

# Outlook for oil prices in 2019

Some observations

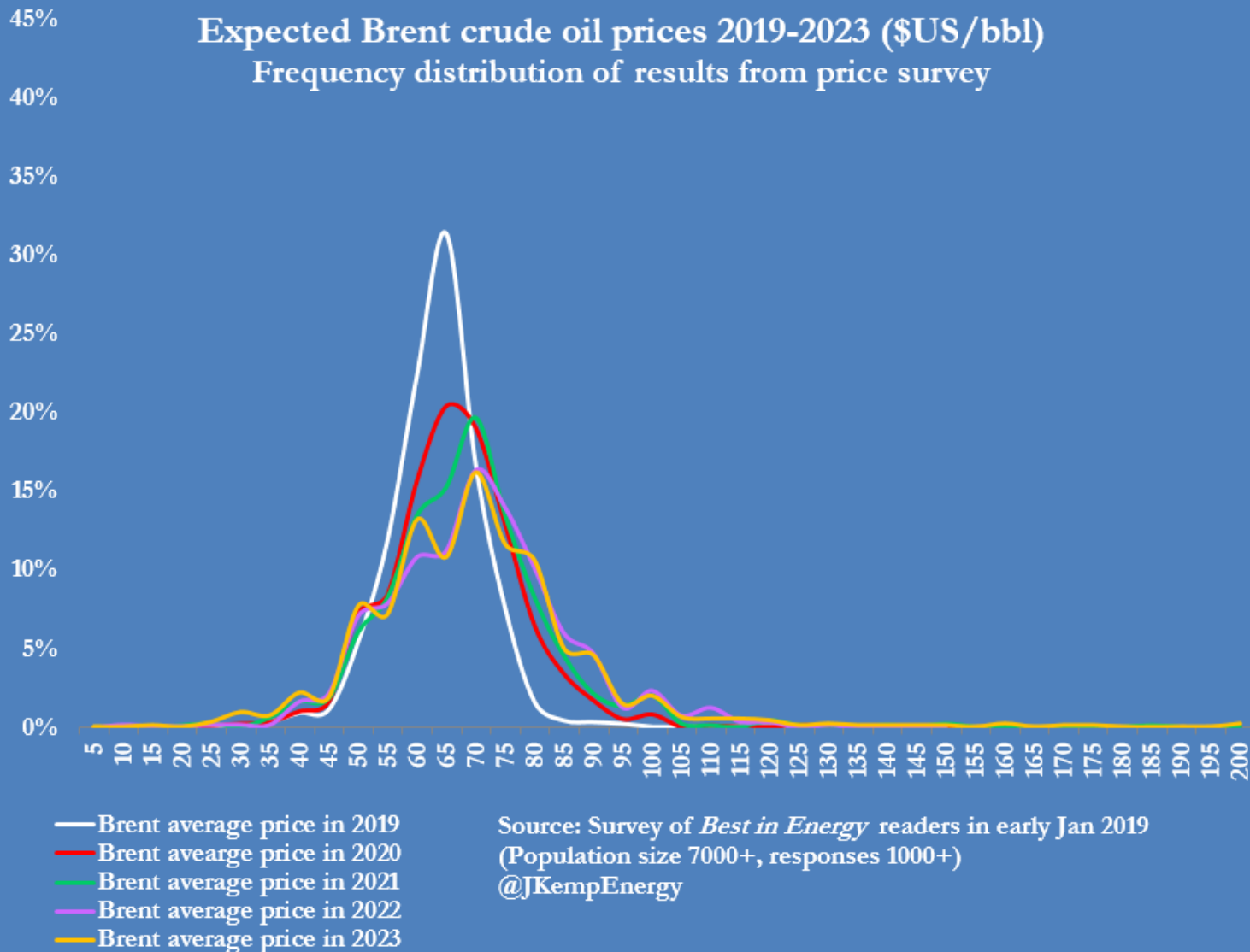
**JOHN KEMP**

**REUTERS**

20 March 2019

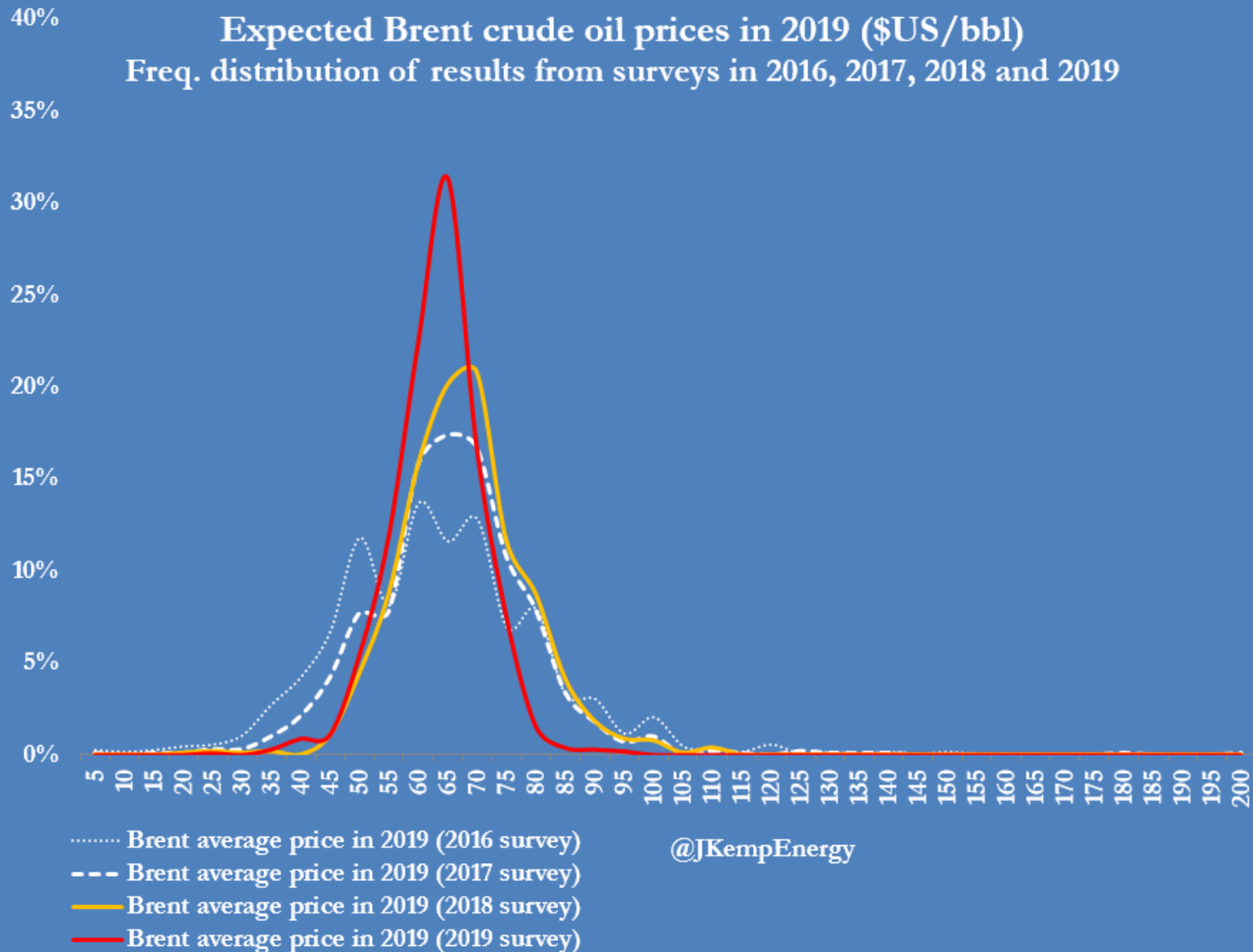
# Brent crude price expected to average around \$65 per barrel in 2019

## Forecasts tightly clustered, price not expected to rise much through 2023

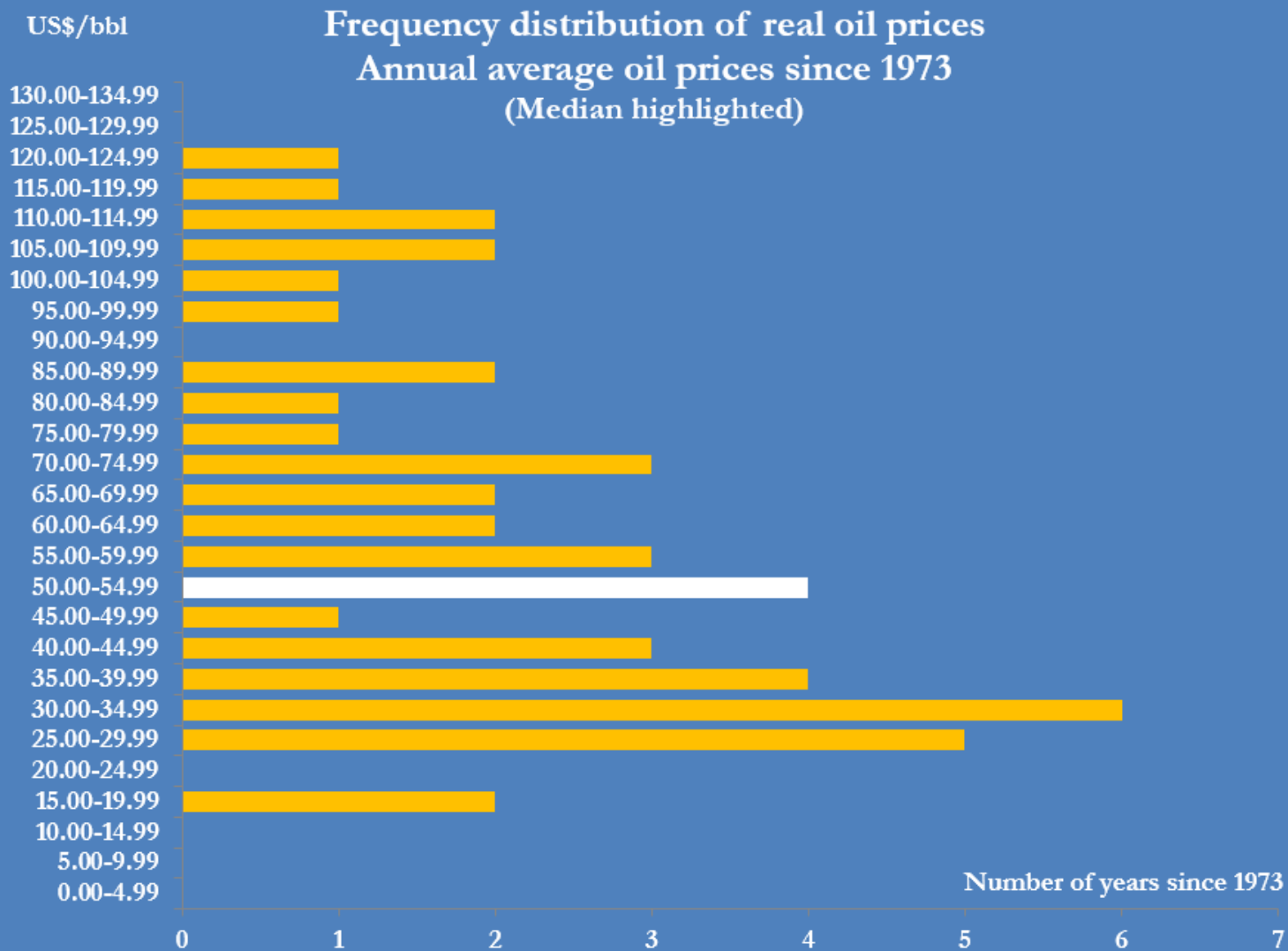


# Price forecasts have changed little over last four annual surveys

## Market seen anchored or balanced around \$65-75



**Brent has averaged \$63 so far this year, down from \$72 in 2018**  
**Real prices are (just) in the top half of the distribution since 1973**

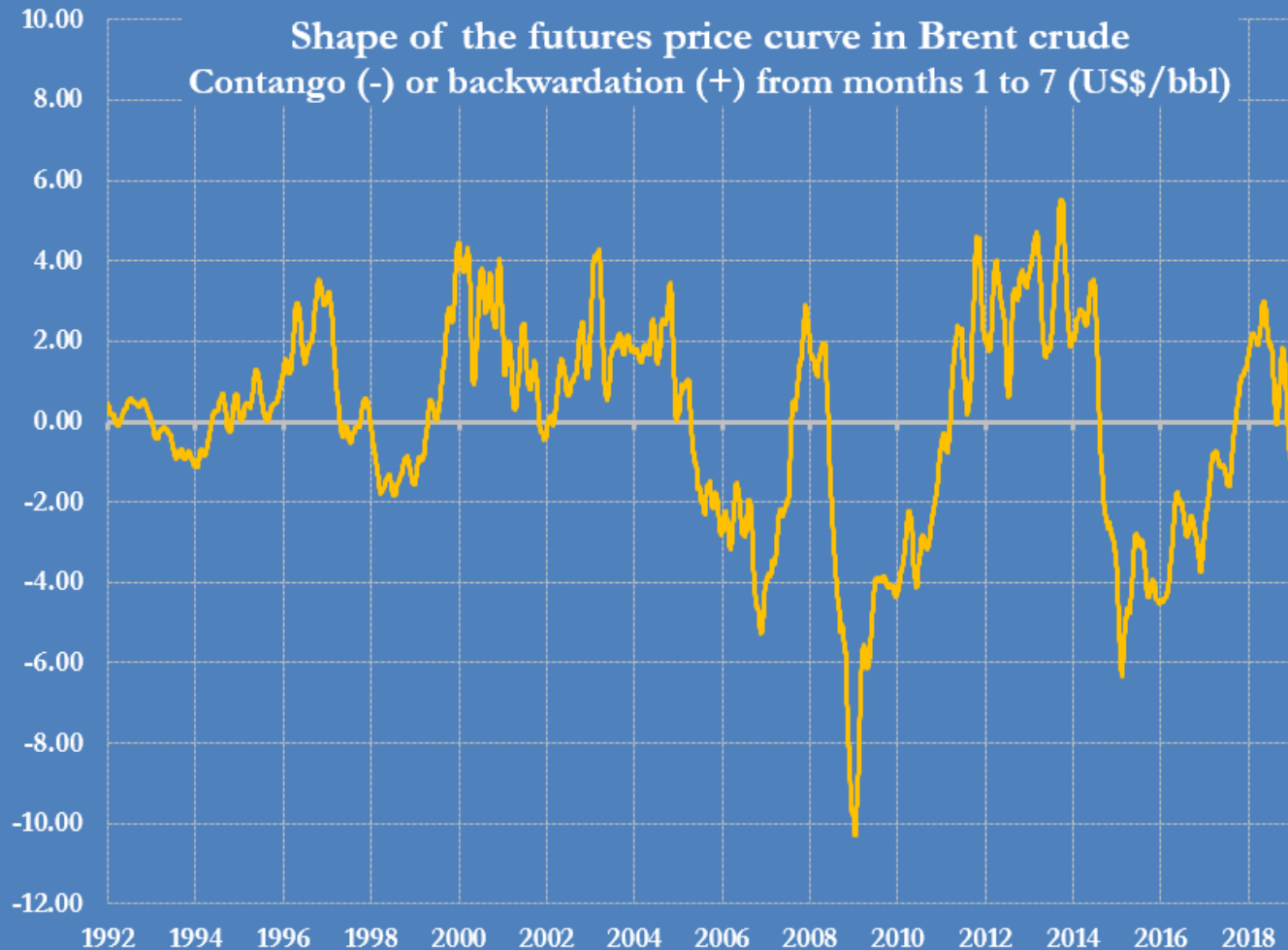


Source: *BP Statistical Review of World Energy, 2018* and author calculations

@JKempEnergy

# Brent six-month calendar spread reverts to backwardation of \$1/bbl

## Traders currently expect market to be roughly balanced in 2019



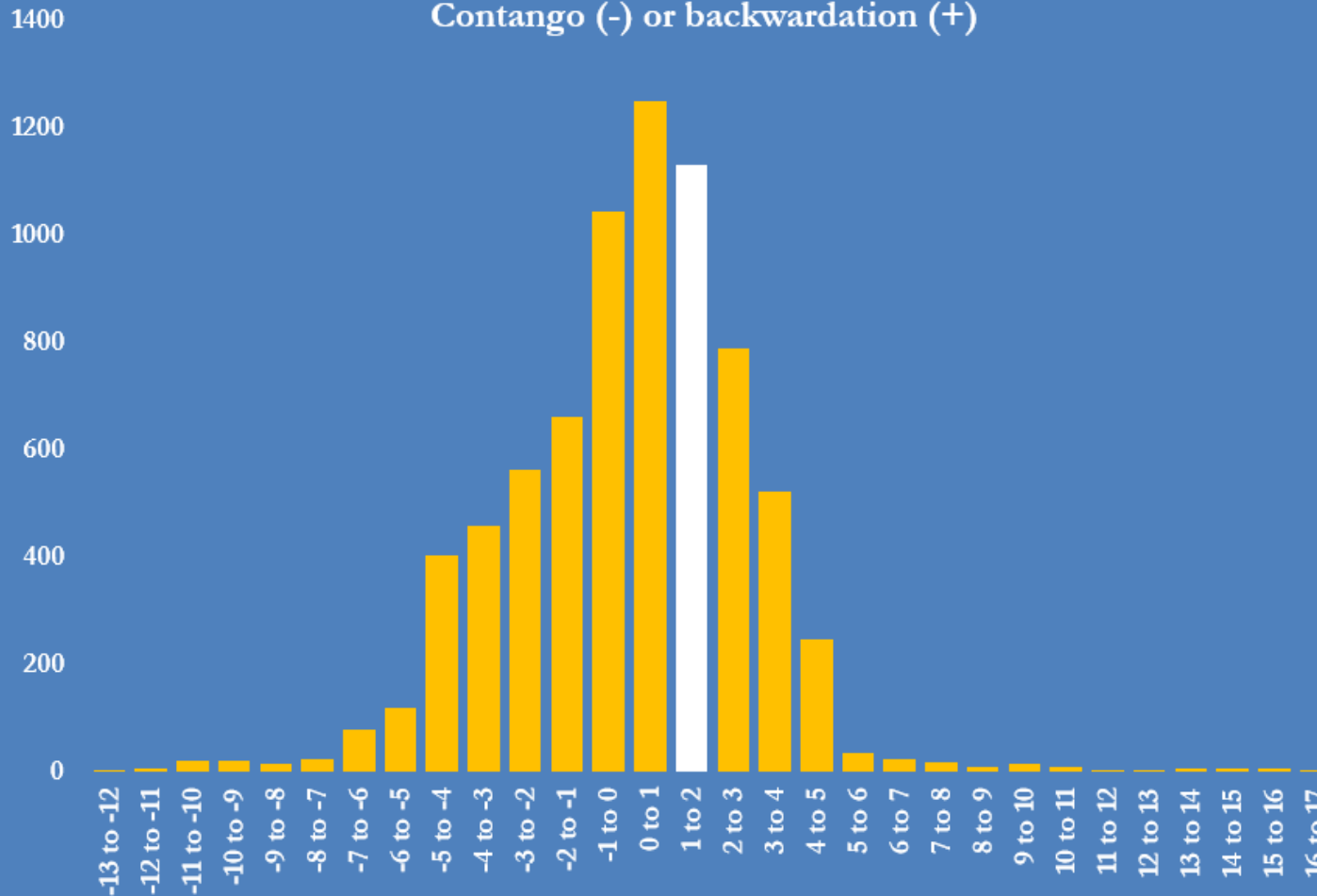
Price difference between 1st listed contract month and 7th listed contract month for Brent futures (U.S.\$/bbl)  
Contango (-) or backwardation (+) averaged over 30 days

Source: Thomson Reuters Eikon, ICE Futures  
@JKempEnergy

# Brent six-month calendar spread slightly above long-run average

## Traders see market tightening, on balance, but no strong directional signal

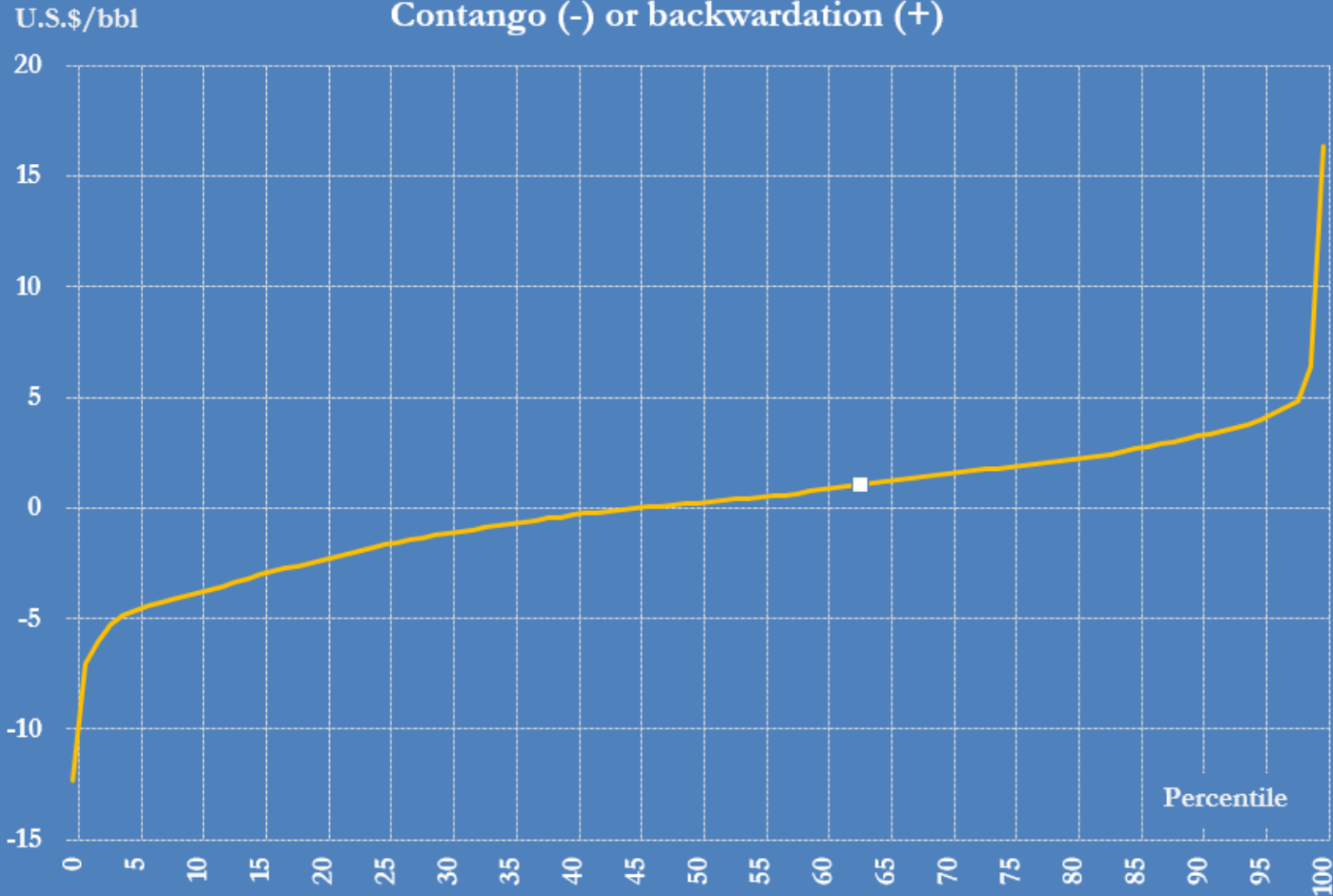
Brent calendar spread from month 1 to month 7  
Frequency distribution (daily) 1990-2019, US\$ per barrel  
Contango (-) or backwardation (+)



# Brent calendar spread trading around 63<sup>rd</sup> percentile

## No strong conviction on market tightening or easing in 2019

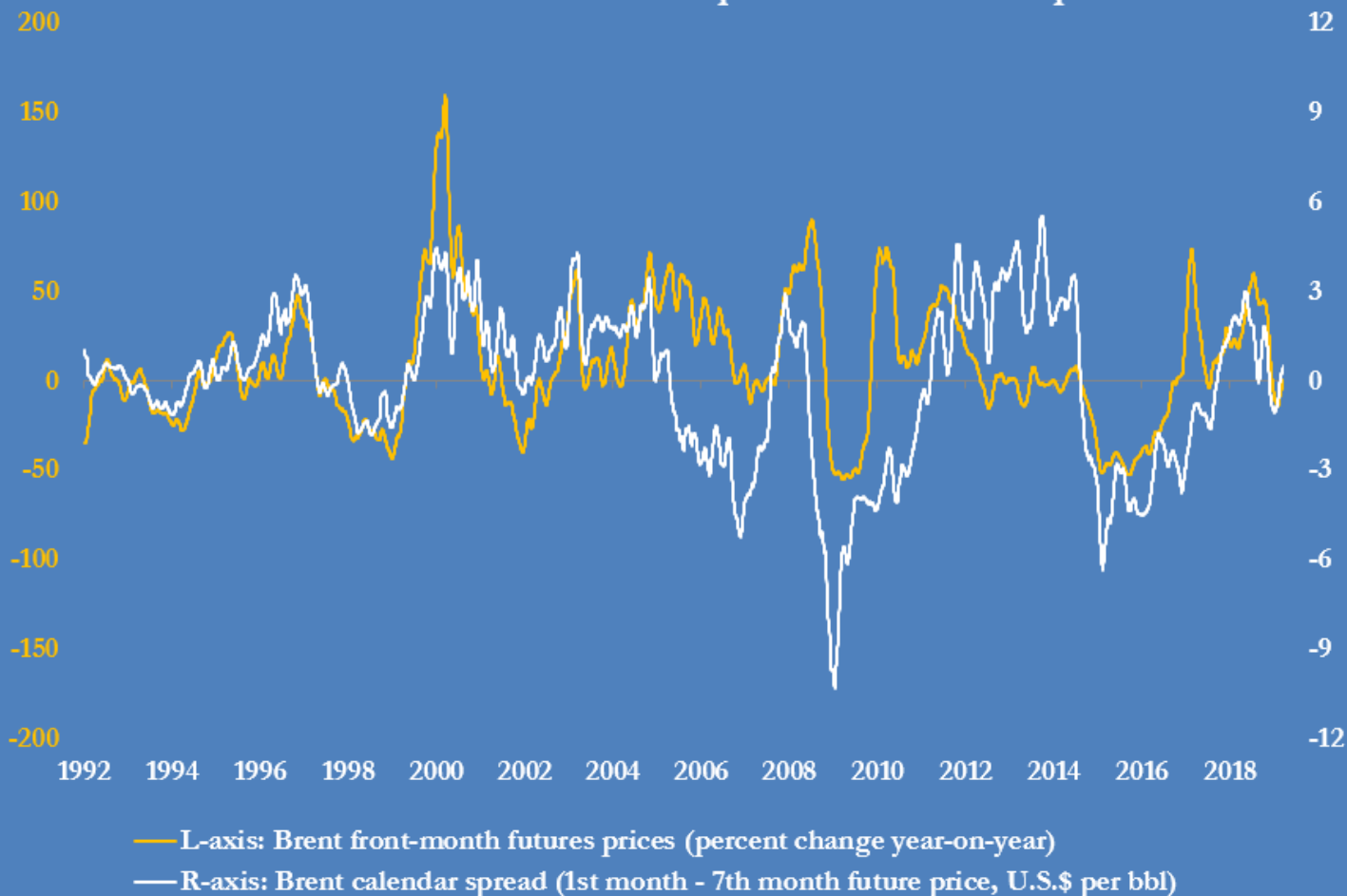
Brent calendar spread from month 1 to month 7  
Percentiles 1990-2019, US\$ per barrel  
Contango (-) or backwardation (+)



# Brent spot price and spreads both point to market expected to balance

## Prices and spreads have steadied after slumping in Q4 2018

Cyclical indicators in the oil market, 1992-2019  
Brent crude: front-month futures prices and calendar spreads



Both series are averaged over 30 trading days to smooth short-term volatility

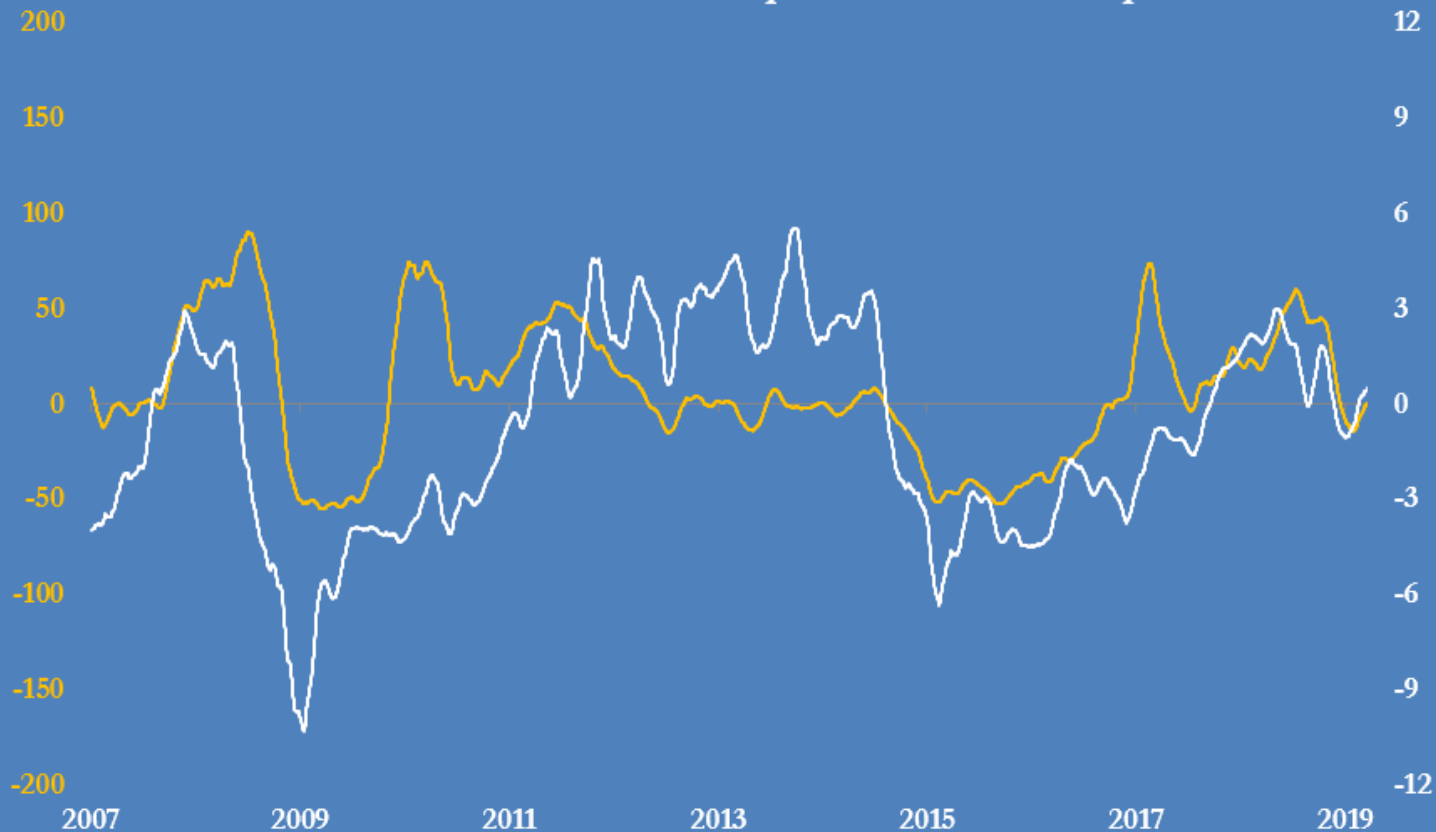
@JKempEnergy



# Brent spot price and spreads both point to market expected to balance

## Prices and spreads have steadied after slumping in Q4 2018

Cyclical indicators in the oil market, 2007-2019  
Brent crude: front-month futures prices and calendar spreads



— L-axis: Brent front-month futures prices (percent change year-on-year)

— R-axis: Brent calendar spread (1st month - 7th month future price, U.S.\$ per bbl)

Both series are averaged over 30 trading days to smooth short-term volatility

@JKempEnergy

# Principal influences on oil prices in 2019

## External variables

(mostly independent of oil prices)

### (1) Global economy

- ❖ U.S./China trade war
- ❖ Financial conditions
- ❖ Global business cycle
  
- ❖ Oil-exporting countries
- ❖ Commodity-dependent economies

## Internal variables

(mostly dependent on oil prices)

### (2) U.S. shale production growth

- ❖ Reaction to lower prices

### (3) OPEC+ output reductions

- ❖ Reaction to lower prices
- ❖ Group discipline
- ❖ Trump pressure

### (4) U.S. sanctions on Iran

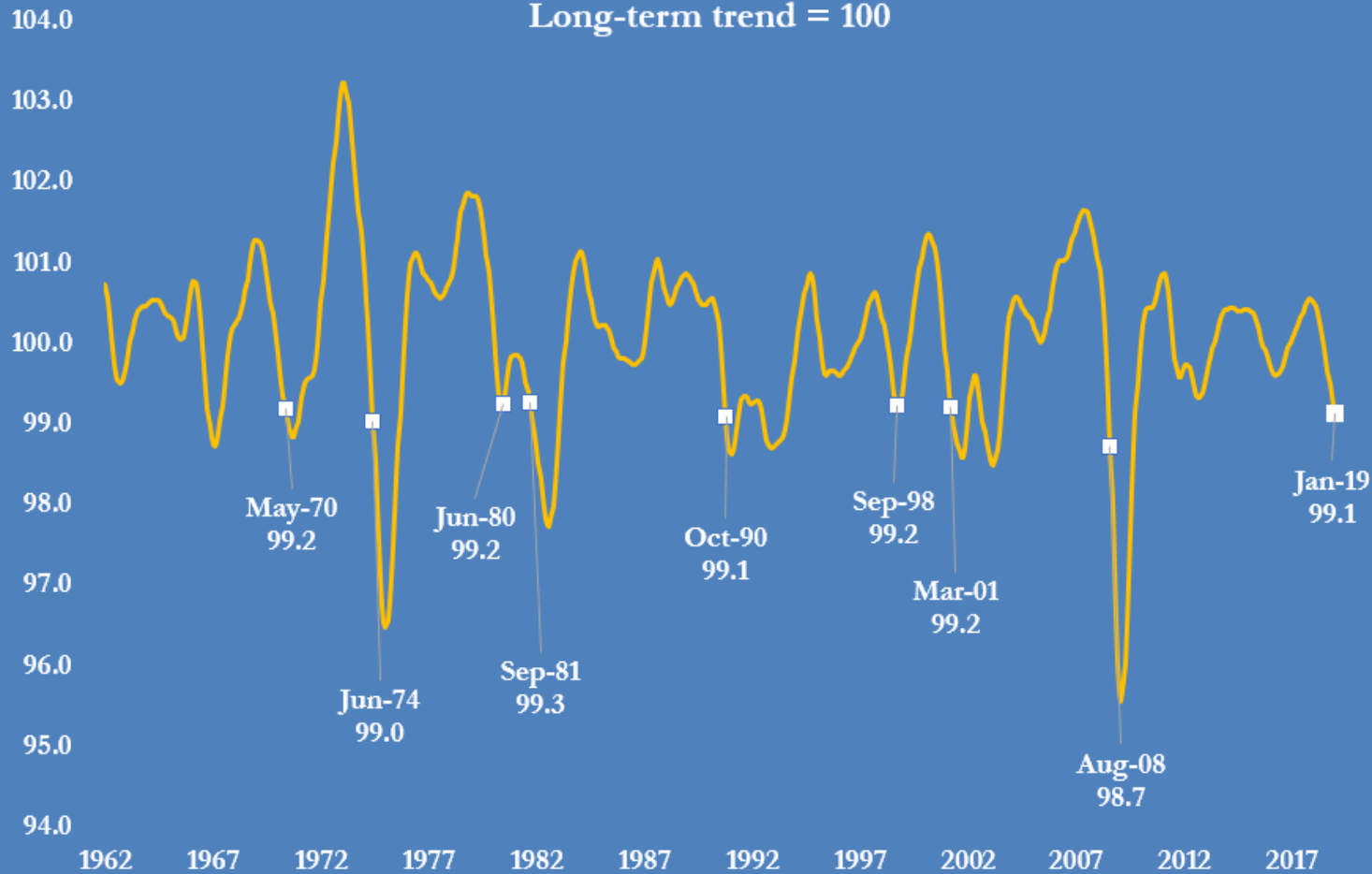
- ❖ Renewal of waivers
- ❖ Availability of replacement bbl
- ❖ Price impact

### (5) U.S. sanctions on Venezuela

- ❖ Availability of replacement bbl

# Global economic growth has slowed sharply over the last year OECD leading indicator has fallen to level normally associated with recession

OECD Composite Leading Indicator, 1962-2019  
Long-term trend = 100

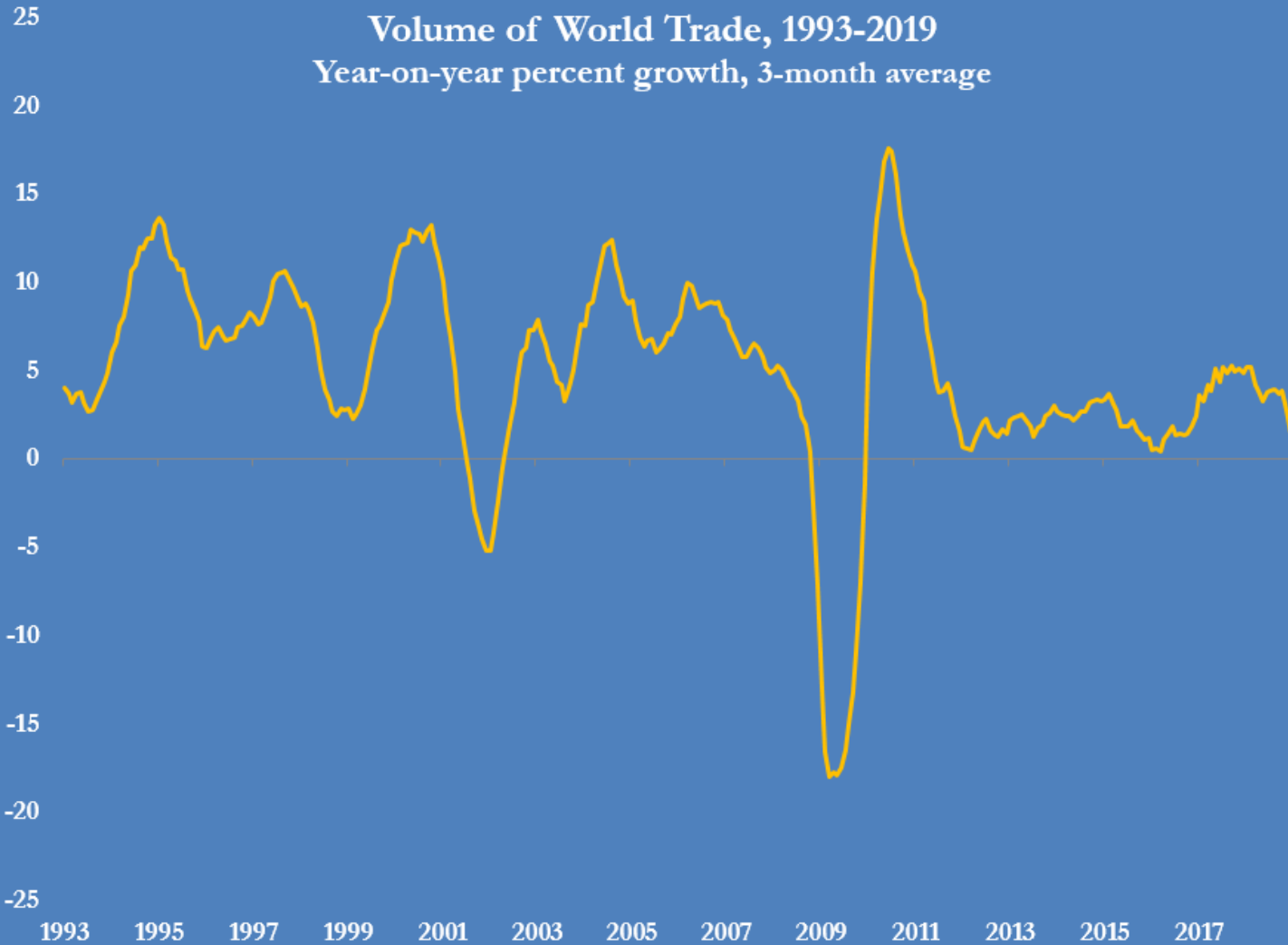


Source: OECD

@JKempEnergy

# World trade growth has slowed significantly since 2017

## Trade volumes actually fell in Q4 2018

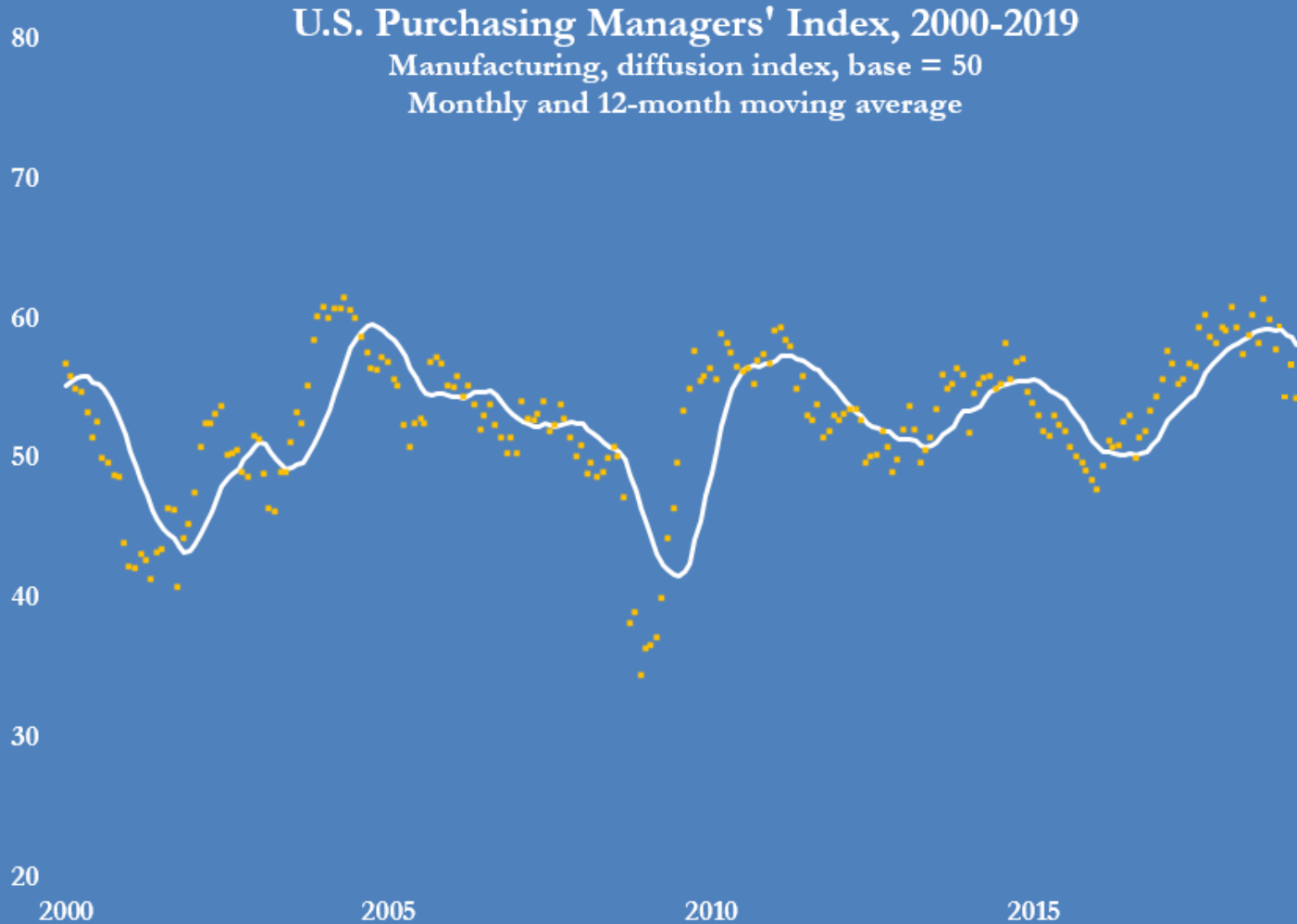


Source: Netherlands Bureau for Economic Policy Analysis, *World Trade Monitor*

@JKempEnergy

# U.S. manufacturing growth has slowed since Aug 2018

## ISM manufacturing index shows deceleration to more moderate expansion

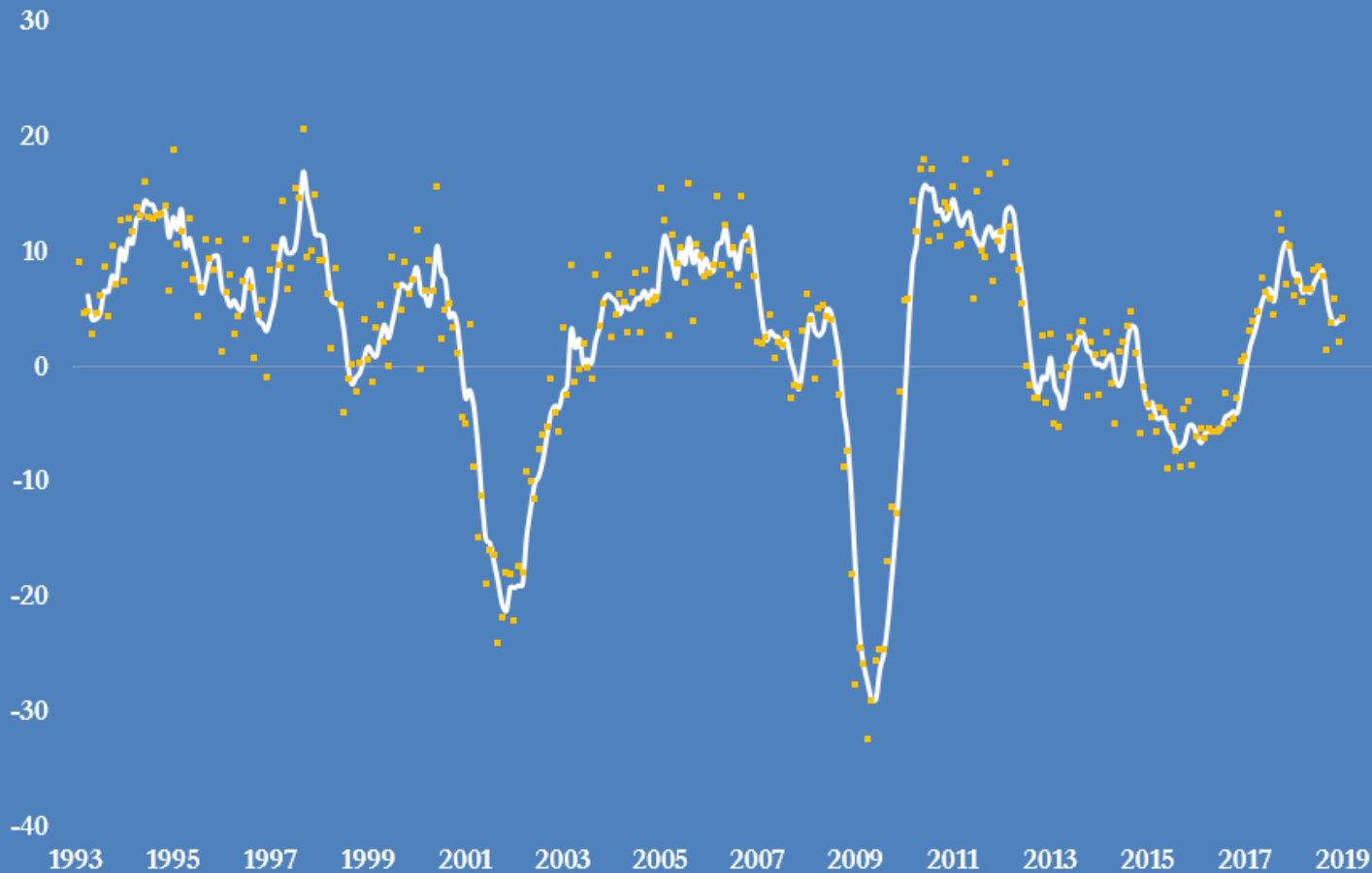


# U.S. business investment shows signs of slower expansion

## Durables orders for new capital equipment ex defence and aircraft decelerate

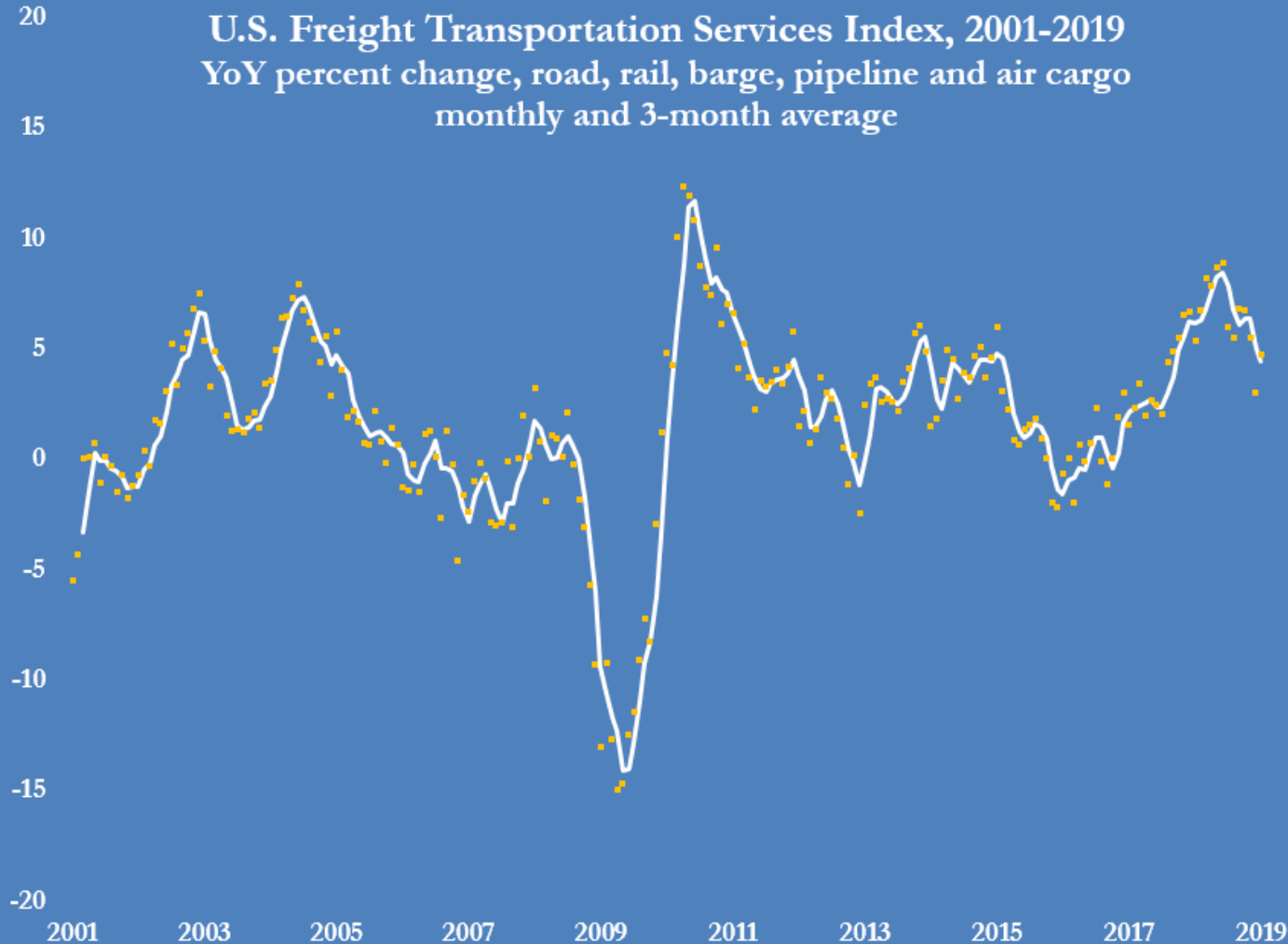
### U.S. manufacturers' new orders of nondefense capital equipment excluding aircraft, 1993-2019

Percent change from year earlier, monthly and 3-month average



# U.S. freight volume growth has decelerated since summer of 2018

Freight volumes growing around +4% down from +8% in middle of last year



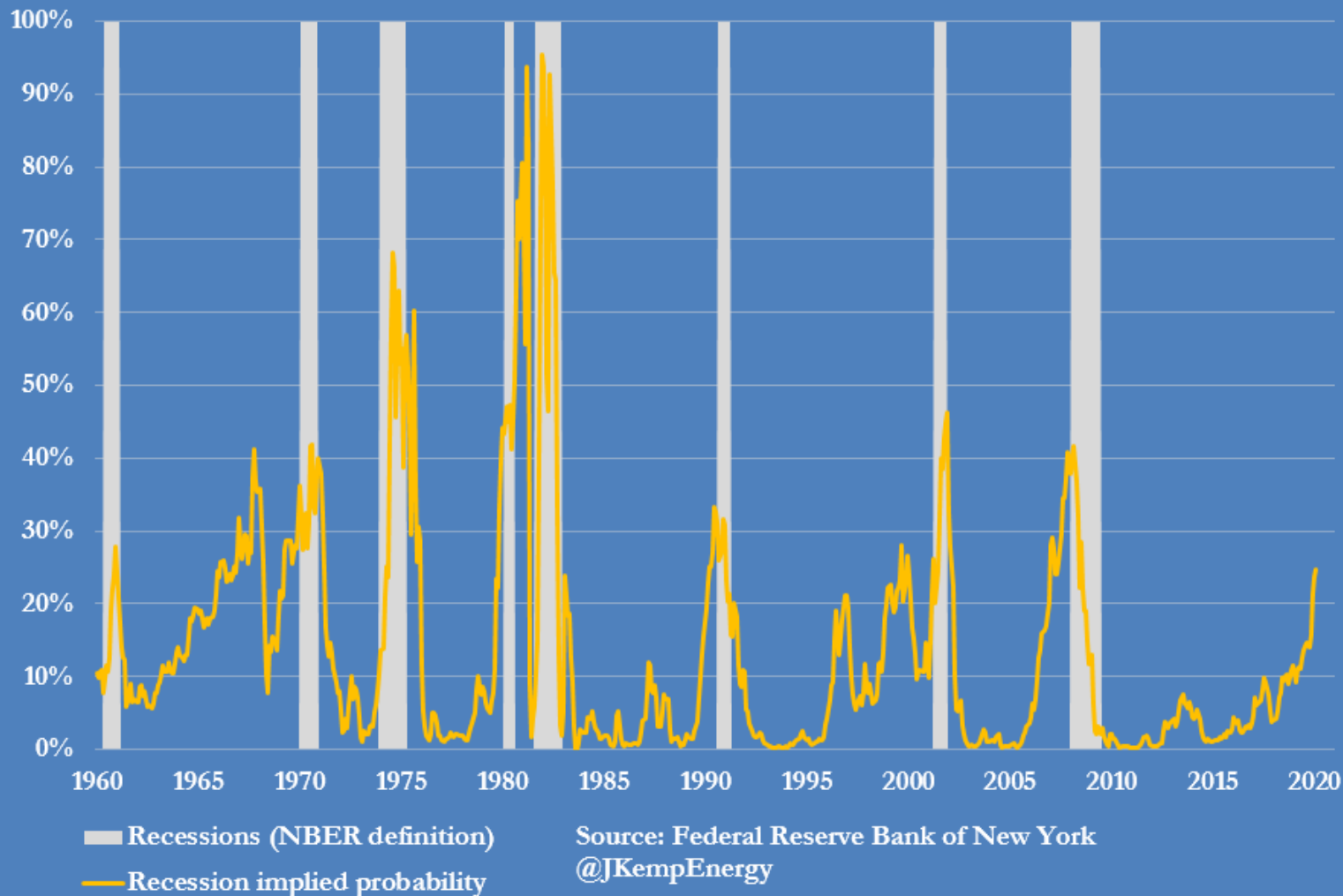
Source: U.S. Bureau of Transportation Statistics

@JKempEnergy

# U.S. Treasury yield curve flattening signals heightened recession risk

## New York Fed yield curve model shows 25% probability of recession in Feb 2020

**Probability of U.S. recession 12-months ahead, 1960-2020**  
Based on Federal Reserve Bank of New York's yield-curve model  
Using spread between 3-month Treasury bills and 10-year Treasury Notes

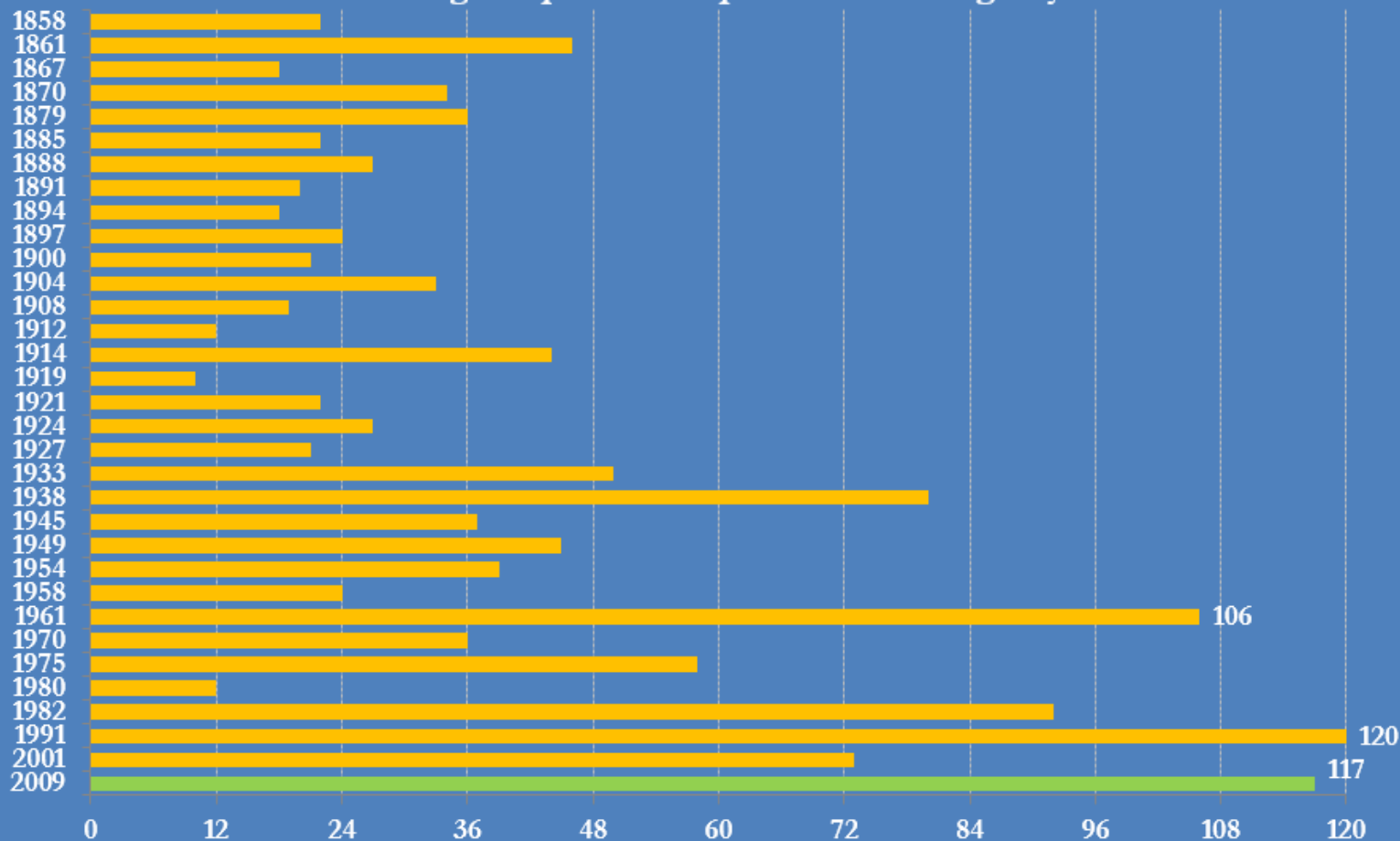




# U.S. business cycle now very mature

Do expansions die of old age or are they murdered? Risks of policy error?

Duration of U.S. business cycles (expansion phase) since 1858  
months from trough to peak for expansions starting in years shown



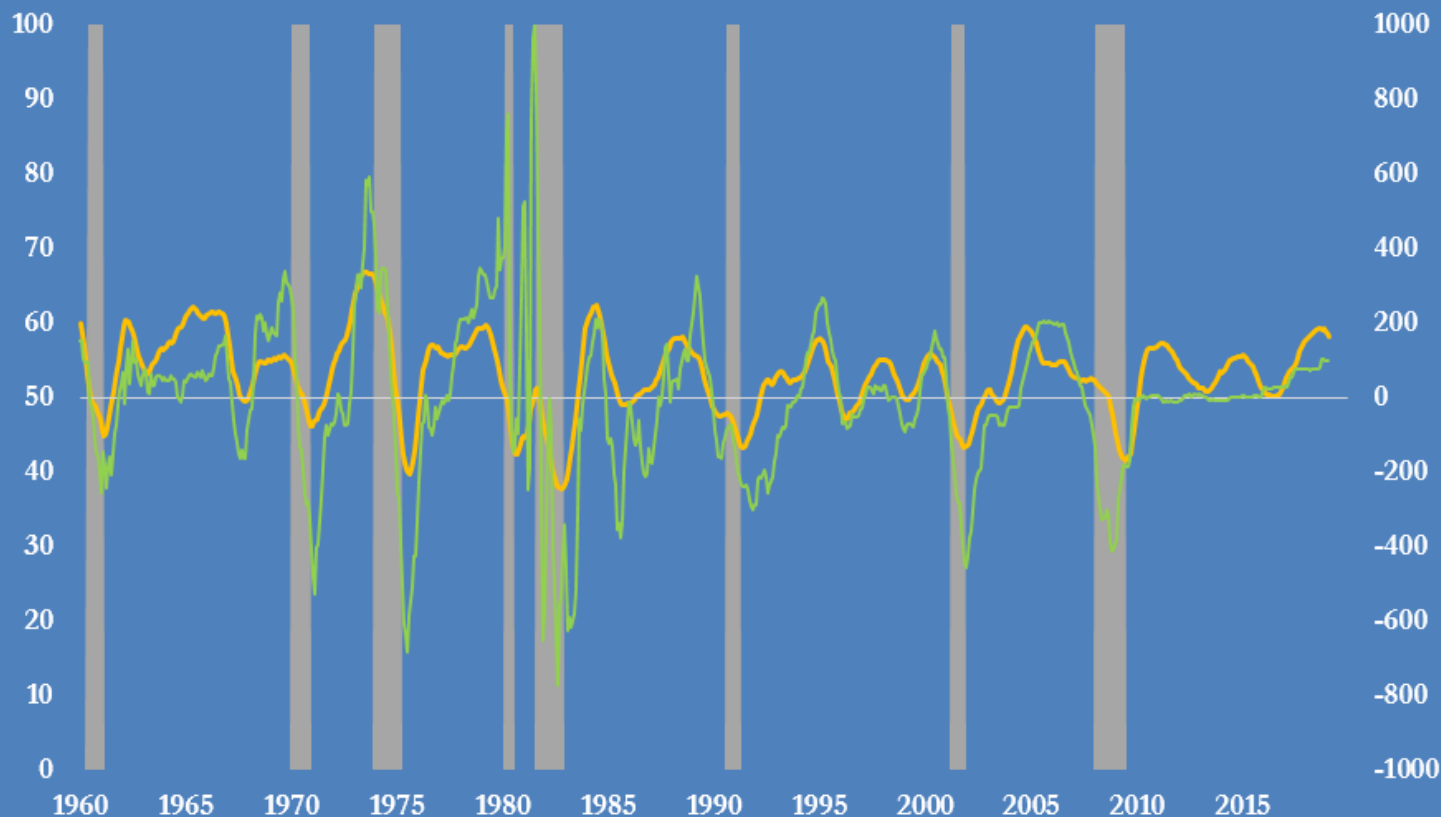
# U.S. Federal Reserve typically responds to signs of slowing economy

## If manufacturing growth decelerates further, Fed likely to ease monetary policy

### U.S manufacturing activity and short-term interest rates

ISM composite index (12-month average)

Effective fed funds rate (basis points, change from year earlier)



- NBER recessions
- ISM manufacturing index (left axis)
- Effective federal funds rate (right-axis)

Sources: Institute for Supply Management, Federal Reserve, NBER, Refinitiv, @JKempEnergy

# Scenarios for the global economy in 2019

U.S./China relations, business reaction, Fed response dominate outlook

## U.S./China relations

- (1) Comprehensive settlement
- (2) Limited trade deal
- (3) No deal

## Fed policy response

- (1) Continued tightening
- (2) Extended pause
- (3) Easing



## Global economic outlook

- (A) Re-acceleration
- (B) Extended slowdown
- (C) Recession

Mid-cycle slowdown or end of cycle?

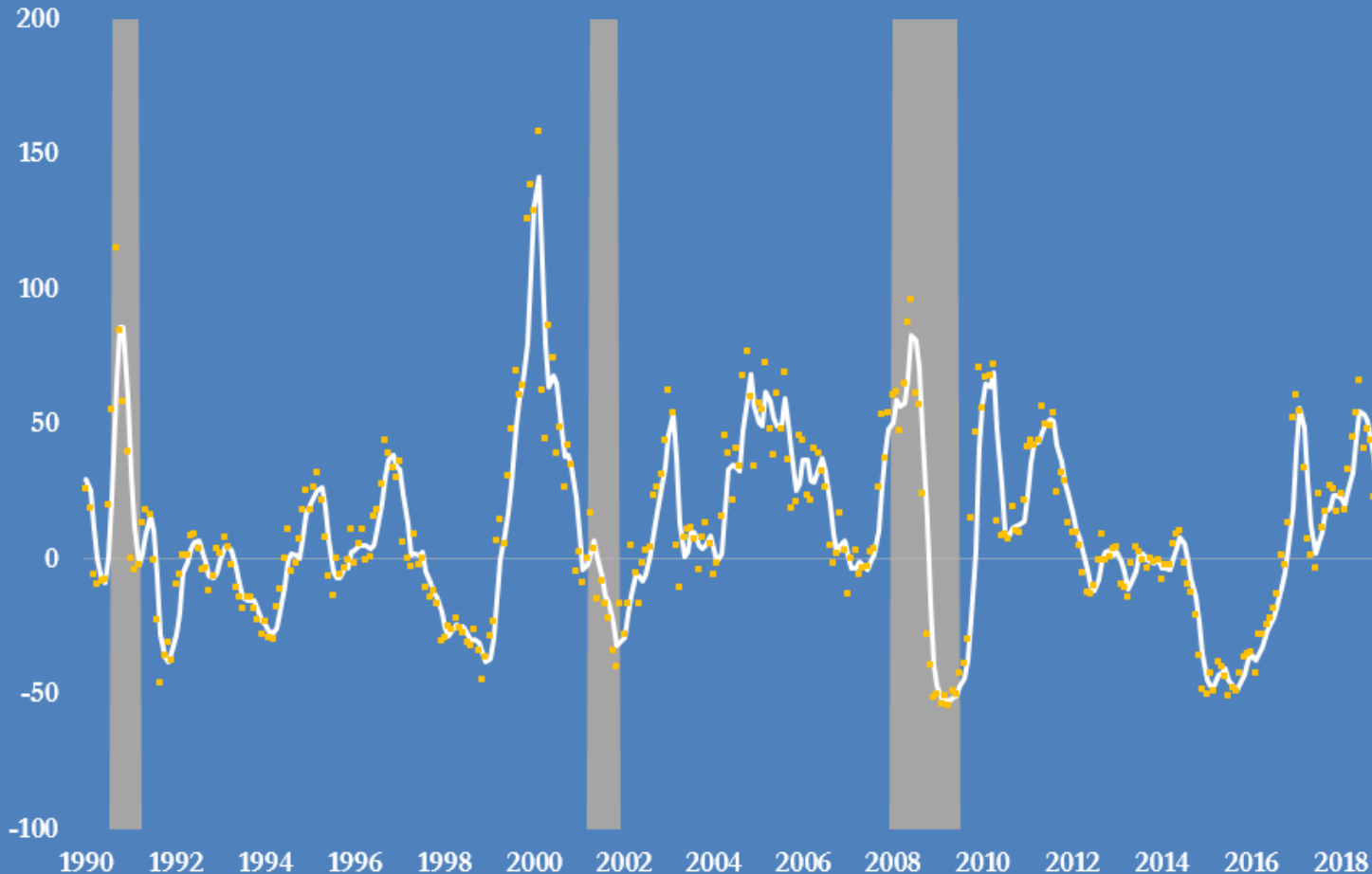
Is the global economic cycle in 1998 or 2001?

# Brent prices and the economic cycle – 1998 or 2001?

Intra-cycle and end-cycle slowdowns have different consequences for oil market

## Brent spot price, 1990-2019

Percent change from year earlier, monthly and 3-month average  
NBER U.S. recession dates shown



Source: ICE Futures Europe, National Bureau of Economic Research

@JKempEnergy

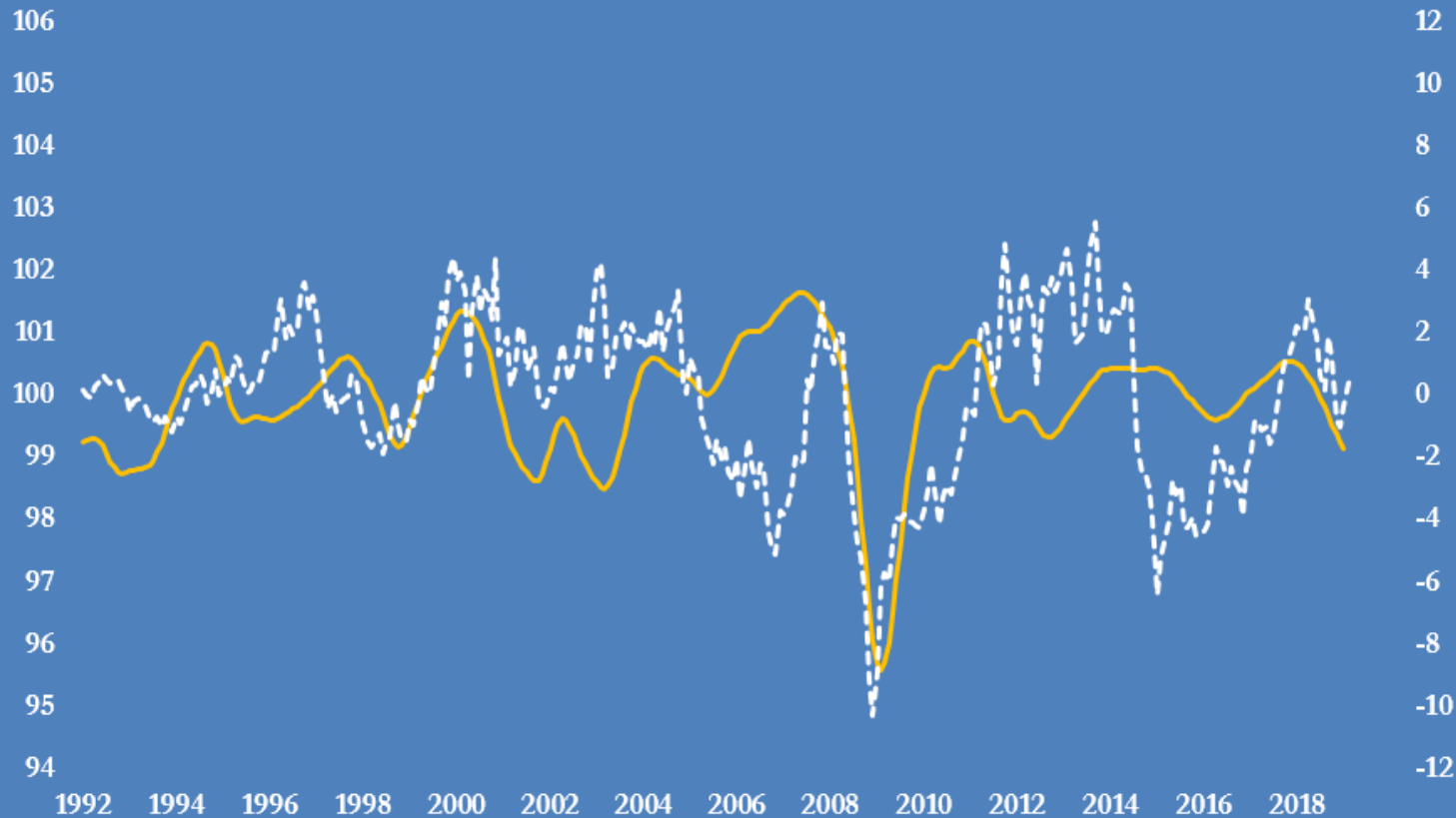
# Brent calendar spread and the global economic cycle

Spreads slumped in Q4 2018 as economic and consumption outlook deteriorated

## OECD composite leading indicator versus Brent calendar spread

Leading indicator long-term trend = 100

Brent spread U.S.\$ per barrel, contango (-) or backwardation (+)



— OECD Composite Leading Indicator (left-axis)

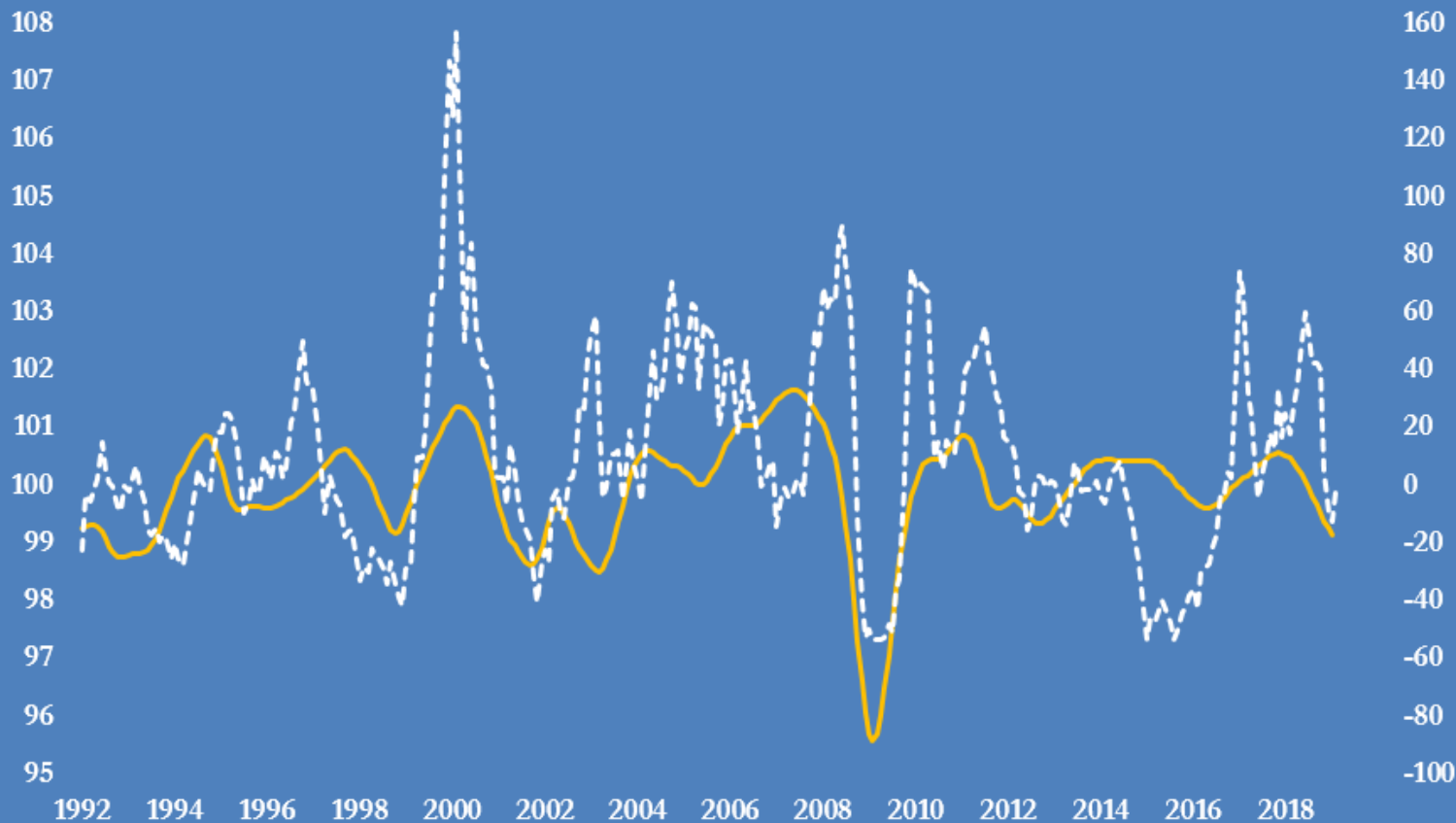
- - - Brent calendar spread (M1-M7) (right-axis)

Sources: OECD, ICE Futures Europe  
@JKempEnergy

# Brent spot price and the global economic cycle

Spot price slumped in Q4 2018 as economic and consumption outlook worsened

OECD composite leading indicator versus Brent price  
Leading indicator long-term trend = 100  
Brent front-month futures price, 12-month percent change, U.S\$/bbl



— OECD Composite Leading Indicator (left-axis)  
- - - Brent price (front-month futures) (right-axis)

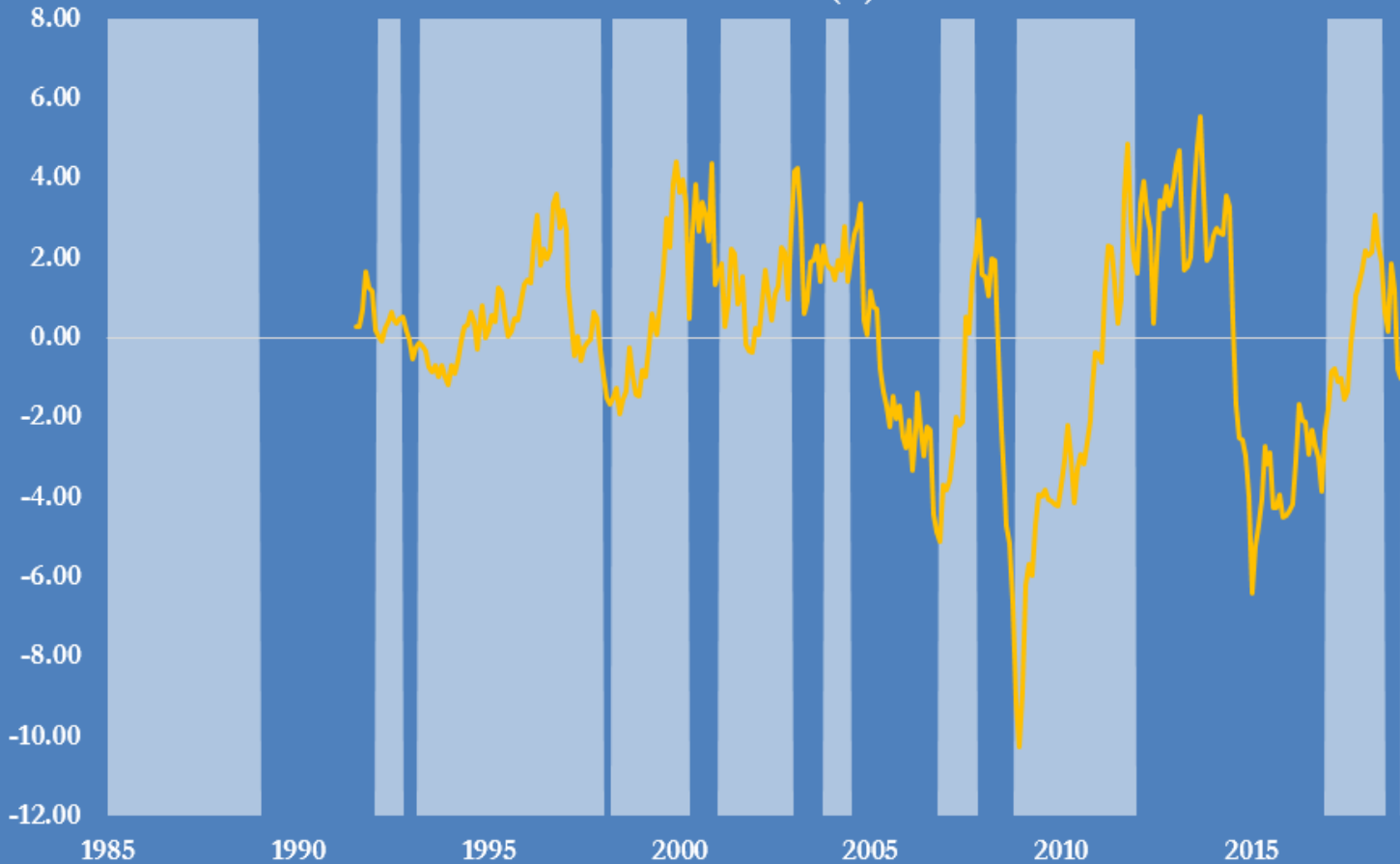
Sources: OECD, ICE Futures Europe  
@JKempEnergy

# Saudi Arabia has resumed traditional role as swing producer

## Kingdom can always force oil market into backwardation if it cuts deeply enough

### Saudi Arabia output restraint and Brent spread, 1985-2019

Calendar spread from month 1 to month 7, U.S.\$ per barrel, contango (-)  
or backwardation (+)



■ Saudi Arabia output restraint (from OPEC Statistical Bulletin)

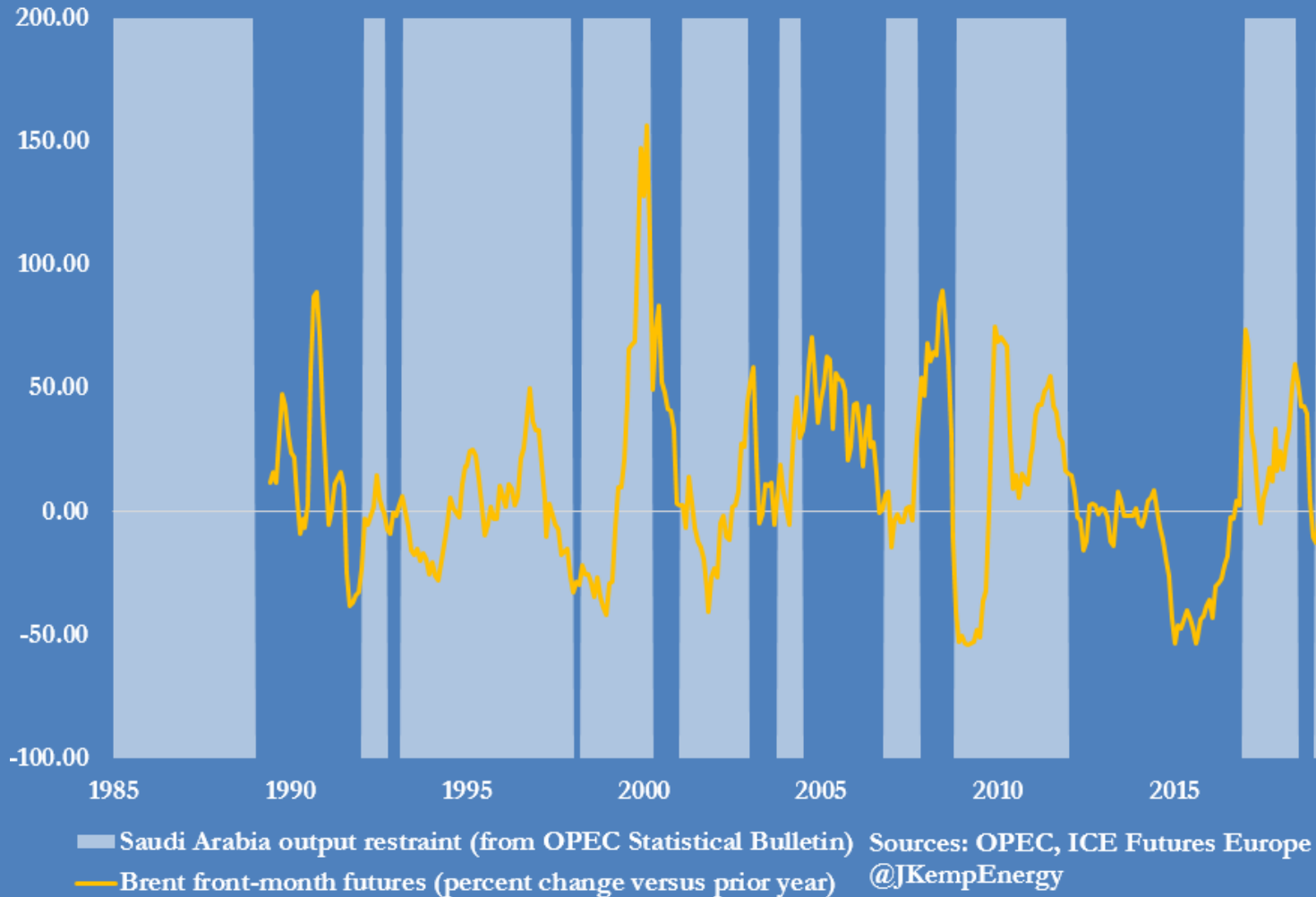
— Brent calendar spread (U.S.\$ per bbl M1-M7)

Sources: OPEC, ICE Futures Europe  
@JKempEnergy

# Saudi Arabia is sacrificing market share to protect prices and revenues

## Policy alternates between price-defence and volume-defence

**Saudi Arabia output restraint and Brent prices, 1985-2019**  
Front-month futures price, percent change compared with prior year

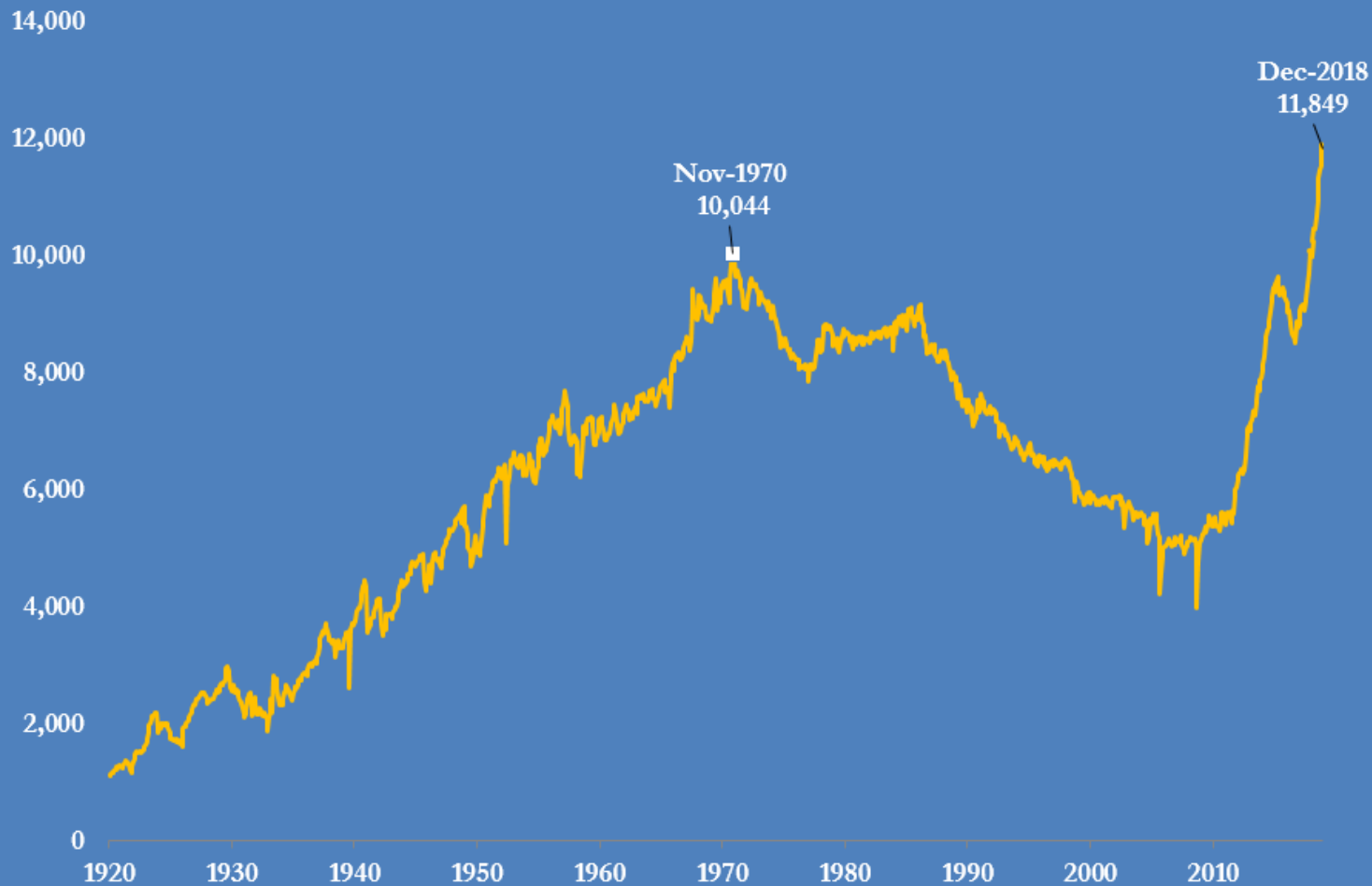




# U.S. crude production has surged in response to price rise since 2016

## Shale producers have increased output at fastest rate anywhere in history

U.S. crude oil production, 1920-2018  
000 b/d



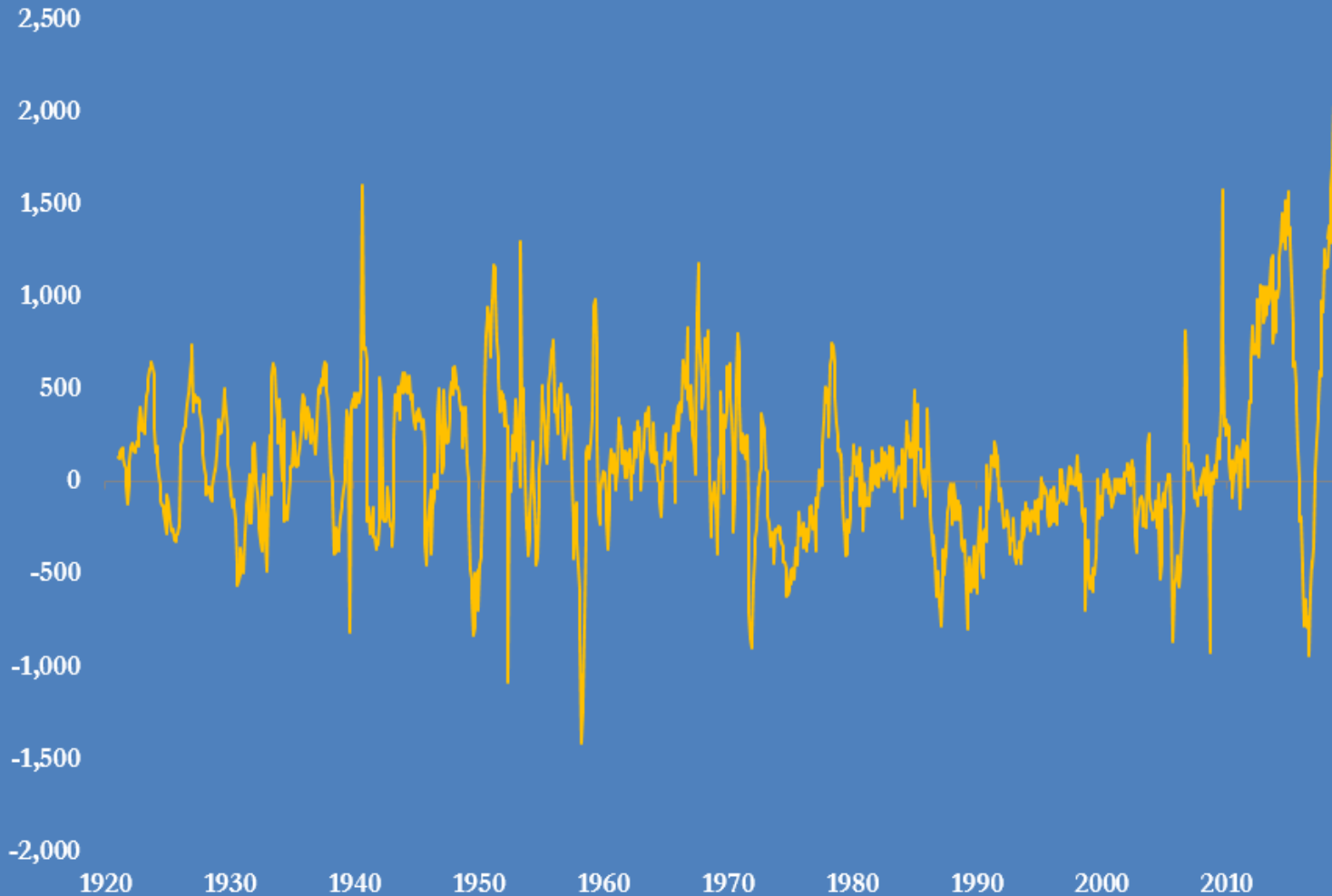
Source: U.S. Energy Information Administration

@JKempEnergy

# U.S. crude output increased by >2 million b/d in year to Aug 2018

## Second shale boom (2016-2018) may be decelerating in response to lower prices

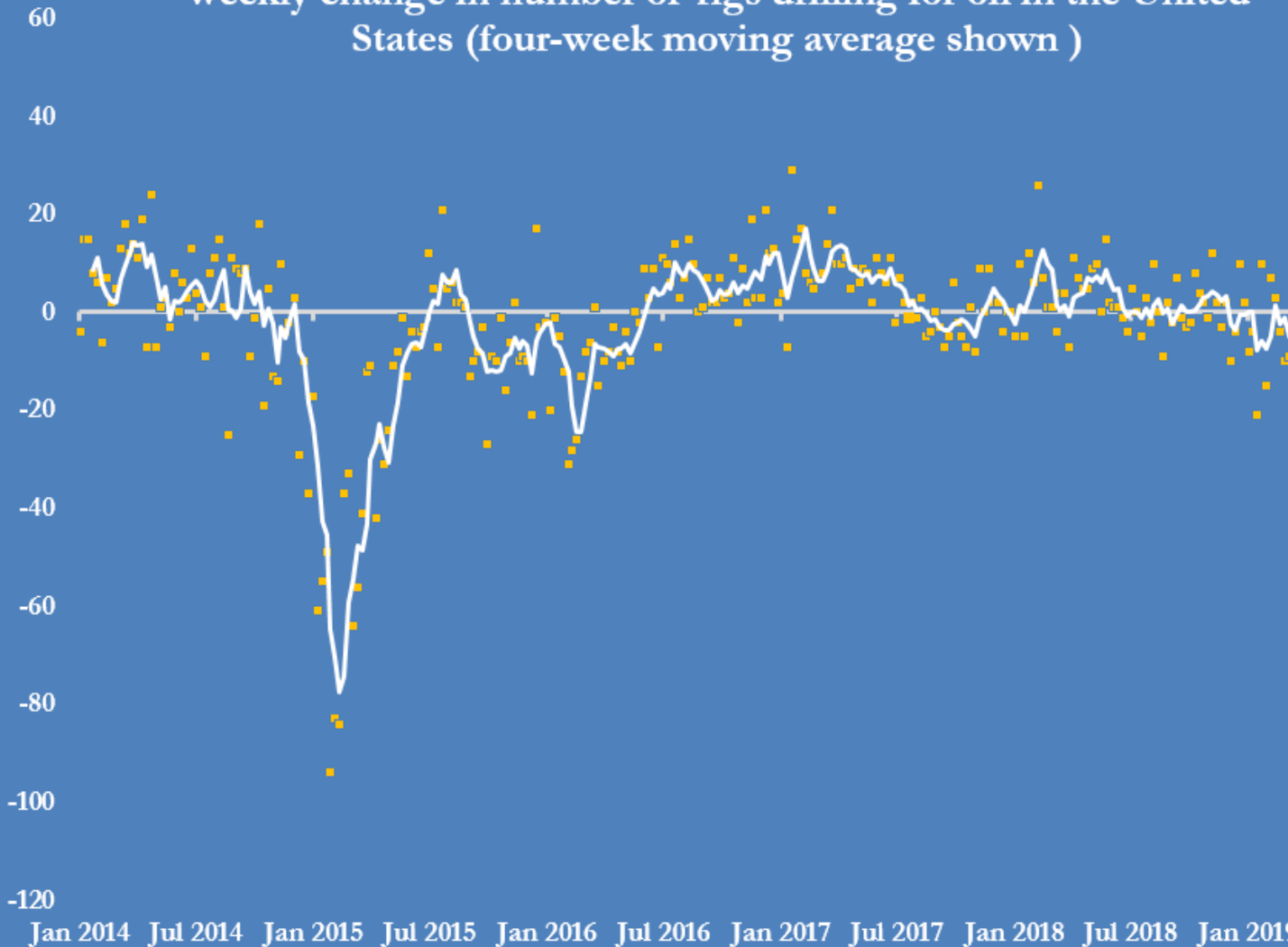
U.S. crude oil production, 1920-2018  
year-on-year change, 000 b/d



# U.S. shale producers have been cutting rig count since end of 2018

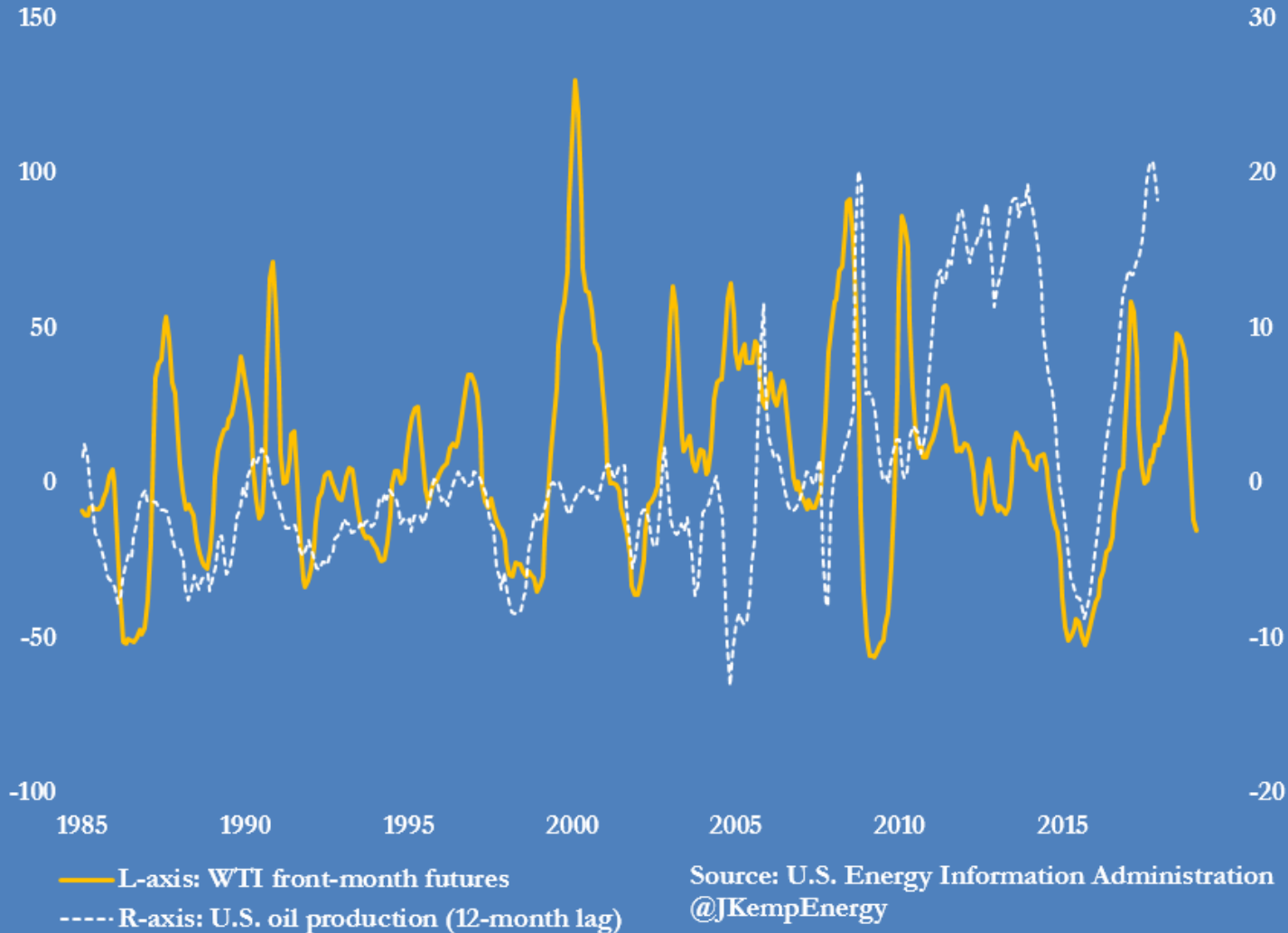
Rig count typically follows changes in WTI with lag of 16-20 weeks

Weekly change in number of rigs drilling for oil in the United States (four-week moving average shown )



U.S. oil output normally responds to prices with ~12-month lag  
Prices to drilling = 3-4 months, drilling to completion and output = 6-9 months

US oil futures prices and crude oil production, 1985-2019  
Percent change compared with prior year, 3-month average



# White House has revealed preference for prices below \$75 or even \$70

## Presidential interventions via twitter as focus turns to re-election campaign

**Brent crude front month futures price, U.S.\$ per barrel**  
Presidential tweets and television interviews about OPEC shown



# Conclusions

## Key sources of uncertainty

### Oil outlook will be dominated by developments in the global economy

- ❖ U.S./China relations, business confidence, trade growth
- ❖ Fed reaction function
- ❖ Intra-cycle slowdown or end of cycle?
- ❖ Final boom?

### White House must choose between aggressive sanctions policy and low oil prices

- ❖ Squeezing Iran and Venezuela
- ❖ Political impact of rising prices
- ❖ Gearing up for 2020 campaign
- ❖ NOPEC legislation and tweets
- ❖ Leverage over Saudi Arabia?

### Saudi Arabia must choose between raising prices and protecting market share

- ❖ Kingdom's price target: \$75? \$80? \$85? \$90?
- ❖ Replacing sanctioned barrels from Iran and Venezuela
- ❖ Spare capacity and production ceiling
- ❖ Future investment
- ❖ Revenue needs and social transformation
- ❖ Aramco privatisation?