

# Oil price outlook for 2022/23

## Baltic Exchange tanker forum

JOHN KEMP  
REUTERS  
21 Feb 2022

# Oil prices have rebounded strongly after the coronavirus recession

## In real terms, prices are highest since 2014

**Brent crude prices, 1990-2022**  
end-month, except most recent month, adjusted for inflation, 2022 U.S.\$/bbl



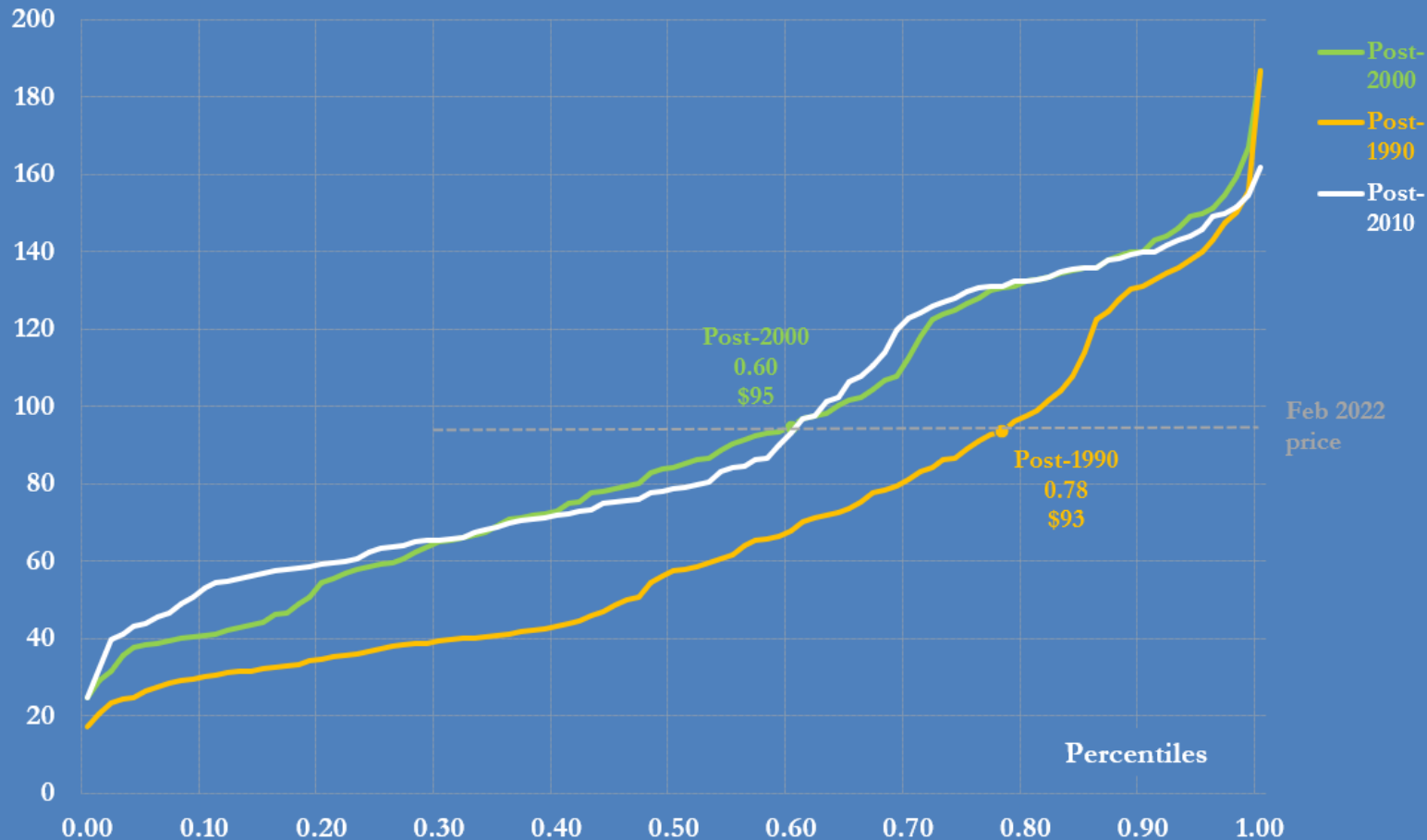
Source: ICE Futures Europe, U.S. Bureau of Labor Statistics

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# Real oil prices are fairly high but not extremely so in historic terms

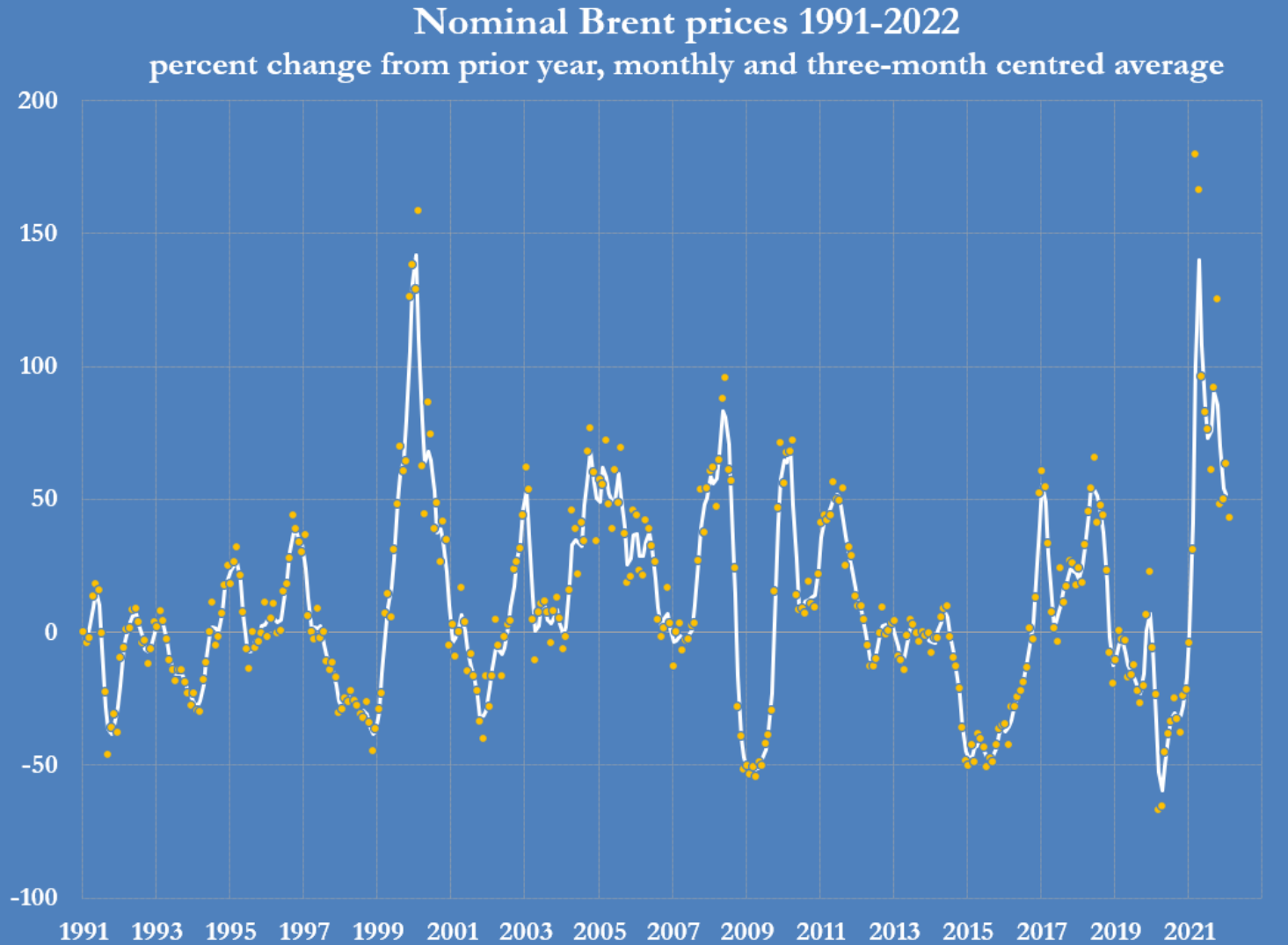
Price in 60<sup>th</sup> to 80<sup>th</sup> percentile depending on time horizon used for evaluation

**Brent crude prices**  
end-month, adjusted for inflation, 2022 U.S\$/bbl  
current price and percentiles over various time horizons



# Oil prices exhibit strongly cyclical behaviour

Extreme slump in coronavirus recession followed by equally strong rebound



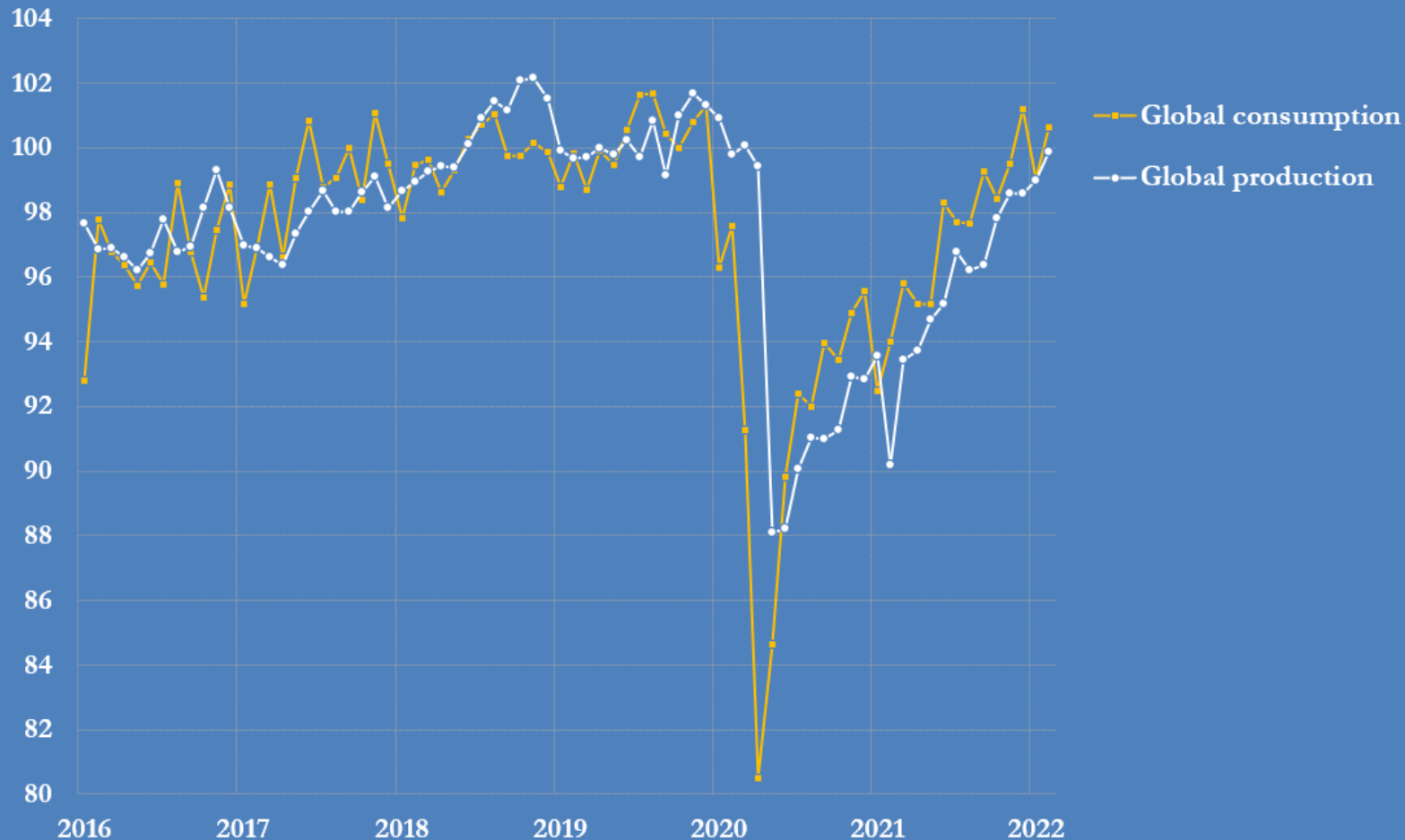
Sources: ICE Futures Europe

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# Consumption fell earlier/faster and has recovered more rapidly

## Production changes lagged behind in both the slump and rebound

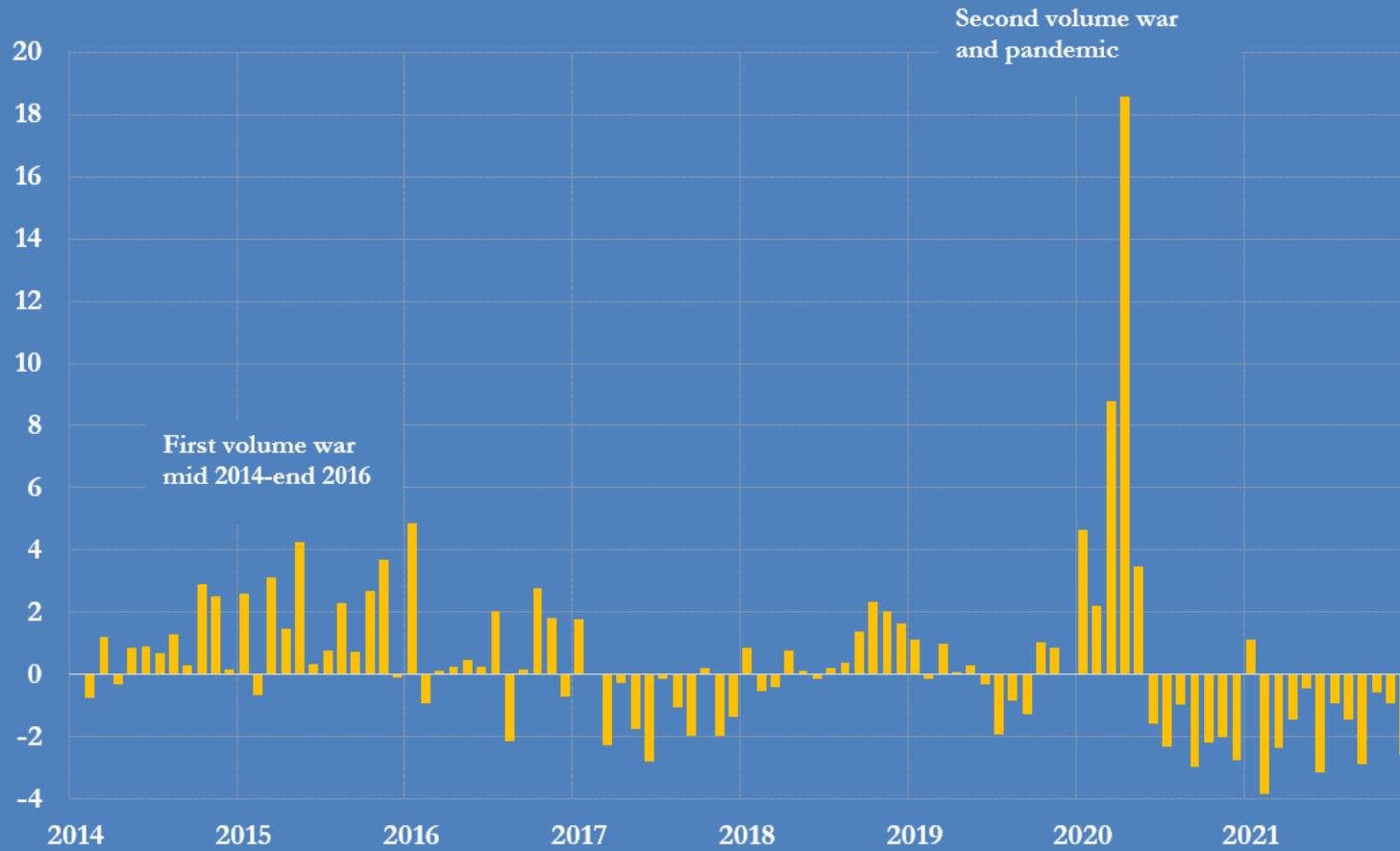
Global oil consumption and production, 2016-2022  
million barrels per day, monthly through Feb 2022



# Massive production surplus during first coronavirus wave/lockdowns

## Followed by production deficit every month except one since June 2020

Global production-consumption balance, 2014-2021  
million b/d, overproduction (+) and underproduction (-)



Source: U.S. Energy Information Administration

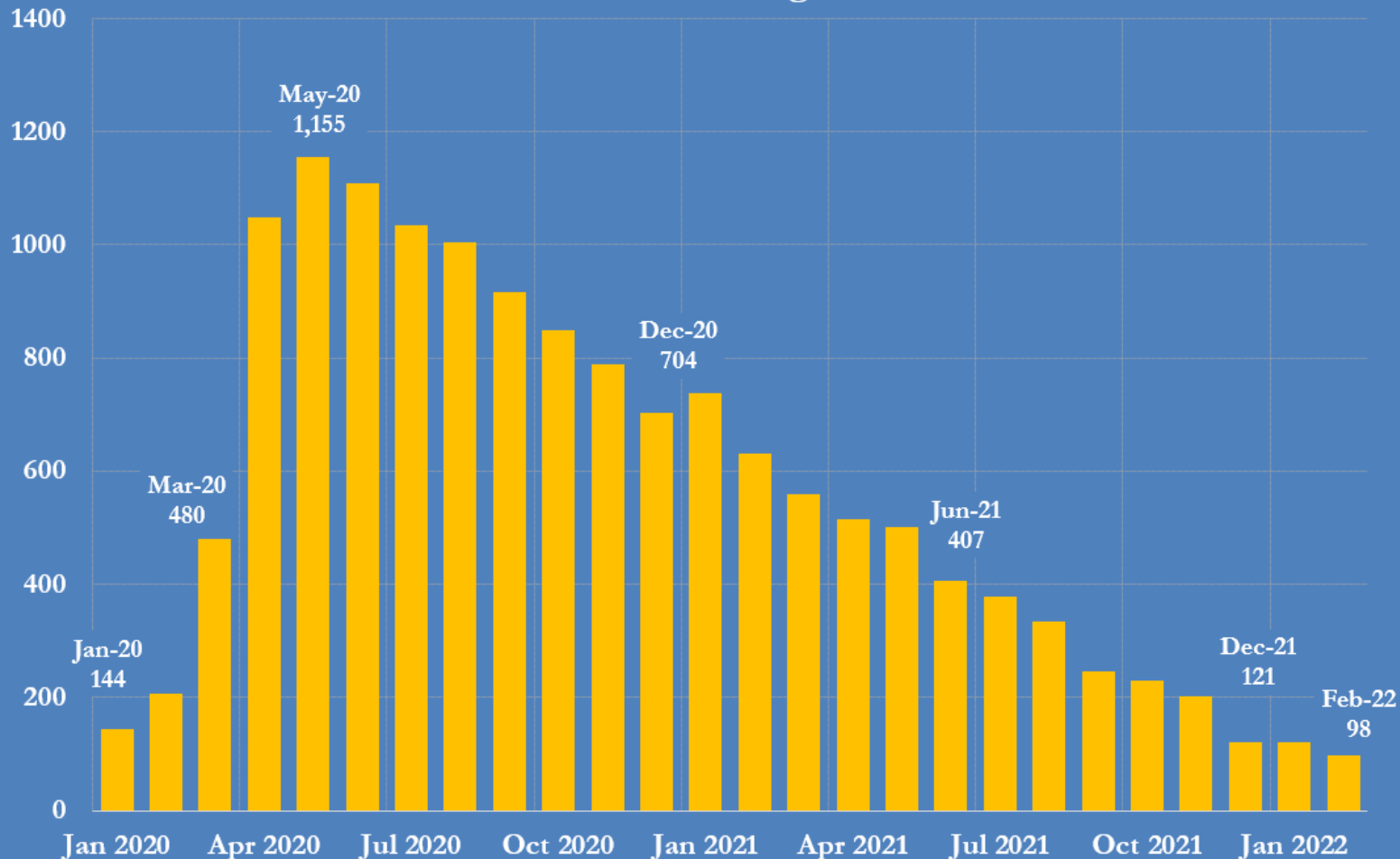
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# Global inventory accumulation of +1.2 billion bbl in Jan-May 2020

## Followed by inventory depletion of -1.1 billion bbl since June 2020

### Global petroleum inventories, 2020-2022

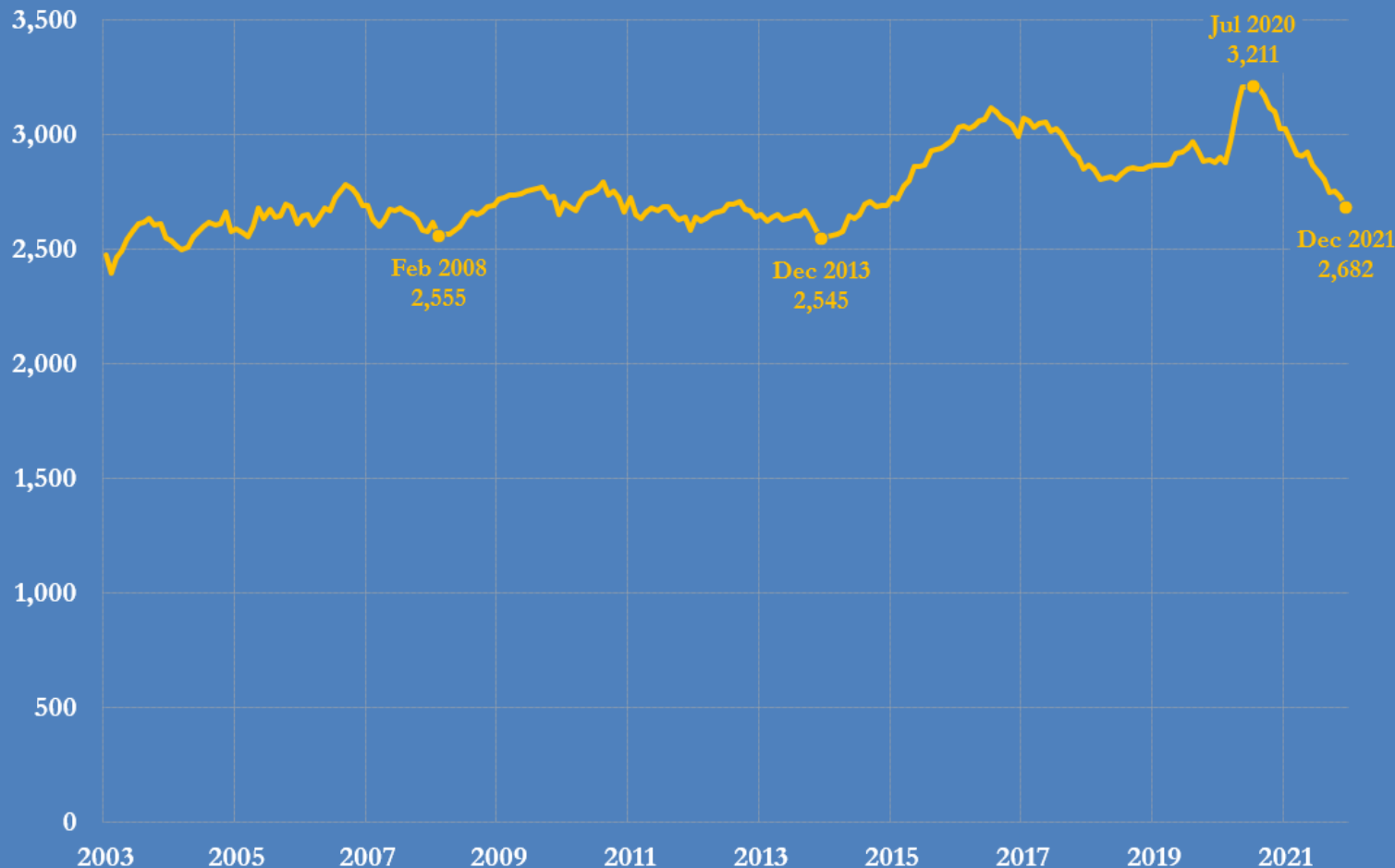
million bbl, accumulated change since start of 2020



# OECD inventory depletion is largest and fastest for decades

## Market has been persistently under-supplied since June-July 2020

OECD commercial petroleum inventories, 2003-2021  
million barrels, month-end



Source: U.S. Energy Information Administration

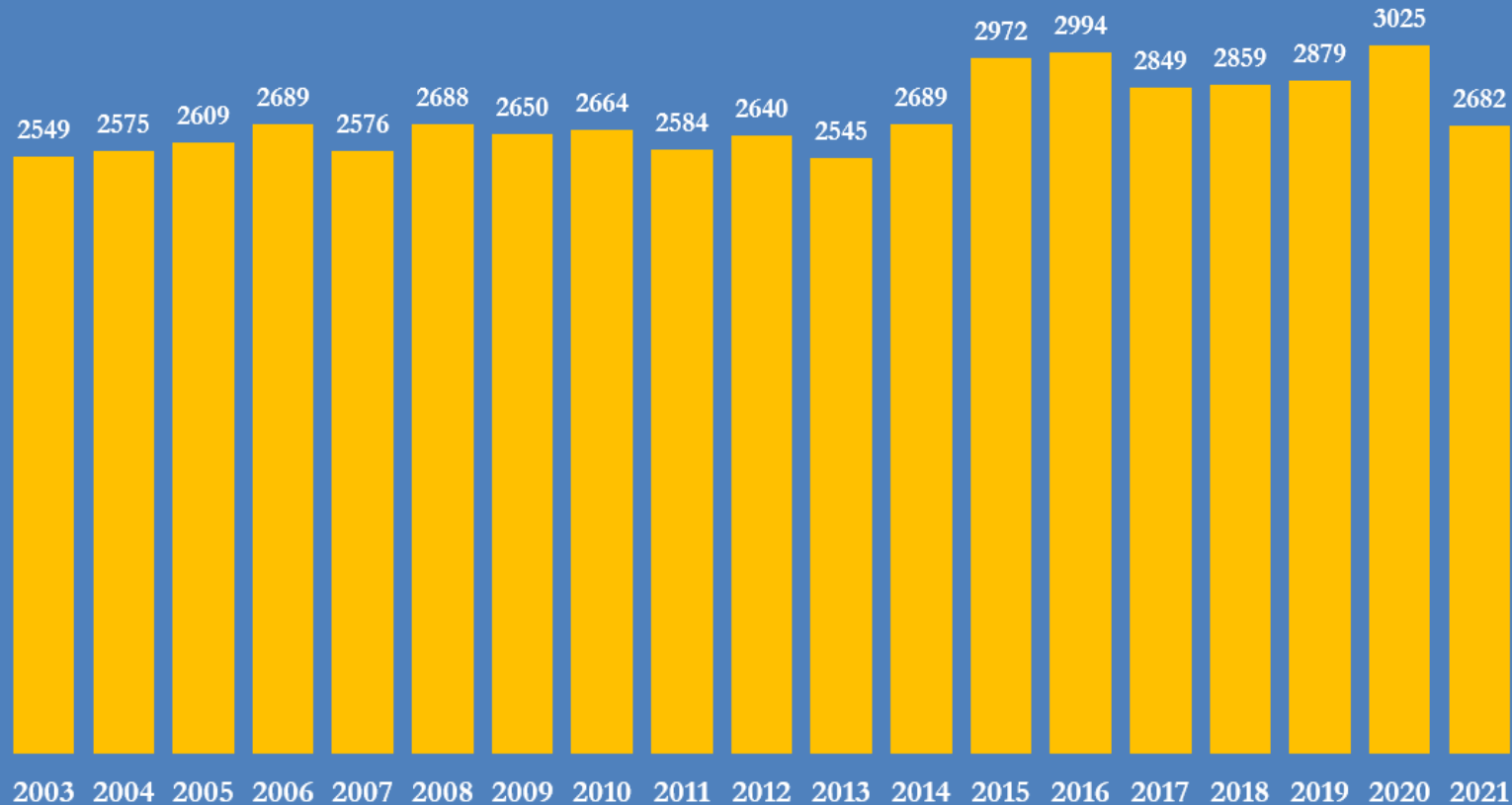
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# OECD inventories ended 2021 at lowest for time of year since 2013

## Inventory drawdown at this rate is unsustainable

OECD commercial petroleum inventories, 2003-2021  
million barrels each year at the end of December



Source: U.S. Energy Information Administration

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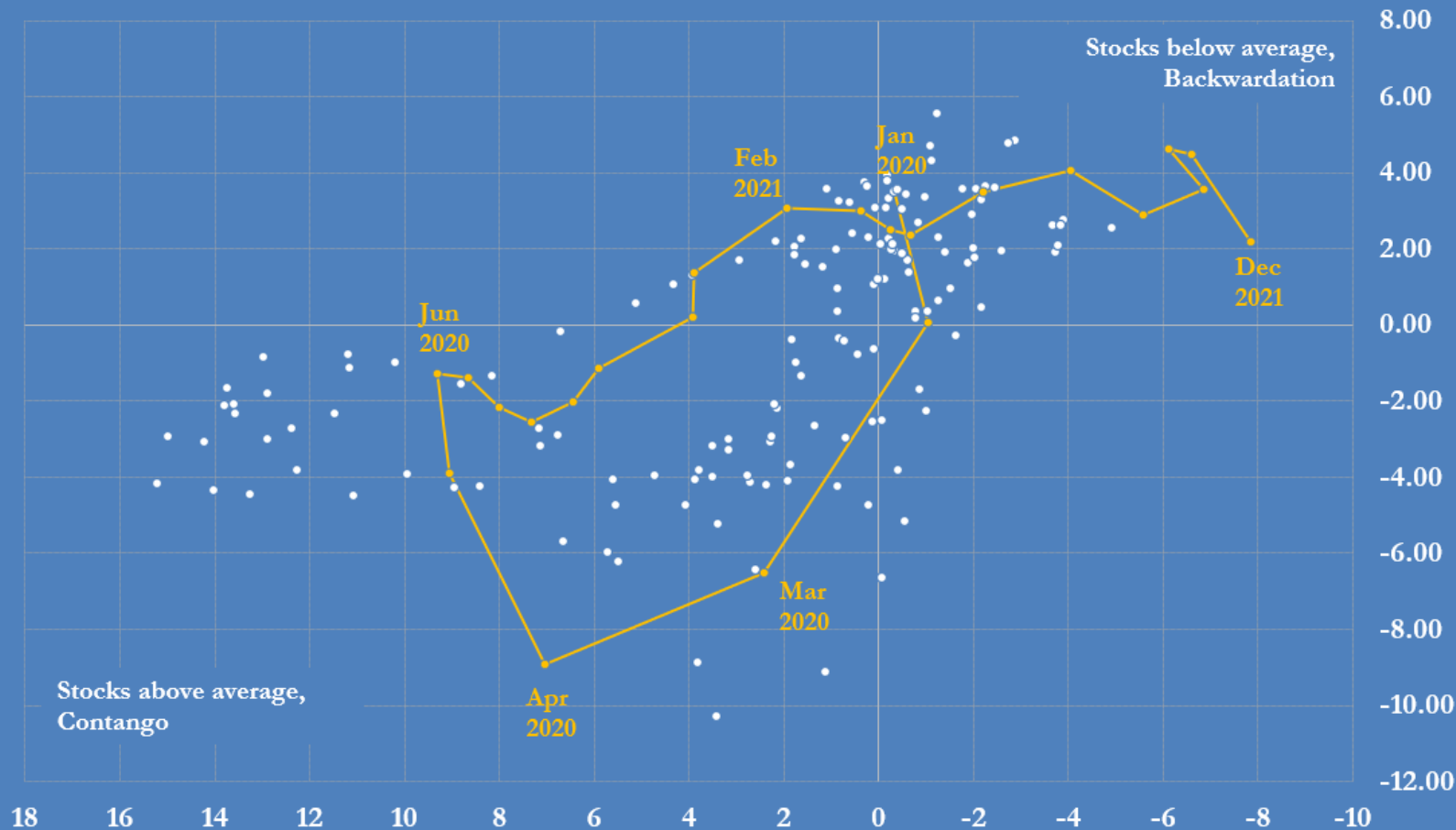
# OECD inventories are -8% below pre-pandemic five-year average

## Low and falling inventories have pushed futures curve into steep backwardation

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

X-axis: OECD commercial stocks (percent change from prior 5yr average, excl 2020)

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  
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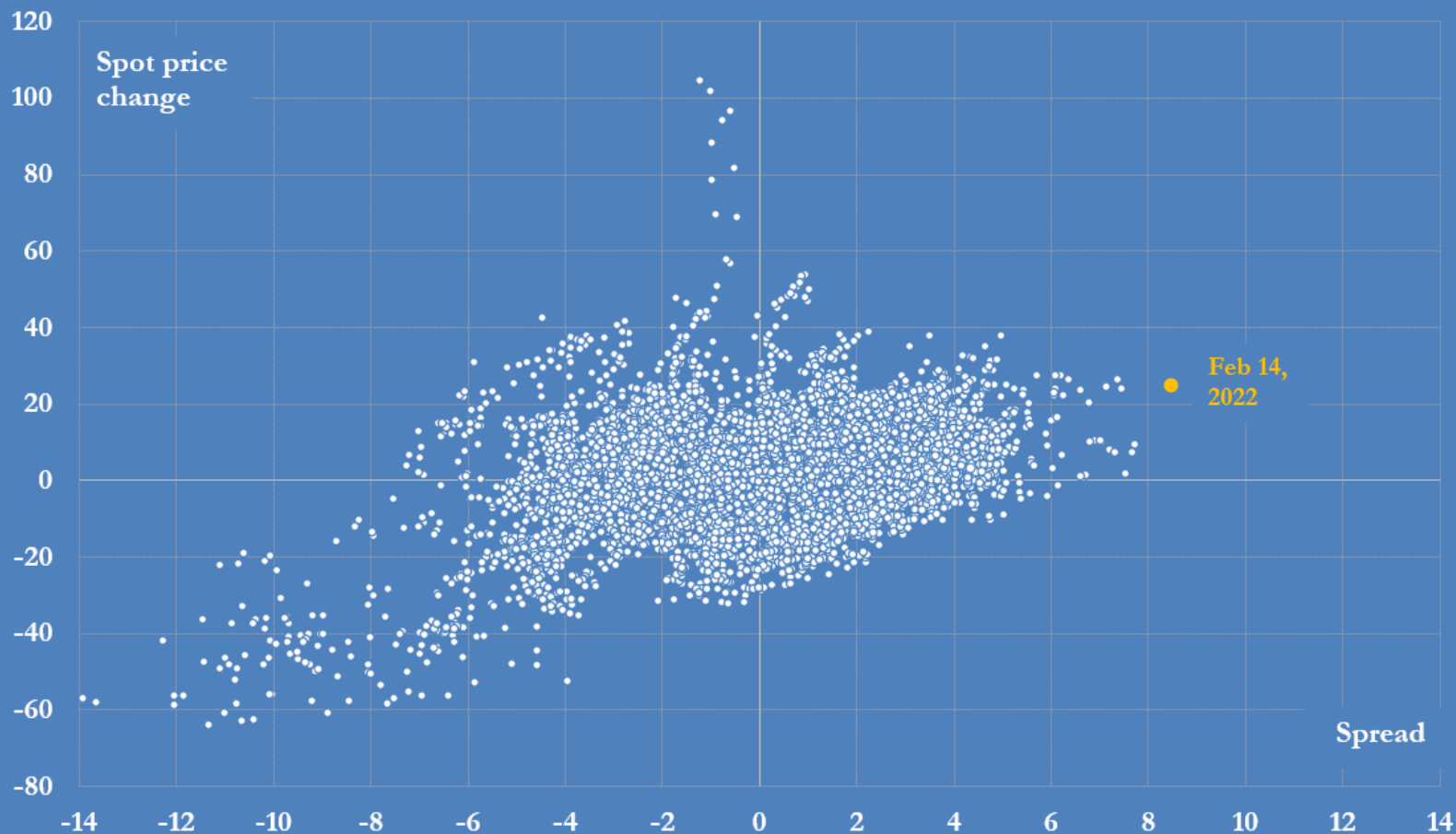
# Oil inventories are tightest for decades

Spot prices escalating rapidly with futures in steep backwardation

## Brent spot prices and calendar spread, 1993-2022

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)

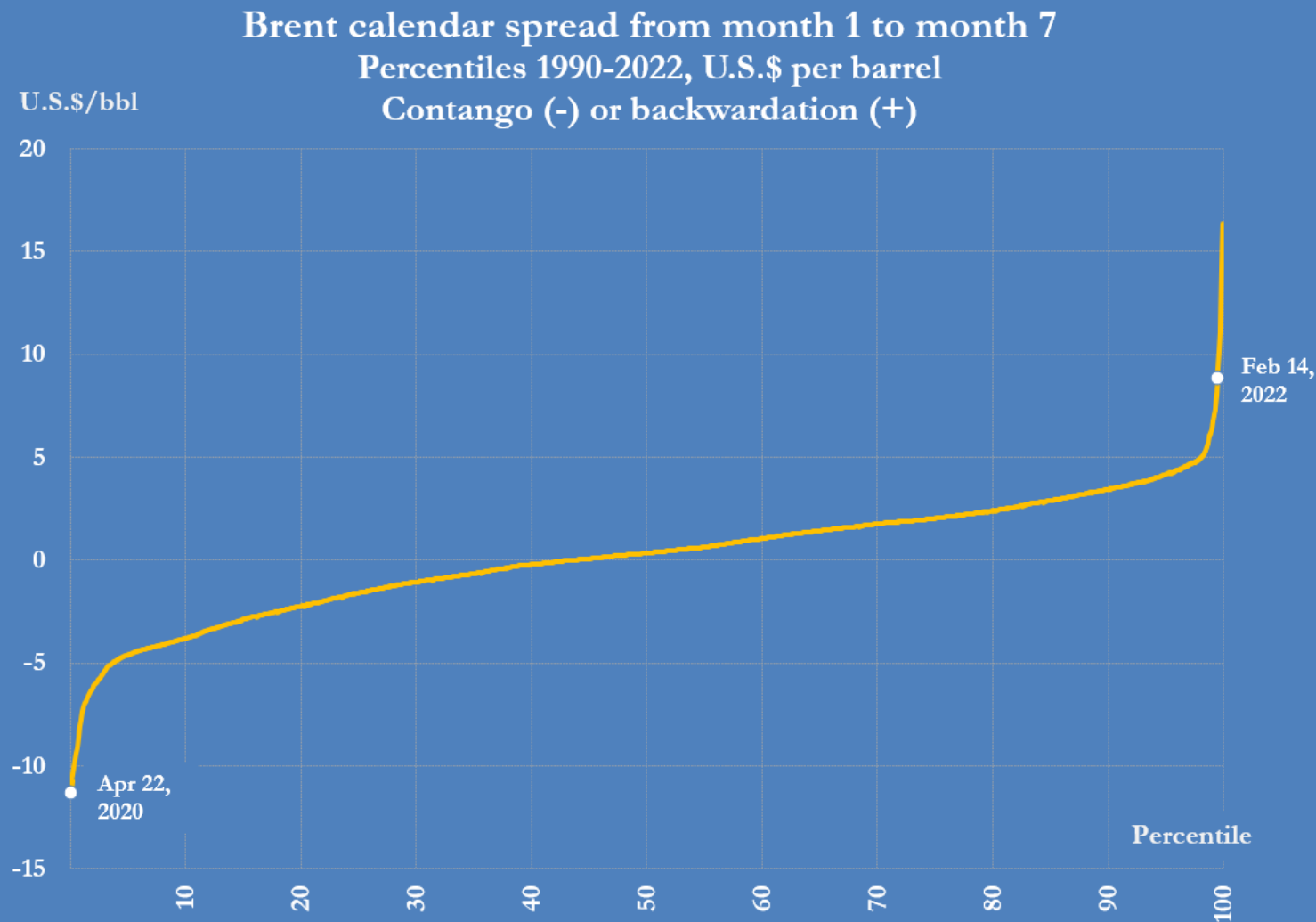


Source: ICE Futures Europe

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# Backwardation correlates with fears about insufficient inventories

## Brent's six-month backwardation in 99<sup>th</sup> percentile for all trading days since 1990



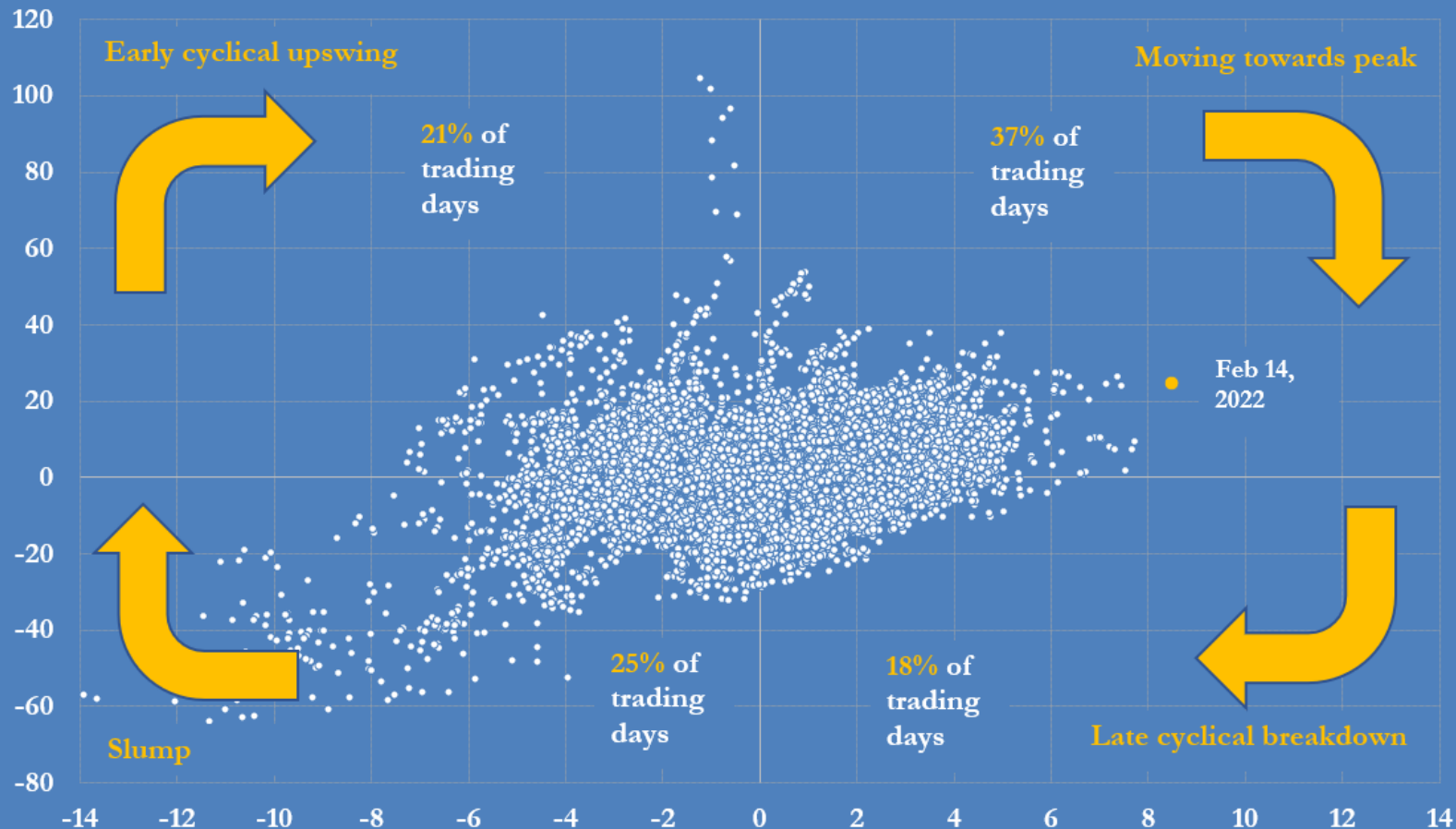
# Oil market moving rapidly towards some sort of cyclical peak

## But short-term, medium-term or long-term peak?

### Brent spot prices and calendar spread, 1993-2022

X-axis: six-month calendar spread (M1-M7) (U.S\$ per barrel)

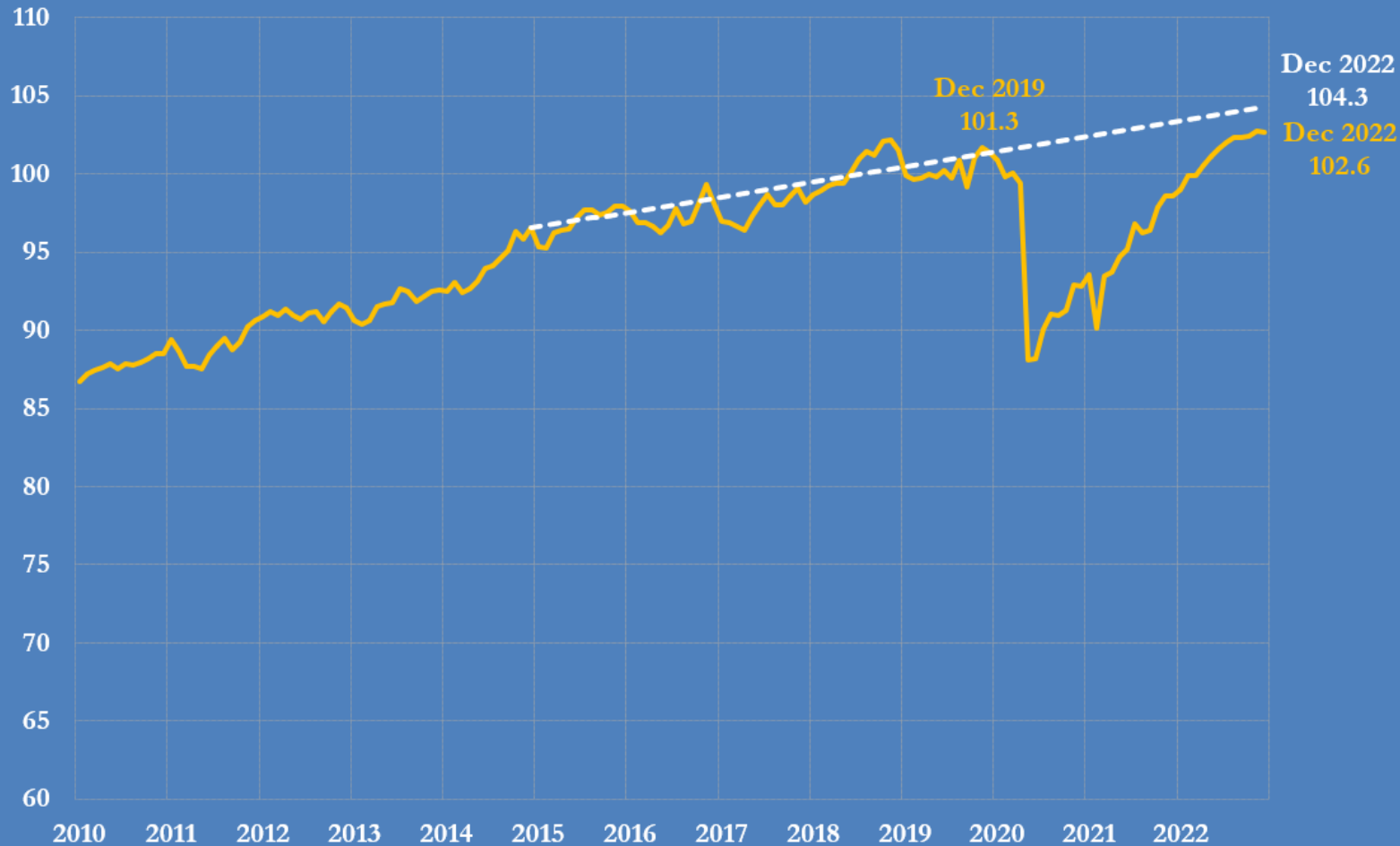
Y-axis: percent change in spot price over previous two months (five-day avg)



# Global oil consumption is still below pre-pandemic trend

## But global oil production is even further below trend

Global liquids consumption, 2010-2022  
million b/d, actual and forecast, projection of Dec 2014-Dec 2019 trend



Source: U.S. Energy Information Administration ("Short-Term Energy Outlook", Feb 2022)  
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# Current rate of inventory depletion is unsustainable

If something cannot continue forever, it will stop — Stein's Law

Either production must grow faster and/or consumption must grow slower

Faster production growth scenarios

- ❖ OPEC<sup>+</sup>
- ❖ U.S. shale producers
- ❖ Non-OPEC non-shale
- ❖ Iran and Venezuela sanctions eased

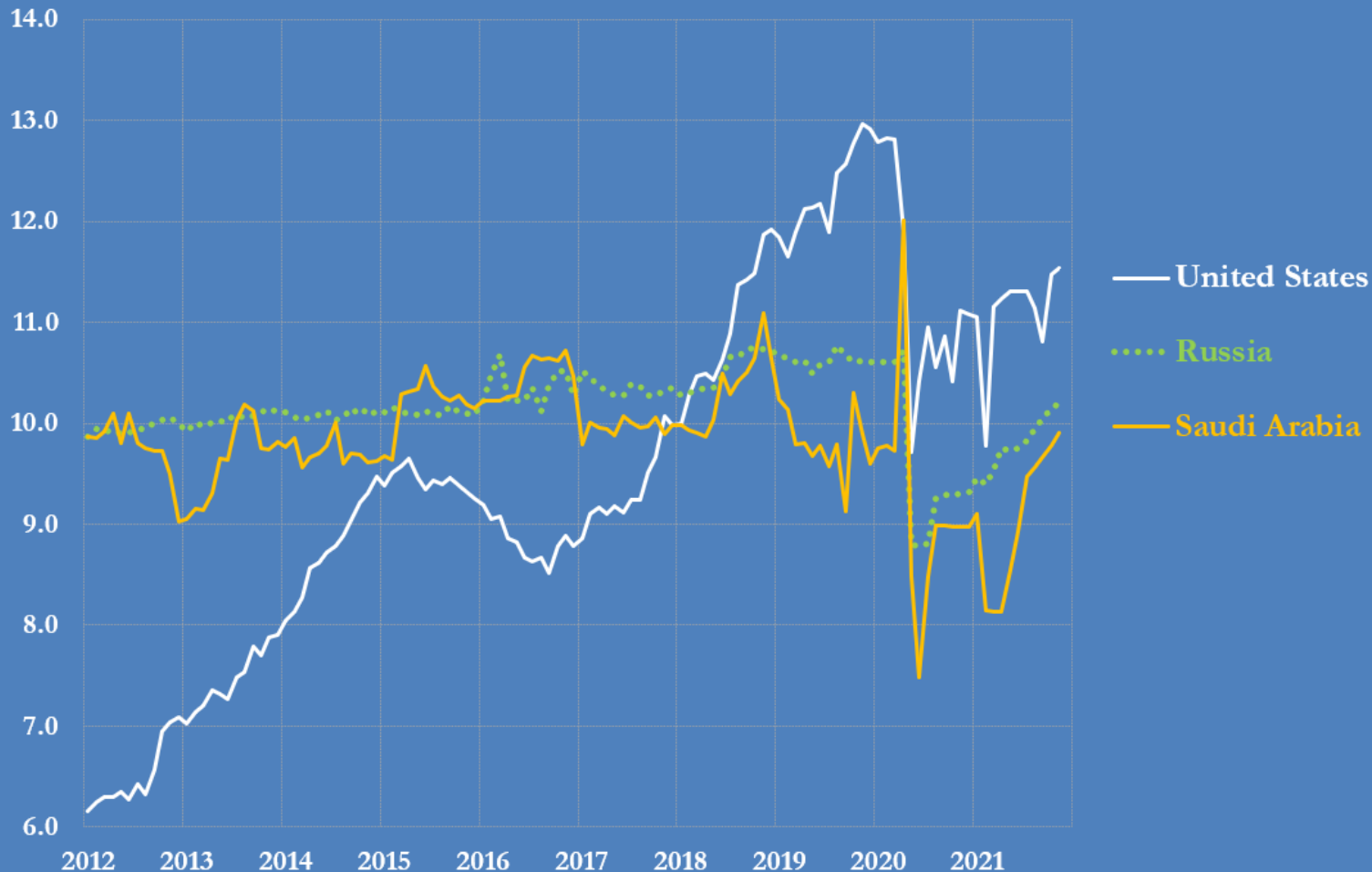
Slower consumption growth scenarios

- ❖ High prices restrain demand?
- ❖ Spontaneous business cycle downturn?
- ❖ Federal Reserve forces cyclical slowdown?
- ❖ China experiences cyclical downturn?

Some or all these scenarios must occur in 2022/23

# Faster production growth would have to come from U.S. shale or Saudi Easing sanctions on Iran and/or Venezuela could also help

Global crude oil output by top three producers, 2012-2021  
million b/d, monthly

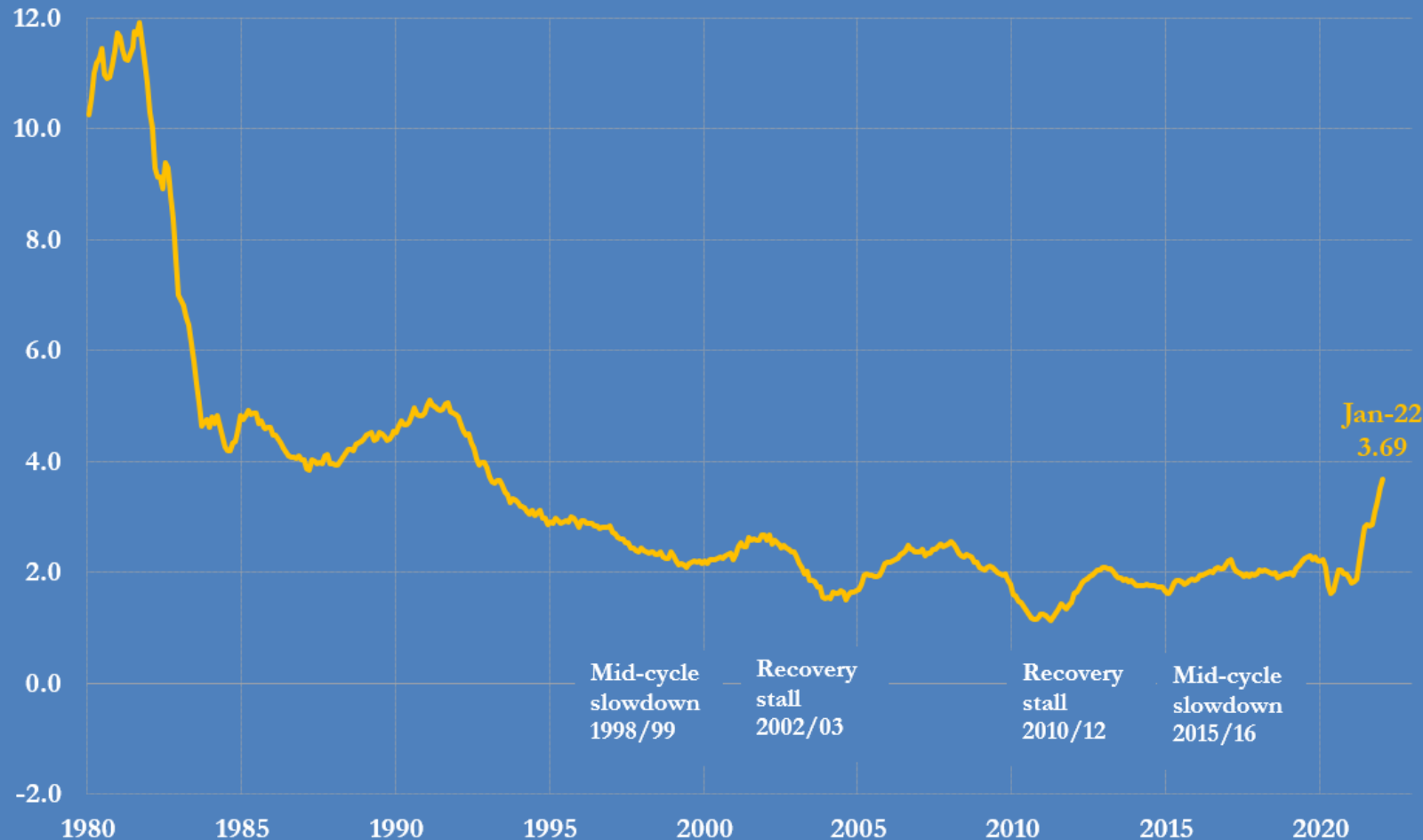




# U.S. core inflation running at fastest rate since 1993

Federal Reserve shifts from supporting recovery/jobs to controlling inflation

U.S. consumer price inflation, 1980-2022  
all-items less food and energy, monthly, percent, 2-year CAGR

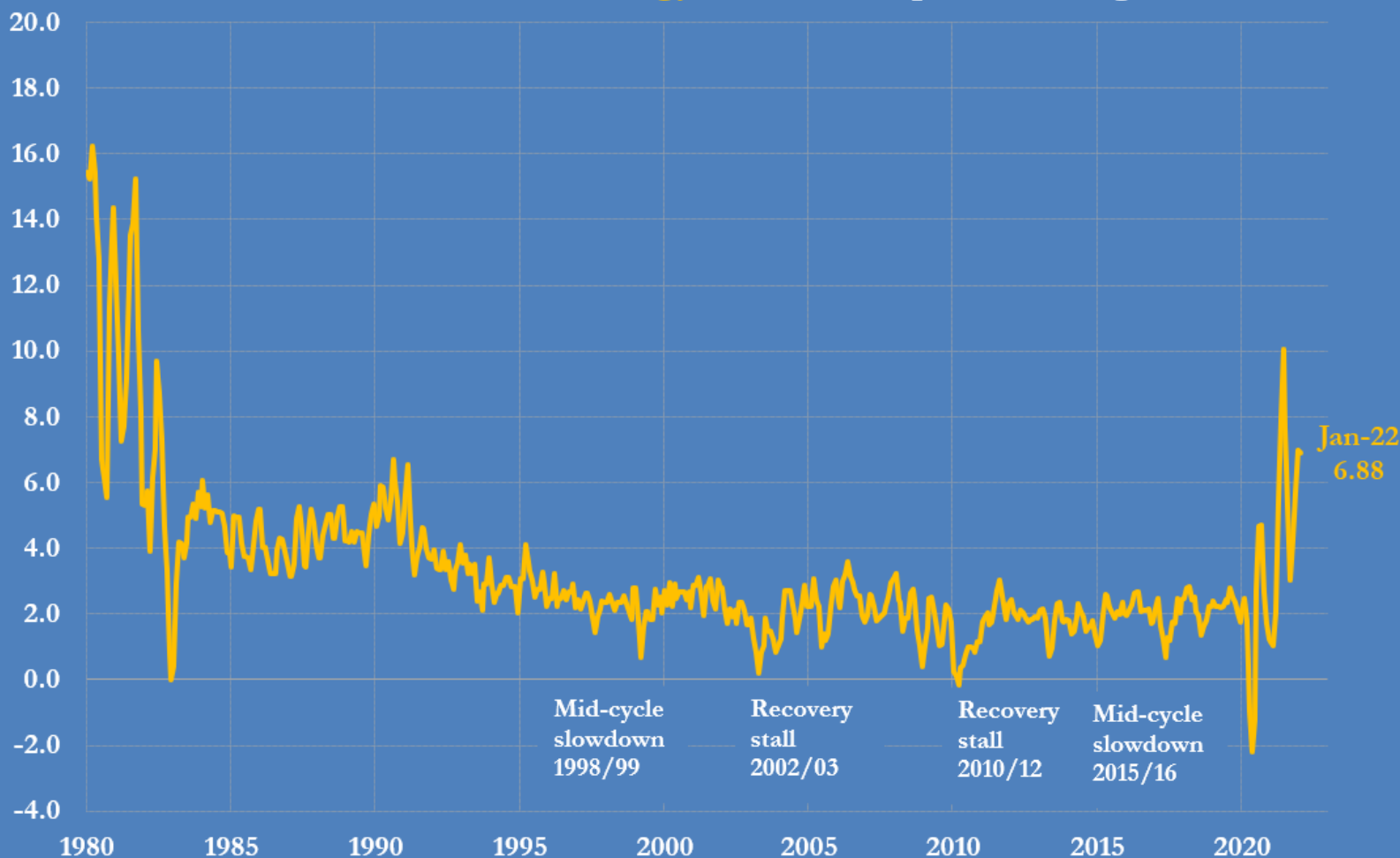


# Inflation is accelerating – transient threatens to become permanent

## Upward pressure on prices likely to intensify as business cycle matures

### U.S. consumer price inflation, 1980-2022

all-items less food and energy, three-month percent change, annualised



Source: U.S. Bureau of Labor Statistics

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# Fed expected to raise interest rates by 1.5 percent points this year

## Six-quarter point increases (or equivalent) before the end of 2022

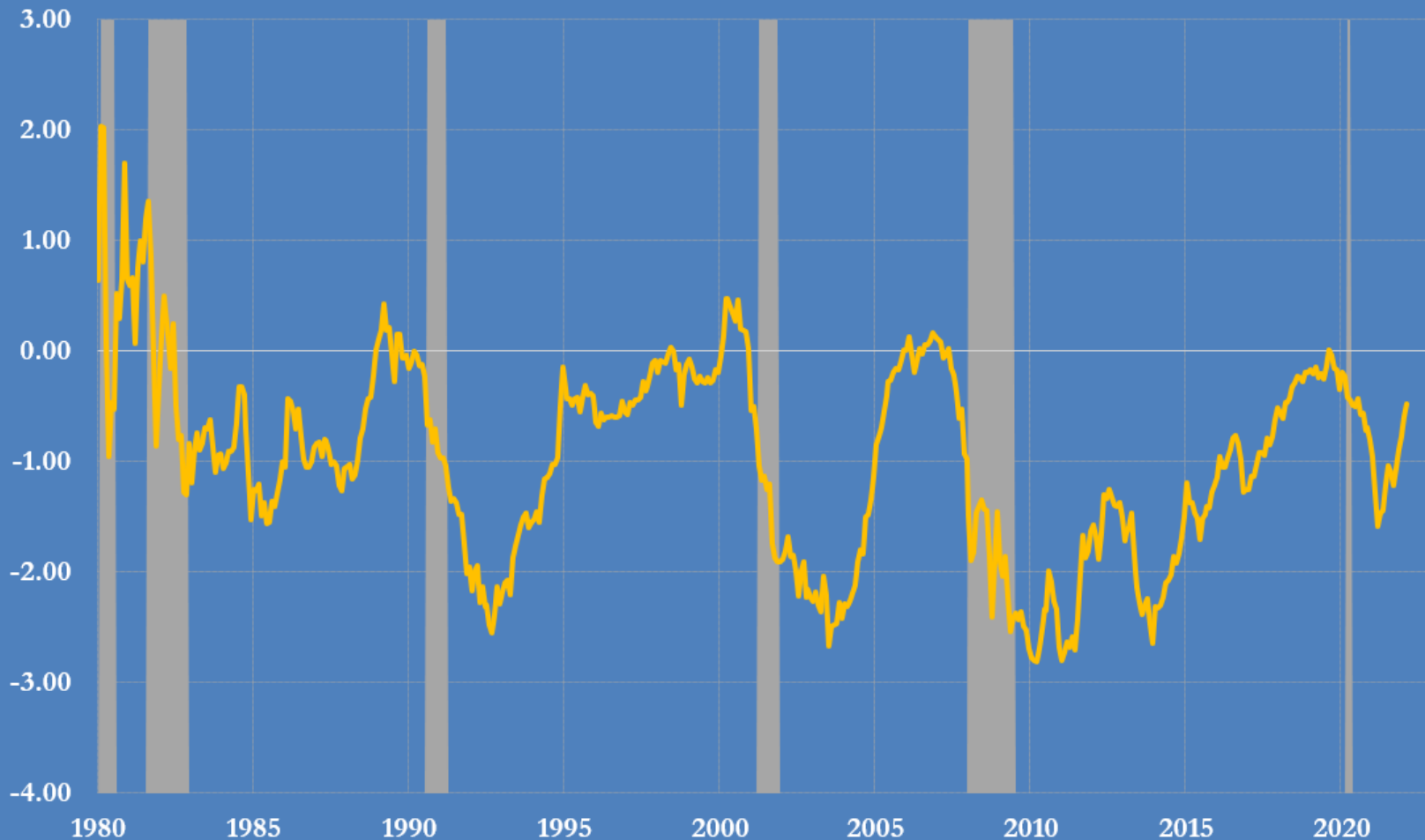
Expected federal funds rate in January 2023  
percent, implied by futures prices



# U.S. Treasury yield curve flattening – cyclical slowdown ahead

## End-of-cycle recession or mid-cycle slowdown?

U.S. Treasury yield curve, 1980-2022  
percentage points, yield on 2-yr minus 10-yr notes  
month-end except most recent month, NBER recessions shown



Source: London Stock Exchange Group

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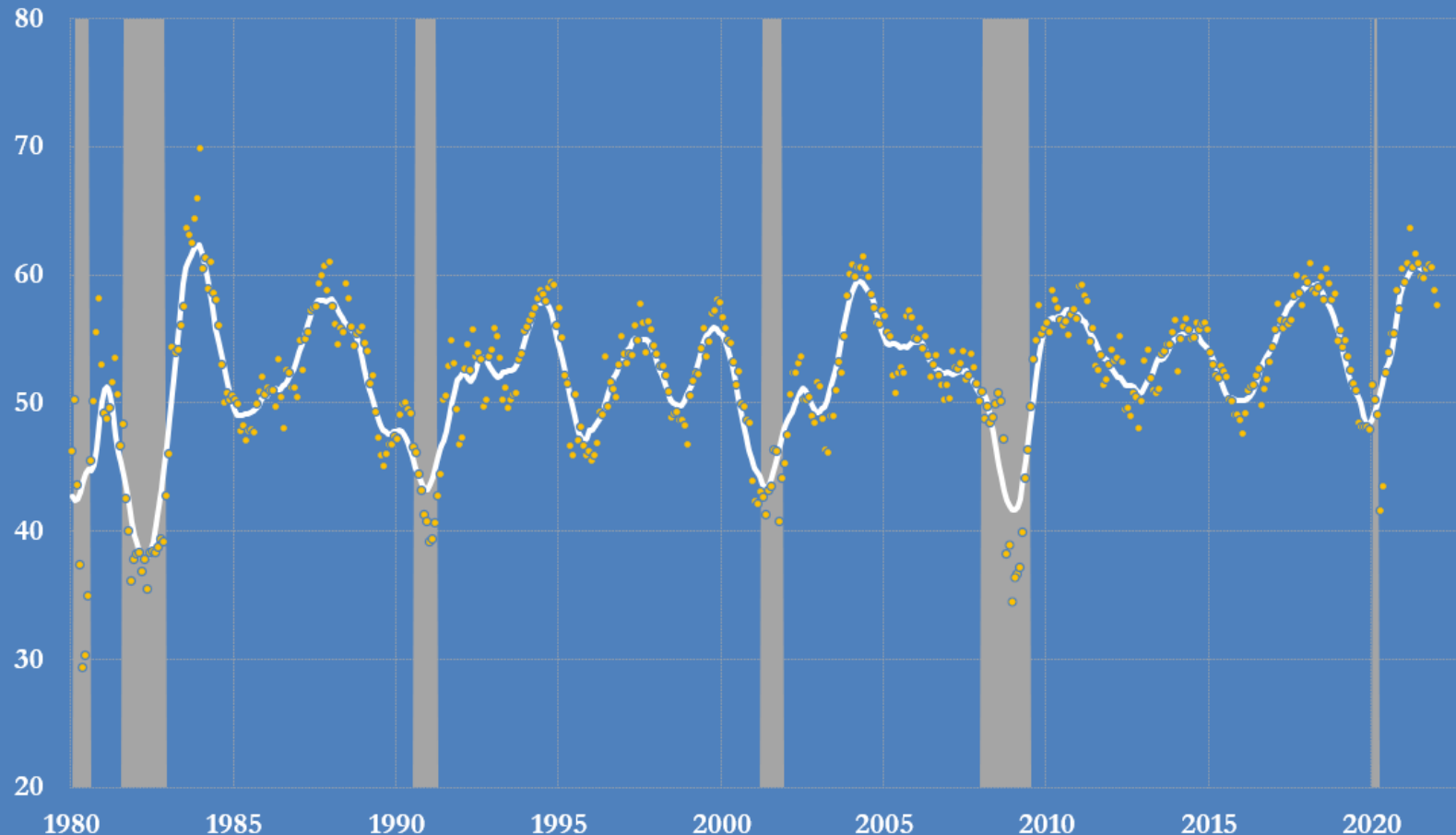
# Manufacturing and freight growth is decelerating

Slower growth ahead after frenzied re-opening following coronavirus recession

## U.S. Purchasing Managers' Index, 1980-2022

Manufacturing, diffusion index, base = 50

Monthly and 12-month centred average, NBER recessions shown



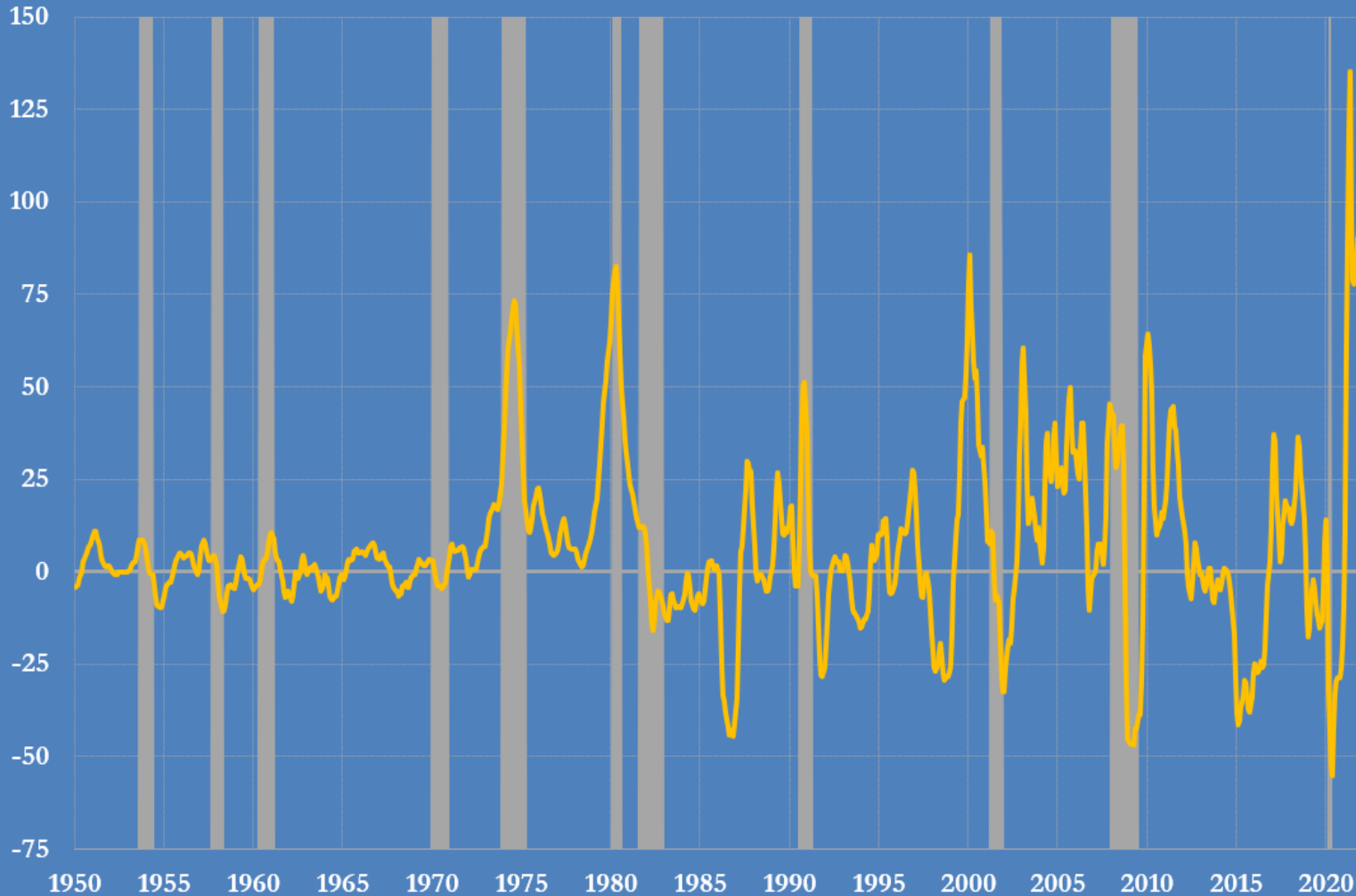
Source: Institute for Supply Management, Manufacturing Report on Business

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# Oil prices are strongly pro-cyclical

Recession or mid-cycle slowdown normally required to bring prices down

U.S. gasoline prices and the business cycle, 1950-2021  
gasoline price percent change from prior year, NBER recession dates



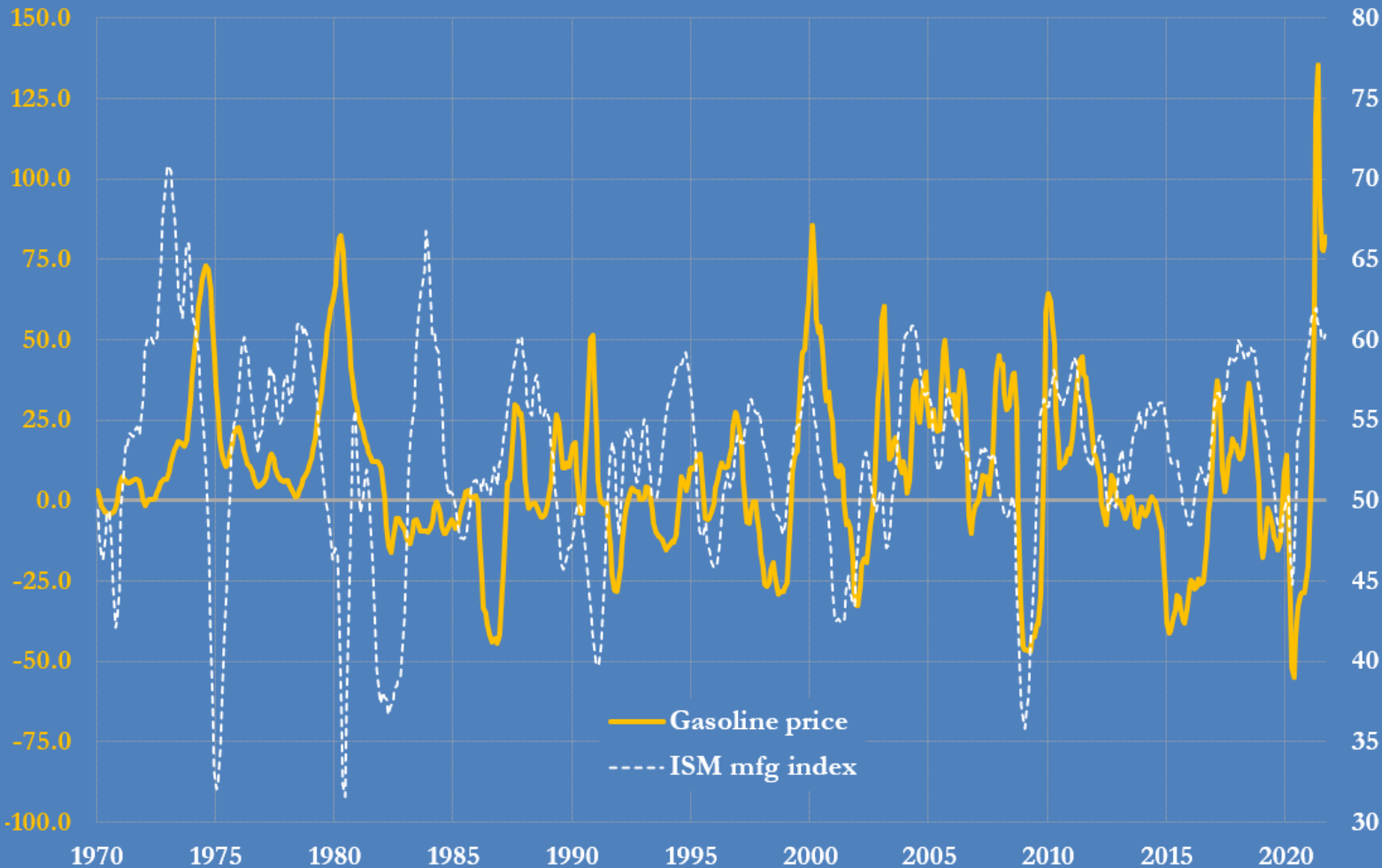
Source: U.S. Bureau of Labor Statistics

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# Oil prices track business cycle

Prices are likely to continue rising until U.S. business cycle slows

U.S. gasoline prices and the business cycle, 1970-2021  
gasoline price percent change from prior year, ISM manufacturing index



Source: U.S. Bureau of Labor Statistics

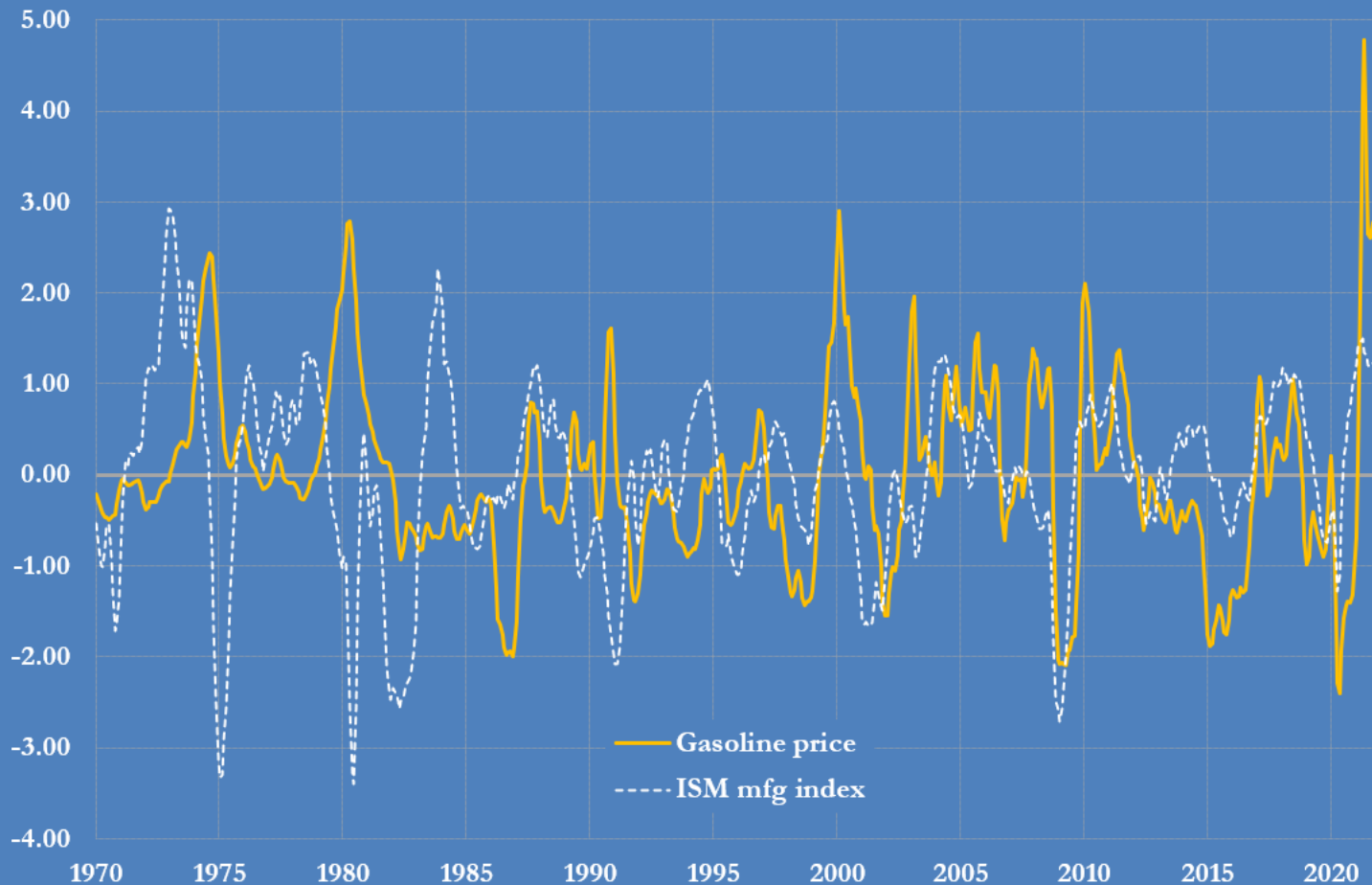
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# Oil prices likely to continue rising and add to inflation

Can Fed engineer a soft landing (mid-cycle slowdown) and avoid hard landing (end-of-cycle recession)?

## U.S. gasoline prices and the business cycle, 1950-2021

gasoline price percent change from prior year, ISM mfg index, **z-scores**



Source: U.S. Bureau of Labor Statistics

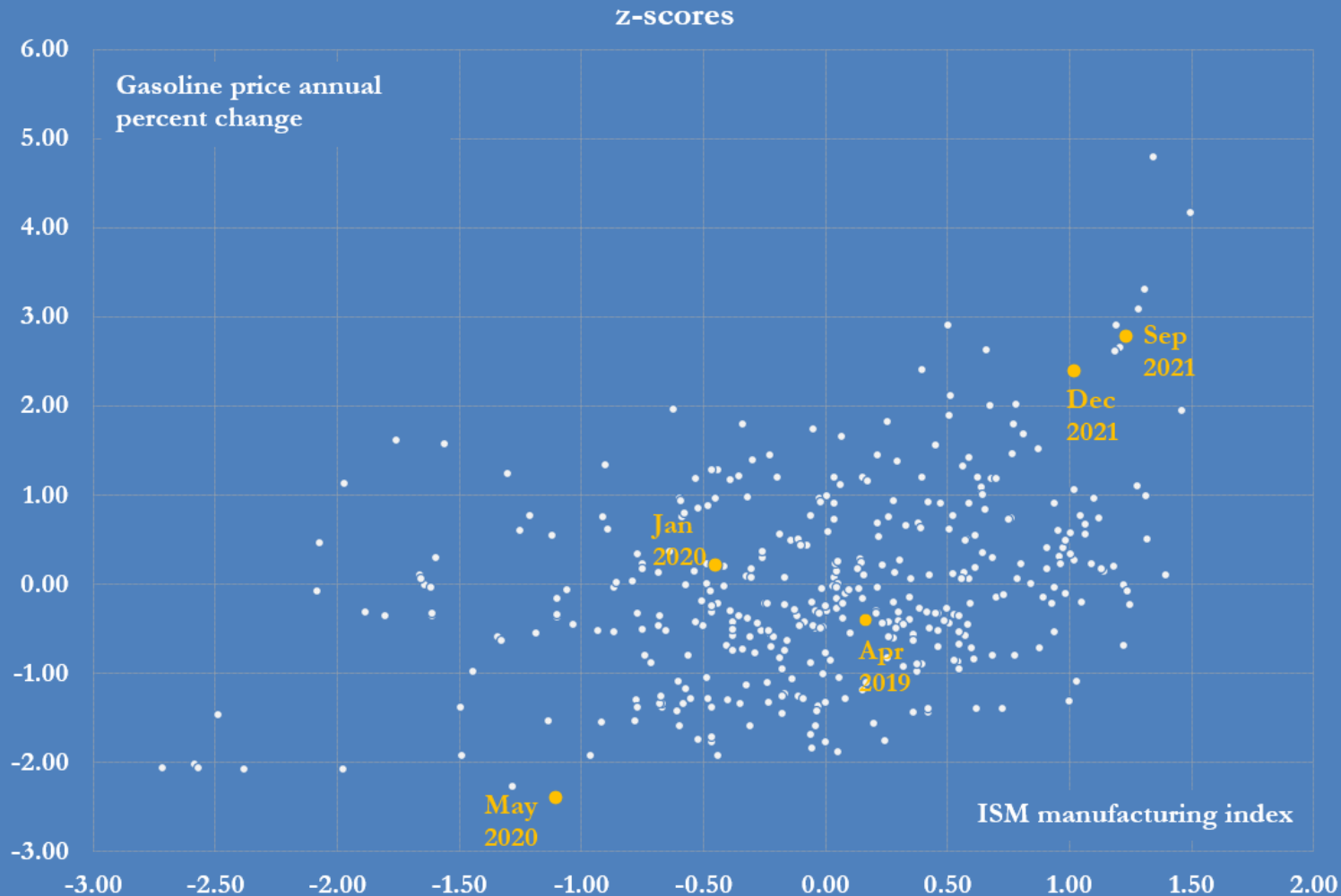
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# Soft-landing implies moderate growth and stable oil prices

## ISM manufacturing index in low 50s, oil and gasoline prices roughly flat on year

U.S. gasoline prices and the business cycle, 1990-2021



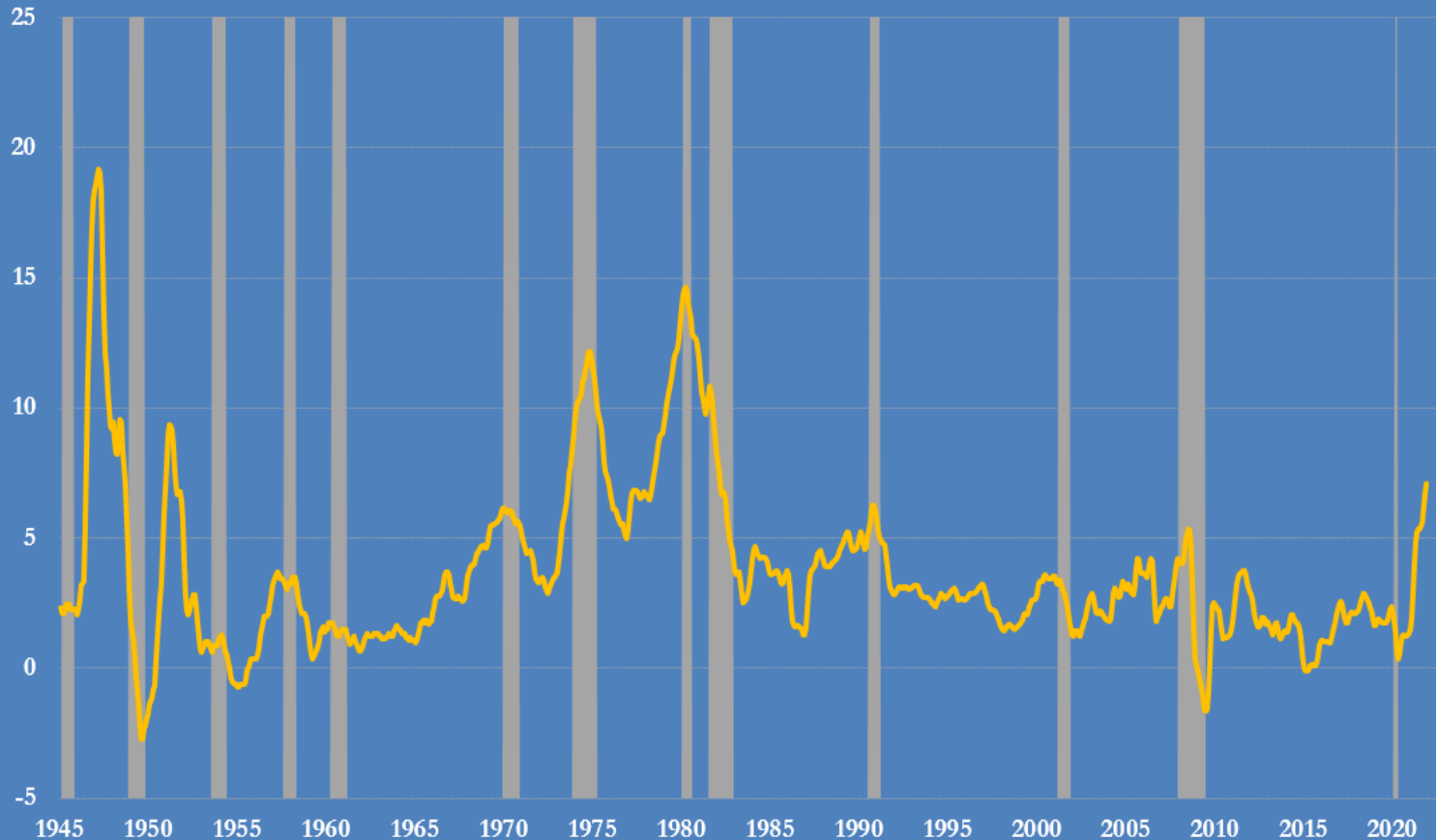
# Soft-landings are hard to achieve – will this time be different?

On last five occasions when inflation peaked above +5.0% per year, a recession ensued when Fed tried to bring price increases under control

## U.S. consumer price index, 1945-2022

percent change from prior year, three-month centred average

NBER recessions shown



Thank you for listening

If you would like a copy of the slides please email me and I will send the chartbook: [john.kemp@thomsonreuters.com](mailto:john.kemp@thomsonreuters.com)

If you would like to receive a daily digest of best in energy news + my own research notes, you can add your email to the circulation list using this link: <https://eepurl.com/dxTcl1>

All data was current as of February 16 – and in most cases the most recent month was either Jan 2022 or Dec 2021