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WisdomTree Europe

Navigating the Next Leg of the Cycle and Energy Crisis with Commodities

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Asset Class Performance Ranked - 2012-2021 & 2022 year to date

		Year											
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	10 Yrs	2022 YTD
Performance Ranking	1	Real Estate 28.7%	Equities 20.3%	Real Estate 15.9%	Cash 0.2%	Commodities 12.4%	Equities 21.6%	Cash 1.7%	Equities 24.0%	Equities 14.3%	Commodities 27.3%	Equities 9.7%	Commodities 19.6%
	2	Equities 13.4%	Real Estate 4.4%	Bonds 5.6%	Real Estate 0.1%	Equities 5.6%	Real Estate 11.4%	Bonds -2.4%	Real Estate 23.1%	Bonds 10.3%	Real Estate 27.2%	Real Estate 9.6%	Cash 2.5%
	3	Bonds 13.4%	Cash 0.2%	Equities 2.1%	Bonds -2.8%	Real Estate 5.0%	Bonds 10.3%	Real Estate -4.7%	Bonds 13.6%	Commodities 2.3%	Equities 16.8%	Bonds 4.2%	Equities -22.2%
	4	Commodities 2.0%	Bonds -4.0%	Cash 0.2%	Equities -4.3%	Bonds 3.6%	Commodities 6.3%	Commodities -9.0%	Commodities 7.7%	Cash 0.5%	Cash 0.1%	Cash 0.6%	Bonds -26.4%
	5	Cash 0.3%	Commodities -10.1%	Commodities -13.3%	Commodities -21.3%	Cash 0.5%	Cash 0.9%	Equities -11.2%	Cash 1.7%	Real Estate -8.2%	Bonds -3.5%	Commodities -0.5%	Real Estate -27.5%

Source: WisdomTree, Bloomberg

Data until 14/06/2022; All returns are in USD; ; 10 Yrs returns are annualised from 31 Dec 11 to 31 Dec 21. YTD = year to date = 31/12/2021 to 07/11/2022

Data: Equity - MSCI World, Bond - Bloomberg Barclays Agg Sovereign TR Unhedged, Real Estate - EPRA/NAREIT Global, Commodity -Optimized Roll Commodity Total Return Index, Cash - US T-Bill 3 Mth

Historical performance is not an indication of future performance and any investments may go down in value

Commodity Sector Performance Ranked - 2012-2021 & 2022 year to date

		Year										10 Yrs	2022 YTD
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Performance Ranking	1	Precious Metals 6.3%	Energy 5.2%	Precious Metals -6.7%	Precious Metals -11.5%	Industrial Metals 19.9%	Industrial Metals 29.4%	Precious Metals -4.6%	Precious Metals 17.0%	Precious Metals 25.6%	Energy 52.1%	Industrial Metals 1.9%	Energy 67.4%
	2	Agriculture 4.0%	Diversified -9.6%	Industrial Metals -6.9%	Agriculture -15.6%	Energy 16.3%	Precious Metals 10.9%	Agriculture -10.8%	Energy 11.8%	Agriculture 16.5%	Industrial Metals 30.3%	Precious Metals -0.3%	Diversified 20.8%
	3	Industrial Metals 0.7%	Industrial Metals -13.6%	Agriculture -9.2%	Diversified -24.7%	Diversified 11.4%	Diversified 0.7%	Energy -12.7%	Industrial Metals 7.0%	Industrial Metals 16.3%	Diversified 27.1%	Agriculture -1.9%	Agriculture 14.7%
	4	Diversified -1.1%	Agriculture -14.3%	Diversified -17.0%	Industrial Metals -26.9%	Precious Metals 9.5%	Energy -4.3%	Diversified -13.0%	Diversified 5.4%	Diversified -3.5%	Agriculture 26.7%	Diversified -3.5%	Precious Metals -9.0%
	5	Energy -9.4%	Precious Metals -30.8%	Energy -39.3%	Energy -38.9%	Agriculture 2.1%	Agriculture -11.0%	Industrial Metals -19.5%	Agriculture 1.7%	Energy -42.7%	Precious Metals -6.1%	Energy -10.6%	Industrial Metals -11.2%

Source: WisdomTree, Bloomberg

Data until 14/06/2022; All returns are in USD; ; 10 Yrs returns are annualised from 31 Dec 11 to 31 Dec 21. YTD = year to date = 31/12/2021 to 07/11/2022

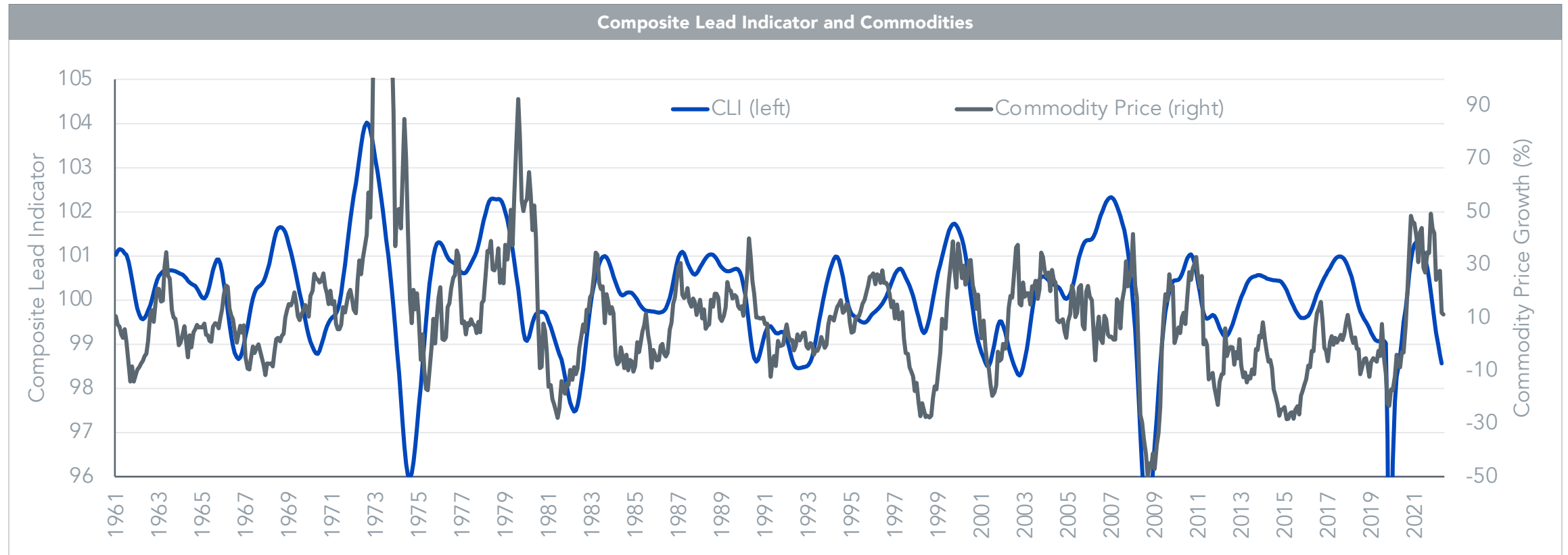
Data: Proxies for each commodity sector using Bloomberg sub-sector indices TR

Historical performance is not an indication of future performance and any investments may go down in value



Commodities: Cyclical pressure in the short-term

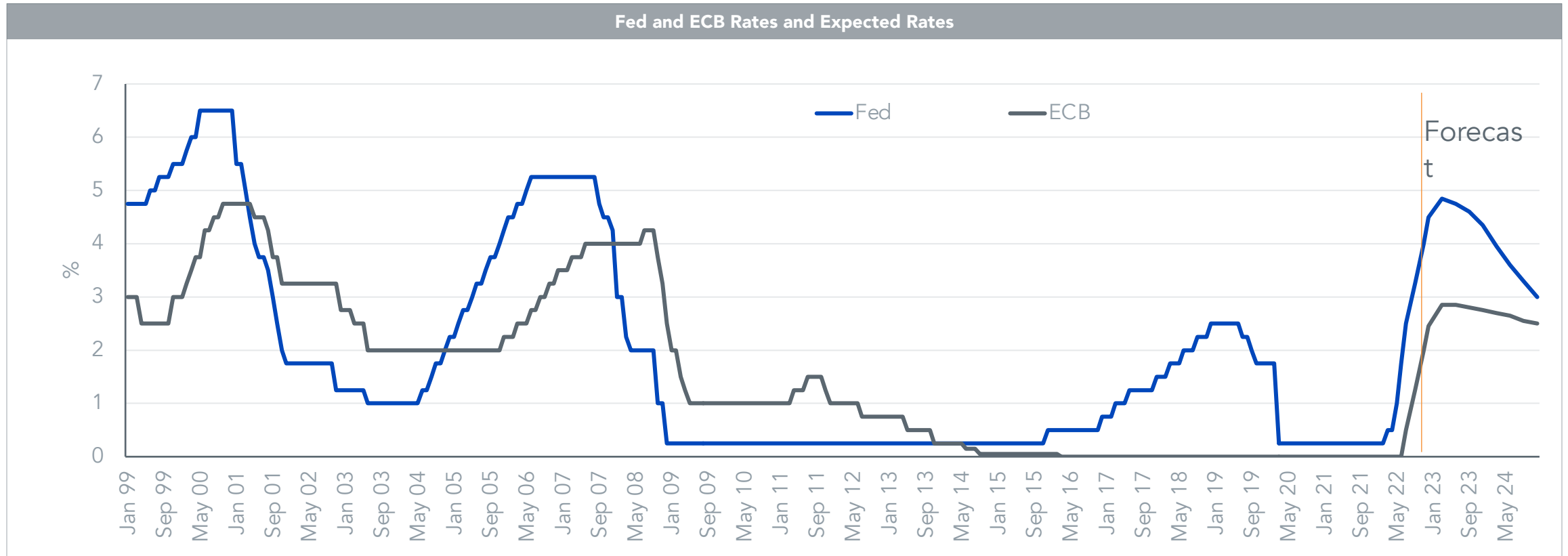
Commodities are a cyclical asset class



Source: WisdomTree, Bloomberg, OECD. June 1961 to October 2022. Commodity price based on Bloomberg Commodity Total Returns Index. The composite leading indicator (CLI) is designed to provide early signals of turning points in business cycles showing fluctuation of the economic activity around its long term potential level. CLIs show short-term economic movements in qualitative rather than quantitative terms. CLI is amplitude adjusted, Long-term average = 100

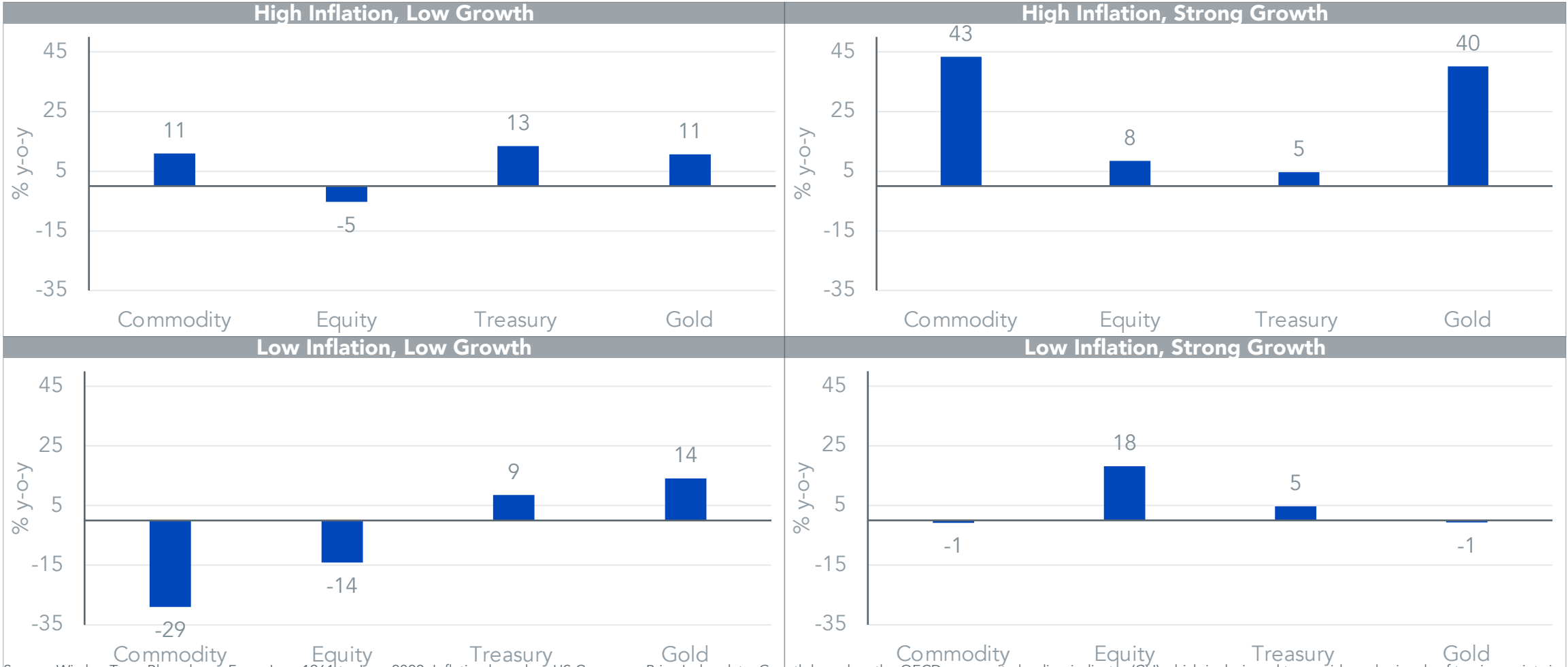
Historical performance is not an indication of future performance and any investments may go down in value.

Consensus expectations are for a wide policy differential between Federal Reserve (Fed) and European Central Bank (ECB)



Source: WisdomTree, Bloomberg. Actual data from January 1999 to November 2022, Surveys from December 2022 to December 2024.
Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties

Asset performance in different economic scenarios



Source: WisdomTree, Bloomberg. From June 1961 to June 2022. Inflation based on US Consumer Price Index data. Growth based on the OECD composite leading indicator (CLI) which is designed to provide early signals of turning points in business cycles, showing fluctuation of the economic activity around its long-term potential level. CLIs show short-term economic movements in qualitative rather than quantitative terms. CLI is amplitude adjusted, Long-term average = 100. Asset price calculations are based on yearly returns in USD. Broad commodities (Bloomberg commodity total return index) and US equities (S&P 500 gross total return index) data started in June 1961. US treasuries (Bloomberg US treasury total return unhedged USD index) and Gold (physical gold) data started in 1968. High inflation is when CPI inflation is above 3.5%. Low inflation is when CPI is below 1.5%. High growth is when CLI is above 101.4 for high inflation scenarios and 100 for low inflation scenarios (CLI threshold is lowered for the latter because of the small number of observations with inflation below 1.5 and CLI above 101.4). Low Growth is when CLI is below 98.6. **Historical performance is not an indication of future performance and any investments may go down in value.**

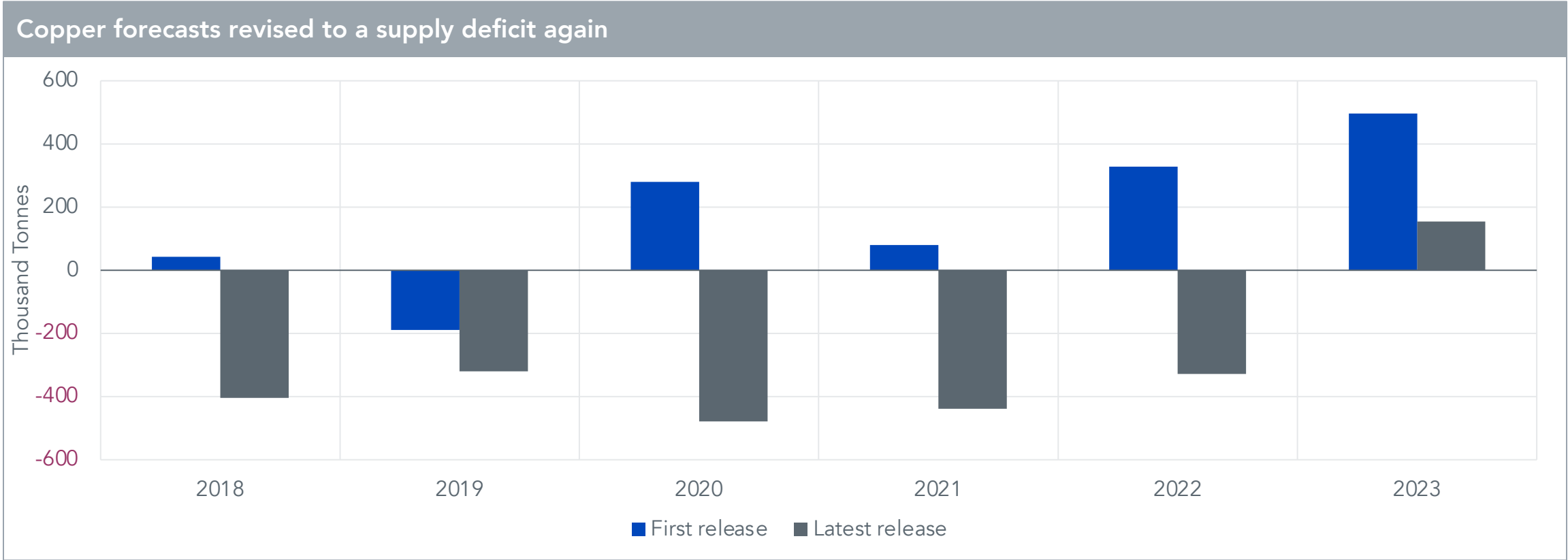
Inventory compared to past

	Current inventory relative to 5-year history	YTD performance
Energy		
Oil - US	-1.2%	6%
Oil - OECD Europe	-4.9%	13%
Natural Gas – US	-9.6%	81%
Gasoline – US	-0.3%	11%
Heating Oil – US	-12.6%	45%
Industrial Metals		
Aluminium	-68.7%	-23%
Copper	-51.2%	-23%
Nickel - LME	-74.1%	1%
Zinc	-62.4%	-1%
Lead	-38.4%	-18%
Tin	-21.2%	-47%
Agriculture		
Wheat	-6.4%	20%
Corn	-0.5%	14%
Soybeans	-1.8%	3%
Sugar	-1.2%	-2%
Cotton	-1.1%	-17%
Coffee	-4.9%	-2%
Soybean Oil	-0.5%	16%

Source: Wisdom Tree, Bloomberg. Data as of 30 September 2022. Agricultural inventories as reported by United States Department of Agriculture (USDA). US Energy inventories as reported by United States Department of Energy. Industrial metals inventory refers to exchange inventory summing stocks reported by the London Metals Exchange, Shanghai Futures Exchange and Chicago Mercantile Exchange. Price performance using the first generic futures contracts of commodities in the Bloomberg Commodity Index.

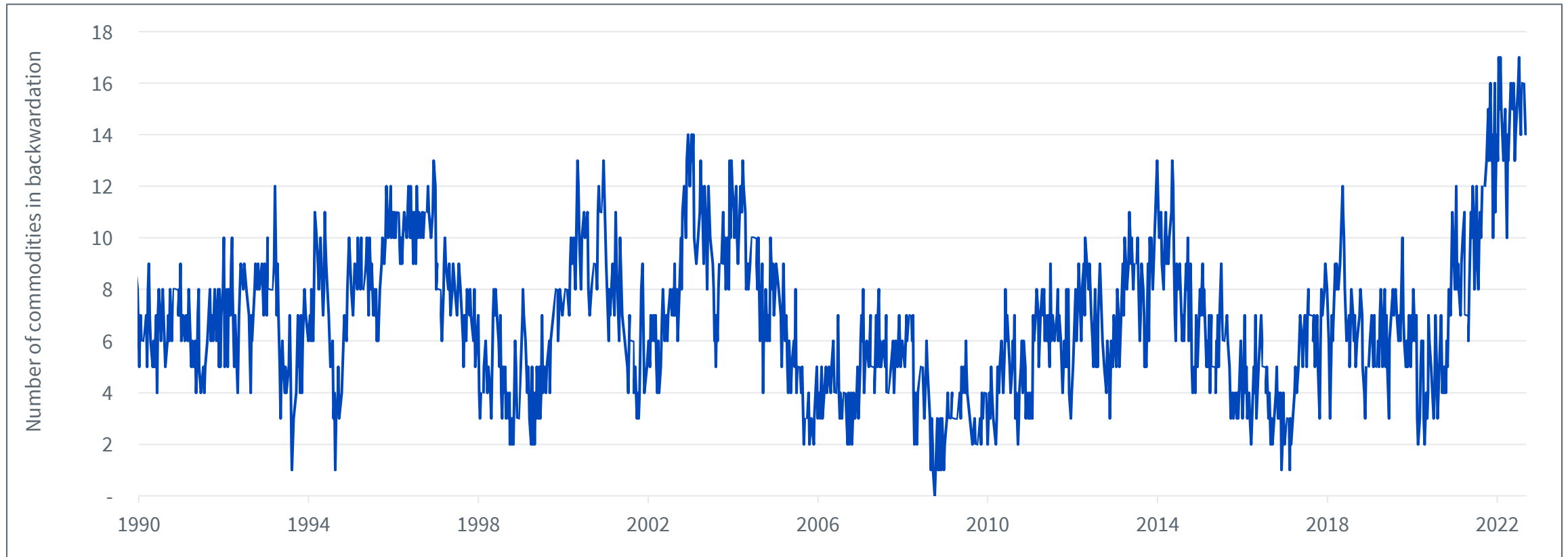
Historical performance is not an indication of future performance and any investments may go down in value.

Copper in a supply deficit again



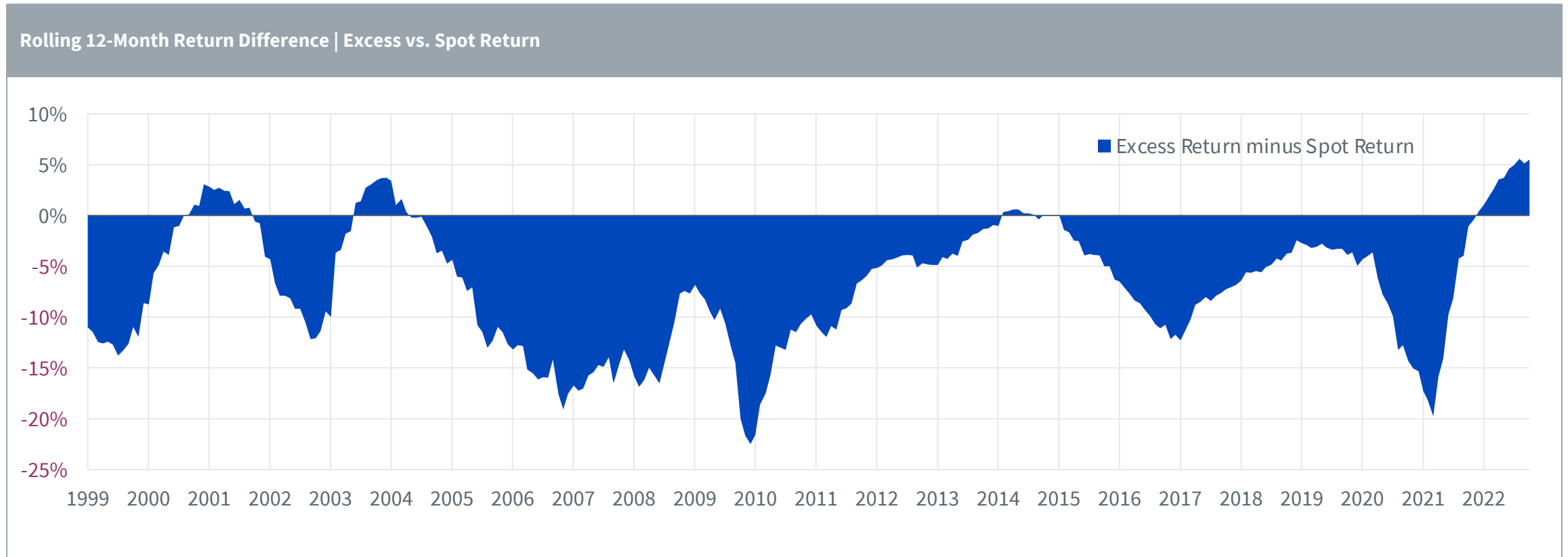
Source: WisdomTree, International Copper Study Group (ICSG). ICSG's latest forecast from 19 October 2022.
Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties

A new era for commodity investing



Source: Bloomberg, January 1990 to November 2022. Backwardation counted as the price of a front month contract being below the price of a second month contract. Covers 25 commodities
Historical performance is not an indication of future performance and any investments may go down in value

Positive roll returns to the commodity market

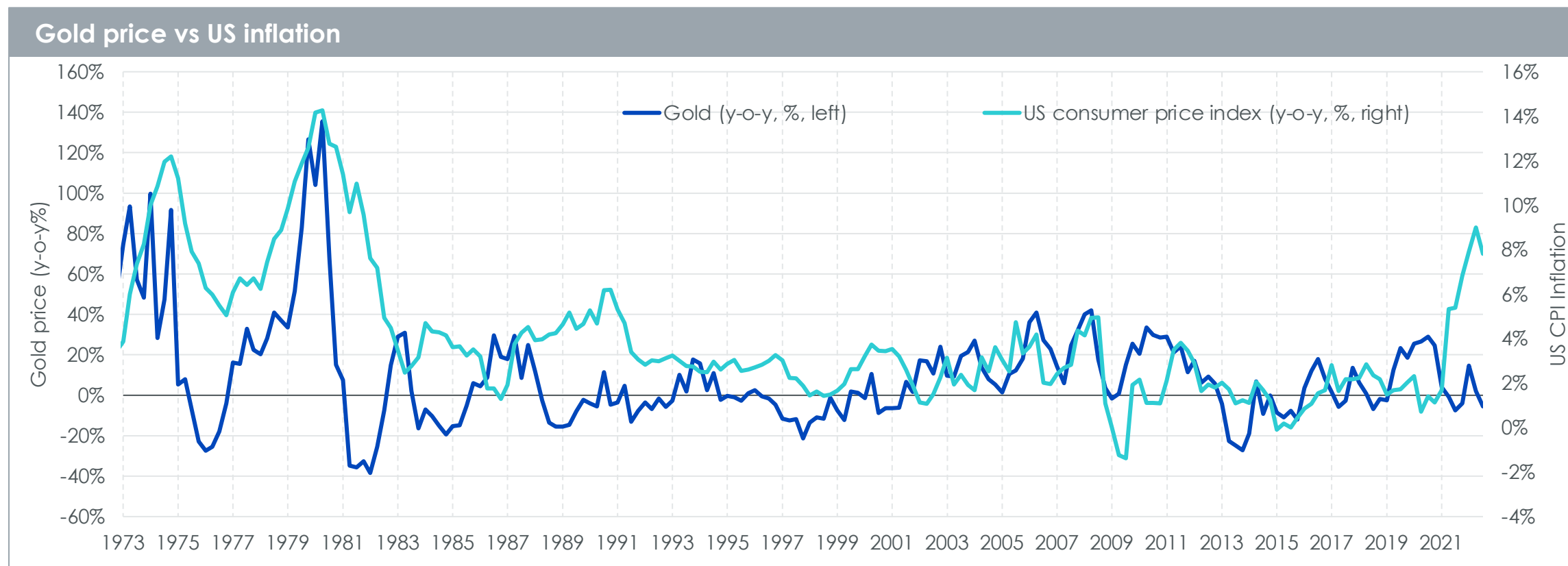


Source: Bloomberg, January 1998 to October 2022. Bloomberg Commodity Index (Excess Return) and Bloomberg Commodity Spot Index
Historical performance is not an indication of future performance and any investments may go down in value



Gold

Gold hasn't risen as much as inflation as it is under pressure from a strong dollar and bond sell-off

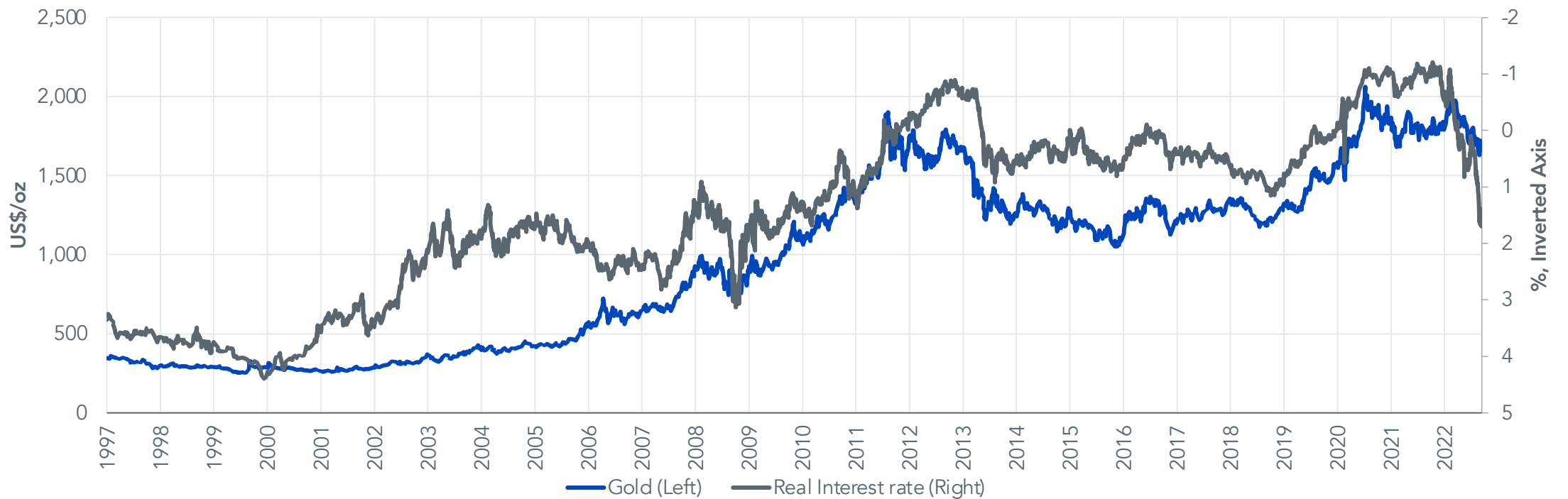


Source: Bloomberg. Quarterly data from Q1 1973 to Q3 2022.

Historical performance is not an indication of future performance and any investments may go down in value

Gold remains resilient in face of bond sell-off

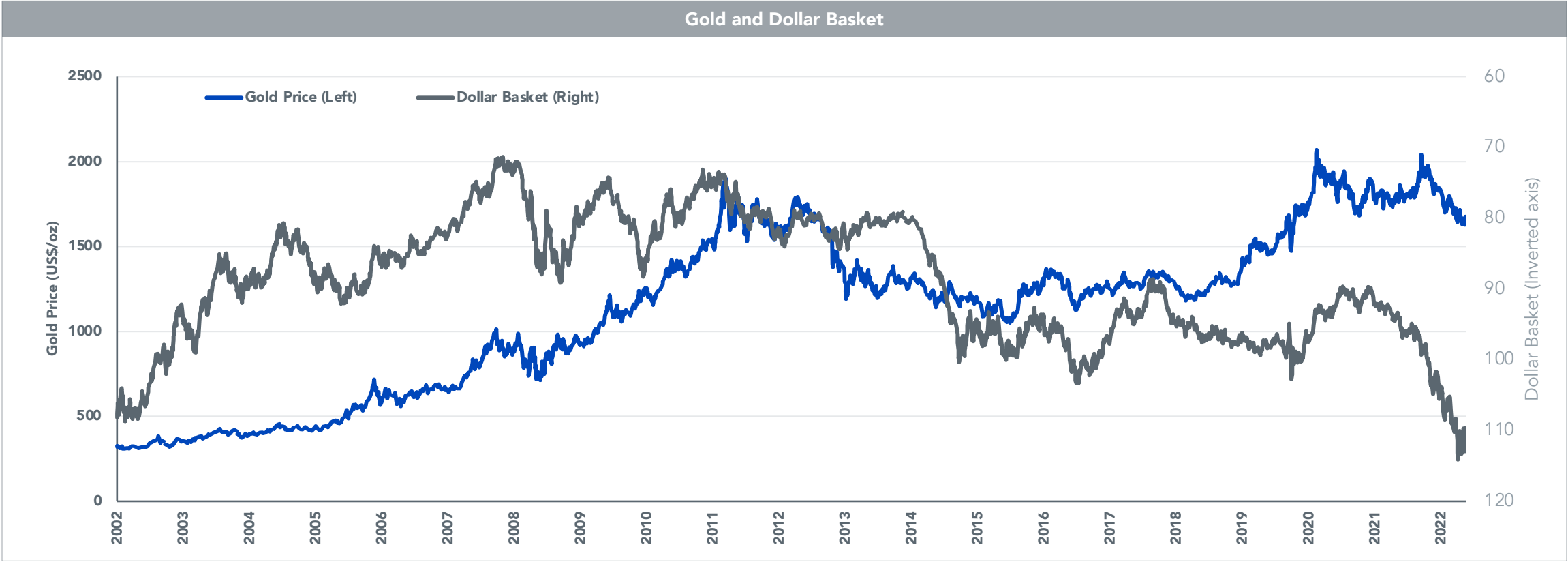
Gold vs real rates (Treasury Inflation-Protected Securities yield)



Source: Bloomberg, WisdomTree. 5 April 2020 to 7 November 2022

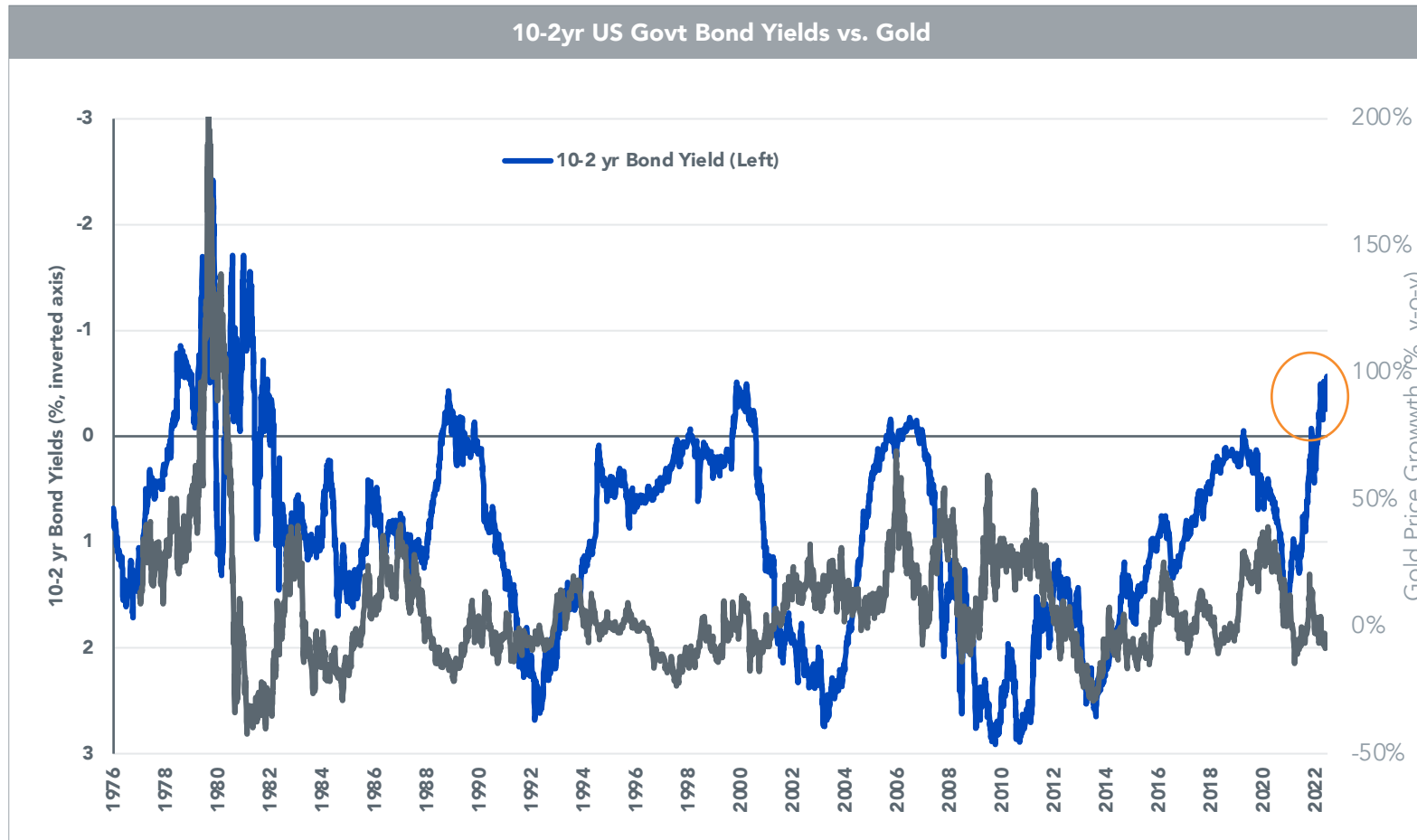
Historical performance is not an indication of future performance and any investments may go down in value

Gold has also been resilient to the extent of Dollar strength



Source: Bloomberg, WisdomTree. 24 June 2002 to 7 November 2022
Historical performance is not an indication of future performance and any investments may go down in value

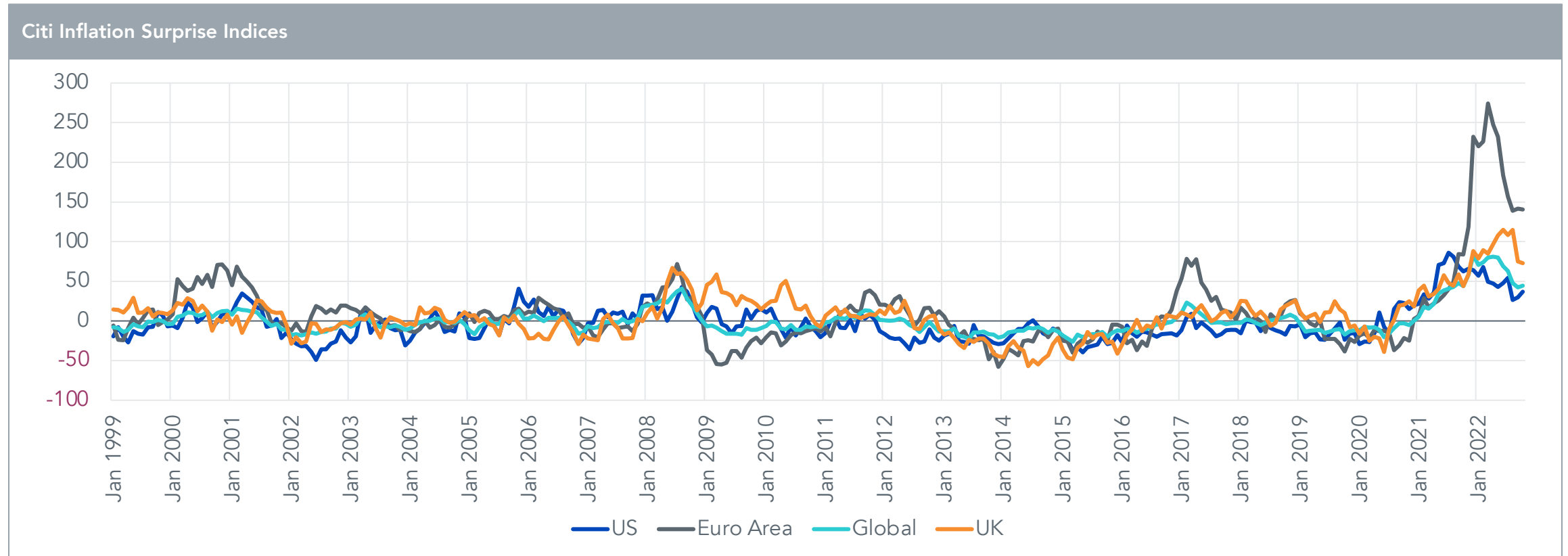
We are in a bear flattening yield curve inversion. Should that be good for gold?



- Bear flattening inversions have been good for gold
 - Between 1978 and 1981, curve inversion was gold price positive
 - In 2006, curve inversion was gold price positive
- Bull flattening inversions have not been great for gold
 - In 1989 and 2000, curve inversion didn't have any positive impact on gold prices
- In November 2022, we are in one of the strongest bear-flattening inversions we have seen since 1981. That points to a source of strength for gold we have not seen in decades.

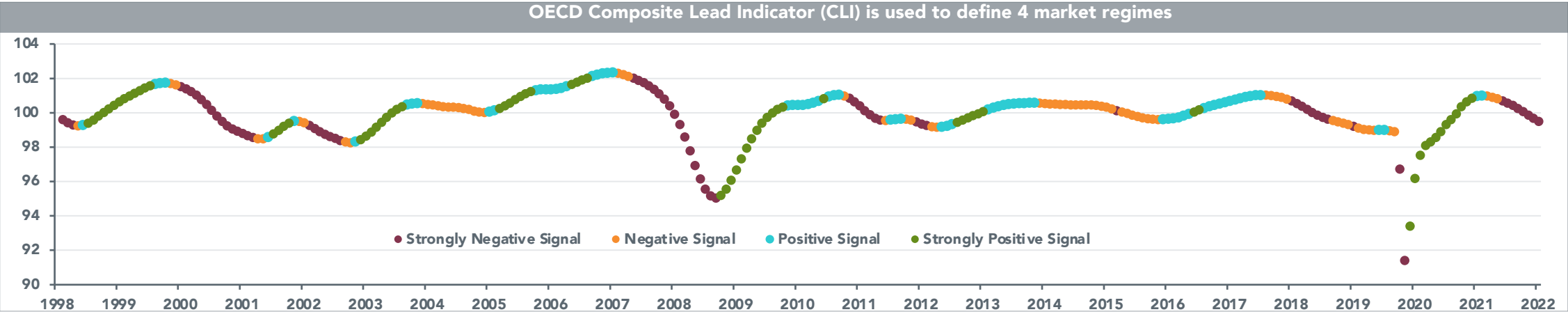
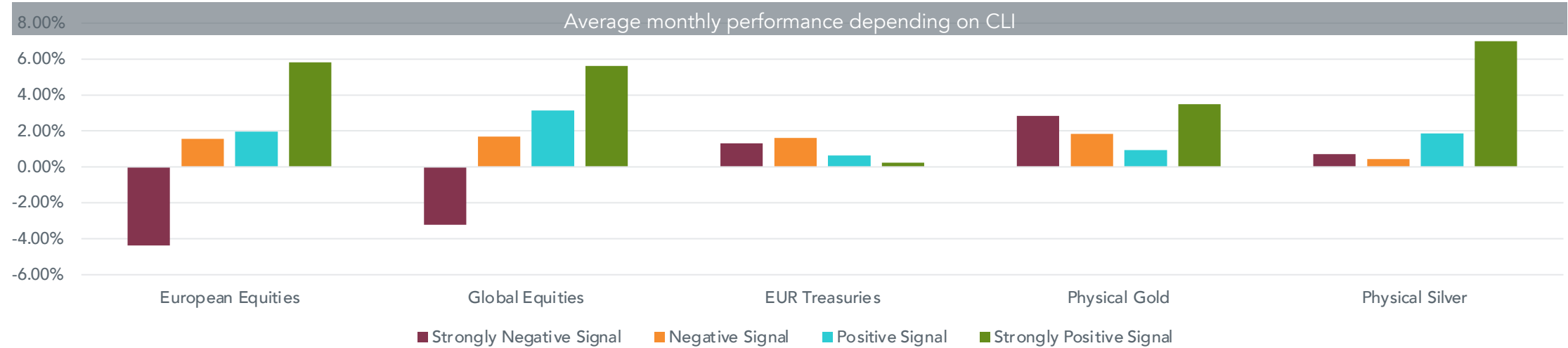
Source: WisdomTree, Bloomberg. Period: June 1976 to November 2022. We define yield curve inversion as the 10-2yr US Government Bond Yield being negative. When the 2yr is rising faster than the 10yr we define it as a bear flattening. When 10yr is falling faster than 2yr we define it as a bull flattening.
Historical performance is not an indication of future performance and any investments may go down in value

With constant supply shocks, inflation likely to continue to surprise to the upside



Source: WisdomTree, Citi Group, Bloomberg, data from January 1999 to October 2022. They are defined as weighted historical standard deviations of inflation data surprises (actual releases vs Bloomberg survey median). A positive reading of the Inflation Surprise Index suggests that inflation releases have on balance been beating consensus.
Historical performance is not an indication of future performance and any investments may go down in value

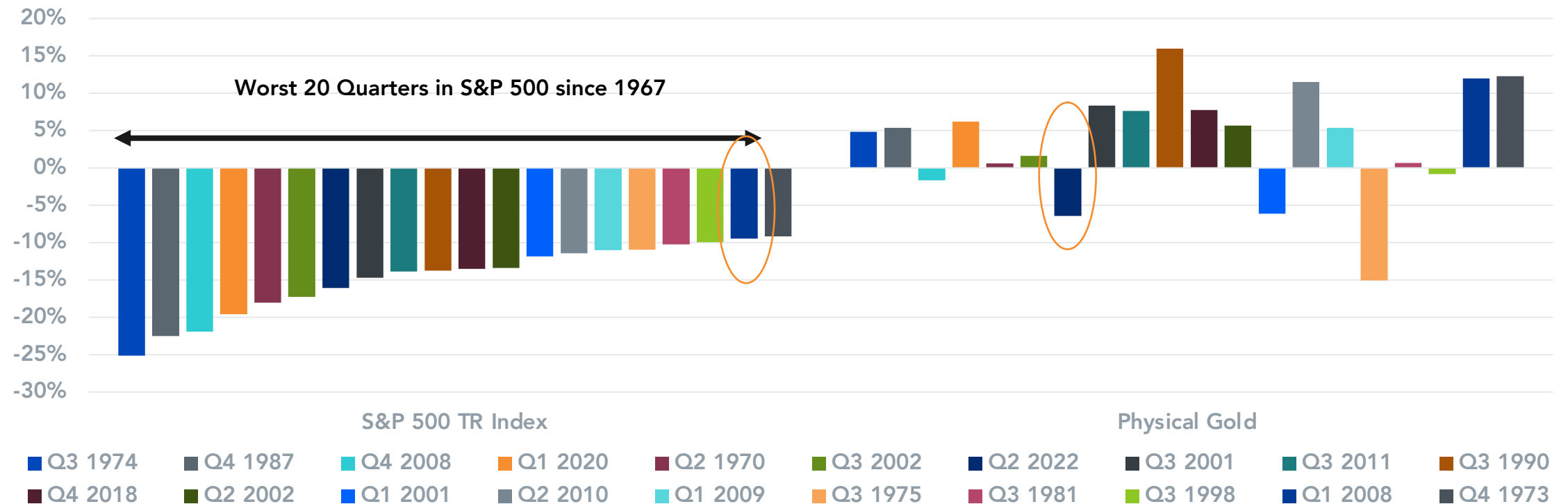
Current phase of business cycle should be favourable for gold...



Source: WisdomTree, Bloomberg. Period July 2000 to July 2022. OECD IS Organisation for Economic Cooperation and Development. Calculations are based on monthly returns in USD. **Historical performance is not an indication of future performance and any investments may go down in value.**

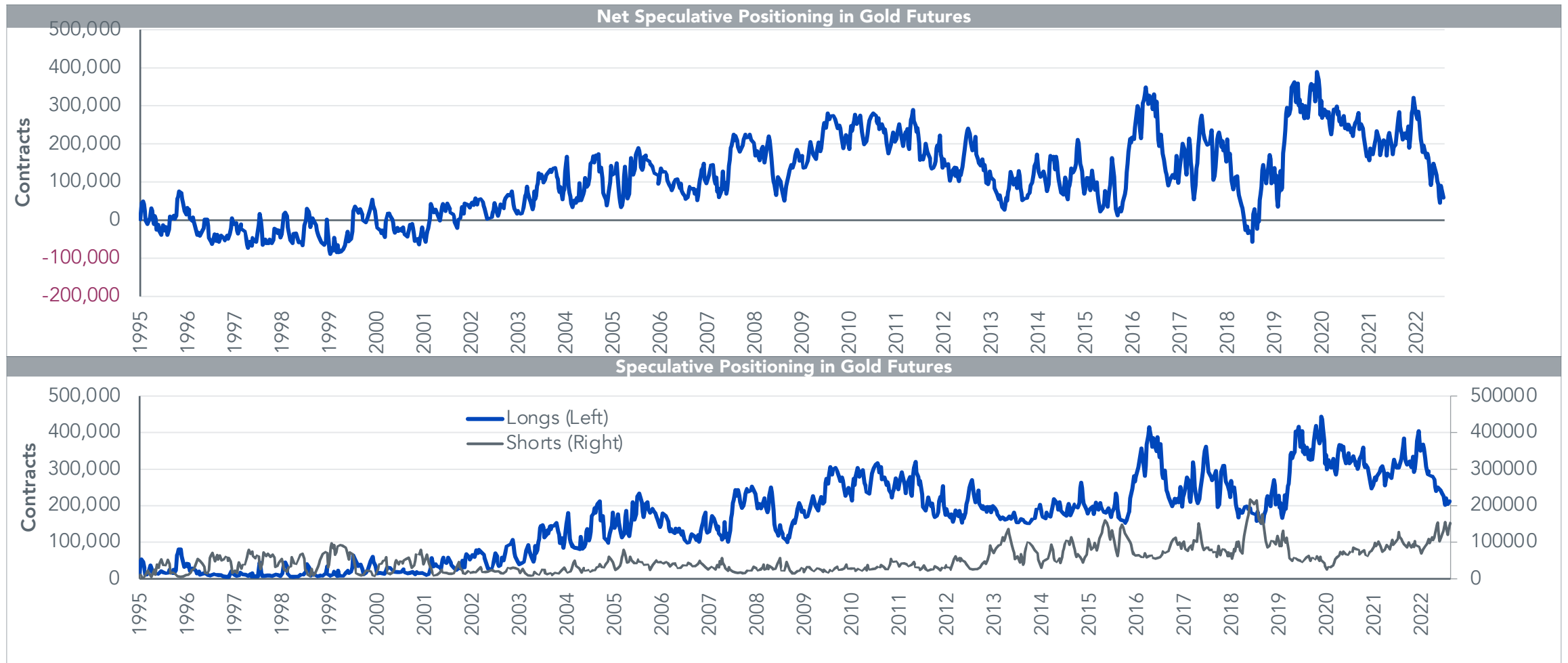
....but gold missed an opportunity in Q2 2022

Gold returned positive performance in 15 of the 20 worst quarters for S&P 500



Source: WisdomTree, Bloomberg. In USD. From December 1967 to 31 June 2022 using quarterly data. Gold is proxied by the LBMA Gold Price PM Index and S&P 500 is proxied by the S&P 500 Gross Total Return Index. Historical performance is not an indication of future performance and any investments may go down in value.

Gold has lost sentiment, but is it ripe for a short-covering rally?



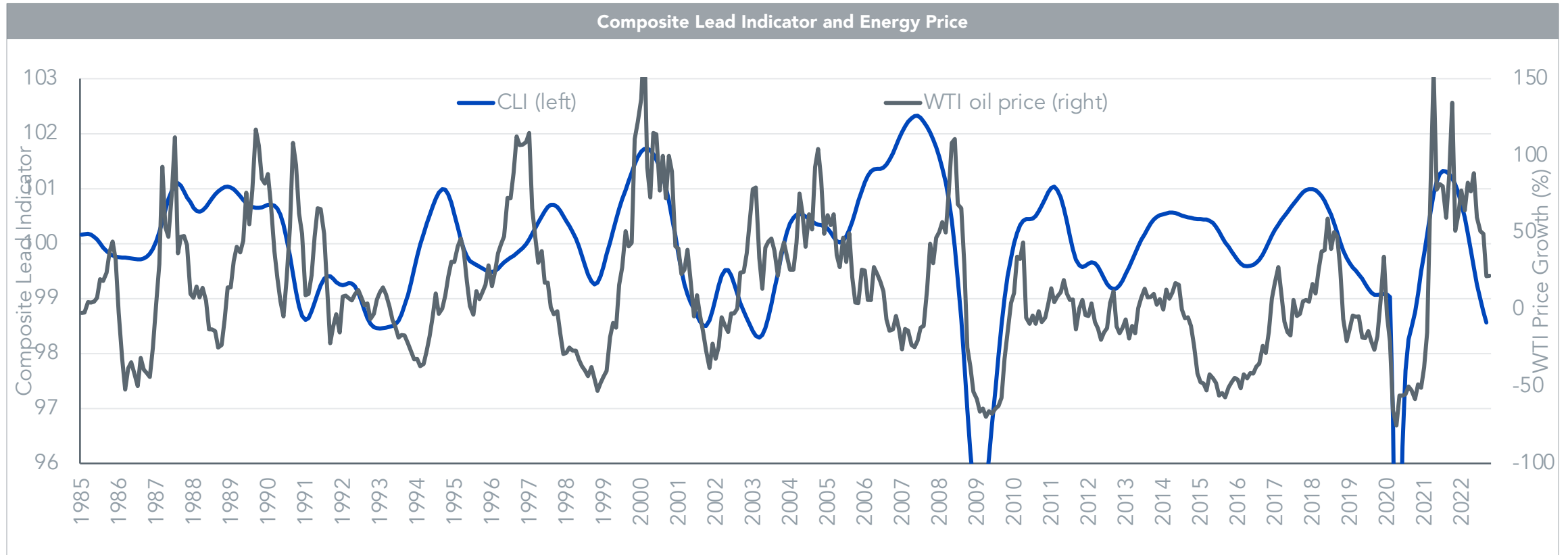
Source: WisdomTree, Bloomberg. March 1995 to November 2022

Historical performance is not an indication of future performance and any investments may go down in value.



How long can energy outperform?

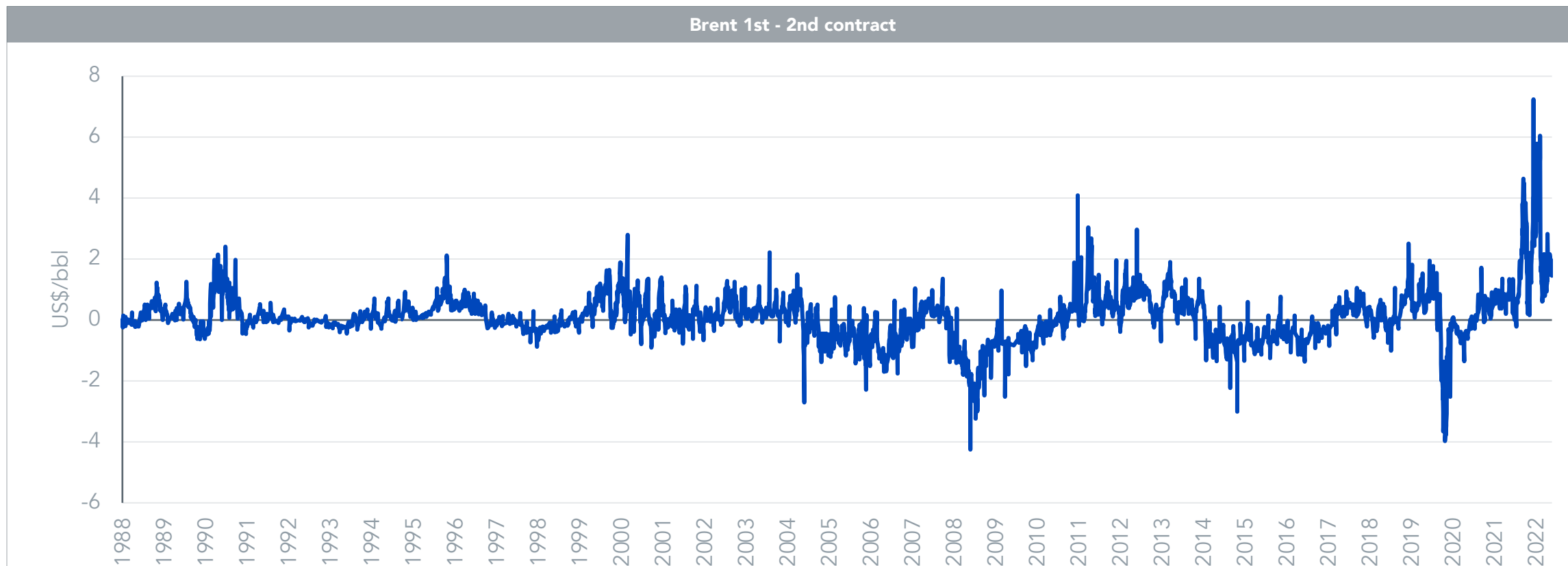
Oil prices are also cyclical



Source: WisdomTree, Bloomberg, OECD. January 1985 to October 2022. Energy price based on Bloomberg Commodity Energy Subindex Total Returns Index. The composite leading indicator (CLI) is designed to provide early signals of turning points in business cycles showing fluctuation of the economic activity around its long term potential level. CLIs show short-term economic movements in qualitative rather than quantitative terms. CLI is amplitude adjusted, Long-term average = 100

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Brent front month backwardation has decreased considerably after hitting peak levels in May 2022

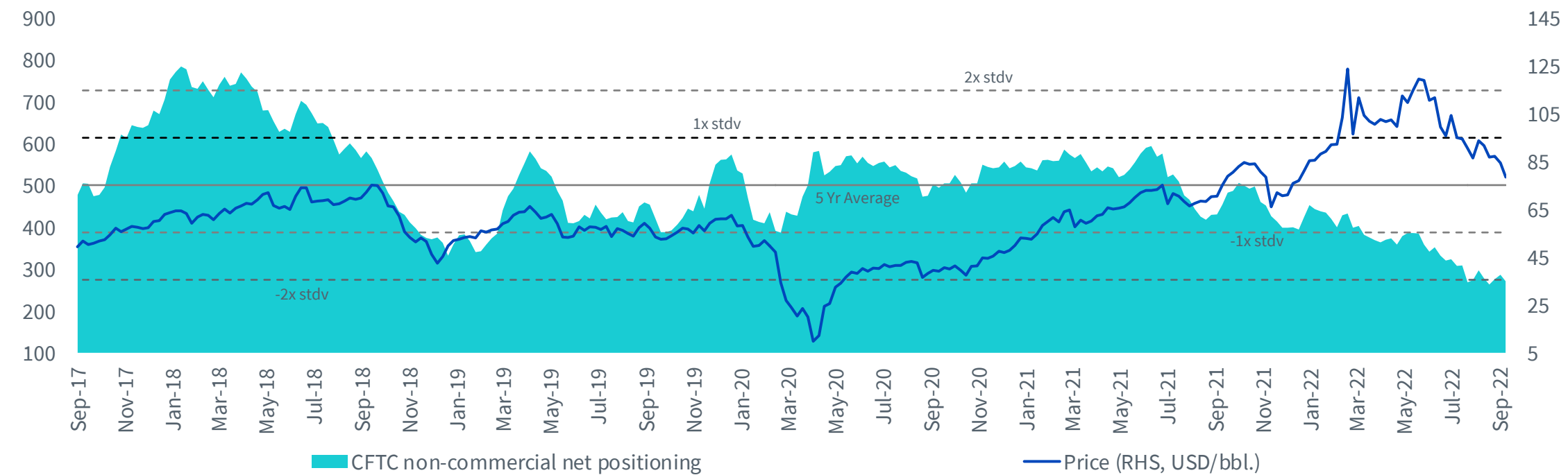


Source: WisdomTree, Bloomberg. January 1989 to October 2022

Historical performance is not an indication of future performance and any investments may go down in value

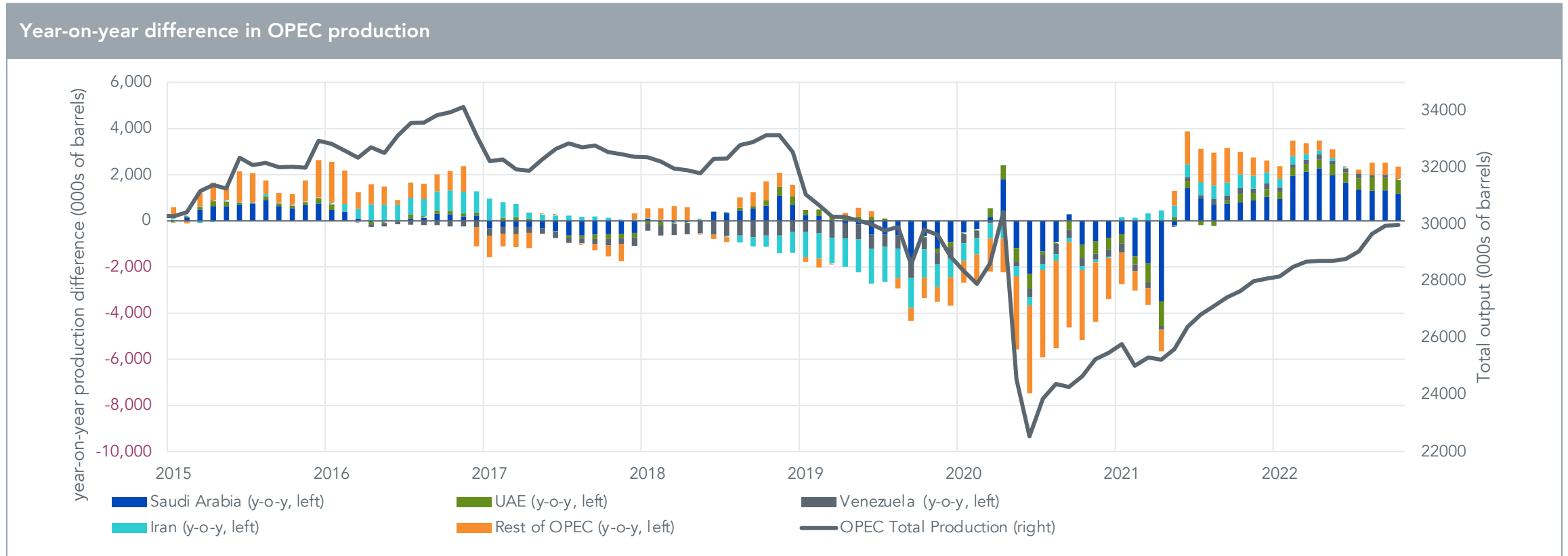
Positioning in WTI futures is the most bearish in over 5 years

WTI Oil



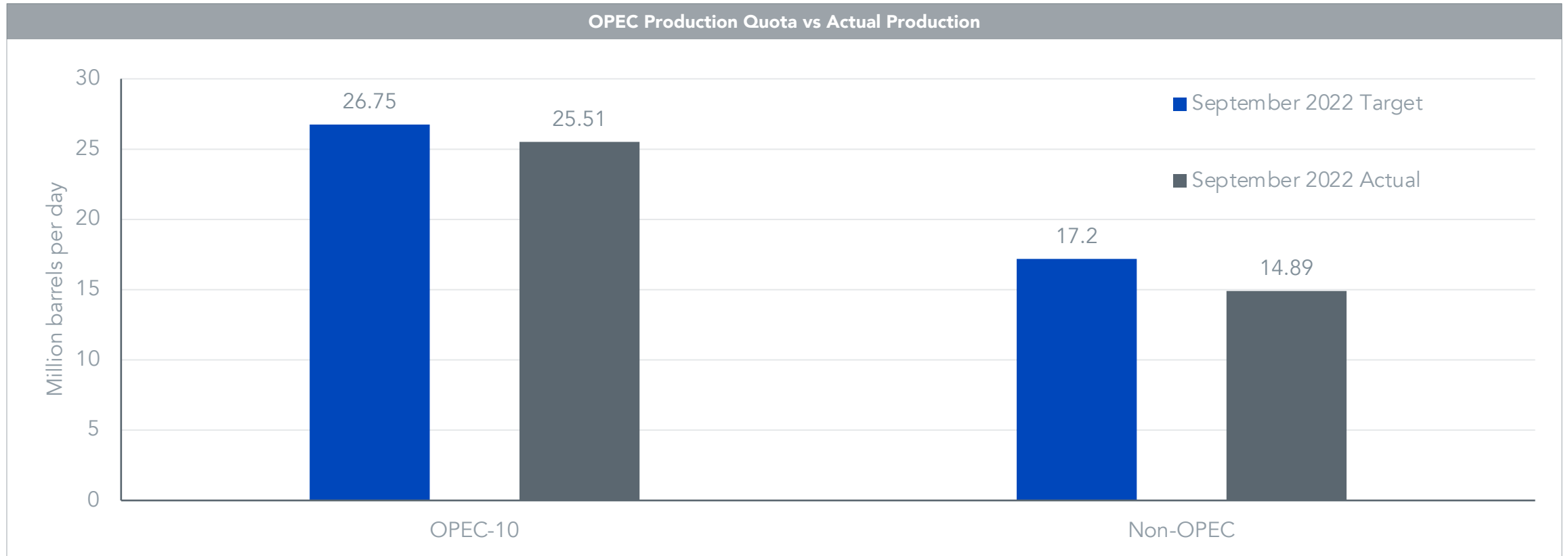
Source: WisdomTree, Bloomberg. August 2017 to October 2022. CFTC = Commodity Futures Trading Commission. Stdv = standard deviation
Historical performance is not an indication of future performance and any investments may go down in value

OPEC oil production was nearing pre-pandemic levels, but new cuts are now in place



Source: WisdomTree, Bloomberg, January 2015 to October 2022. OPEC = Organization for Petroleum Exporting Countries . Note Iran and Venezuela are exempt from the quota
Historical performance is not an indication of future performance and any investments may go down in value

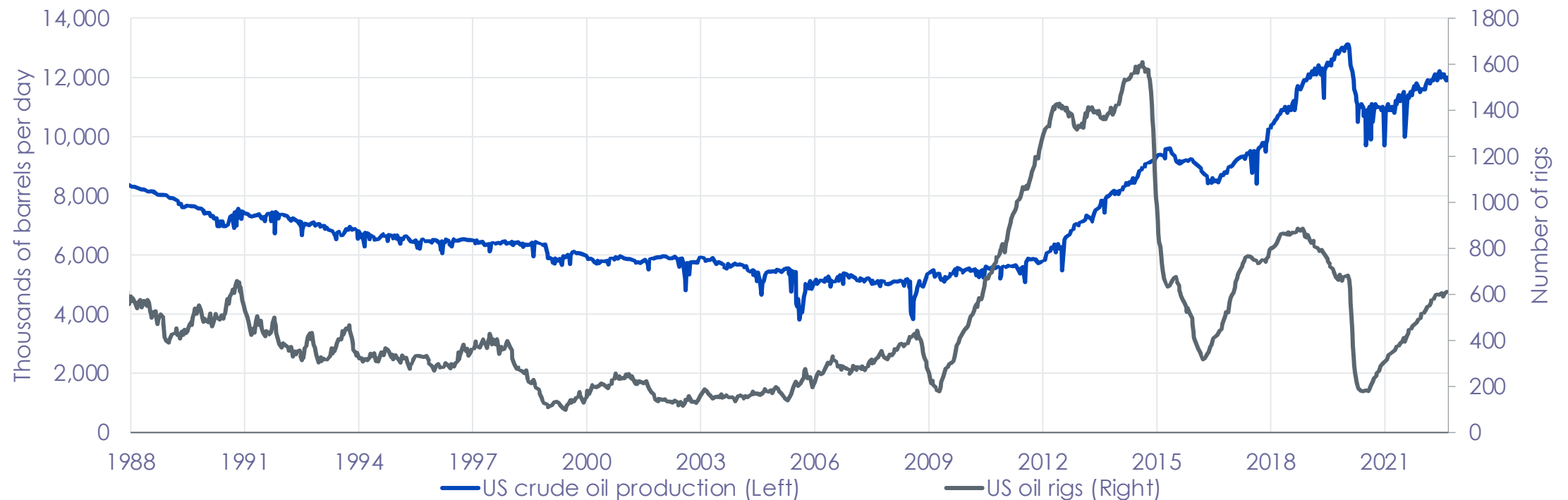
OPEC+ has struggled to keep up with quota



Source: WisdomTree, International Energy Agency. OPEC = Organization for Petroleum Exporting Countries and partner countries. OPEC 10 = Organization for Petroleum Exporting Countries that have a quota (note Iran, Libya and Venezuela are OPEC members but are exempt from the quota). Non-OPEC countries include Russia, Azerbaijan, Kazakhstan, Oman, Bahrain, Brunei, Malaysia, Sudan and South Sudan)
Historical performance is not an indication of future performance and any investments may go down in value

US rig counts unlikely to reach pre-pandemic levels in near term

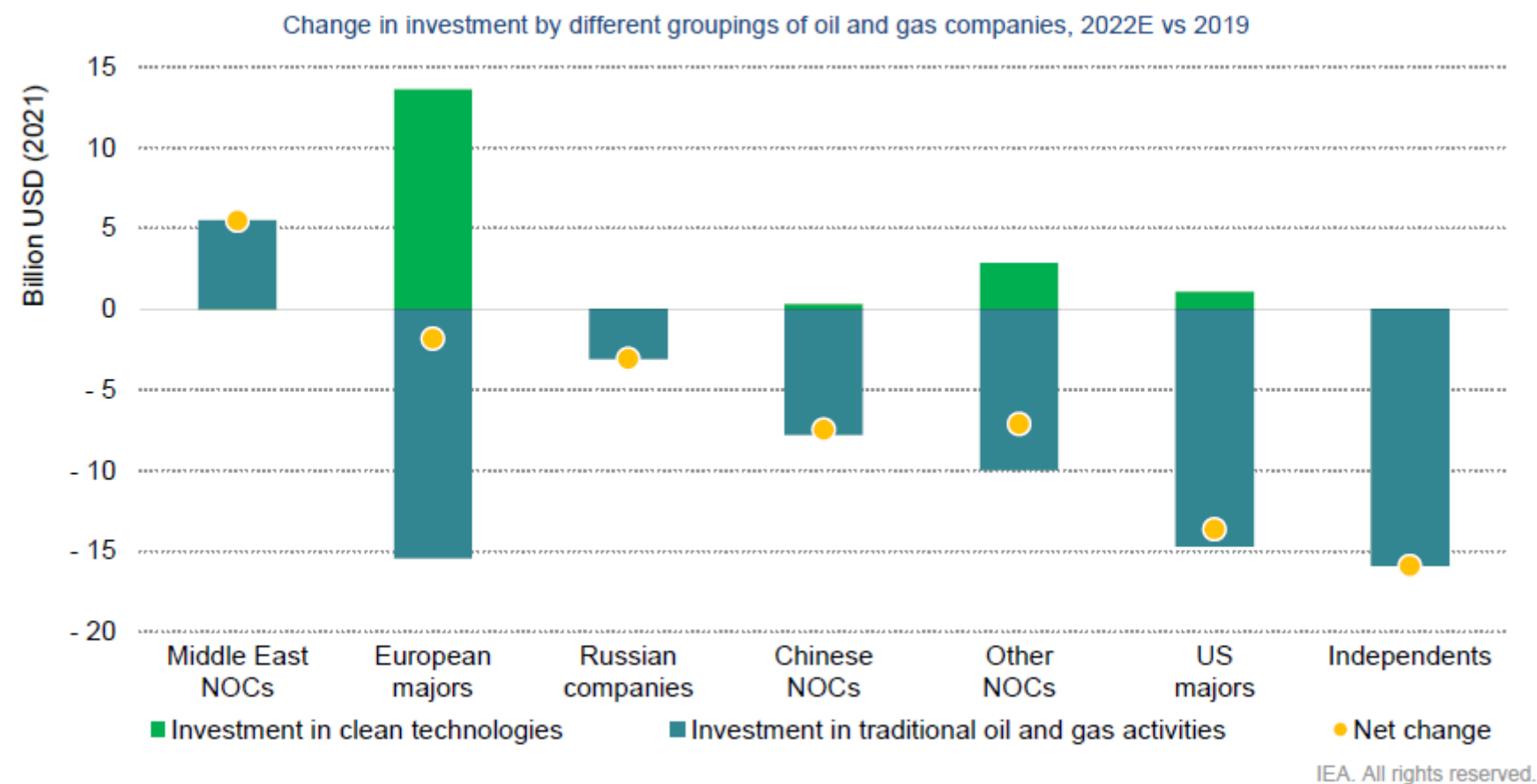
US oil production and rig count



Source: WisdomTree, Bloomberg. January 1988 to October 2022.

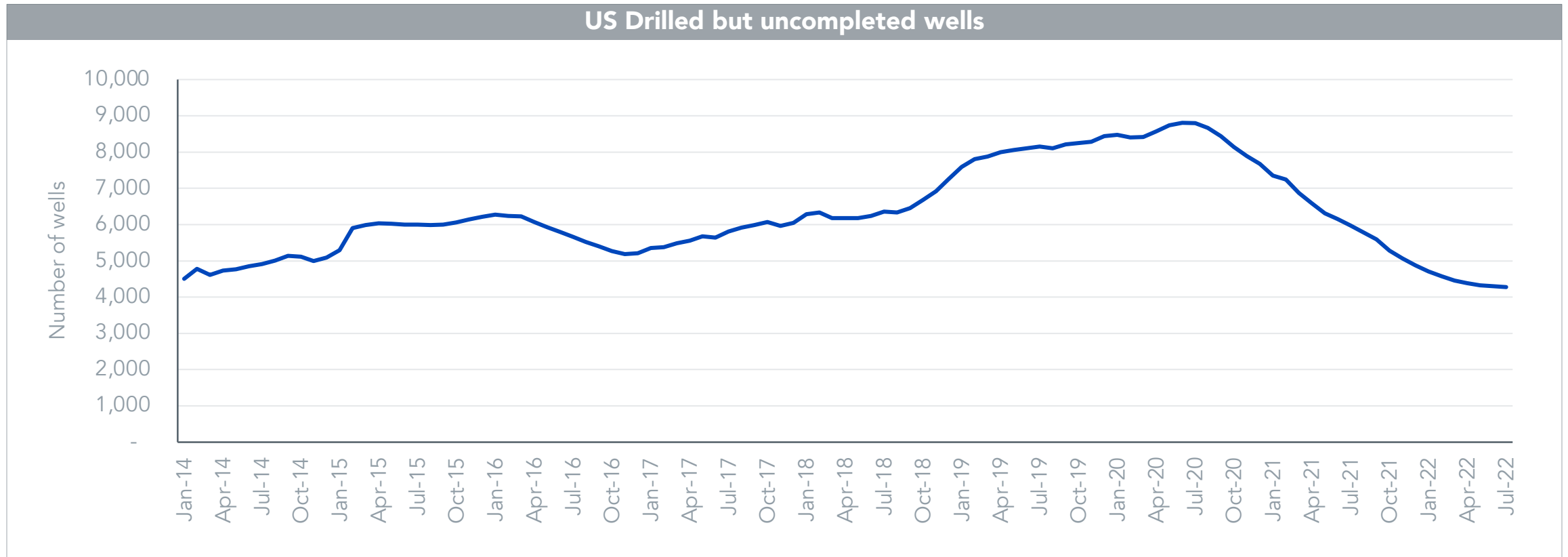
Historical performance is not an indication of future performance and any investments may go down in value

Securing future supply will be difficult with low levels of investment



Source: International Energy Agency, June 2022. NOCs = National Oil Companies
Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties

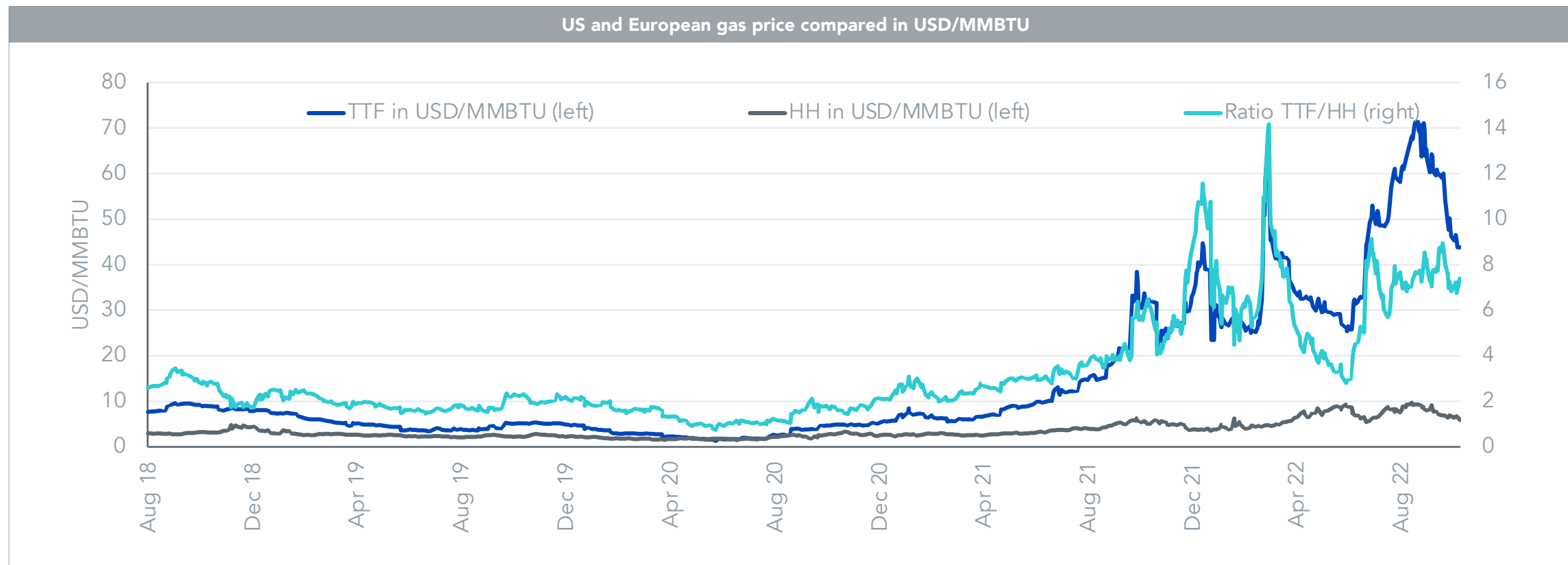
Drilled but uncompleted wells are at lowest level, indicating little 'easy to tap' sources of oil



Source: Energy Information Administration, January 2014 - July 2022

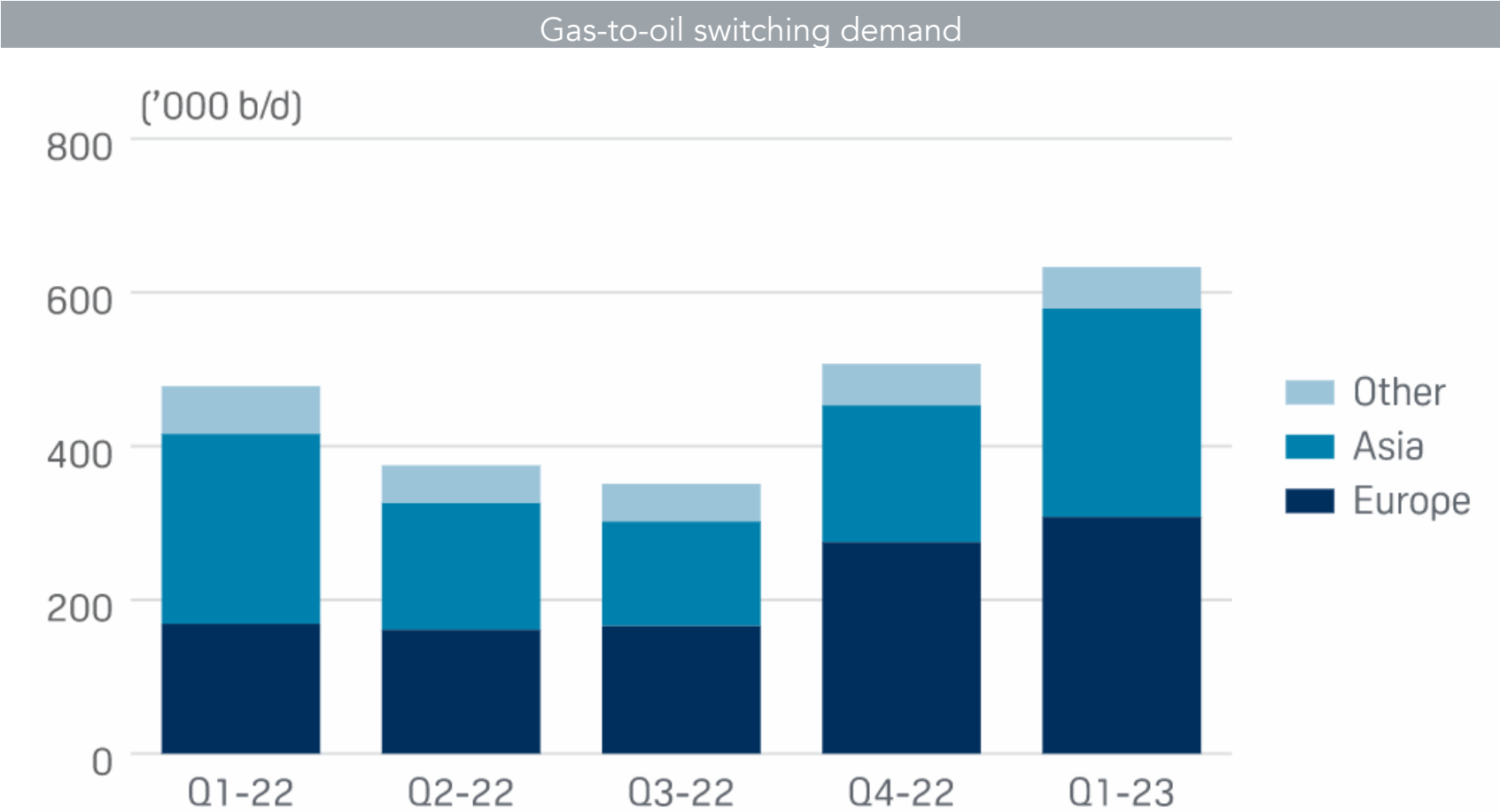
Historical performance is not an indication of future performance and any investments may go down in value

European natural gas prices are close to 8 times the price in US. Natural gas is more difficult to export than oil. Fuel-switching to oil could be a path for Europe to deal with the crisis in short-term



Source: WisdomTree, Bloomberg. 09/09/2018 to 17/10/2022. TTF price using Dutch TTF Gas 1st Line Financial Futures (USD/MMBTU) as published by ICE Index who convert megawatt hour to Metric Million British Thermal Unit (MMBTU) and USD using the WM/Refinitiv Closing EURUSD Spot Rates as published by Refinitiv at 4 pm UK time. Note 1st Generic Futures Prices do not incorporate roll yields.
Historical performance is not an indication of future performance and any investments may go down in value

Gas-to-oil switching expected to add more demand to oil

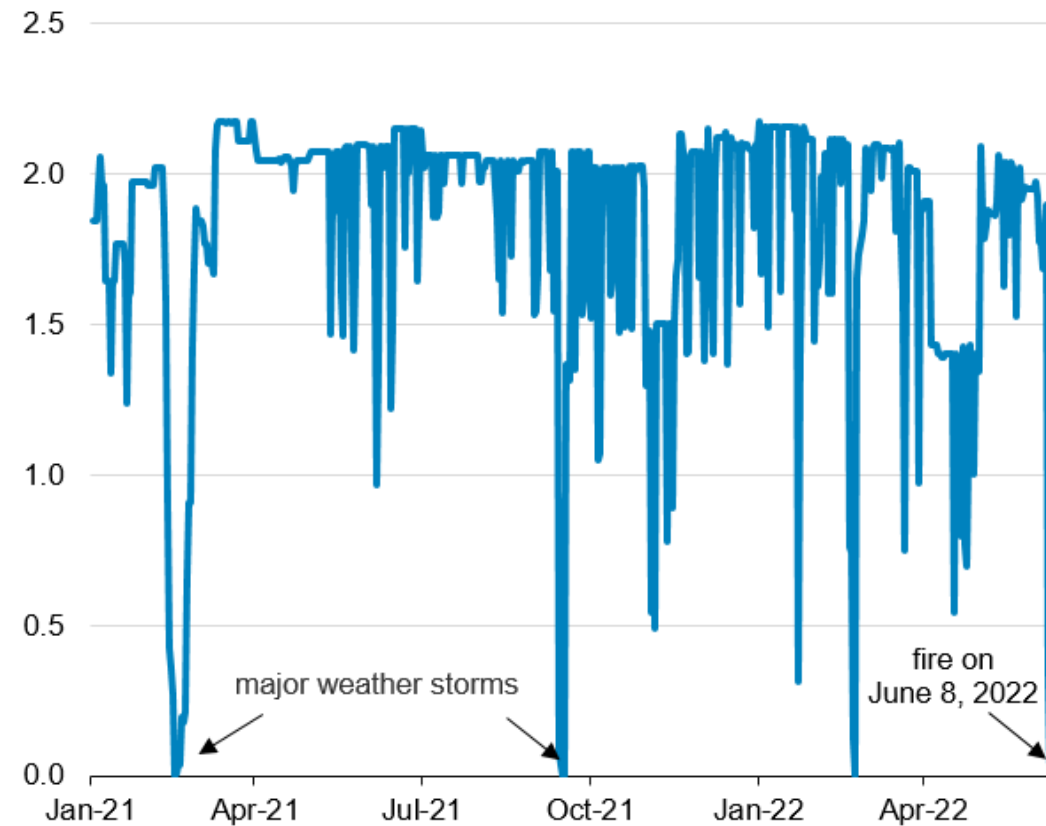


Source: Platts Analytics, S&P Global, September 2022
Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties

Freeport LNG terminal outage has reduced US natural gas demand

Natural gas deliveries to Freeport LNG (Jan 2021–Jun 2022)*

billion cubic feet per day



An outage at Freeport's liquefaction plant in South Texas on 8th June has reduced the demand for natural gas as a feedstock into the LNG market. According to the Energy Information Administration (EIA), export capacity of LNG has declined by 2 billion cubic feet per day (Bcf/d) or 17% of the total US LNG export capacity. The outage was caused by a fire driven by excess pressure in the LNG transfer line that transfers LNG from the facility's storage tank to the terminal's dock facilities. Freeport does not expect a return to full service until late 2022, although a partial resumption may be possible sometime in November 2022 according to its press department*.

Source: International Energy Agency

* http://freeportlng.newsrouter.com/news_release.asp?intRelease_ID=9749&intAcc_ID=77



Commodities: Secular strength over the longer-term

Long-term Commodity outlook



Elevated inflation

Commodities as a hedge



Infrastructure rebound

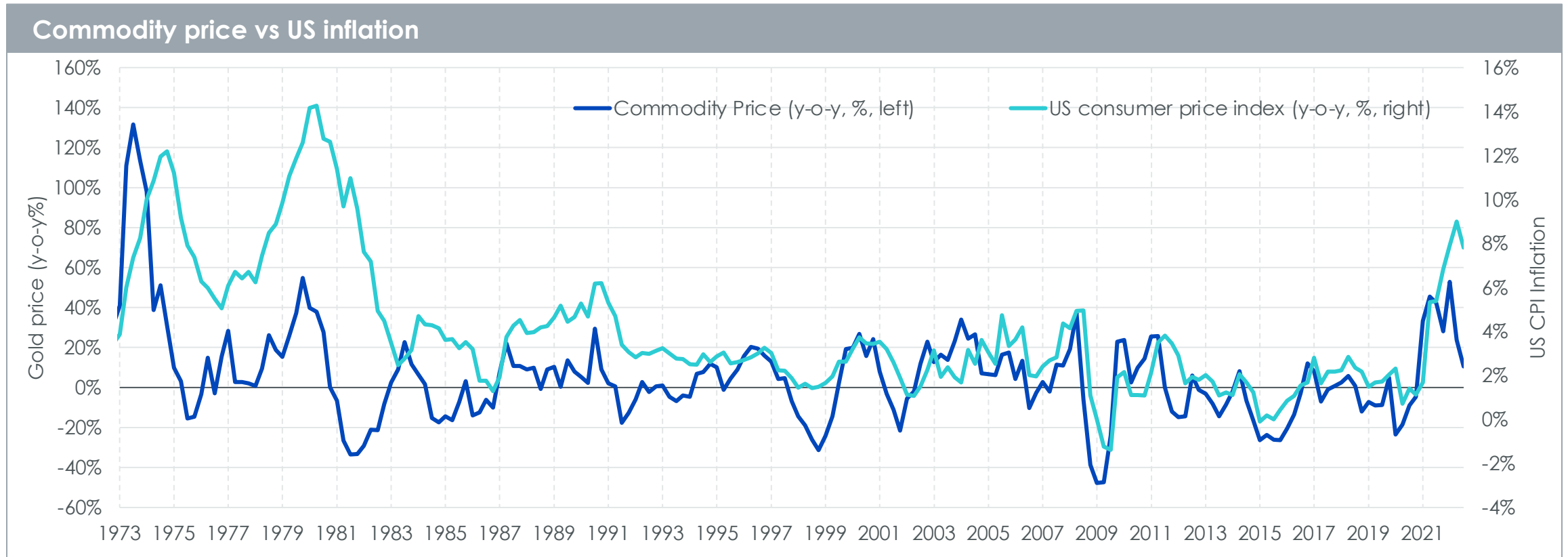
A boost for commodity demand



Energy transition

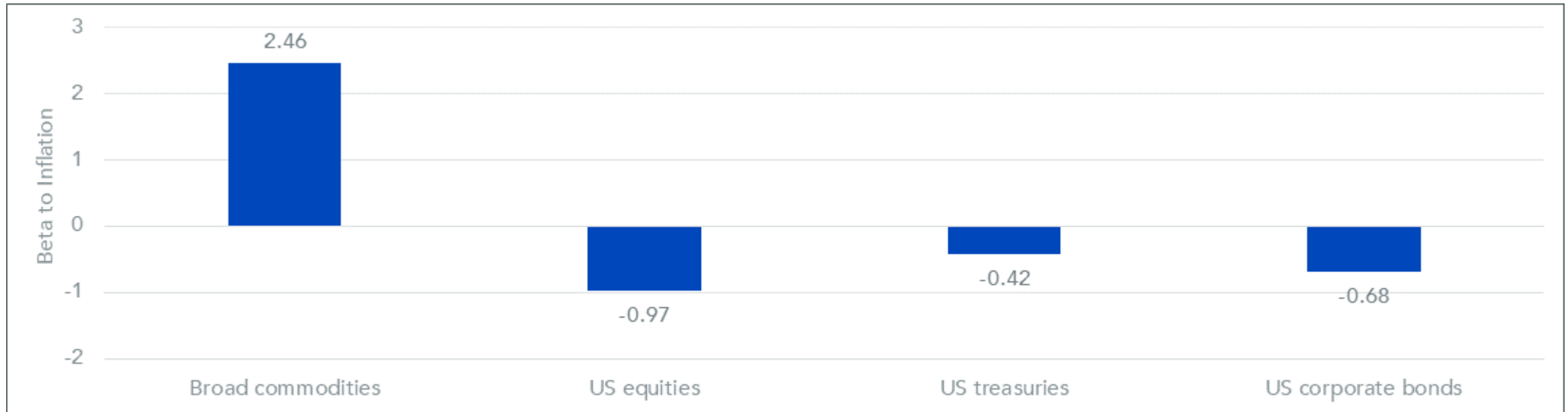
Is the green energy transition accelerating?

Commodities as an inflation hedge



Source: WisdomTree, Bloomberg. Q1 1972 – Q3 2022, Quarterly data. Commodity price based on Bloomberg Commodity Total Returns Index.
Historical performance is not an indication of future performance and any investments may go down in value.

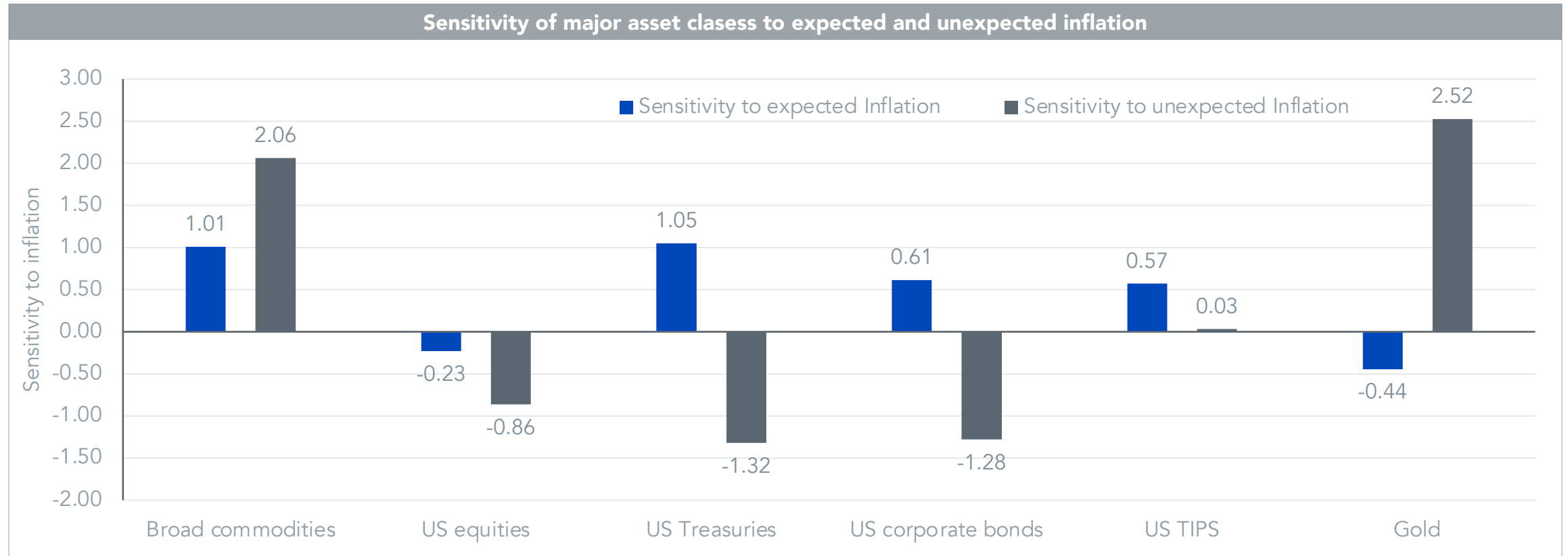
Commodities have a high Beta to inflation



- + Broad commodities exhibit a very beta to inflation.
- + Equities and bonds exhibit negative beta to inflation.

Source: WisdomTree, Bloomberg, S&P. From January 1960 to September 2021. Calculations are based on monthly returns in USD. Broad commodities (Bloomberg commodity total return index) and US equities (S&P 500 gross total return index) data started in Jan 1960. US treasuries (Bloomberg US treasury total return unhedged USD index) and US corporate bonds (Bloomberg US corporate total return unhedged USD index) data started in Jan 1973. **Historical performance is not an indication of future performance and any investments may go down in value.**

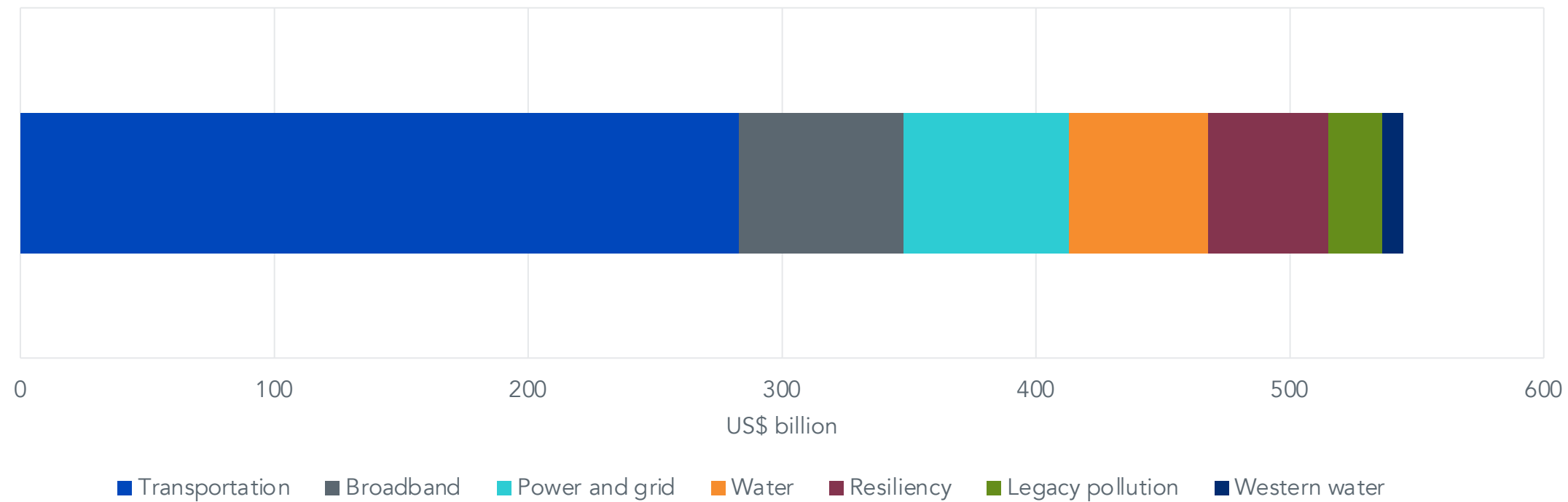
Broad commodities, an unusually effective hedge to unexpected inflation



Source: WisdomTree, Bloomberg, S&P. From January 1960 to June 2022. Calculations are based on monthly returns in USD. Broad commodities (Bloomberg commodity total return index) and US equities (S&P 500 gross total return index) data started in Jan 1960. US treasuries (Bloomberg US treasury total return unhedged USD index) and US corporate bonds (Bloomberg US corporate total return unhedged USD index) data started in Jan 1973. Gold (physical gold) data started in 1968. US Treasury Inflation Protected Securities (TIPS) started in Apr 1997. Sensitivity is measured through the asset class beta with inflation. In statistical terms, beta represents the slope of the line through a regression of the asset class returns and inflation. We proxy the expected inflation using the T-Bill interest rate. Unexpected inflation is the 'realised inflation rate' minus the T-Bill rate. **Historical performance is not an indication of future performance and any investments may go down in value.**

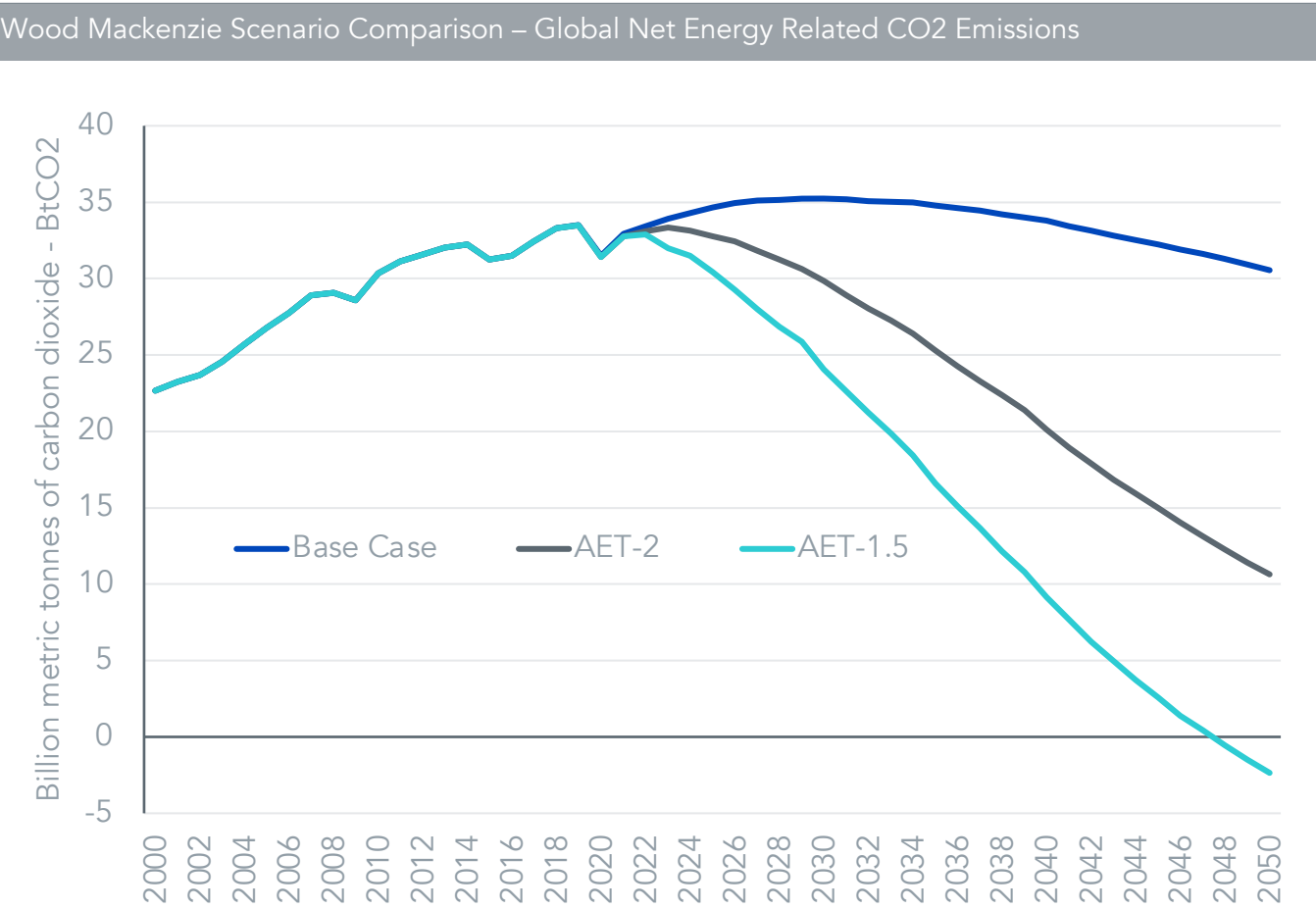
Infrastructure to boost commodity demand

Spending above baseline in US Infrastructure Bill



Source: Bipartisan Infrastructure Investment and Jobs Act Summary
Historical performance is not an indication of future performance and any investments may go down in value

Paris Agreement (2-Degree Scenario) requires a significant policy shift



Source: Wood Mackenzie, 2022. **Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties.** The Paris Agreement is a legally binding international treaty on climate change. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

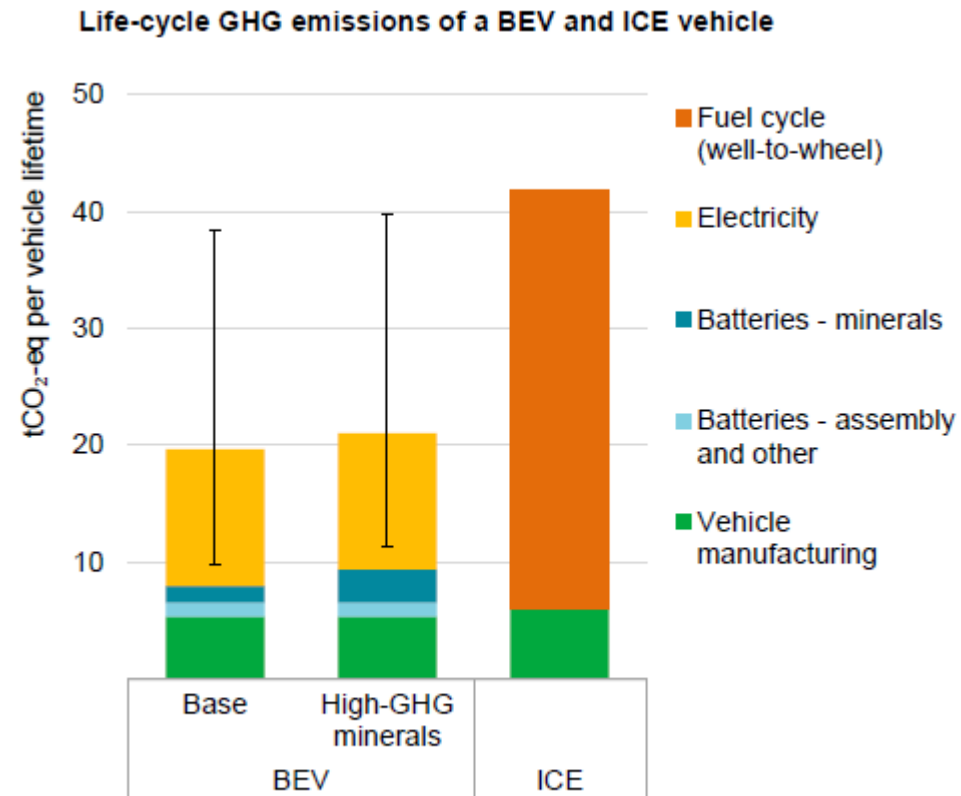
Scenario	Net zero	Policy	Enablers
Base case	Not reached, consistent with 2.5-2.7 Degrees global warming	Evolution of current policies	Steady advancement of current and nascent technologies
2-Degree Scenario (AET-2)	2070 (Global), 2050 (Developed)	Aligned with upper limit of Paris Agreement	Electrification across all sectors and rapid decarbonisation of power supply
1.5 Degree Scenario (AET-1.5)	2050 (Global)	Aligned with most ambitious goal of Paris Agreement	Early peak energy, rapid hydrogen and carbon removal deployment, consumer shift

The source of green-house gases

Power and road transport, which together contributed around two-thirds of carbon emissions in 2020 (source: IEA), are a clear area of focus for the energy transition.

Source: WisdomTree, International Energy Agency

The environmental story behind electric vehicles is clear



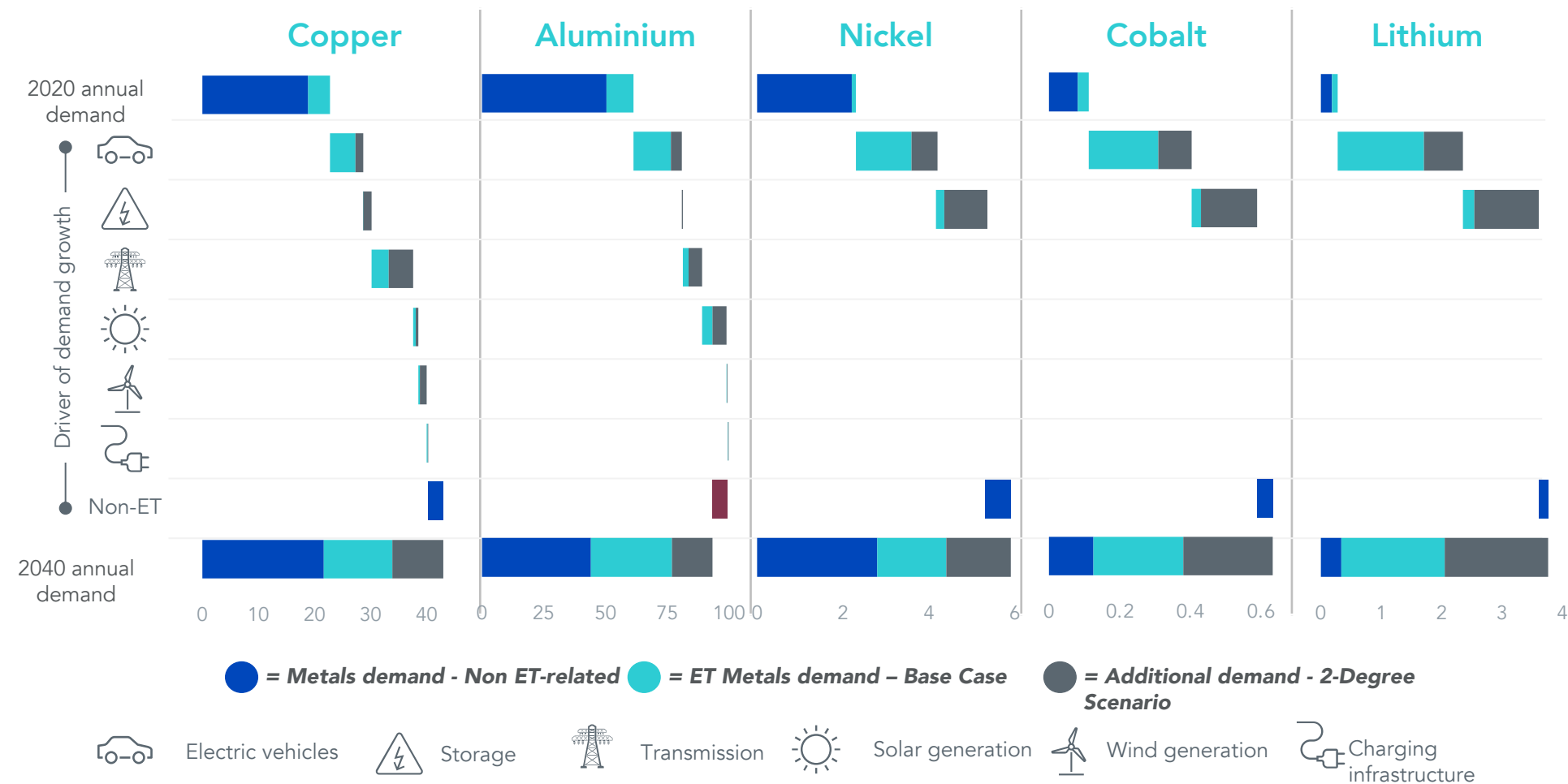
IEA. All rights reserved.

Source: International Energy Agency, July 2021

GHG = Greenhouse gases, BEV = battery electric vehicles, ICE = Internal combustion vehicles, tCO₂ eq = tonnes of carbon equivalent GHGs, well to wheel = everything from extracting from the oil well to the combustion of the oil product in the vehicle

Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties

The Energy Transition could be the largest driver of metal demand



Source: Wood Mackenzie, 2022. ET = energy transition. Data presented in Millions of Tonnes. Non –ET demand growth for aluminium in 2040 expected to be negative (represented in red). Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties.

Questions

For more information and insights please visit:



wisdomtree.eu/global-quality-dividend-growth



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