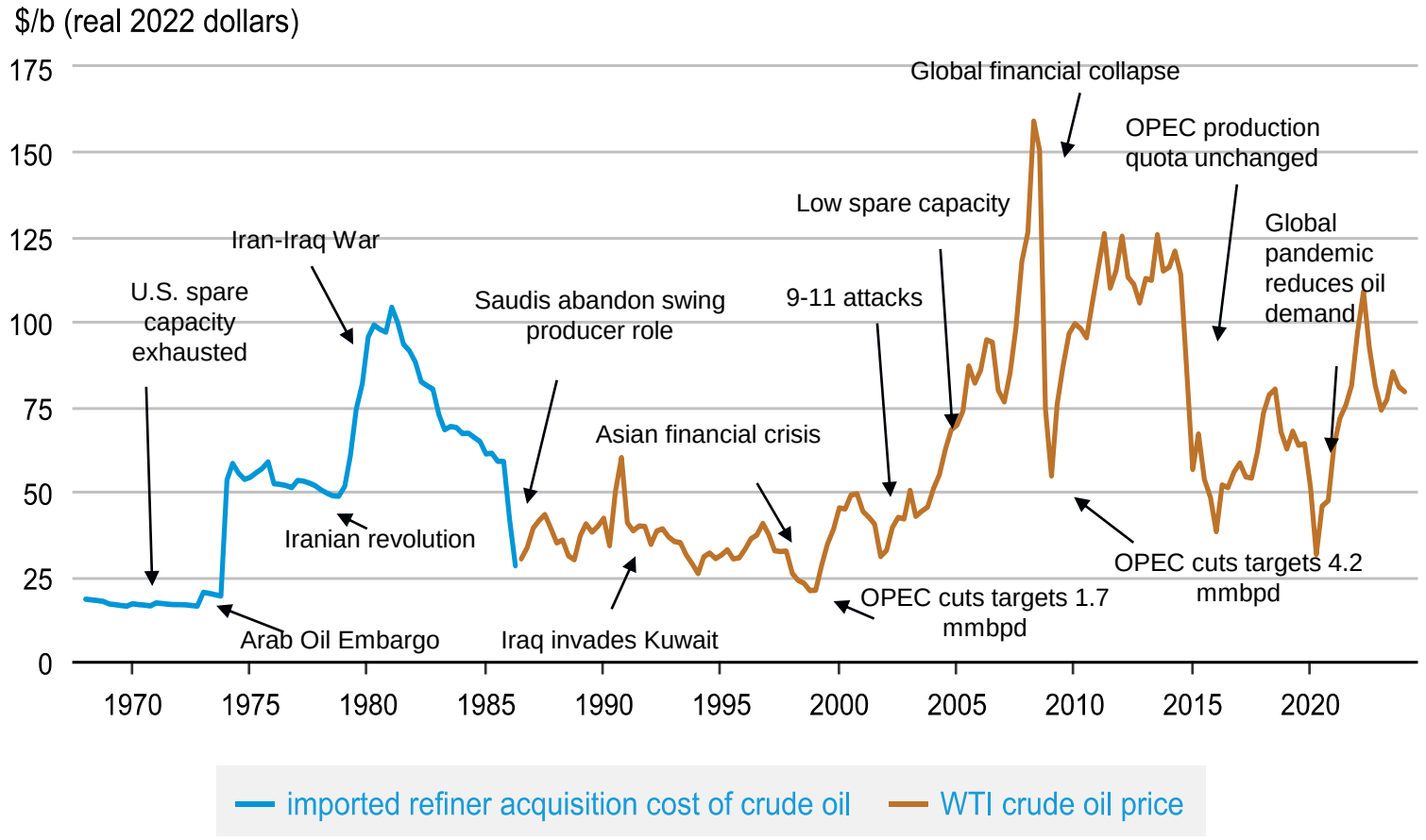
What drives crude oil prices?

An analysis of 7 factors that influence oil markets, with chart data updated monthly and quarterly

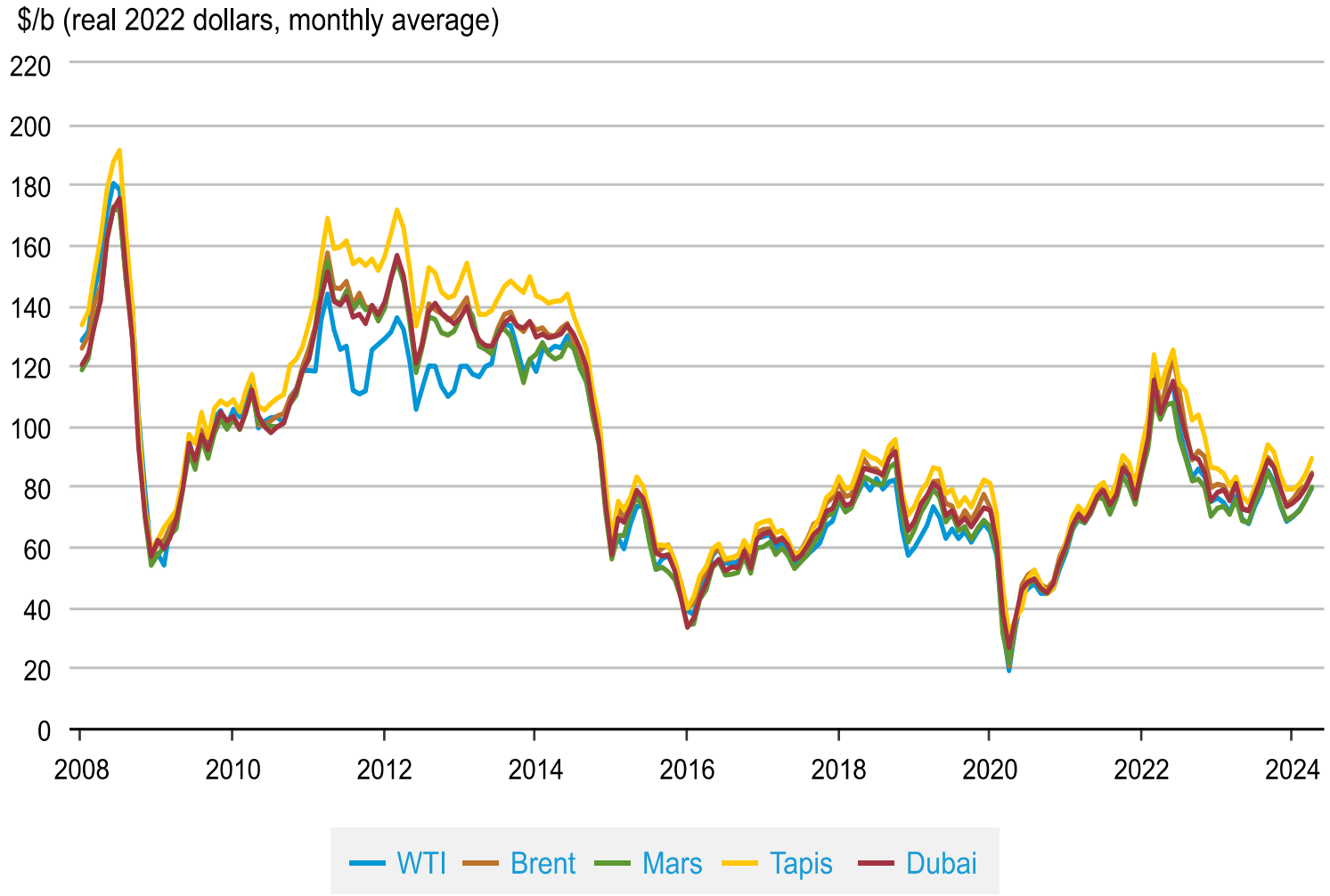
May 7, 2024 | Washington, DC

Crude oil prices react to a variety of geopolitical and economic events



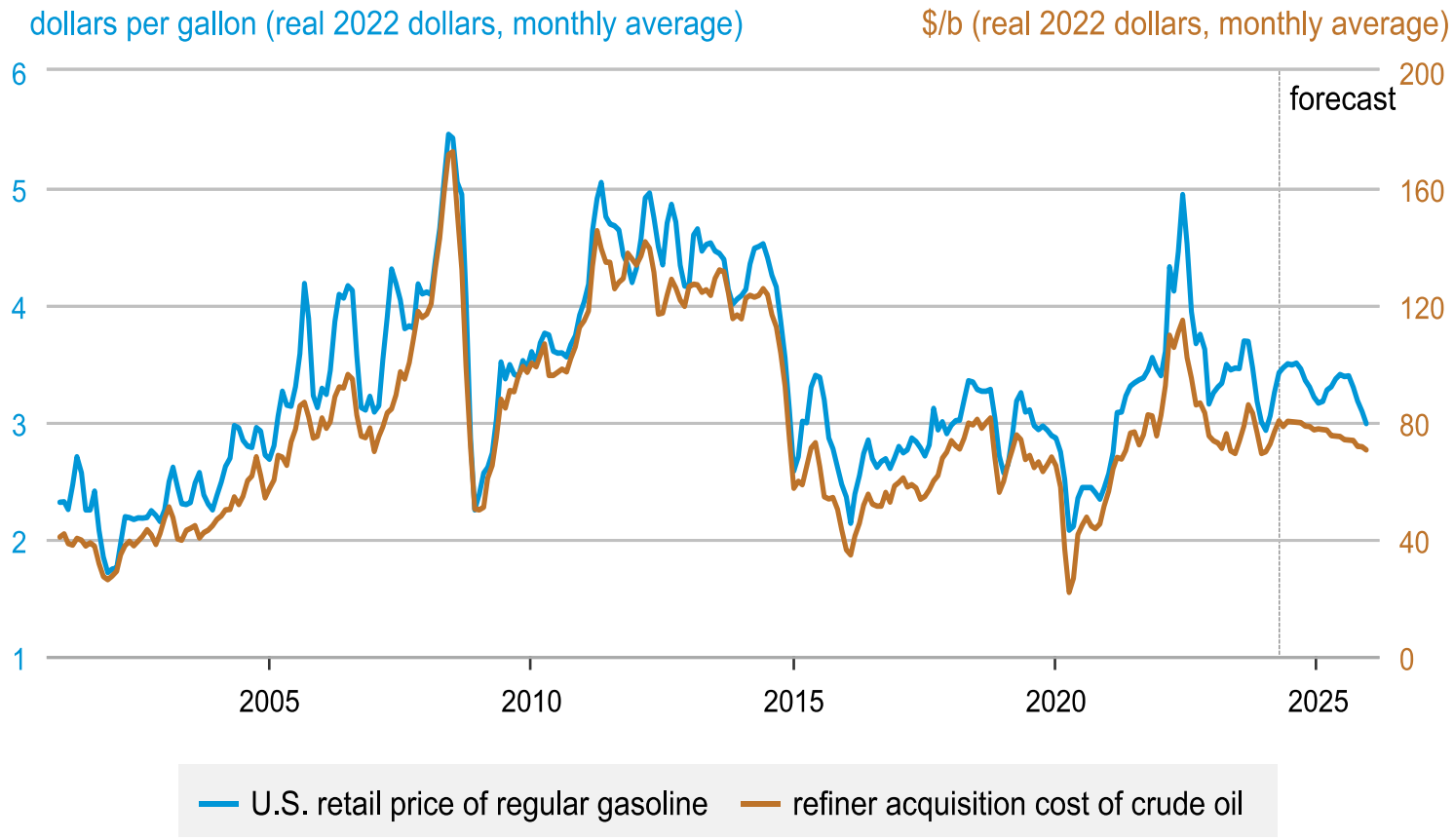
Data sources: U.S. Energy Information Administration, Refinitiv An LSEG Business

World oil prices move together due to arbitrage



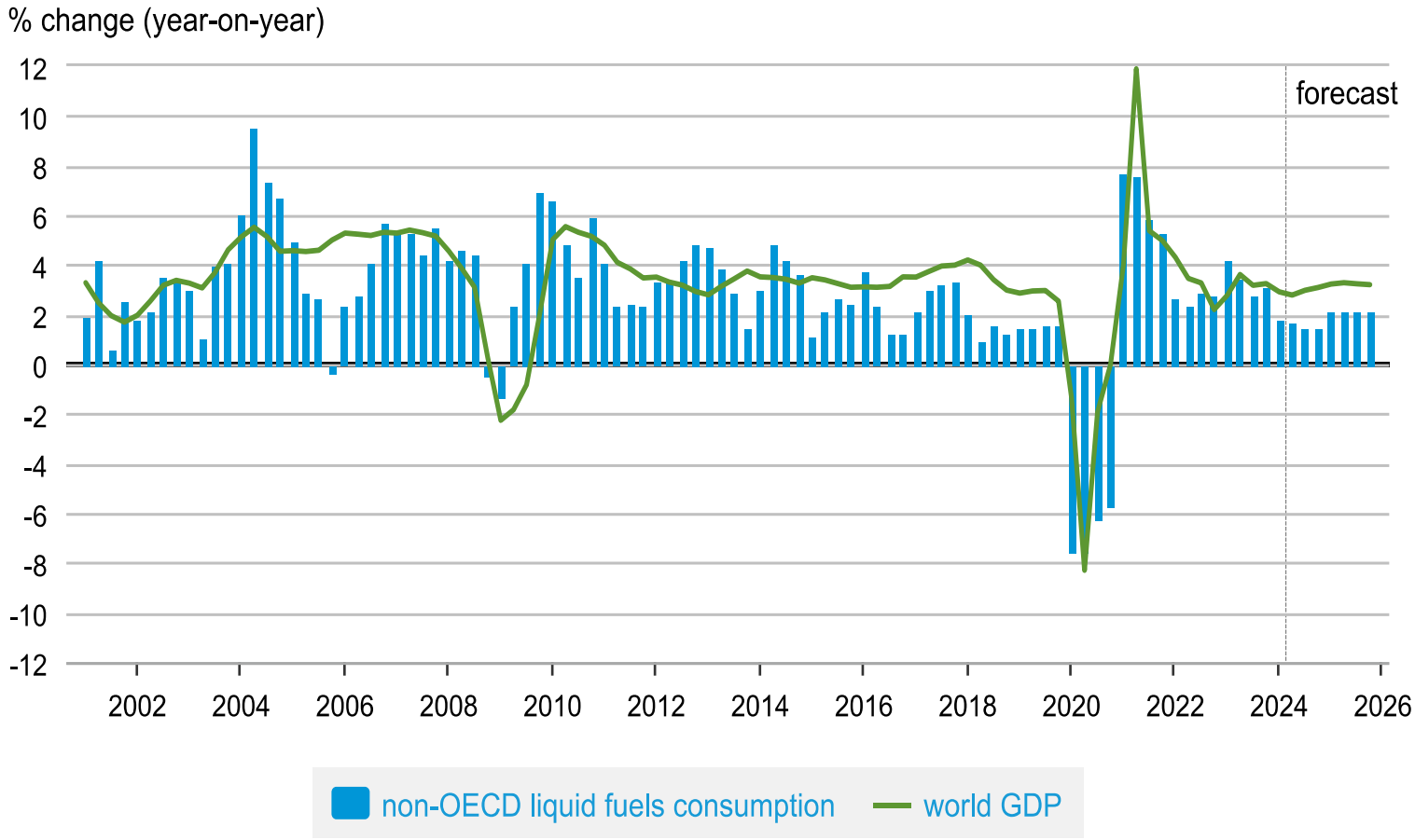
Data sources: Bloomberg, Refinitiv An LSEG Business

Crude oil prices are the primary driver of petroleum product prices



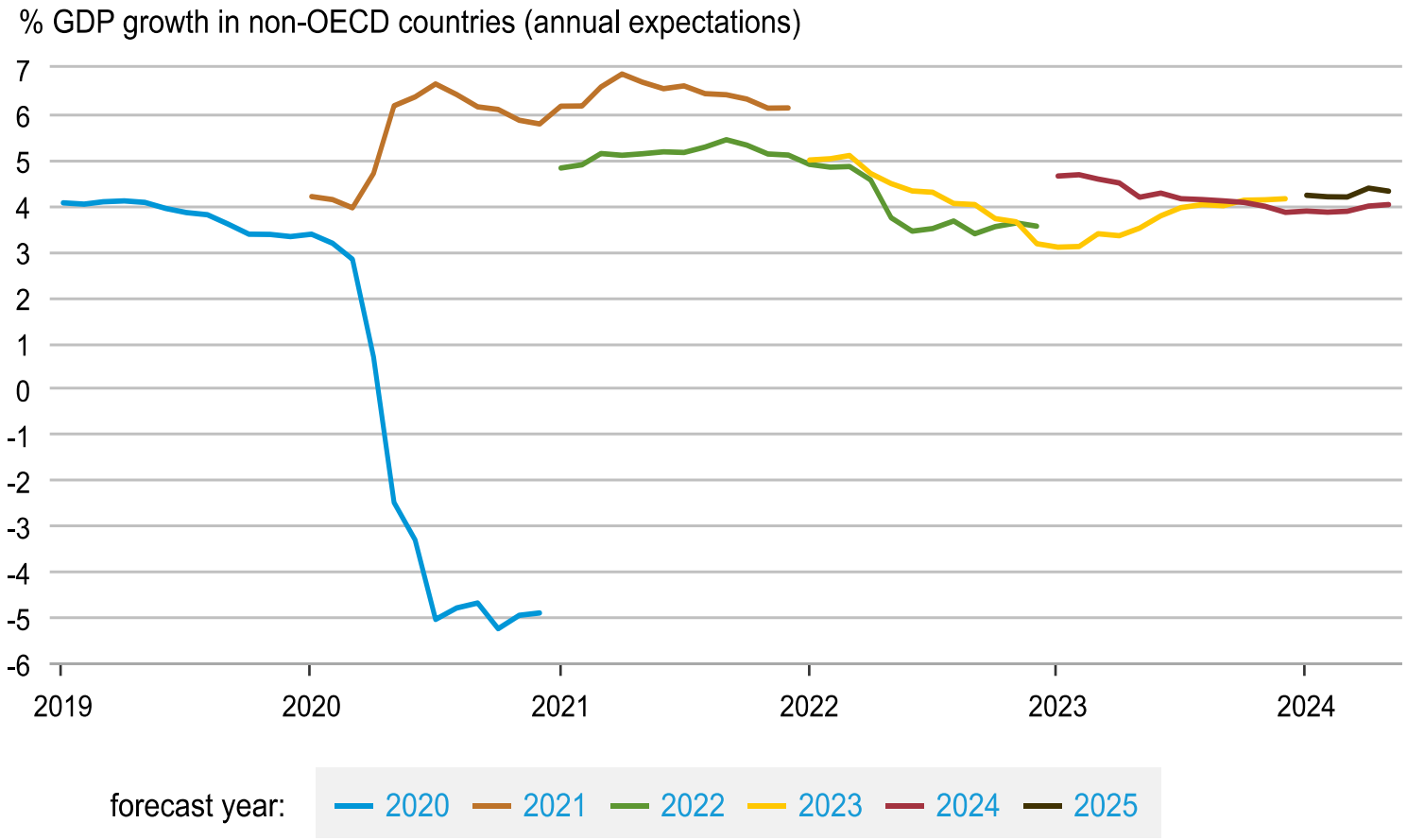
Data source: Short-Term Energy Outlook

Economic growth has a strong impact on oil consumption



Data sources: U.S. Energy Information Administration, Oxford Economics

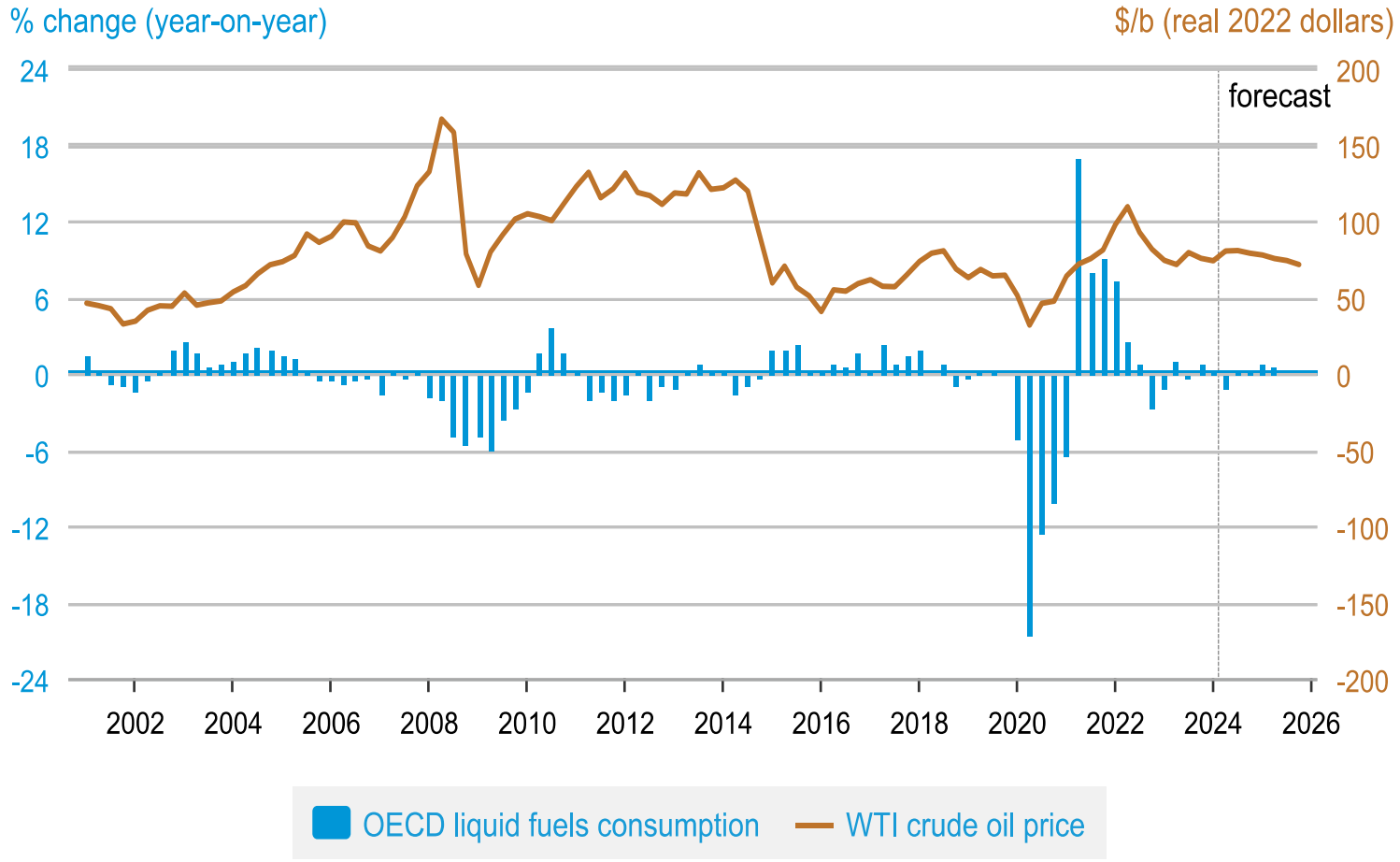
Changes in expectations of economic growth can affect oil prices



Note: Starting in January of each year, each line shows the expected forecast of GDP growth for the specified calendar year, which tends to move toward the actual realized growth outcome as the year progresses. Expectations continue to evolve into the next calendar year as revised GDP data become available (e.g., 2021 GDP expectations are revised even during 2022).

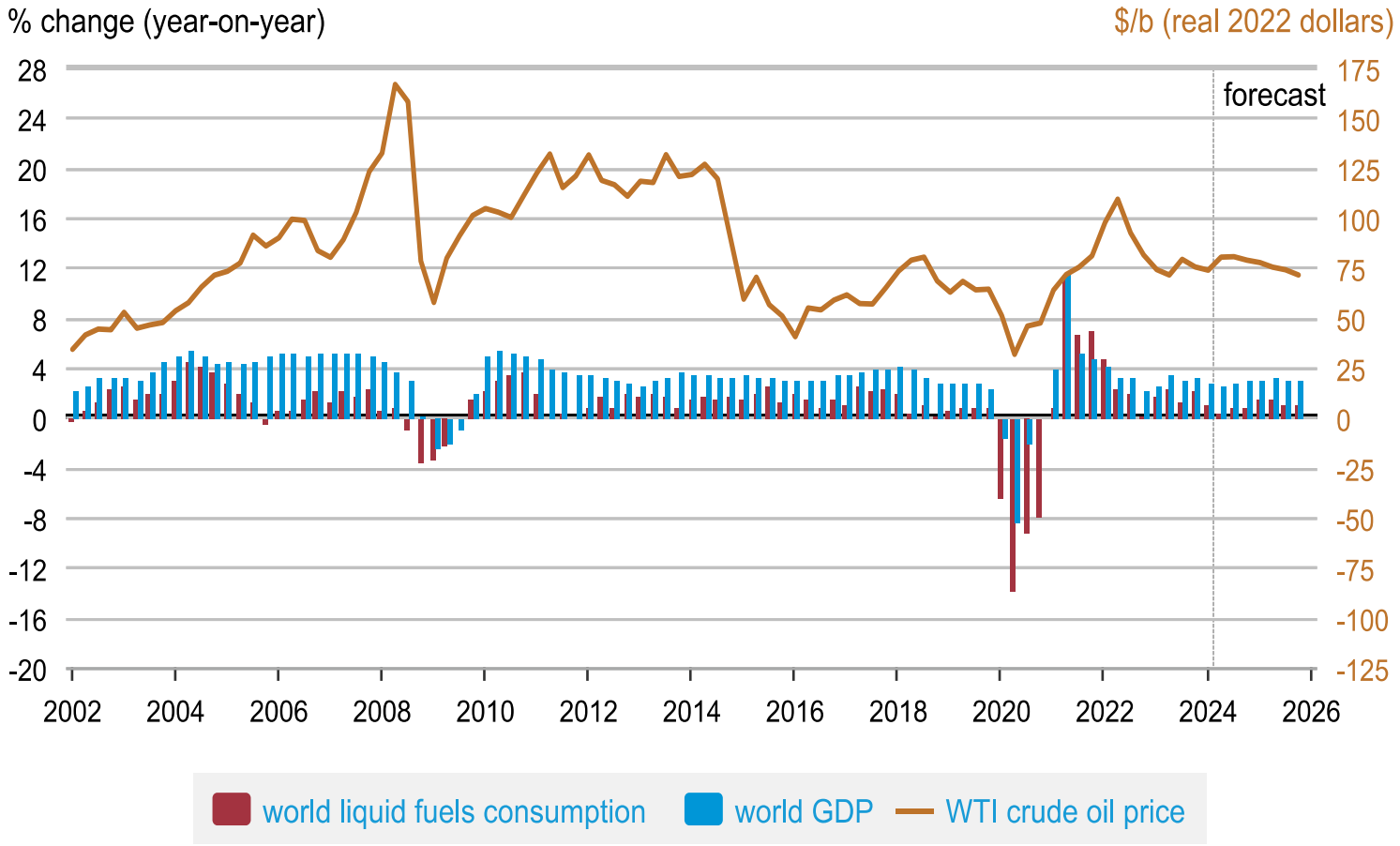
Data source: Oxford Economics

In OECD countries, price increases have coincided with lower consumption



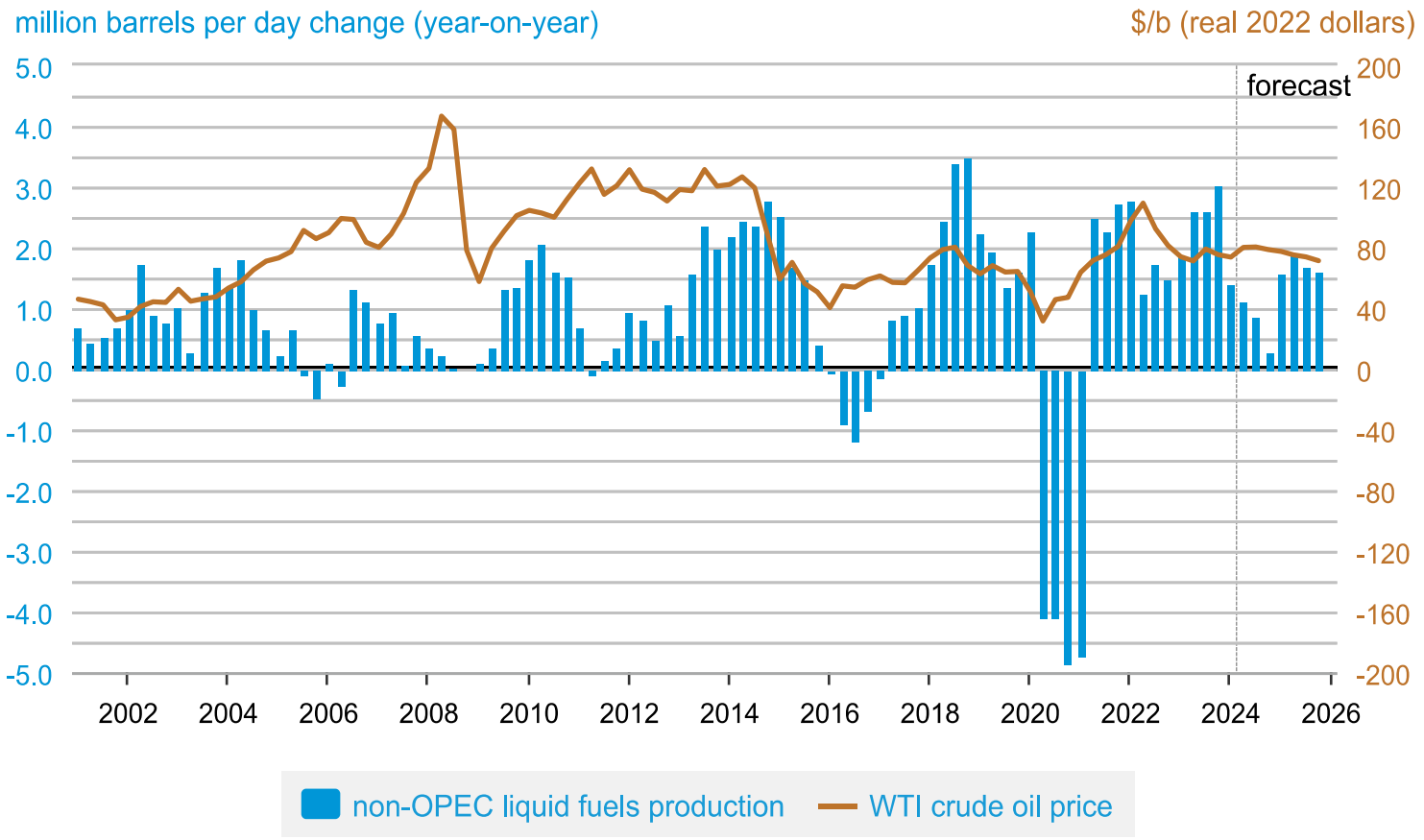
Data source: Short-Term Energy Outlook

Rising oil prices held down global oil consumption growth from 2005-2008, despite high economic growth



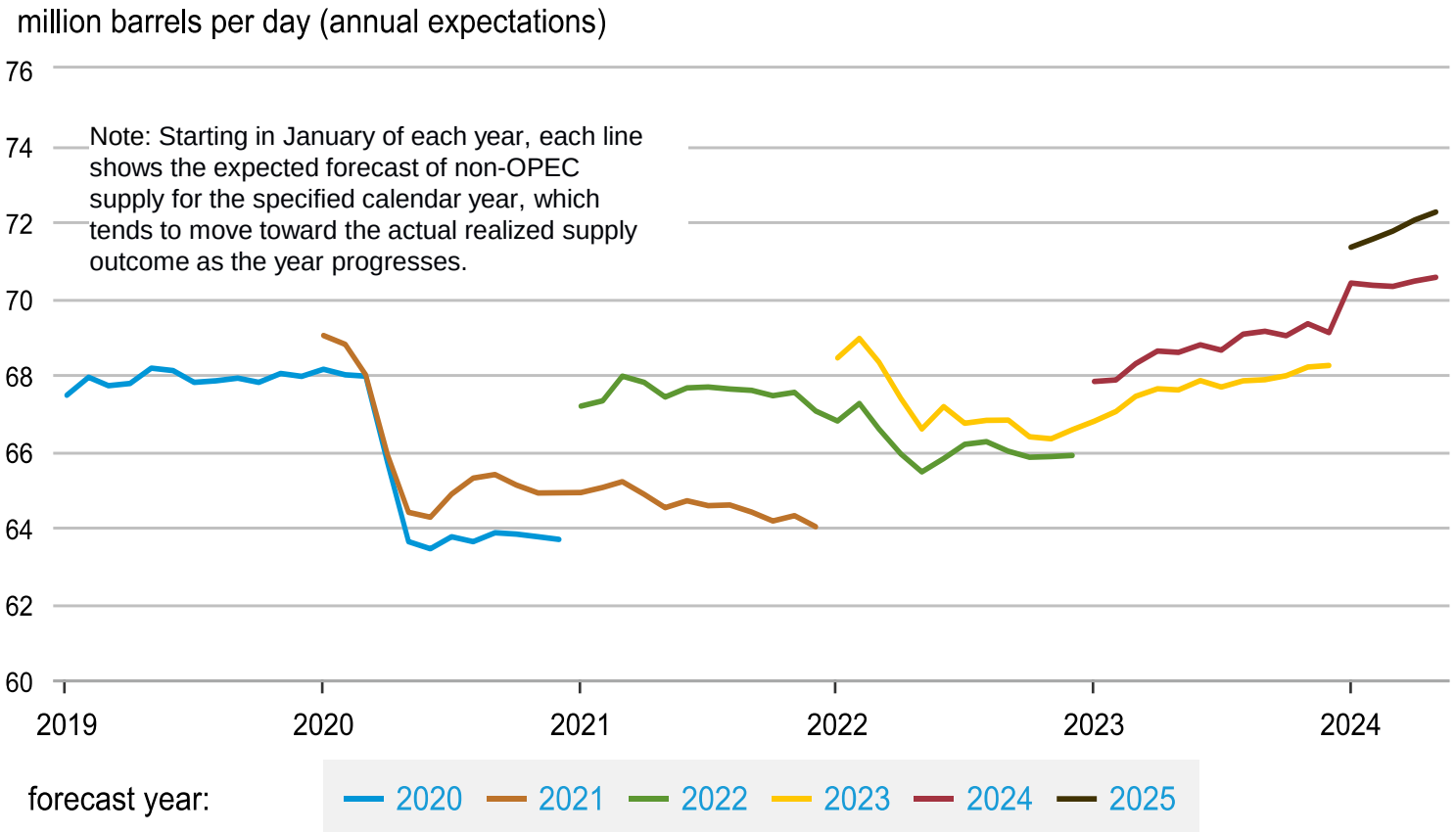
Data source: Short-Term Energy Outlook

Changes in non-OPEC production can affect oil prices



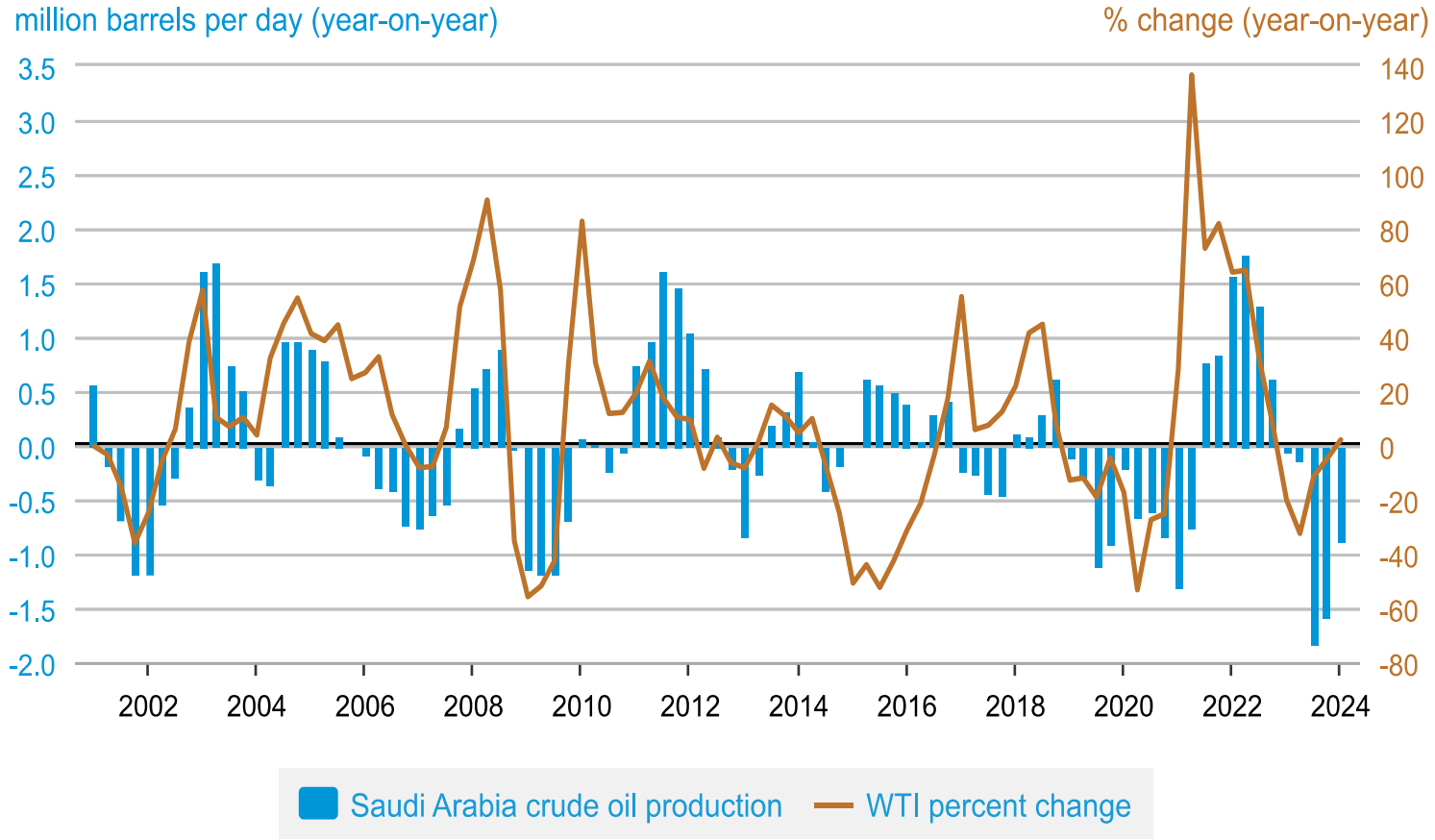
Data source: Short-Term Energy Outlook

Non-OPEC supply expectations indicate changes in market sentiment concerning oil supply



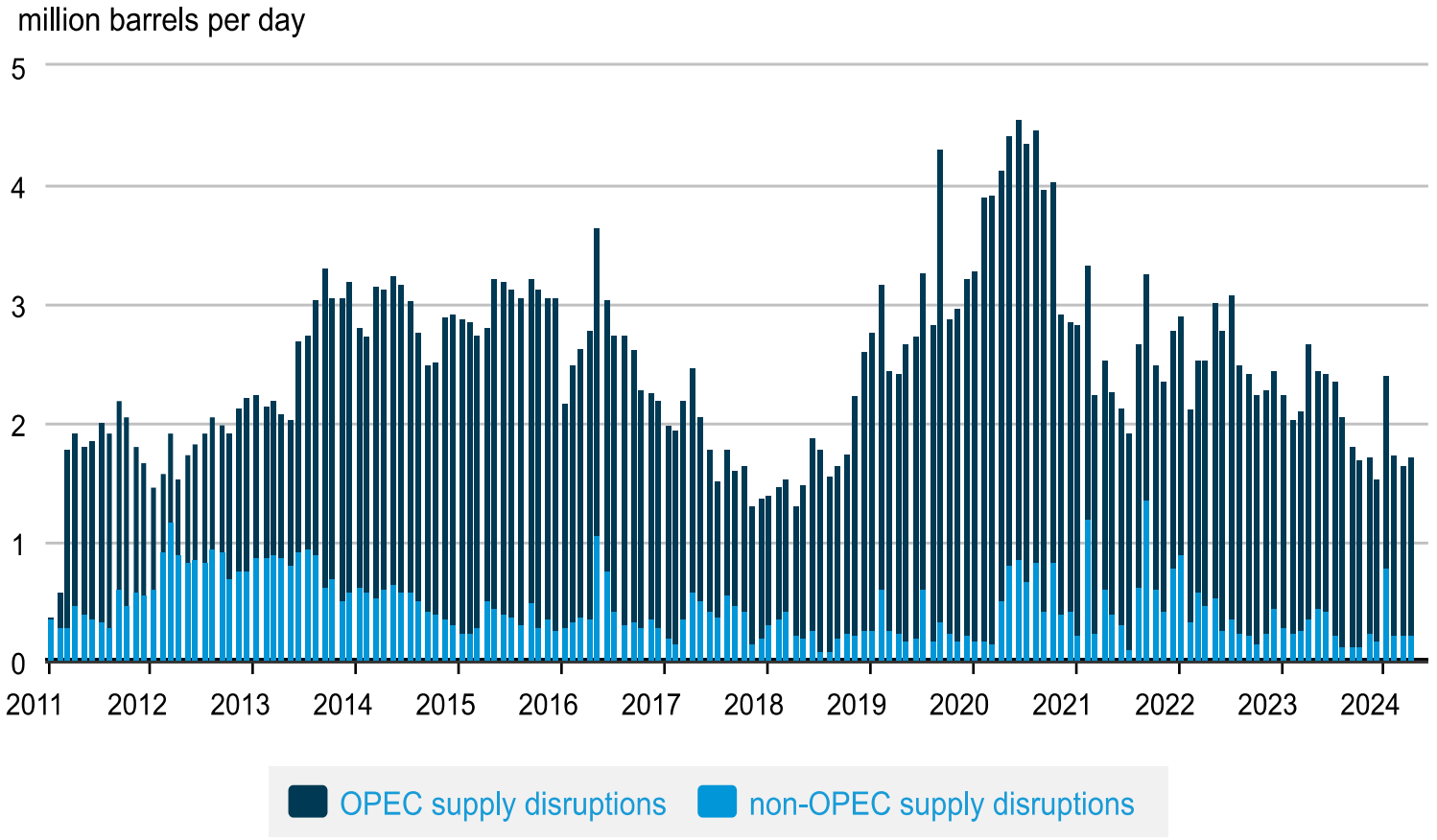
Data source: Short-Term Energy Outlook

Changes in Saudi Arabia crude oil production can affect oil prices



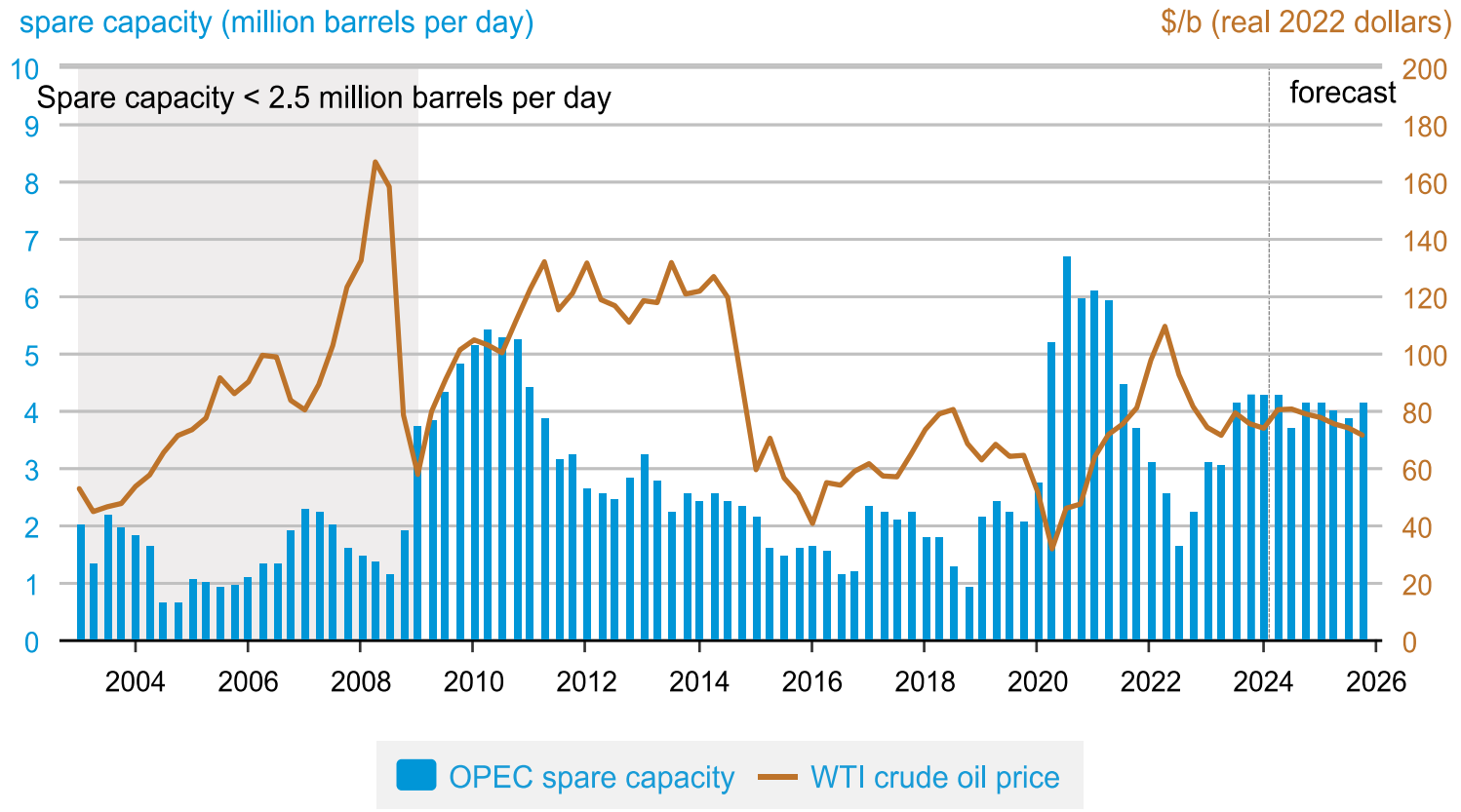
Data sources: U.S. Energy Information Administration, Refinitiv An LSEG Business

Unplanned supply disruptions tighten world oil markets and push prices higher



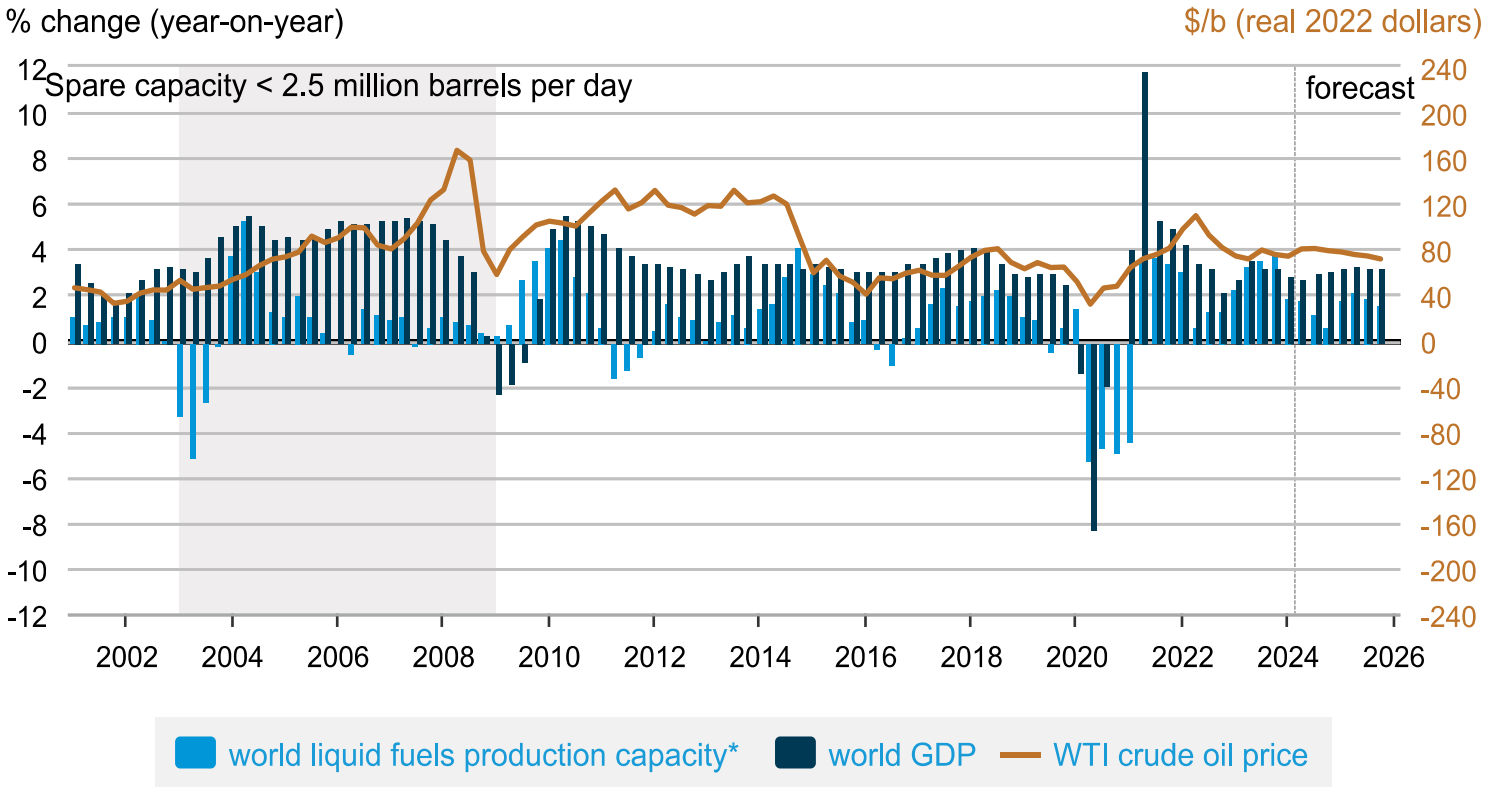
Data sources: U.S. Energy Information Administration

During 2003-2008, OPEC's spare production levels were low, limiting its ability to respond to demand and price increases



Data source: Short-Term Energy Outlook

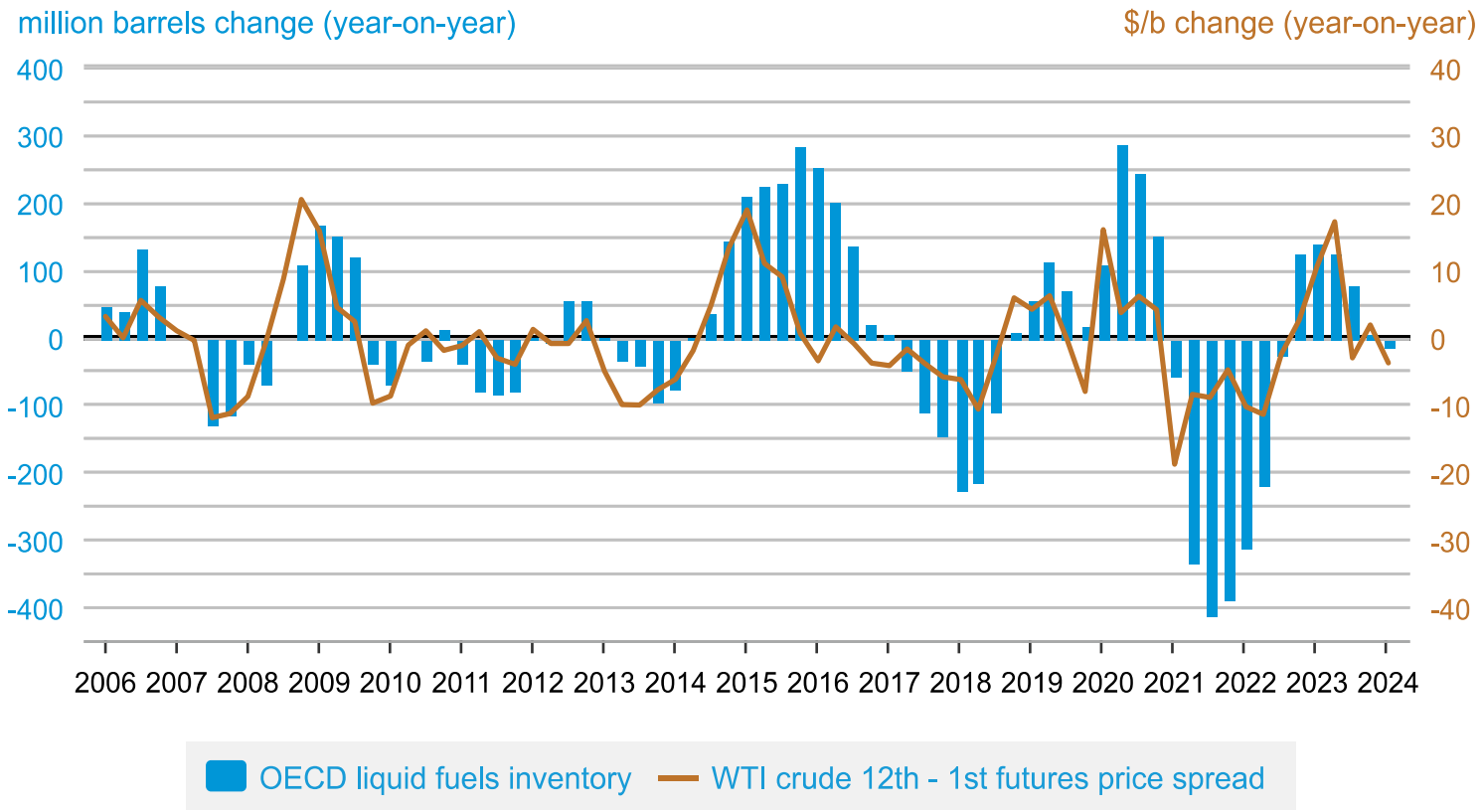
The years 2003-2008 experienced periods of very strong economic and oil demand growth, slow supply growth and tight spare capacity



Data source: Short-Term Energy Outlook

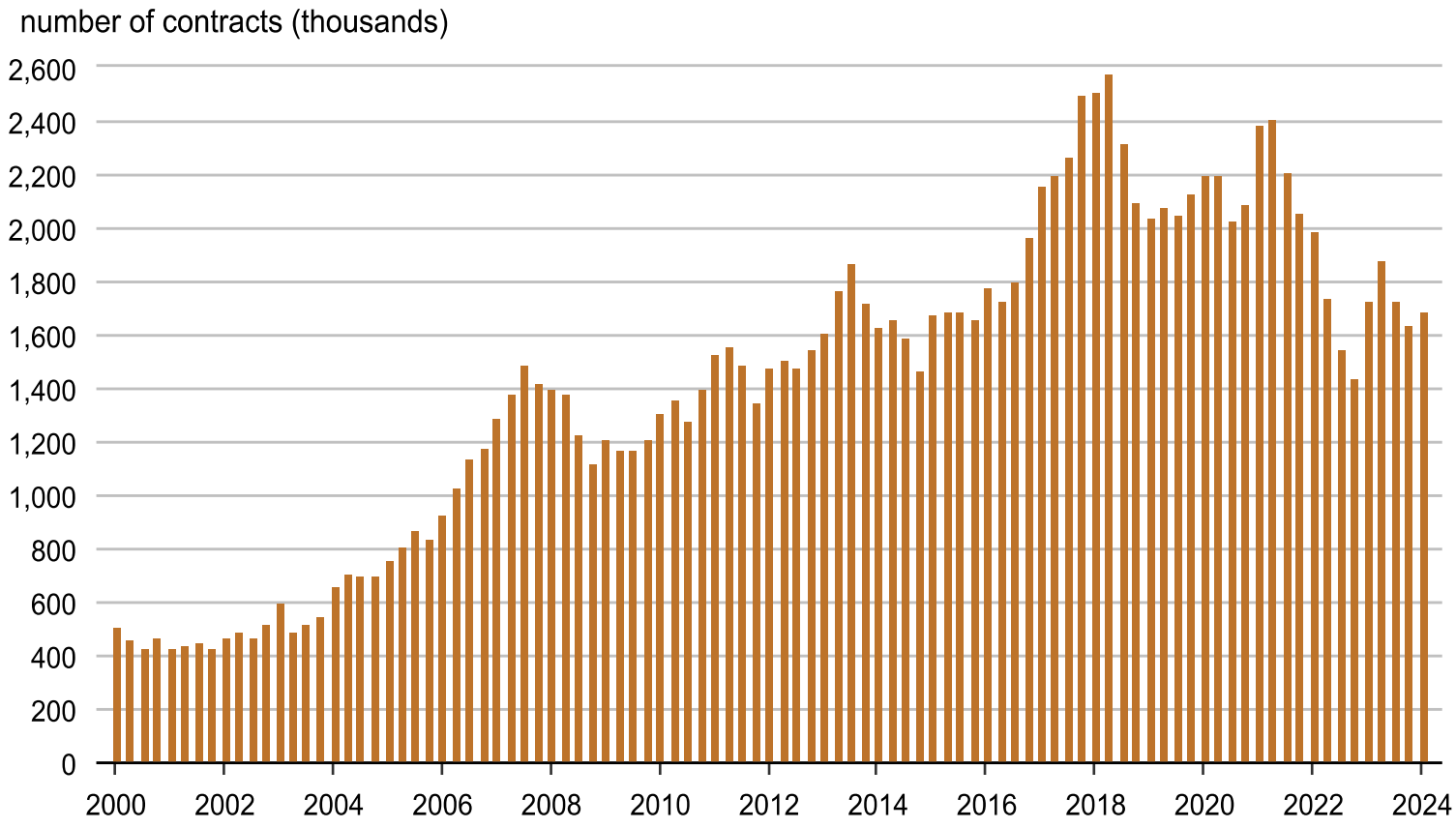
*World Capacity = OPEC capacity plus non-OPEC production

Inventory builds go hand-in-hand with increases in future oil prices *relative to* current prices (and vice versa)



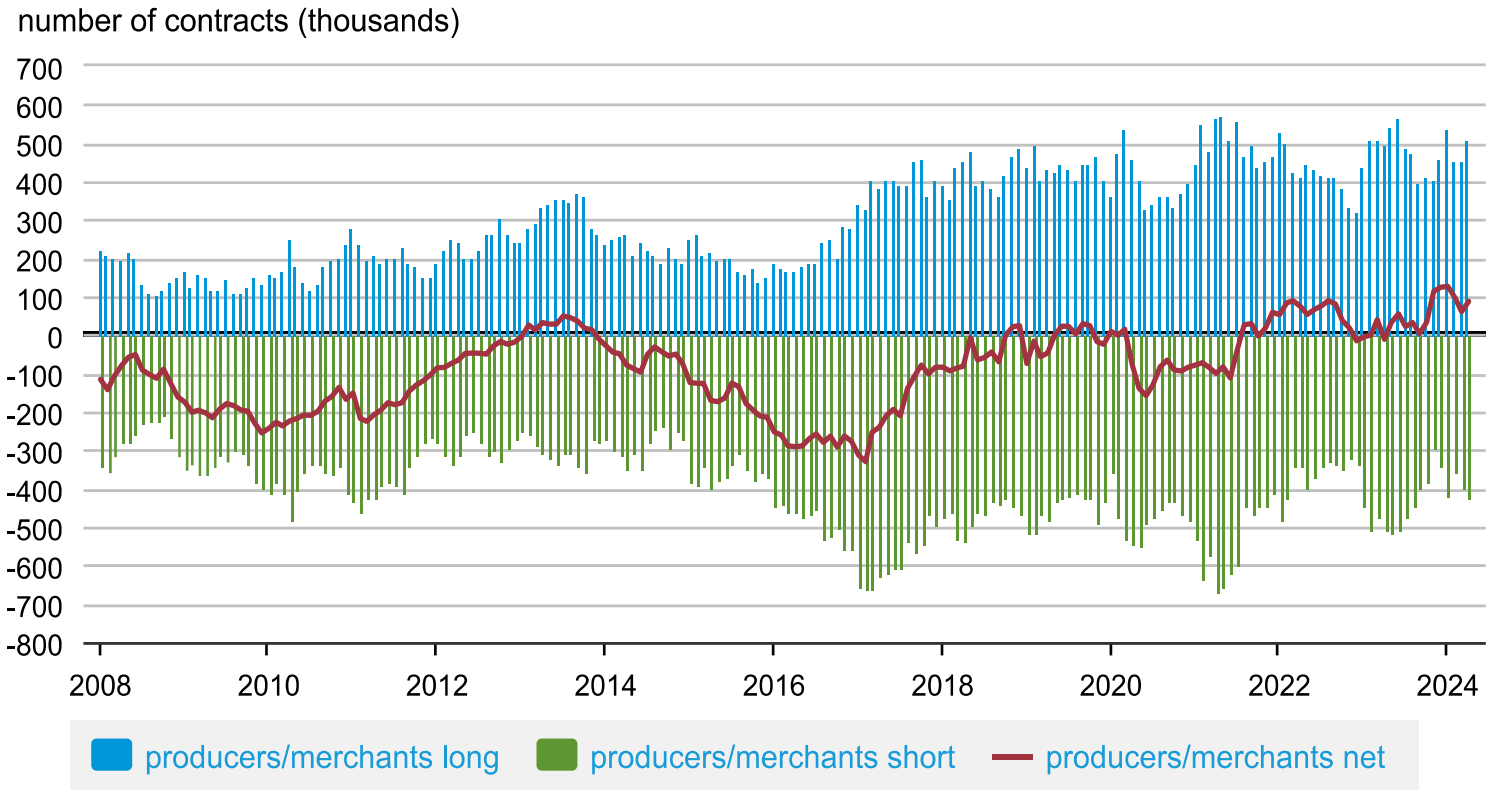
Data source: Short-Term Energy Outlook

Open interest in crude oil futures grew over the last decade as more participants entered the market



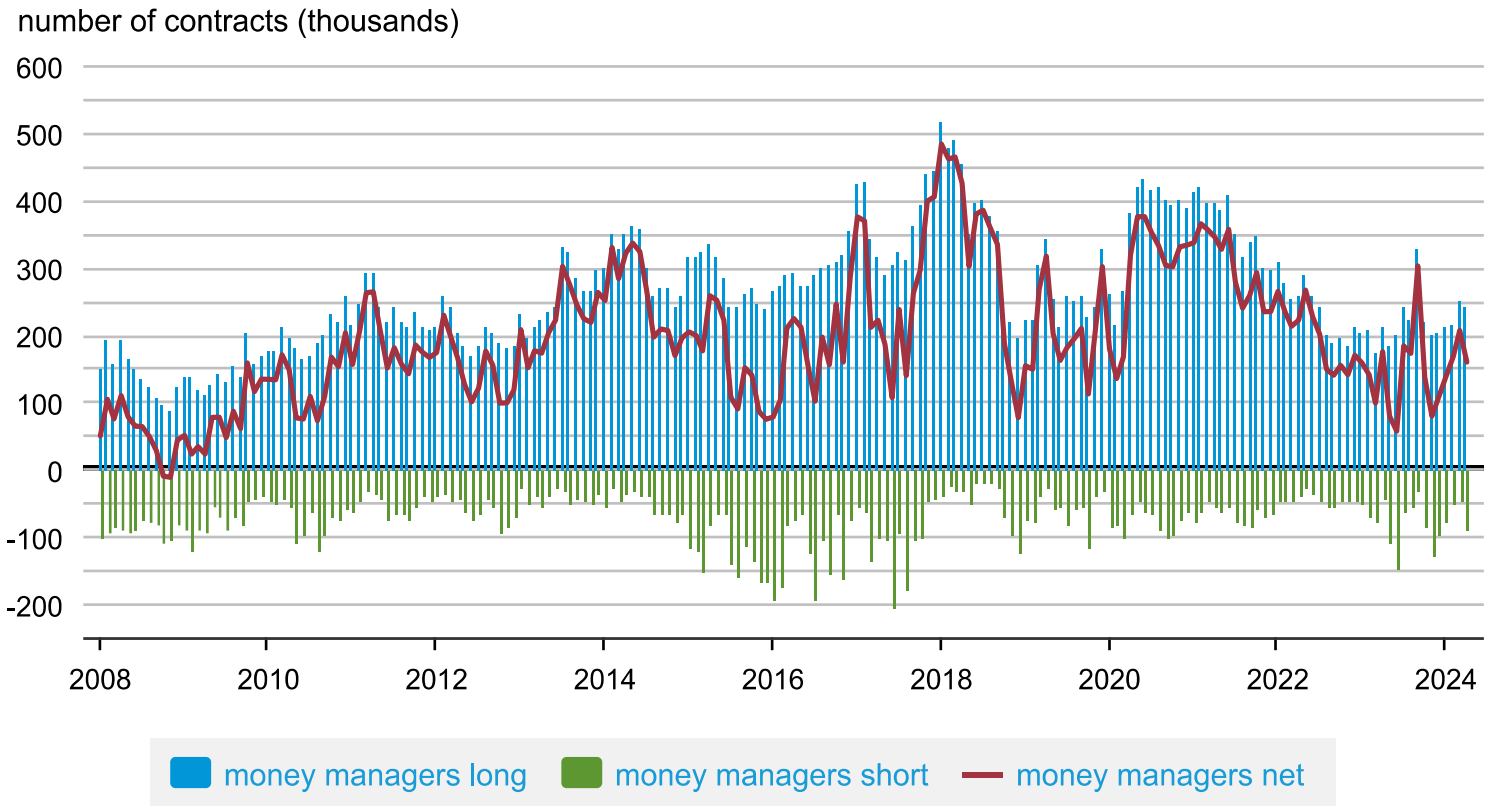
Data source: Bloomberg

Physical participants' (producers, merchants, processors, and end users) U.S. futures market contract positions



Data source: Commodity Futures Trading Commission, Commitments of Traders

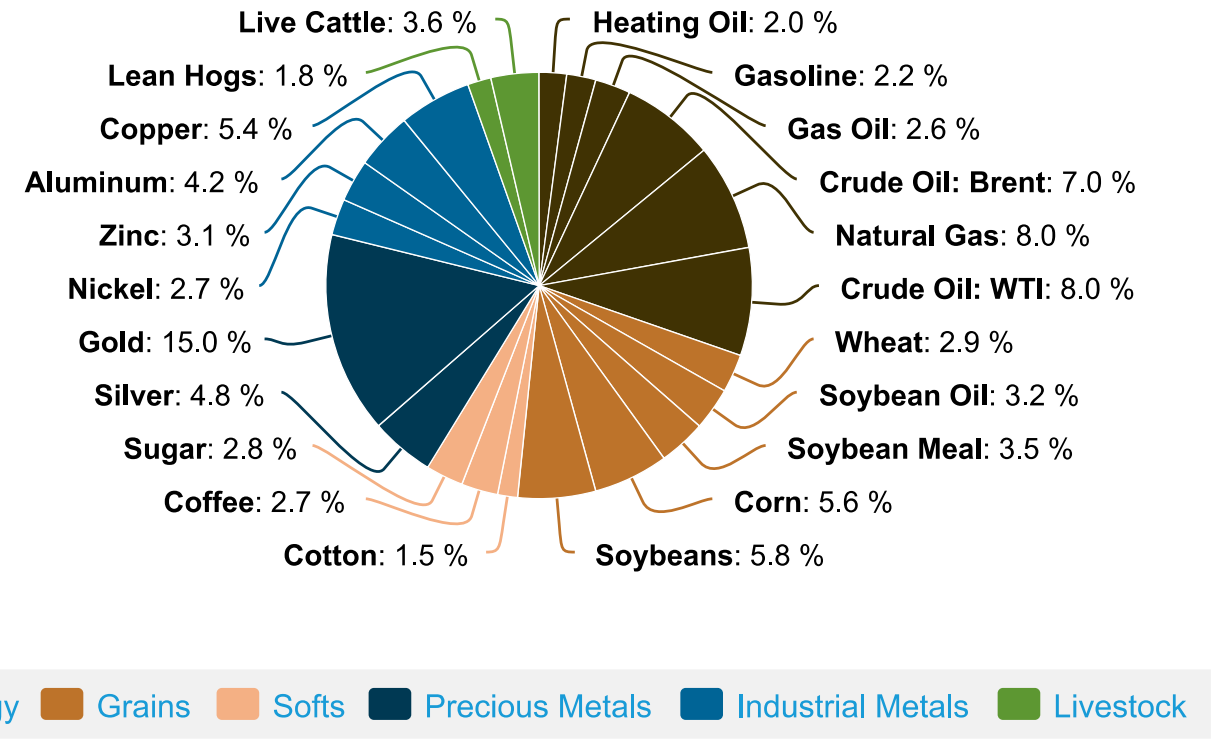
Money managers tend to be net long in the U.S. oil futures market



Data source: Commodity Futures Trading Commission, Commitments of Traders

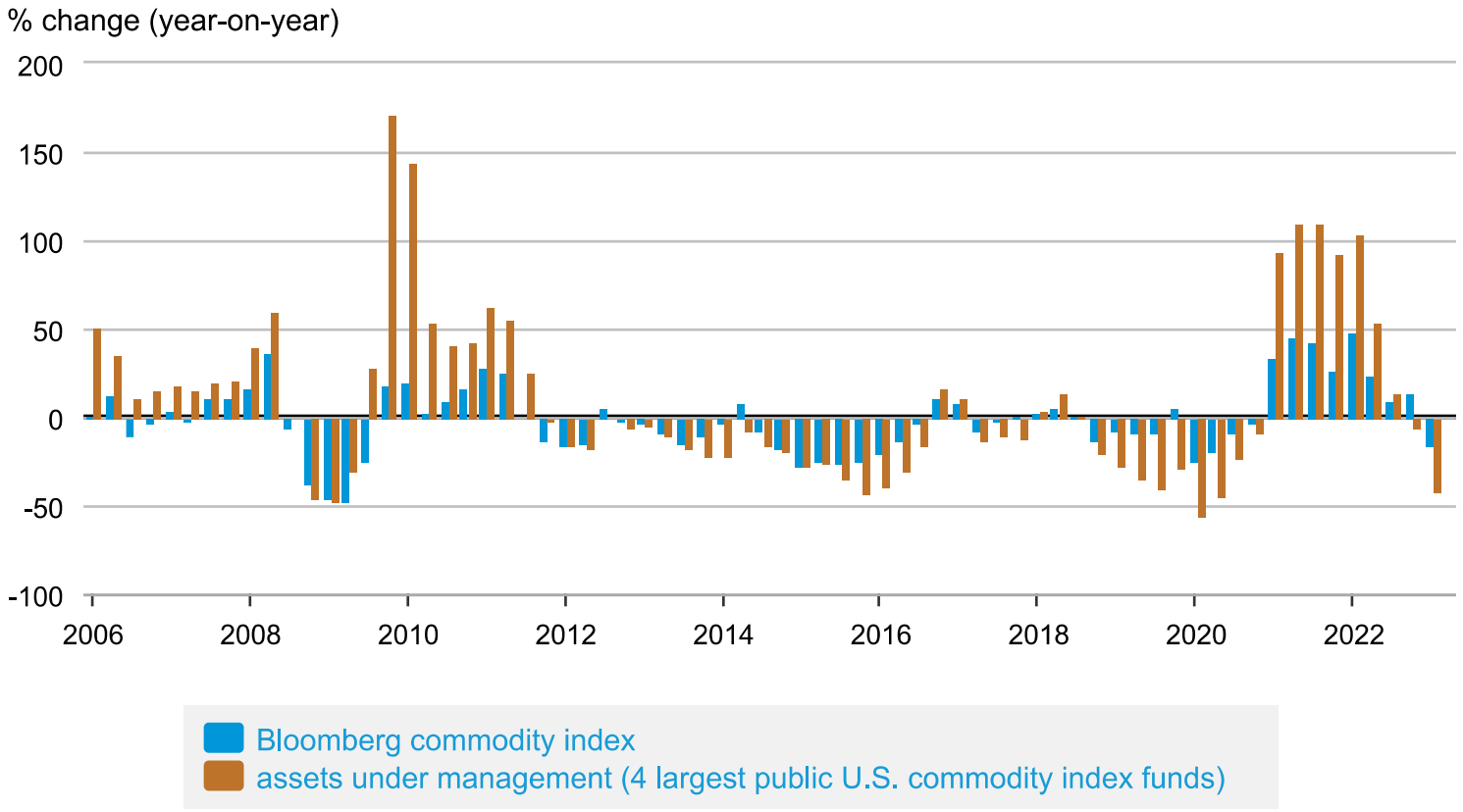
Crude oil plays a major role in commodity investment

Commodity index assets under management and Bloomberg commodity index level



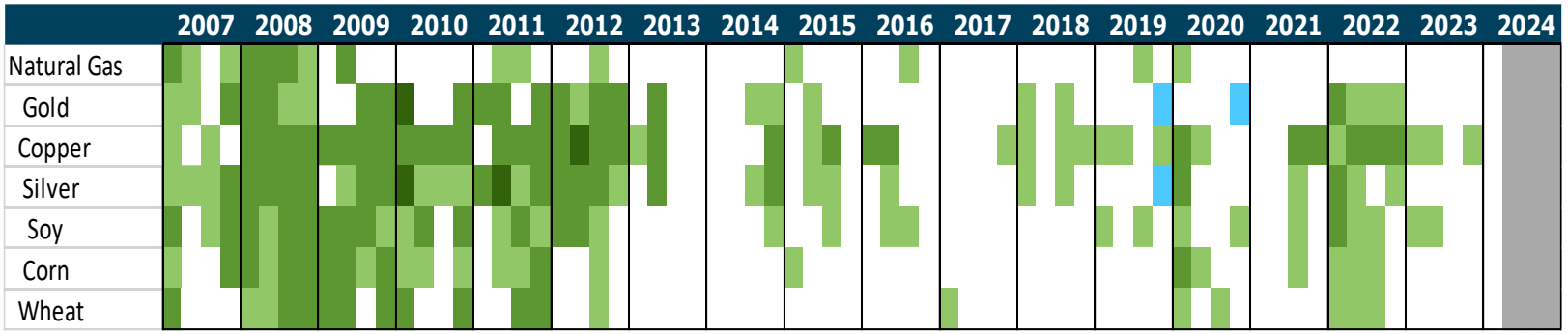
Data source: Bloomberg

Commodity index investment flows have tended to move together with commodity prices



Data source: Bloomberg

Correlations (+ or -) between daily price changes of crude oil futures and other commodities generally rose in recent years

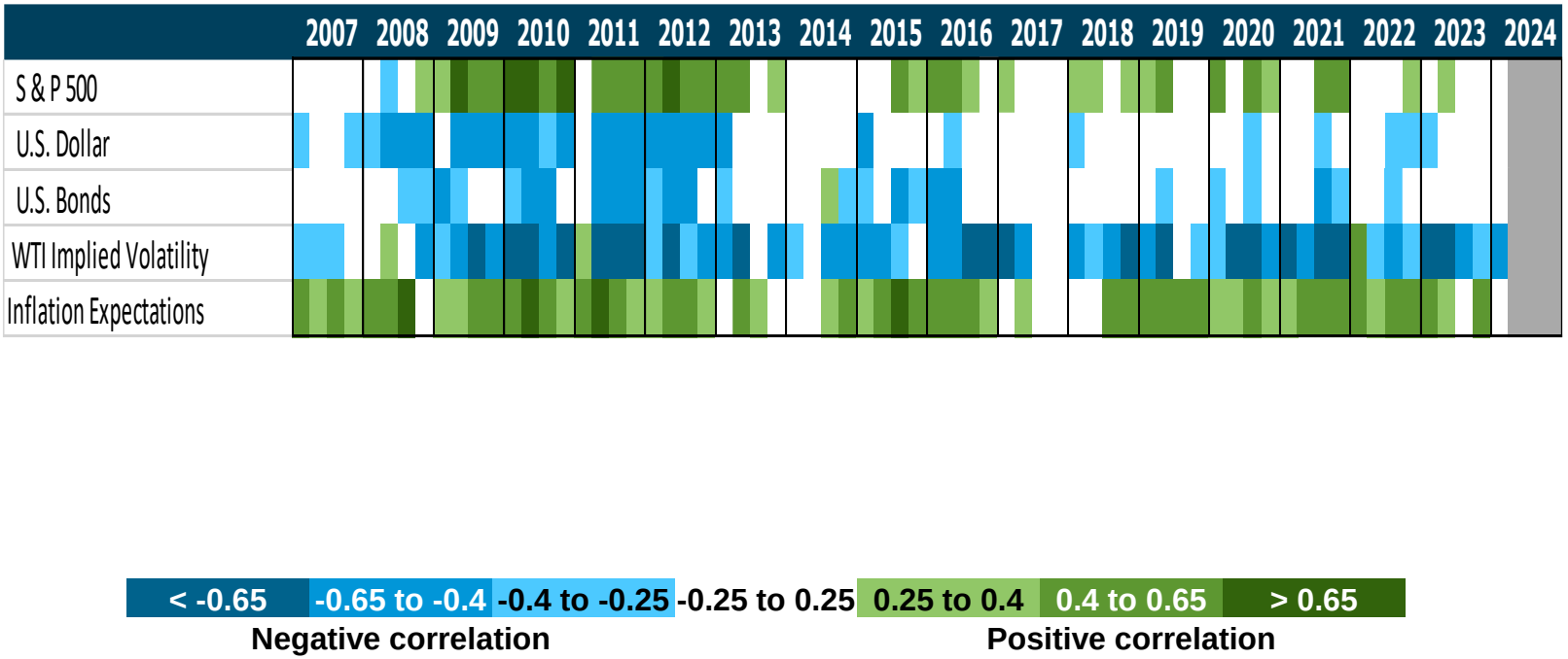


< -0.65 | -0.65 to -0.4 | -0.4 to -0.25 | -0.25 to 0.25 | 0.25 to 0.4 | 0.4 to 0.65 | > 0.65

Negative correlation **Positive correlation**

Note: Correlations computed quarterly

Correlations (+ or -) between daily returns on crude oil futures and financial investments have also strengthened



Note: Correlations computed quarterly

For more information

U.S. Energy Information Administration home page | www.eia.gov

Short-Term Energy Outlook | www.eia.gov/steo

Annual Energy Outlook | www.eia.gov/aeo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

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