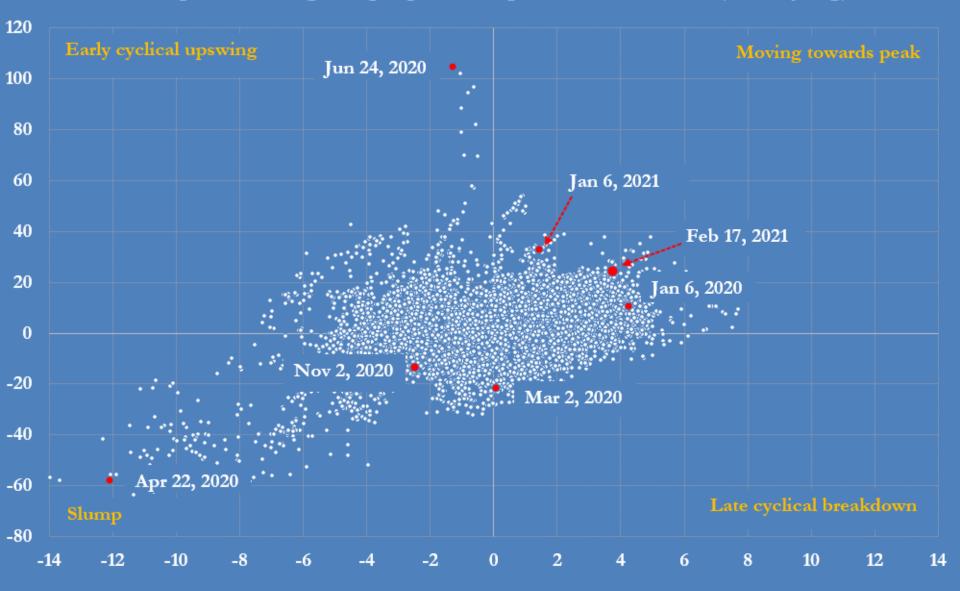
OPEC<sup>+</sup> and the oil price cycle Selected indicators

JOHN KEMP REUTERS 18 Feb 2021

Brent spot prices and calendar spread, 1993-2021

X-axis: six-month calendar spread (M1-M7) (U.S\$ per barrel) Y-axis: percent change in spot price over previous two months (five-day avg)



Source: ICE Futures Europe

@JKempEnergy

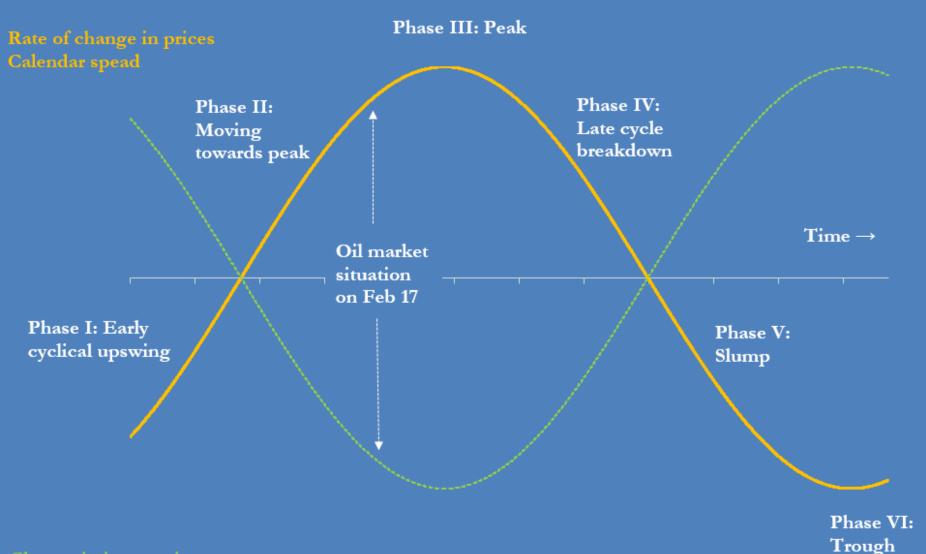
## Global petroleum market, monthly data, 2008-2021

X-axis: OECD commercial inventories (percent change from prior five-year average)
Y-axis: Brent calendar spread (six-months, U.S\$/bbl, contango (-) or backwardation (+))



Sources: U.S Energy Information Administration (Short-Term Energy Outlook), ICE Futures Europe @JKempEnergy

## Global petroleum cycle, a stylised view Oil prices, calendar spreads, inventories and OPEC policy responsivenes



Change in inventories
OPEC policy responsiveness

## Global petroleum market cycle - prices and inventories

PHASE	CYCLICAL POSITION	SPOT PRICES	CALENDAR SPREAD	INVENTORIES	OPEC RESPONSE
I	Early cyclical upswing	Increasing Accelerating rate	Contango → Backwardation	High Falling	OPEC compliance weakens
н	Moving towards peak	Increasing Decelerating rate	Backwardation Widening	Moderate Falling	OPEC agreement dissolves
Ш	Peak	Level stabilising Extreme daily volatility	Backwardation Narrowing	Low Steadying	OPEC under pressure to raise output
IV	Late cyclical breakdown	Decreasing Slowly	Backwardation → Contango	Moderate Rising	OPEC postpones decision on cuts
V	Slump	Decreasing Rapidly	Contango Widening	High Rising	OPEC agrees to cut production
VI	Trough	Level stabilising Extreme daily volatility	Contango Narrowing	High Steadying	OPEC focuses on compliance

## Global petroleum market cycle - production and consumption

PHASE	CICLICAL POSITION	OPEC PRODUCTION	NON-OPEC OUTPUT	CONSUMPTION
	Early cyclical upswing	Output restraint Compliance weakens	Falling Decelerating rate	Growing above trend Low prices spur consumption
п	Moving towards peak	Restraint relaxed Compliance dissolves	Rising Accelerating rate	Growing above trend Economic expansion spurs use
ш	Peak	No restraint Maximum output	Rising Rapidly (boom)	Growing below trend High prices inhibit consumption
IV	Late cyclical breakdown	No restraint Pump at will	Rising Decelerating rate	Growing below trend High prices inhibit use
V	Slump	Fiscal crisis Cuts agreed	Falling Accelerating rate	Growing below trend Oil producers in recession
VI	Trough	Cuts implemented Compliance high	Falling Rapidly (bust)	Growing above trend Low prices spur consumption