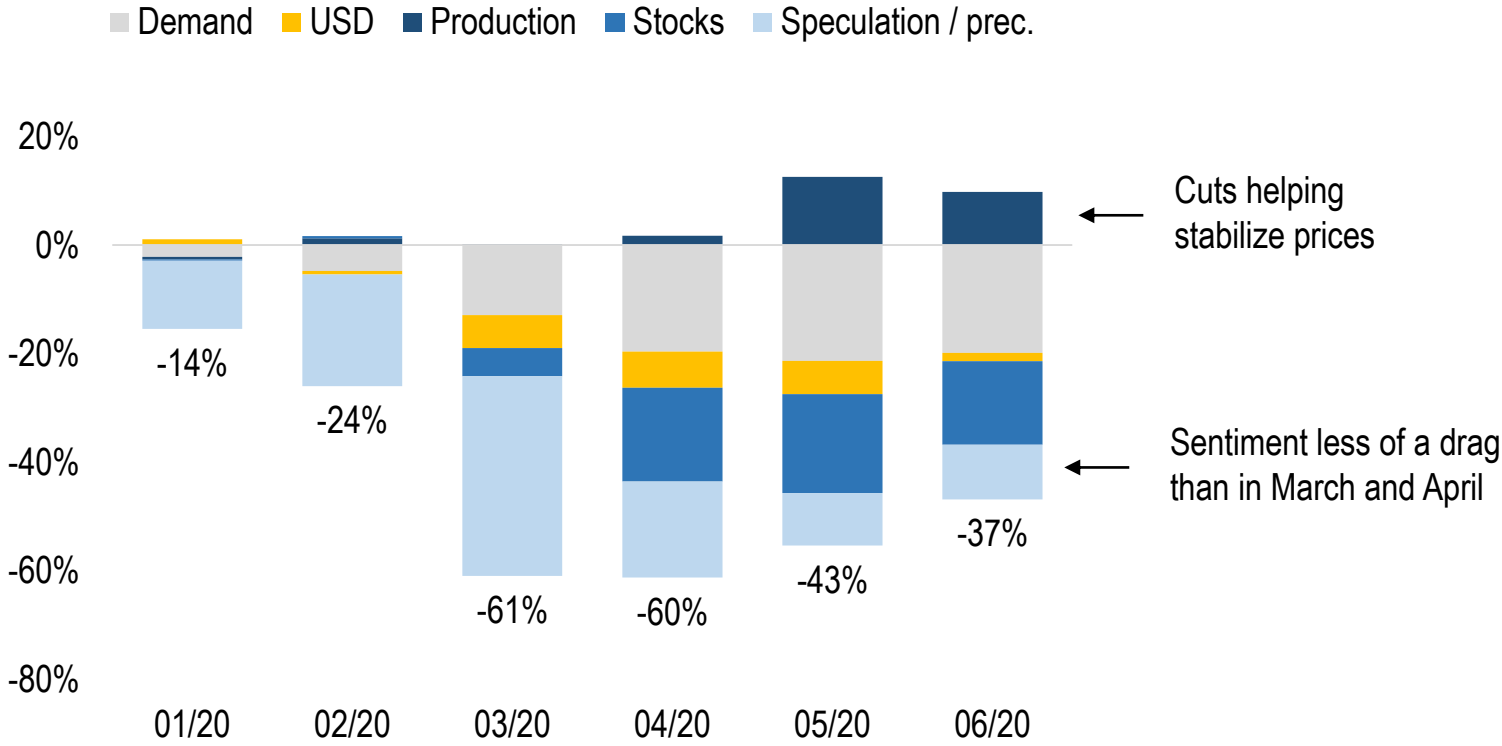
Net long positions – Crude oil  
Thousands of contracts



Note: Net long positions are the difference between long and short crude oil positions by traders in the New York Mercantile Exchange (NYMEX).

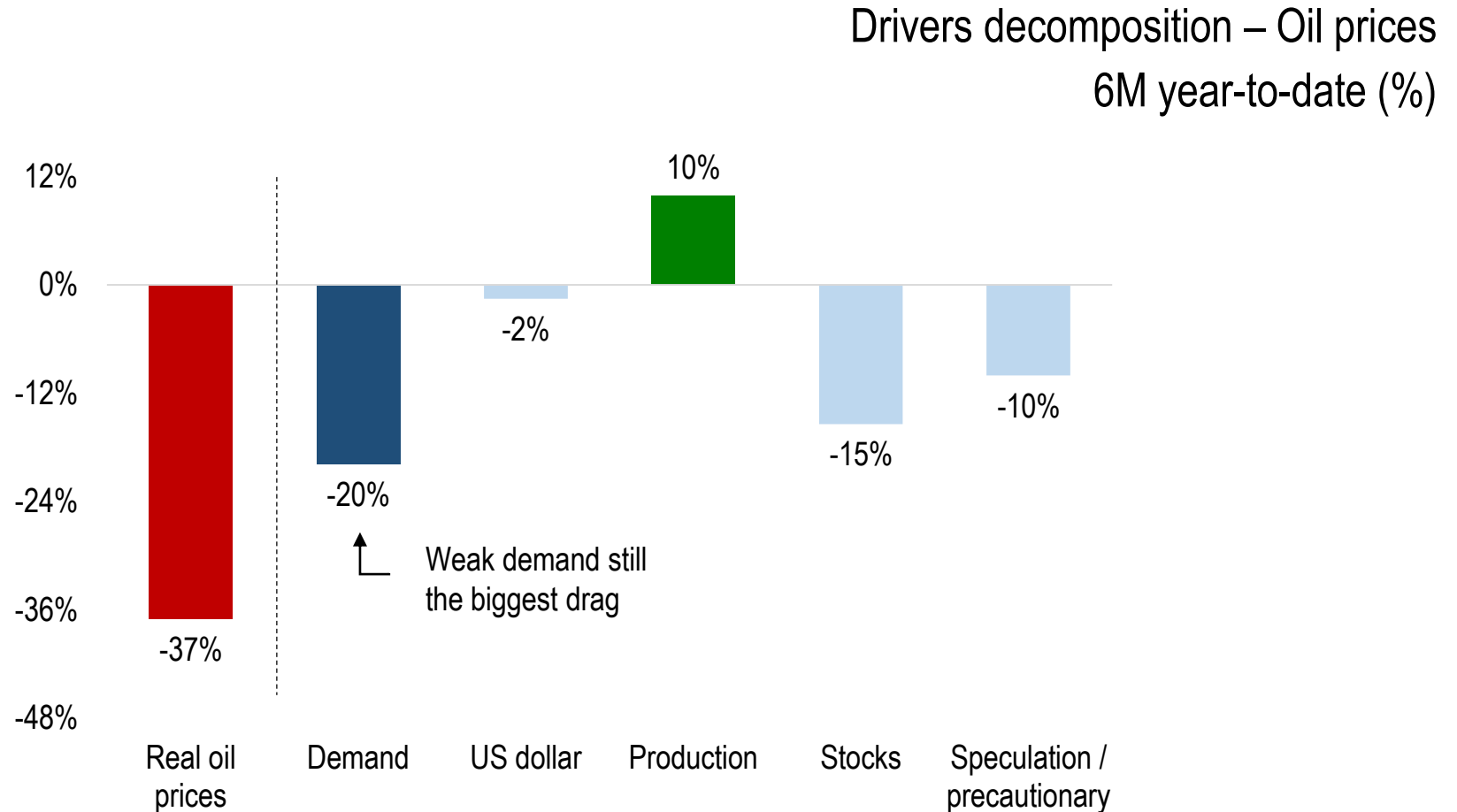
# OPEC cuts are helping stabilize prices

Drivers decomposition – Oil prices  
Year-to-date (%)



Note: Contribution of market drivers to change in real Brent prices vs. December 2019. 'Demand' captures changes in broad economic activity and oil-specific demand shocks. Speculation is proxied by net long NYMEX oil positions.

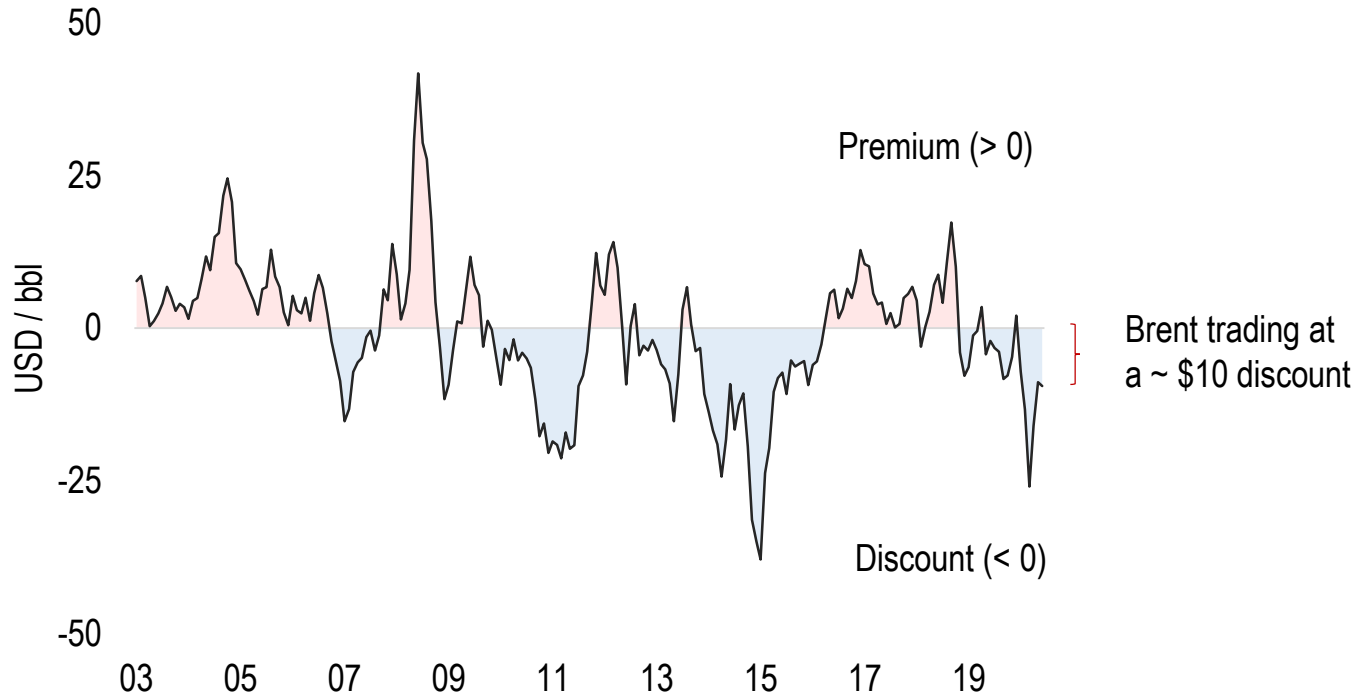
# Low demand remains the biggest drag



Note: Contribution of market drivers to change in real Brent prices 6M YTD (right-hand bar in previous chart).

# Oil prices trading at a ~ \$10 discount

Brent spot vs. 'fair' value  
Risk premium – USD / bbl



Note: The oil risk premium is obtained by comparing the Brent spot price to its modelled 'fair' (or equilibrium) value. A positive gap indicates oil is trading at a premium, e.g. due to geopolitical risk. A negative gap signals bearish sentiment.

# Market outlook

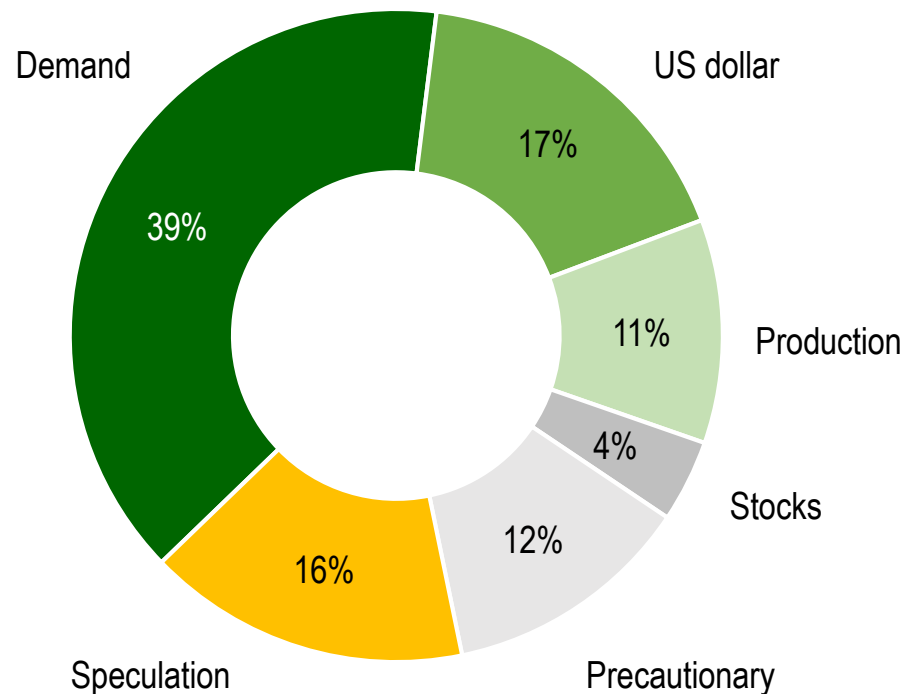
# Oil market outlook

- We expect global oil consumption to recover further, averaging ~ 98M bbl / day in 2021. Given depressed air travel, however, it is unlikely that oil will exceed 100M bbl (its Q4/19 level) before late 2021.
- Financial markets expect oil prices to rise 6% (\$3 / bbl) by mid-2021. In our view, prices have greater upside. There is a 78% chance that Brent will exceed the July 12M futures contract (\$46 / bbl). This improves its relative appeal versus other risky assets.
- The high probability reflects further improvements in transportation demand, alongside limited oil investments and a weaker USD outlook. The fact that oil is still trading at a discount also improves its upside.



# Demand factors dominate at a 12M horizon

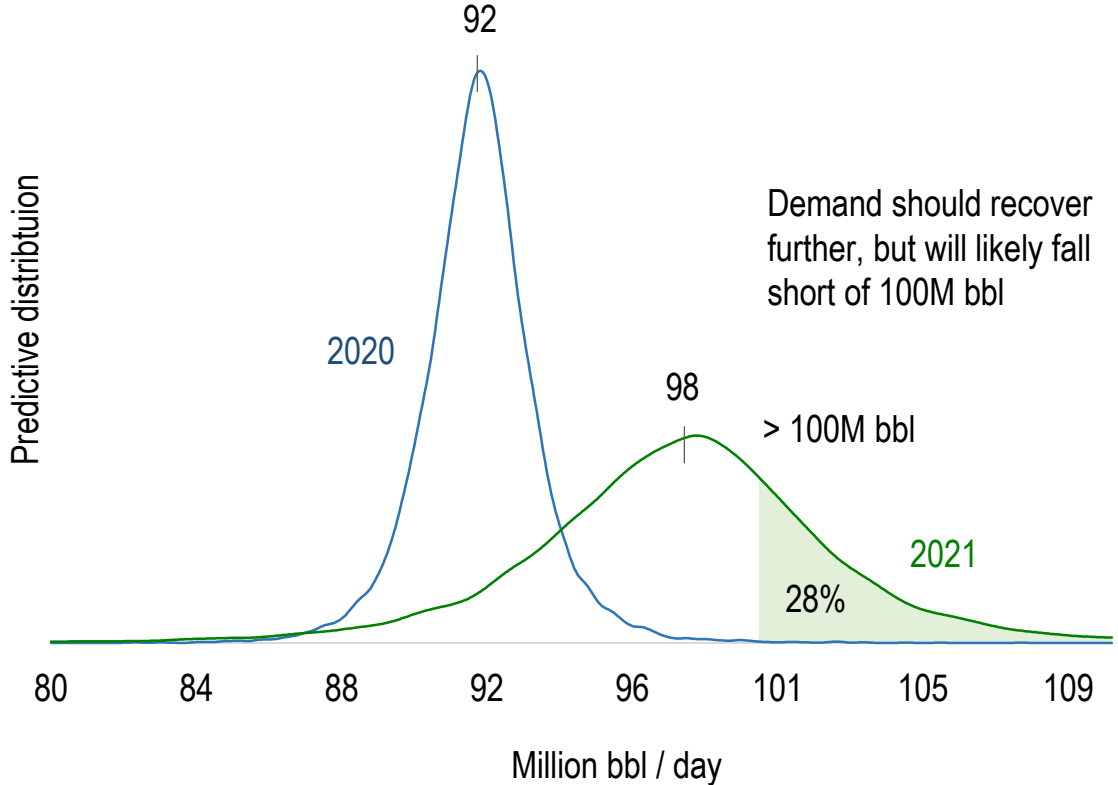
12M variance decomposition – Brent  
Share of variability, 1986-20 (%)



Note: Pie chart breaks down the contribution of market drivers to 12M (YoY) fluctuations in real Brent prices. 'Sentiment' encompasses both precautionary purchases by consumers (e.g. refineries) and speculative moves by traders.

# Oil demand should continue recovering

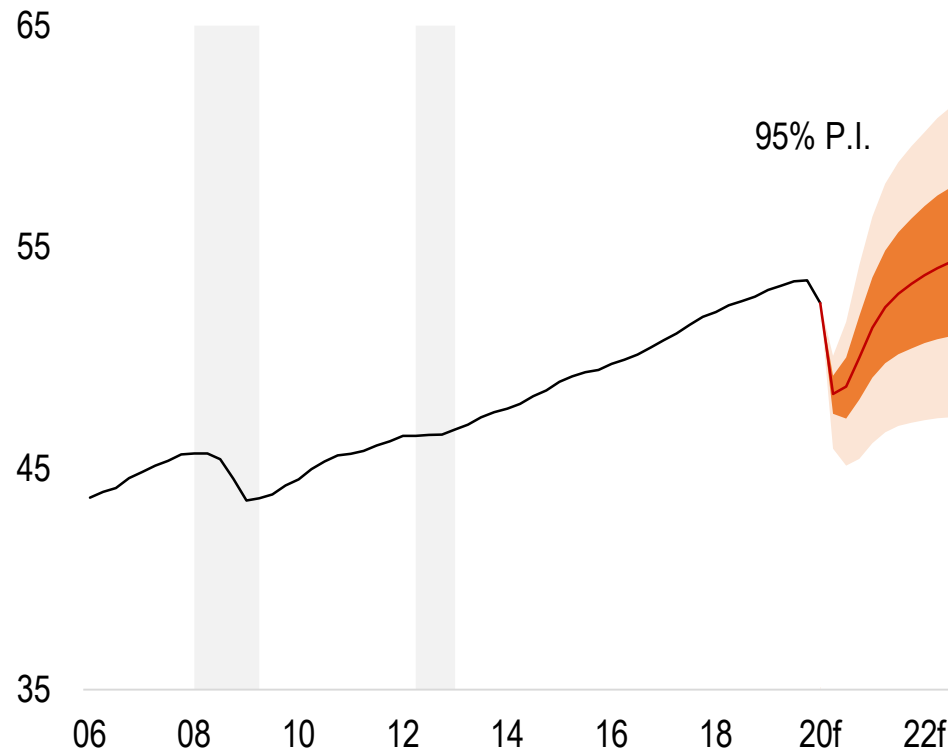
## Global oil consumption 2020-21 outlook (Mbbbl / day)



Note: Chart shows probability distributions for average oil consumption worldwide in 2020 and 2021. Base scenario is the mean of each distribution. Shaded area denotes the likelihood of oil demand exceeding 100M bbl / day in 2021.

# Aided by stronger economic activity

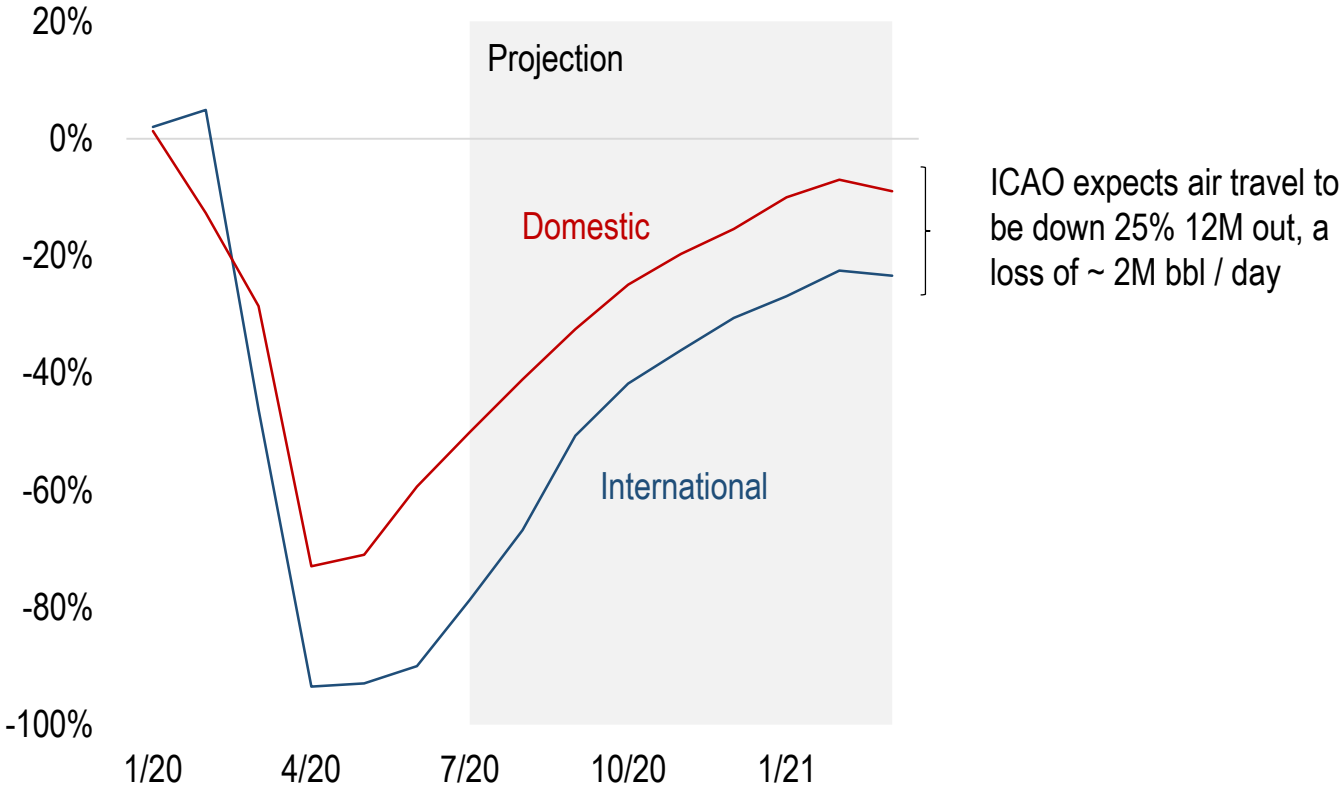
DM GDP outlook  
Trillions of (2010) USD



Note: Fan chart corresponds to 70% and 95% prediction intervals. Grey bars are OECD recession dates.

# Air travel is the weakest link

Global air traffic seating capacity  
Deviations from baseline (%)

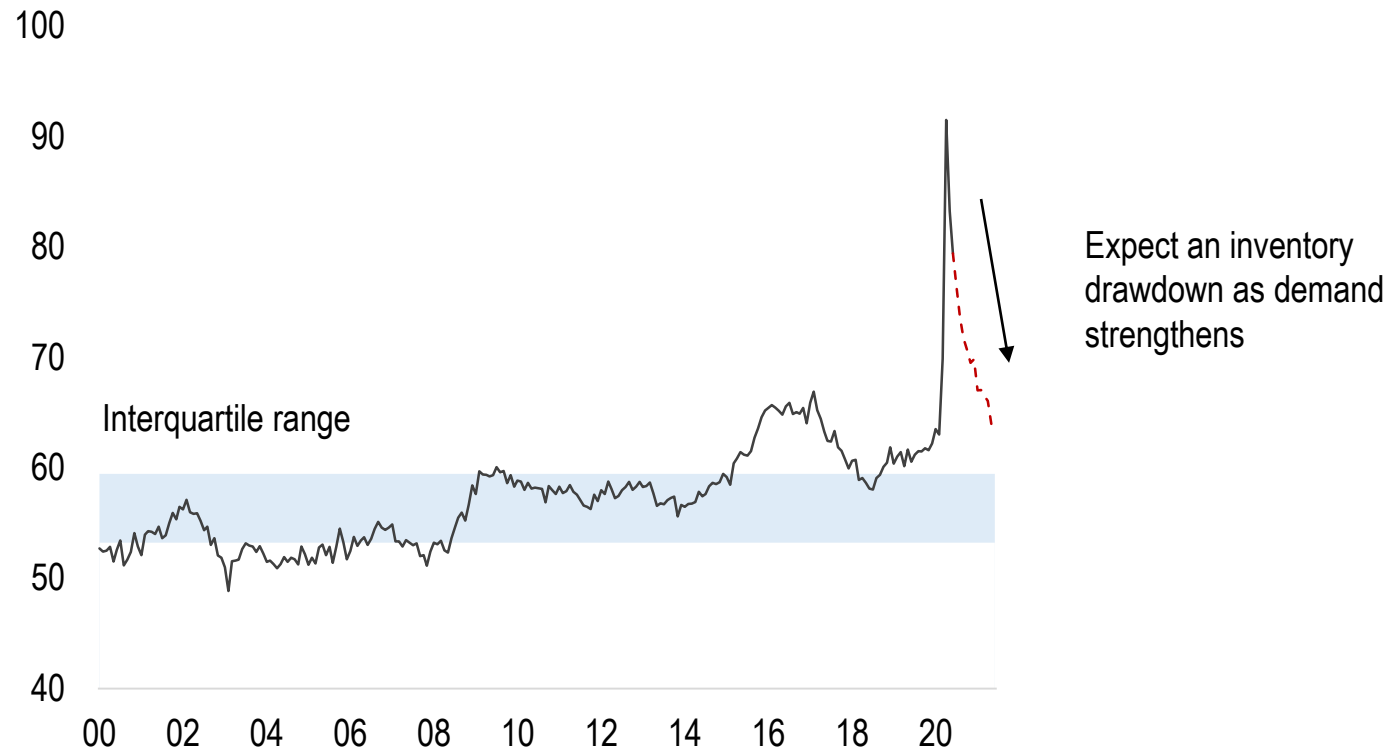


ICAO expects air travel to be down 25% 12M out, a loss of ~ 2M bbl / day

Note: Chart compares global air traffic seating capacity relative to 'business as usual'.

# Inventory overhang should diminish

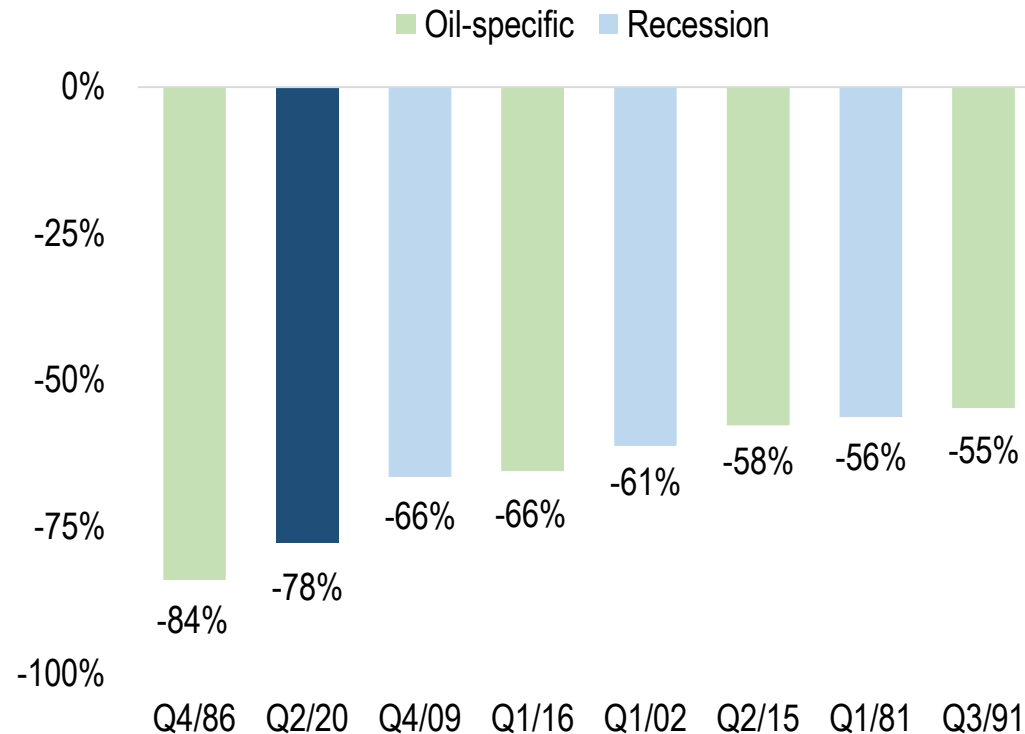
## OECD crude oil inventories Monthly days of supply



Note: Commercial inventories only (excludes US Strategic Petroleum Reserves).

# Low CAPEX should keep NA supply tight

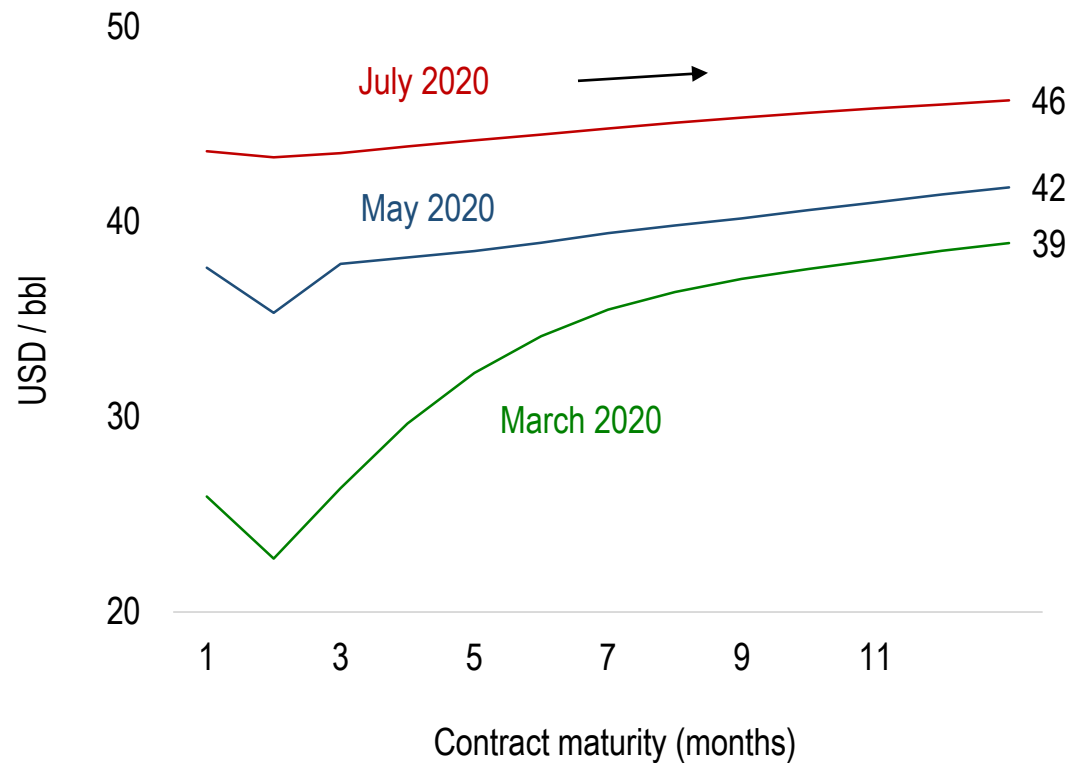
Largest declines in US oil investment  
Quarter-on-quarter, SAAR (%)



Note: Bars show the eight largest quarterly declines in US oil mining investment since 1970. Green bars represent oil market-specific events. Blue bars correspond to declines during recessions.

# Markets expect Brent to hit \$46 12M out

Brent NYMEX futures  
USD / bbl



Markets expect Brent  
to rise by 6% to \$46 /  
bbl one-year out

# But market view is quite conservative

## Crude oil price outlook Baseline and probabilities

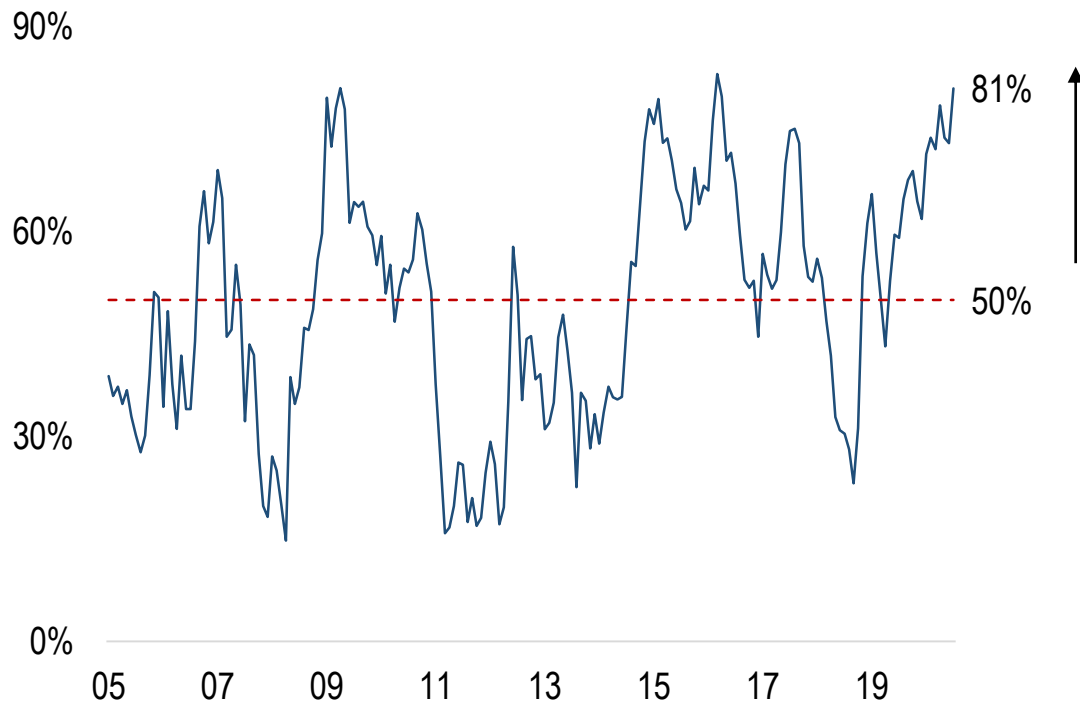
| Brent Outlook<br>Horizon | Baseline<br>(USD / bbl) | Probabilities (%) |           |        |        |
|--------------------------|-------------------------|-------------------|-----------|--------|--------|
|                          |                         | > July (\$43)     | > Futures | < \$30 | > \$70 |
| 3M ahead                 | \$49                    | 66%               | 64%       | 9%     | 5%     |
| 6M ahead                 | \$55                    | 78%               | 75%       | 11%    | 16%    |
| 12M ahead                | \$61                    | 81%               | 78%       | 9%     | 35%    |

Note: Baseline forecast is the mean of the predictive distribution. Probabilities show the likelihood of exceeding specific thresholds over a given horizon. These include the July month-end price (in red) and the futures price for a specific maturity.



# High probability of oil price inflation

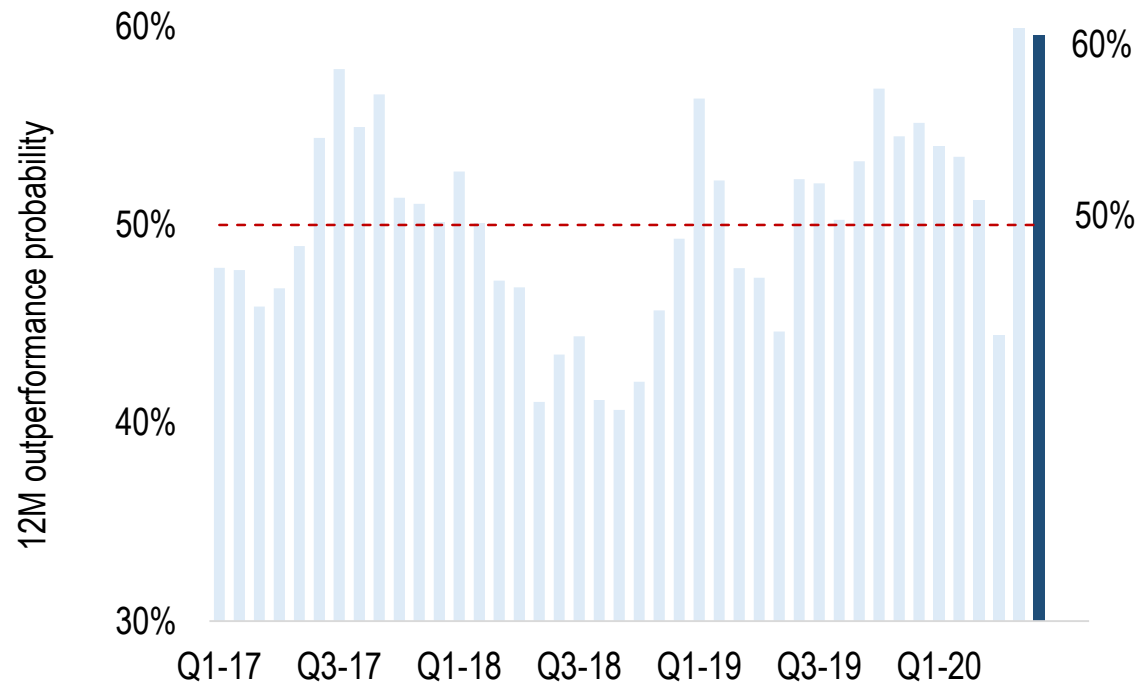
Likelihood of higher Brent prices  
12M ahead probability (%)



Note: Chart tracks the probability of Brent spot prices rising over a one-year period. Probabilities above 50% (dashed red line) indicate oil price inflation is the most likely outcome.

# Improving the upside for oil investments

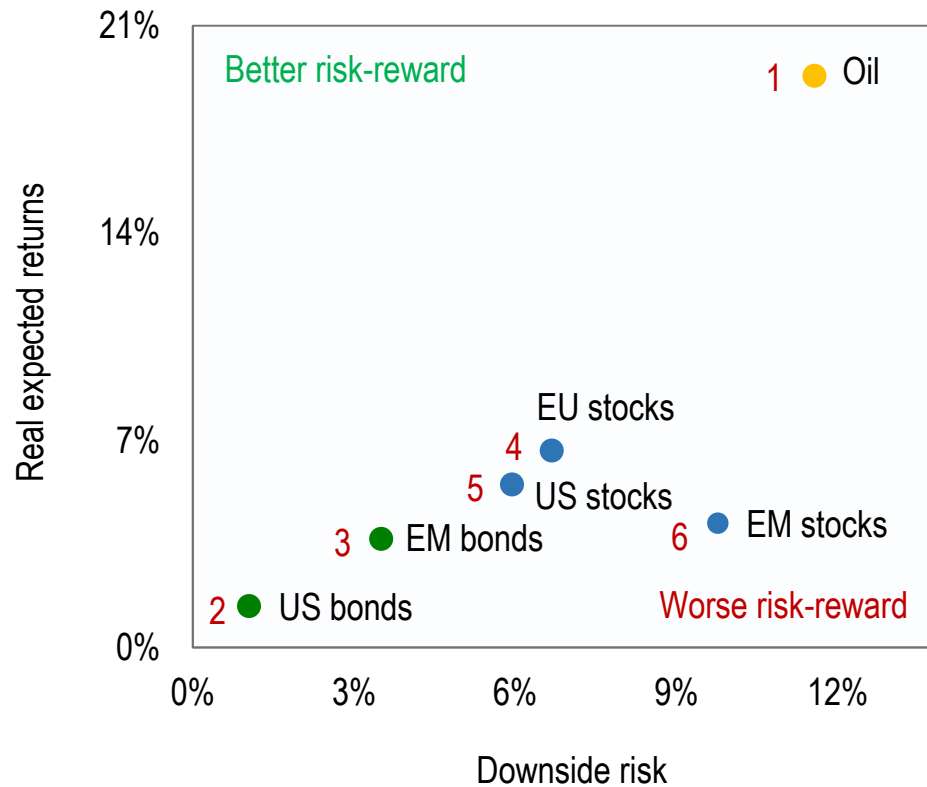
Crude oil vs. DM stocks  
Excess returns probability



Note: Chart plots likelihood of crude oil investments outperforming DM stocks over a 12M holding period. Probabilities above 50% indicate most likely outcome.

# Favourable risk-reward trade-off 12M out

## Risk-reward comparison 12M investments



Despite being a *very* risky investment, oil offers higher risk-adjusted expected returns

Note: Numbers in red rank assets by their Omega ratio, a measure of investment quality that compares expected returns to downside risk (defined as average expected losses).