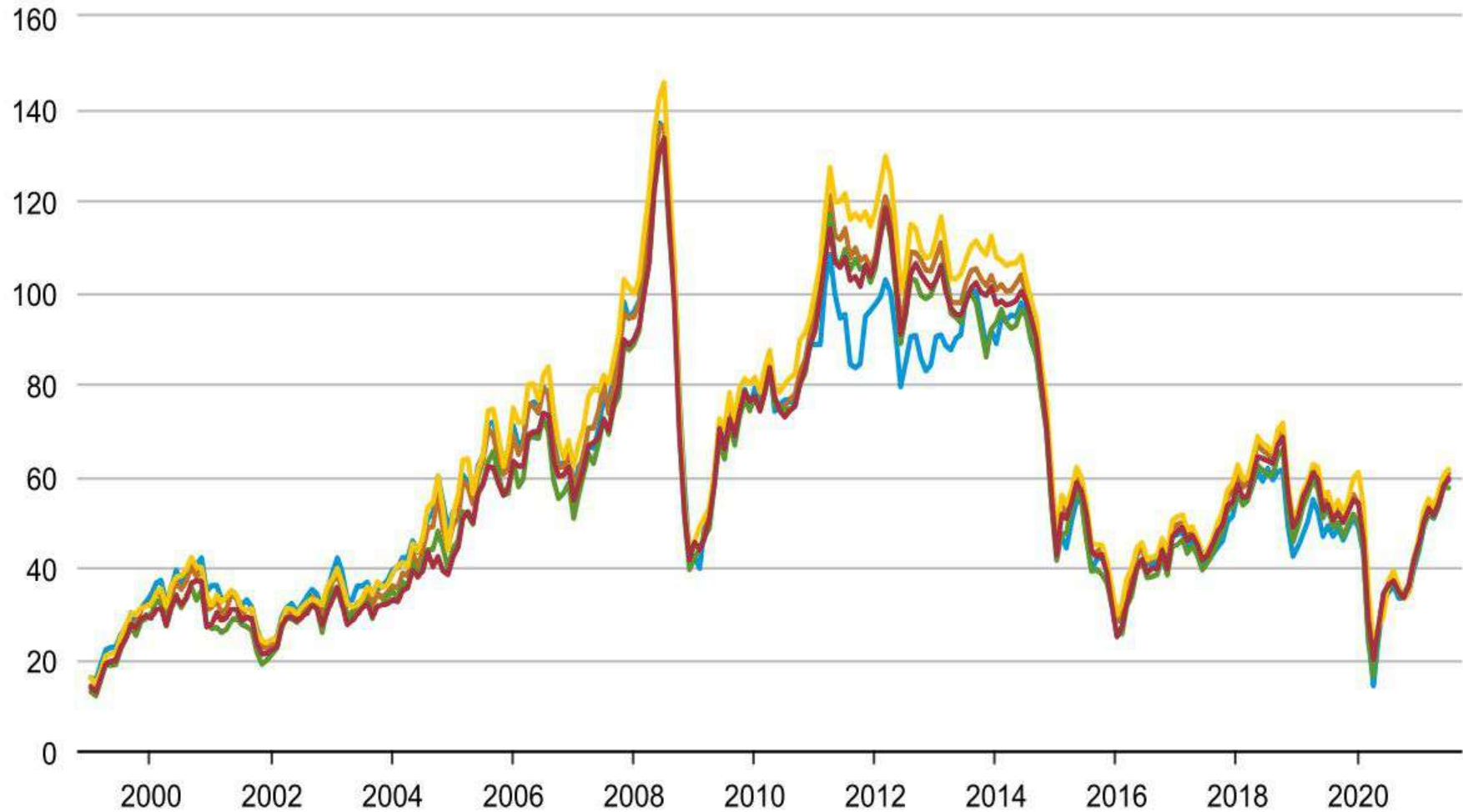


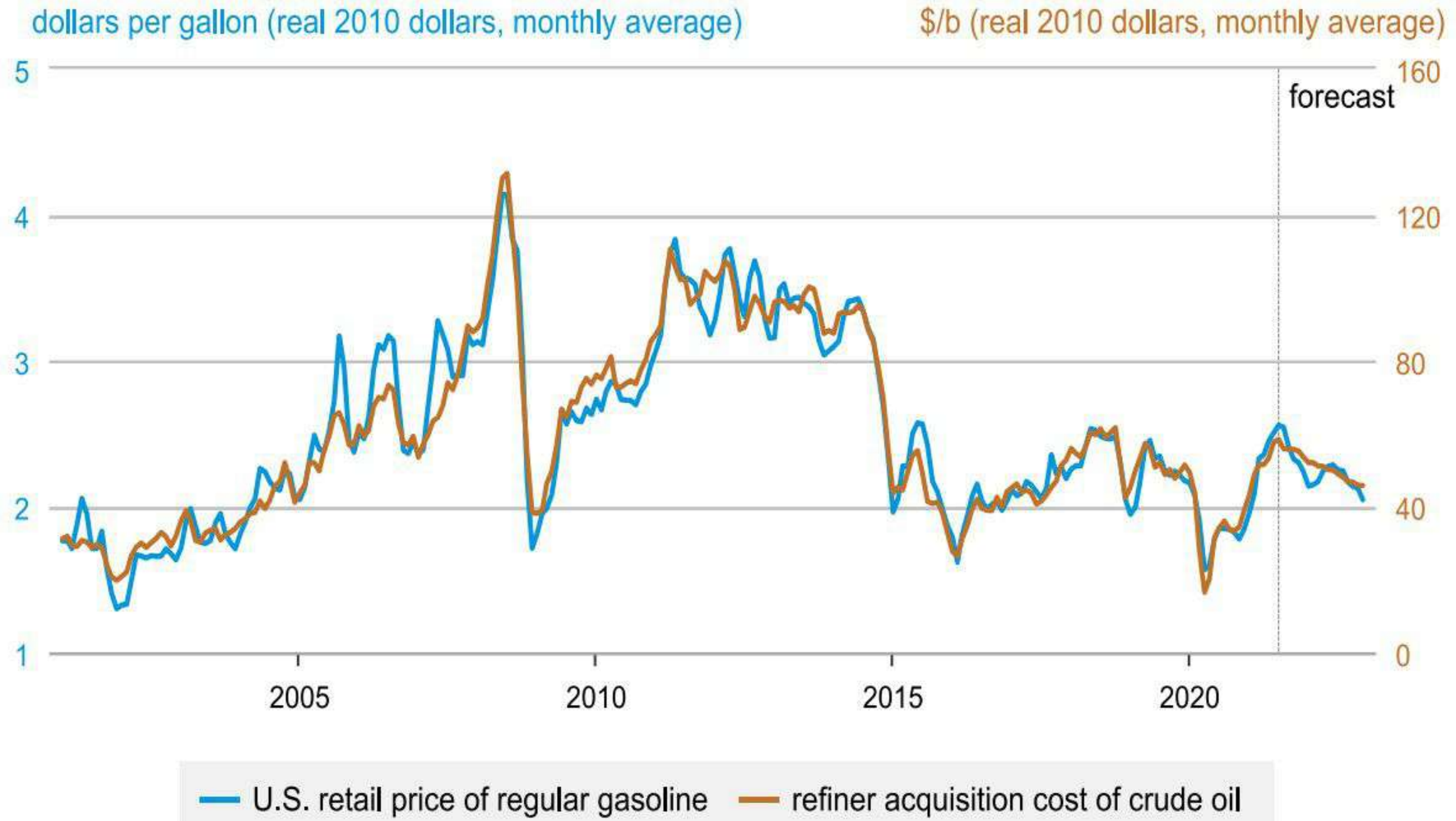
# World oil prices move together due to arbitrage

\$/b (real 2010 dollars, monthly average)

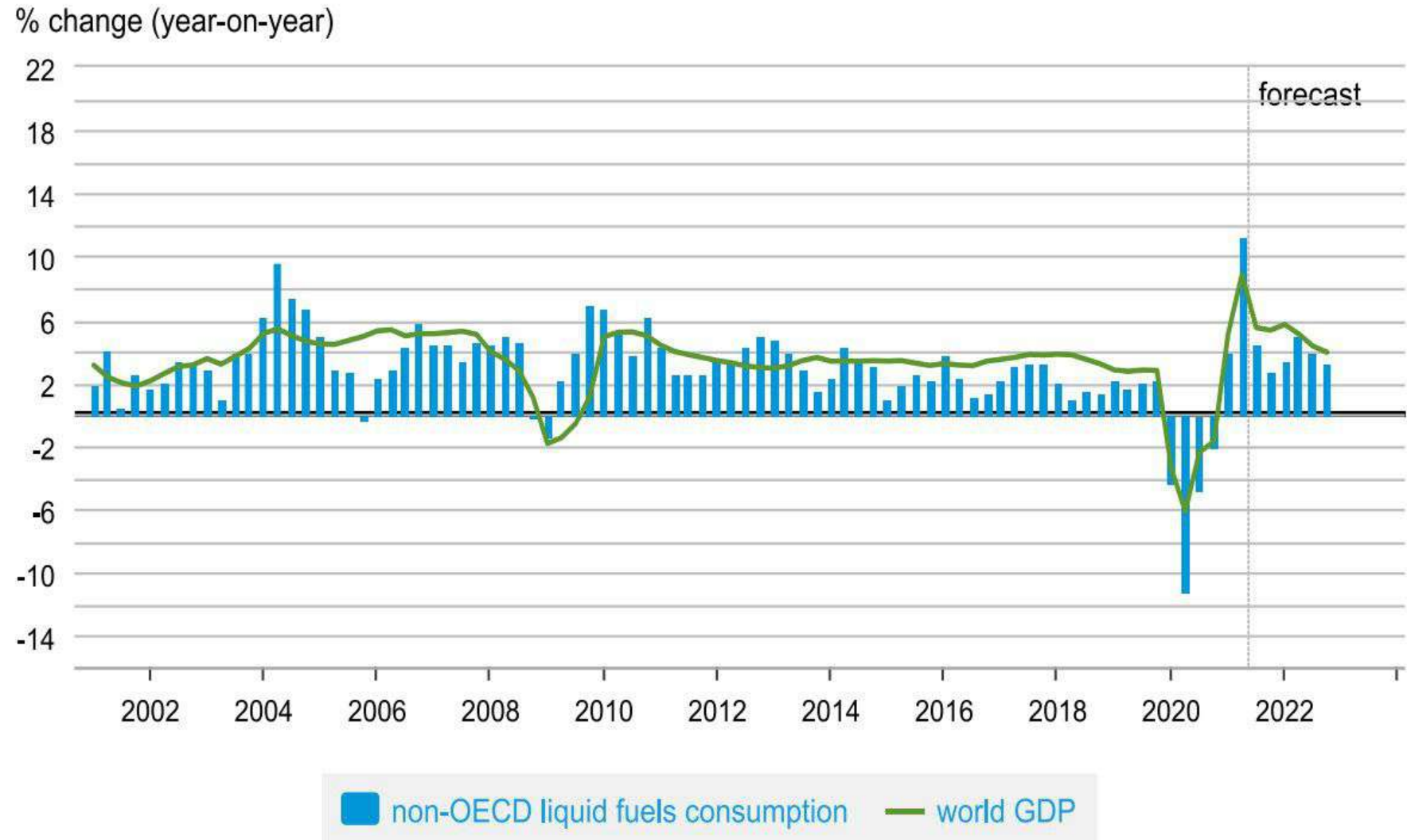


— WTI — Brent — Mars — Tapis — Dubai

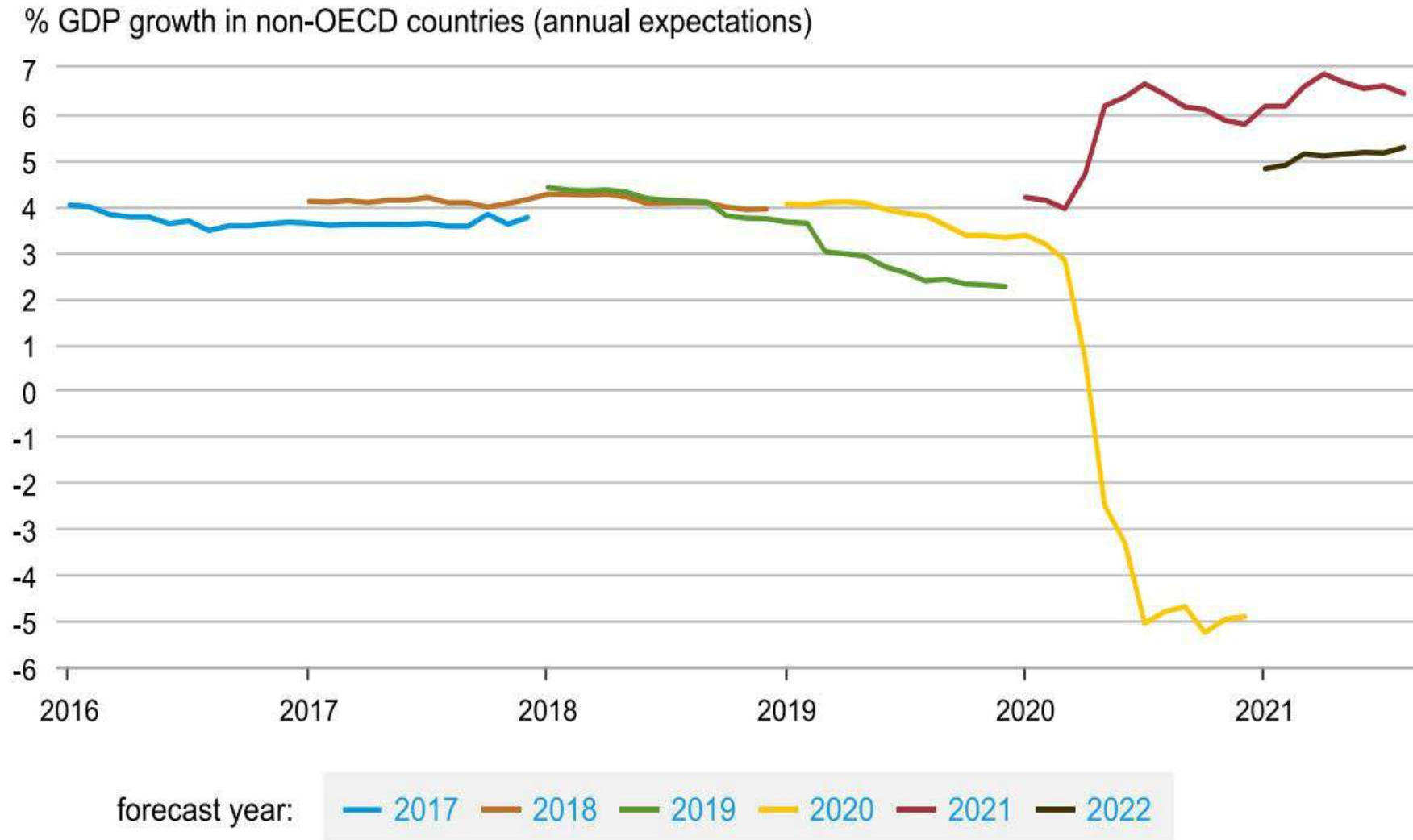
# Crude oil prices are the primary driver of petroleum product prices



# Economic growth has a strong impact on oil consumption

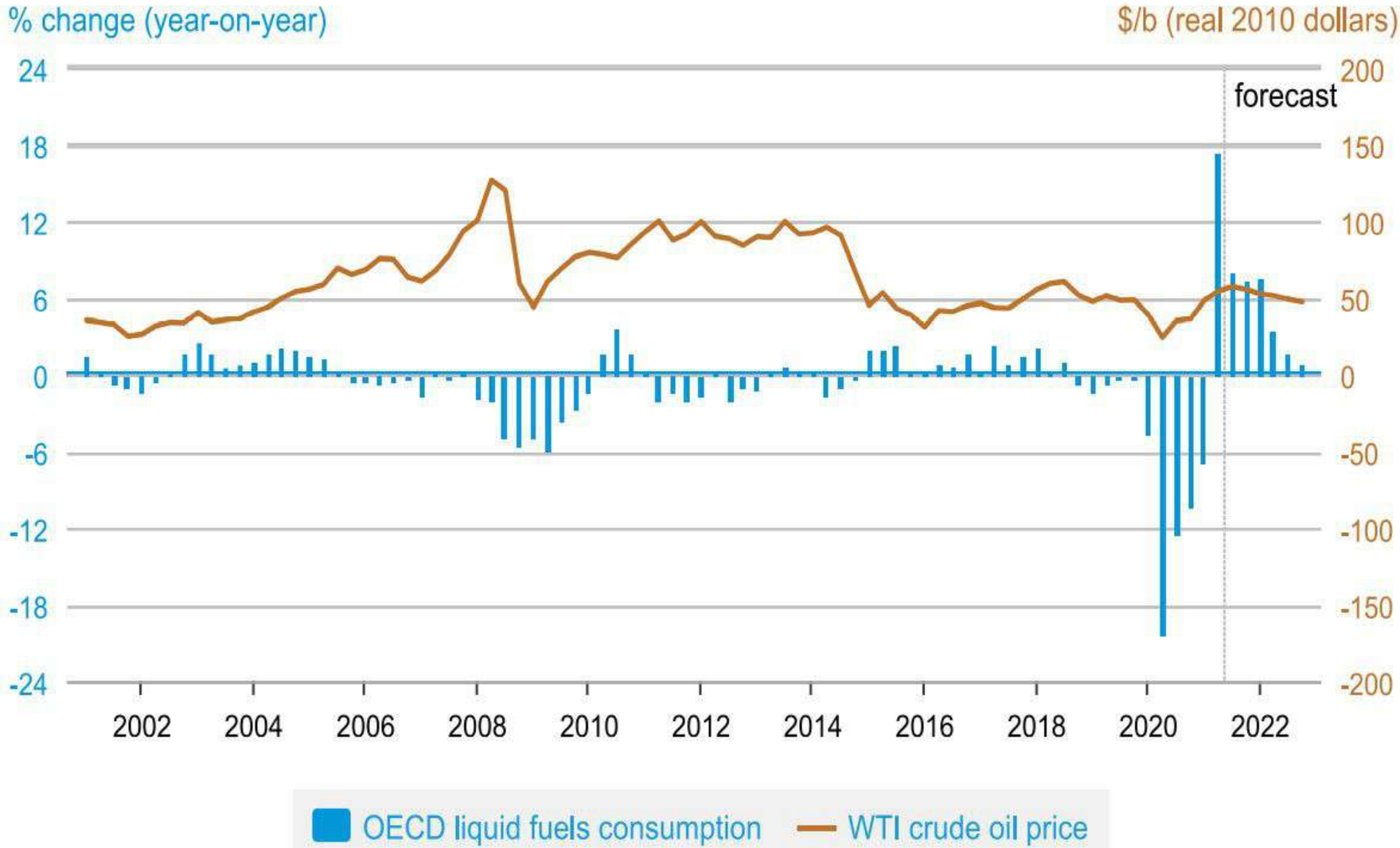


# Changes in expectations of economic growth can affect oil prices

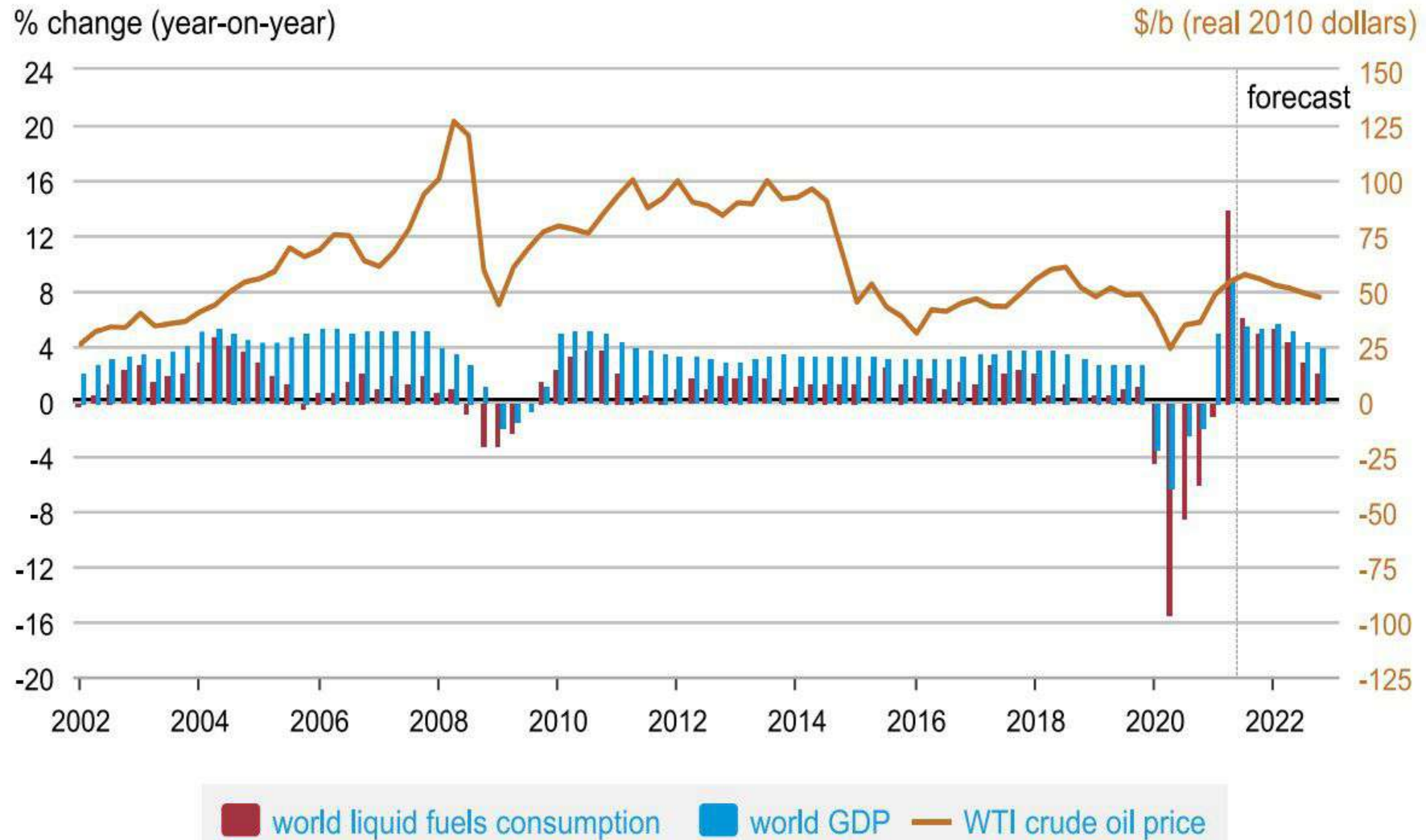


Note: Starting in January of each year, each line shows the expected forecast of GDP growth for the specified calendar year, which tends to move toward the actual realized growth outcome as the year progresses. Expectations continue to evolve into the next calendar year as revised GDP data become available (e.g., 2008 GDP expectations are revised even during 2009).

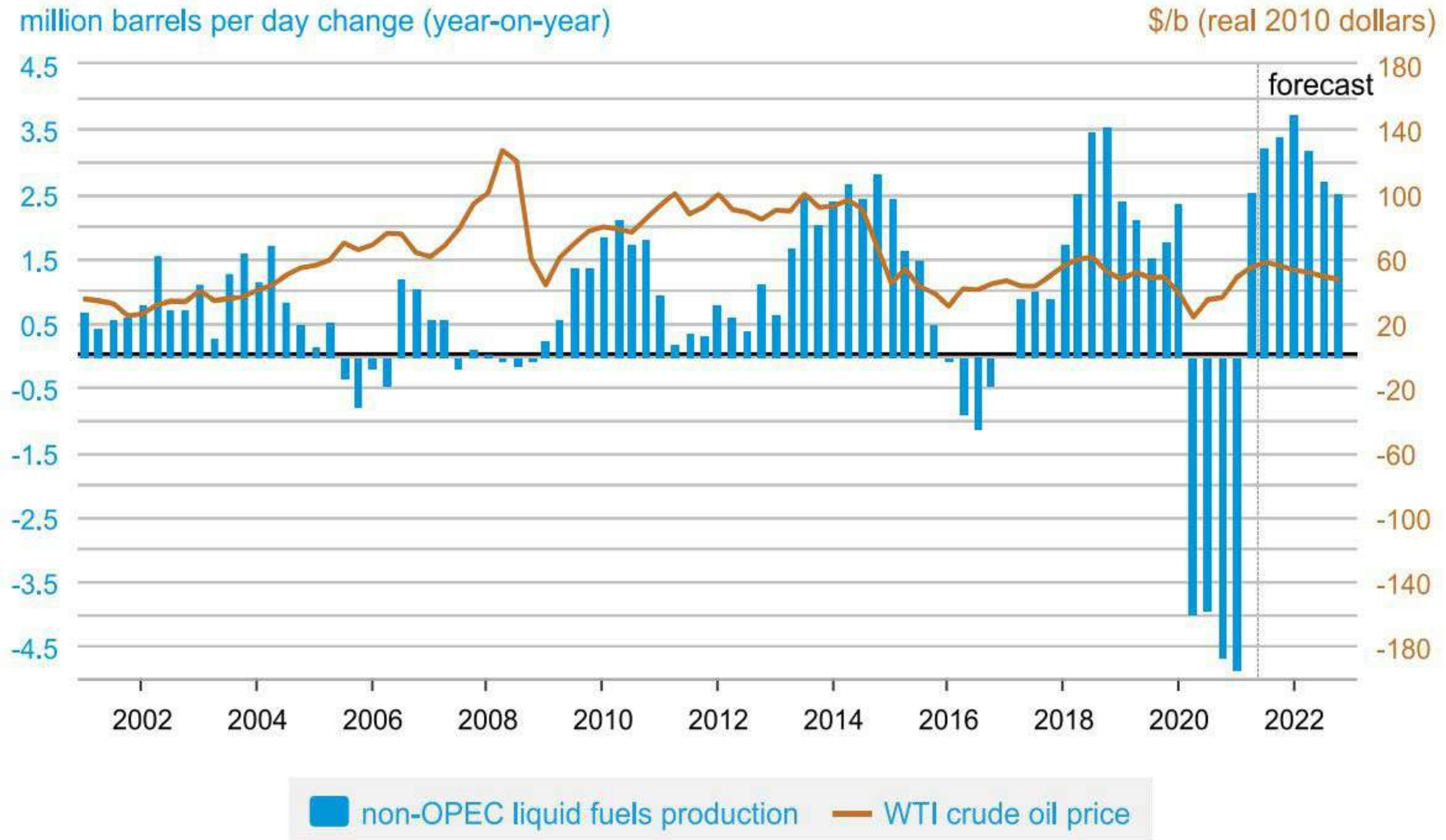
# In OECD countries, price increases have coincided with lower consumption



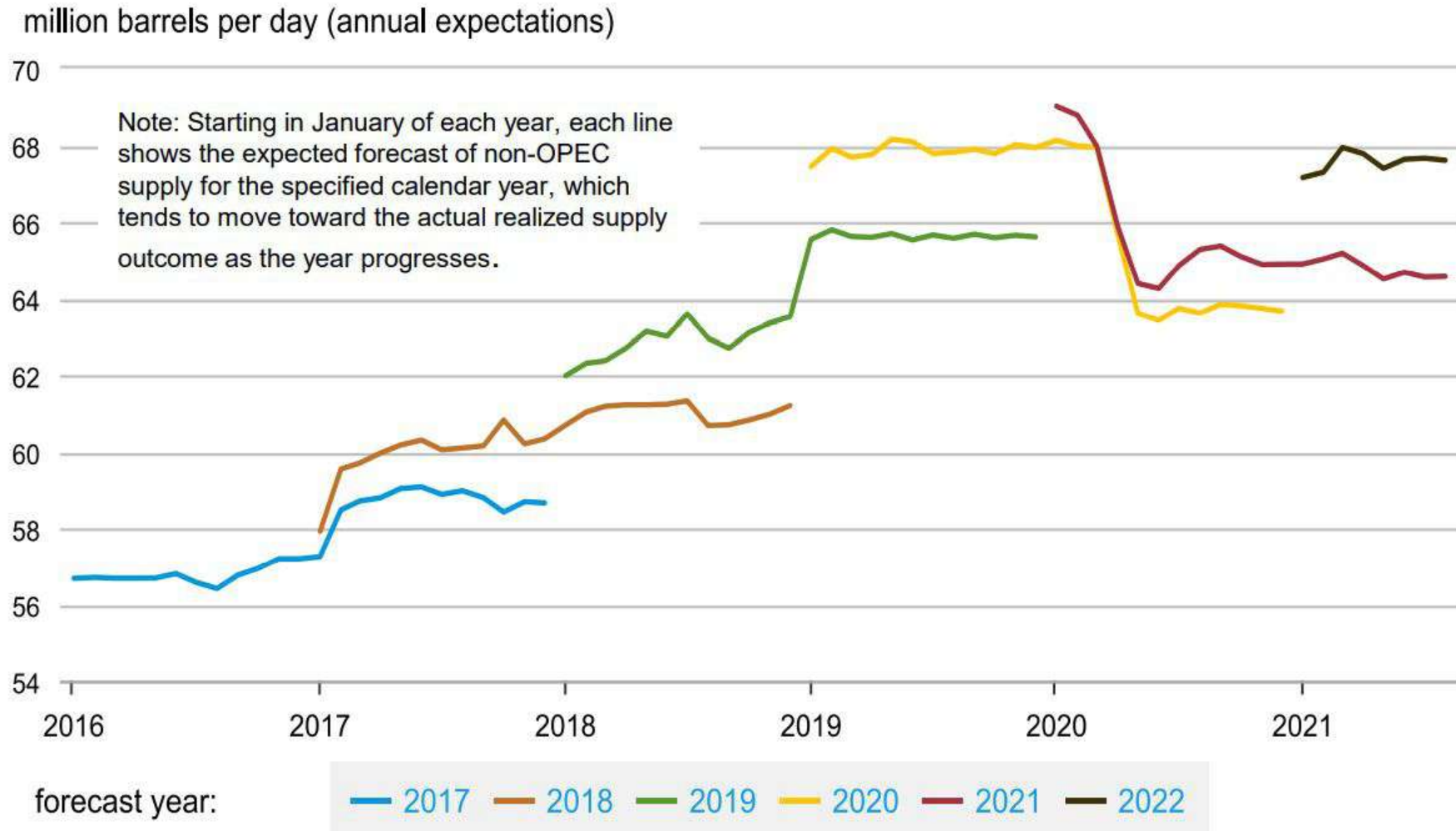
# Rising oil prices held down global oil consumption growth from 2005-2008, despite high economic growth



# Changes in non-OPEC production can affect oil prices

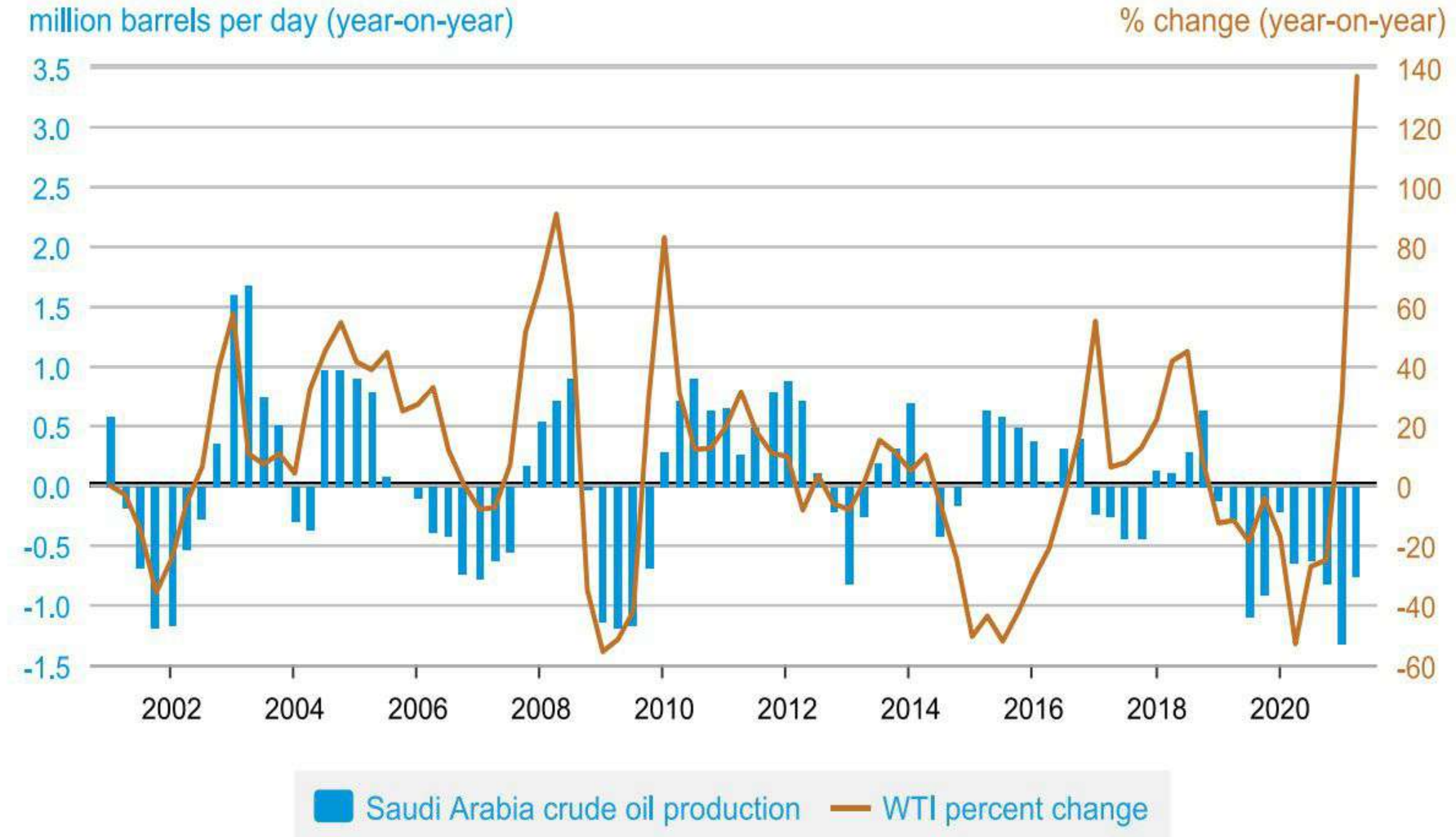


# Non-OPEC supply expectations indicate changes in market sentiment concerning oil supply

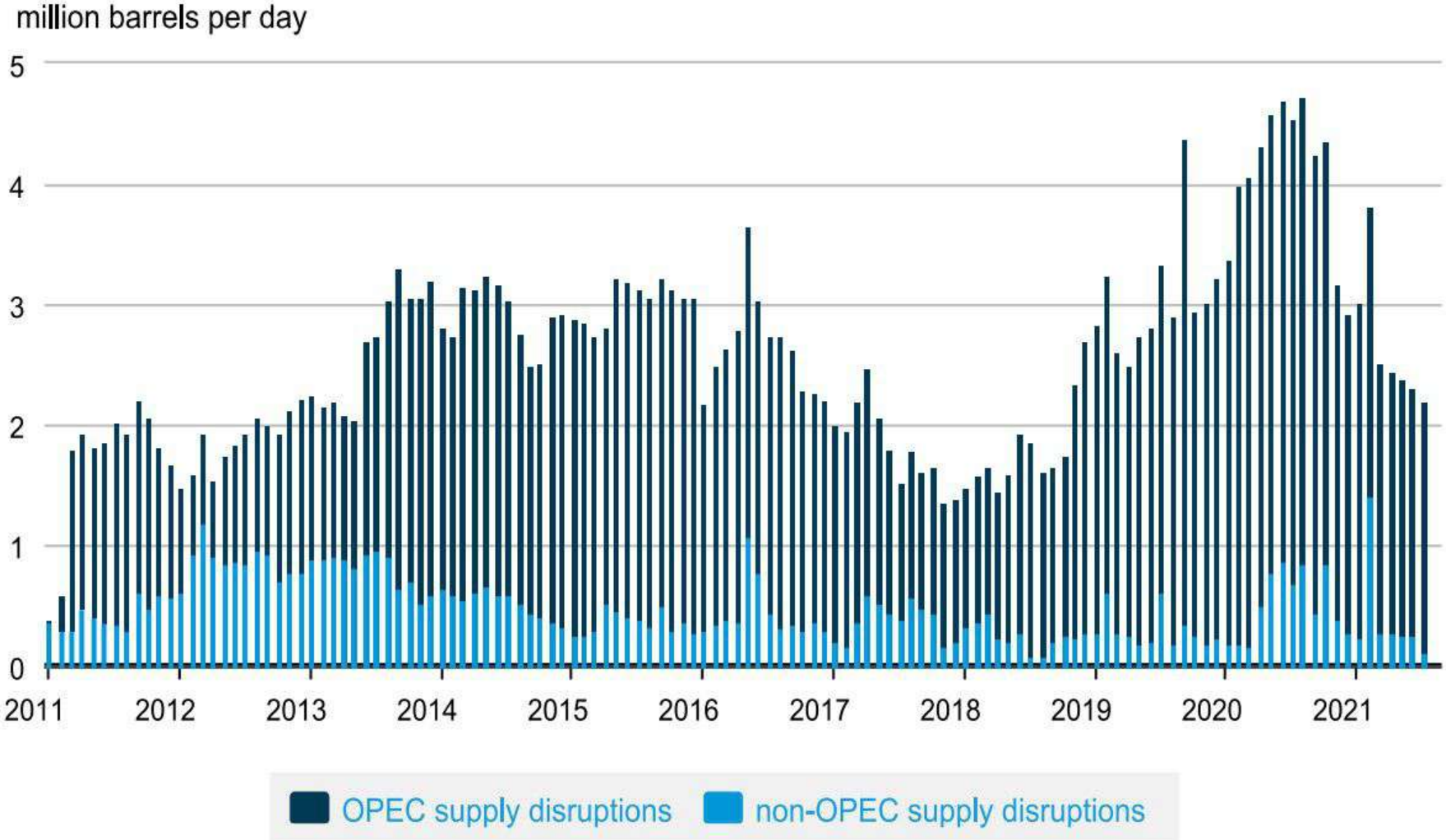




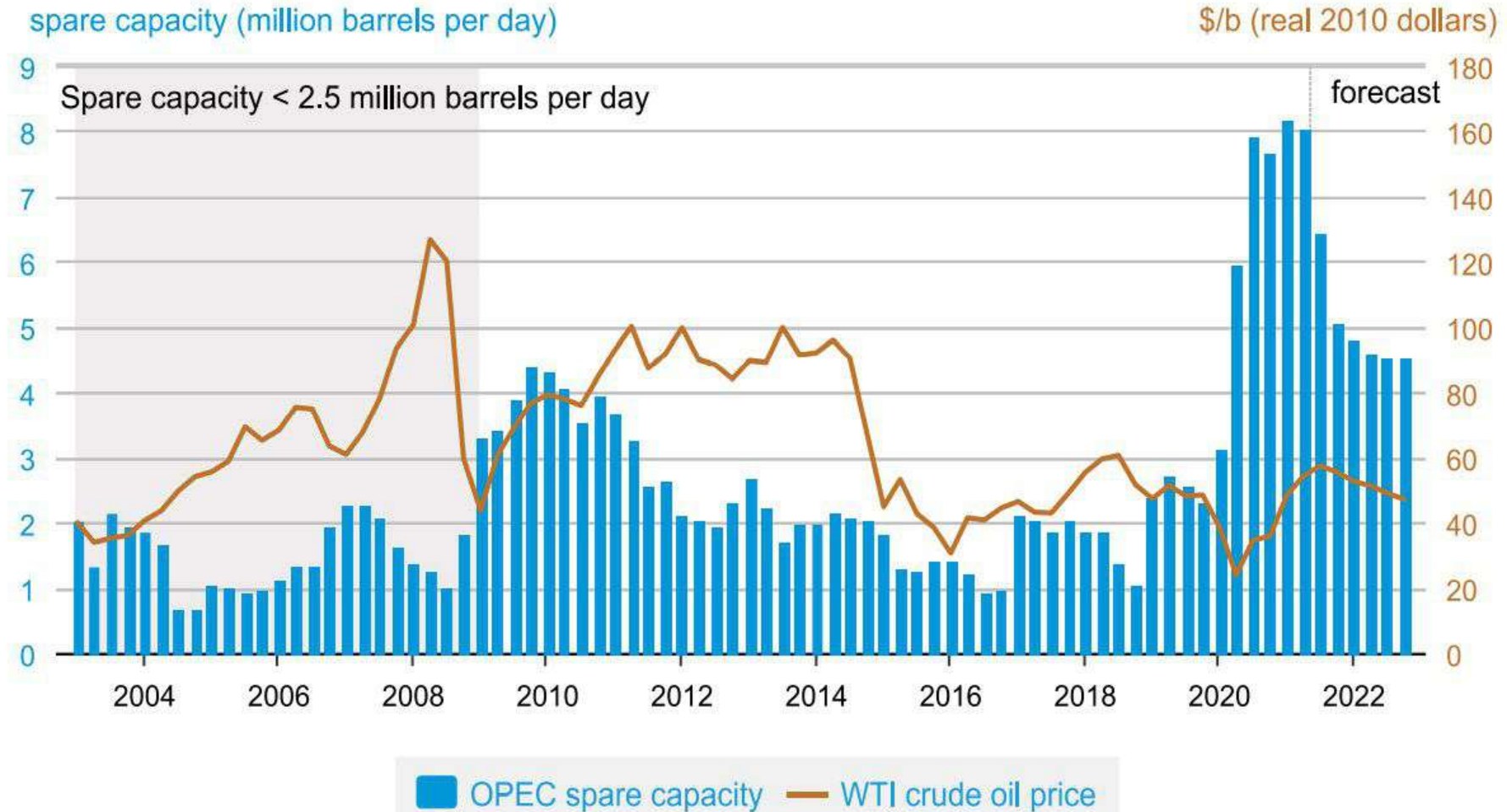
# Changes in Saudi Arabia crude oil production can affect oil prices



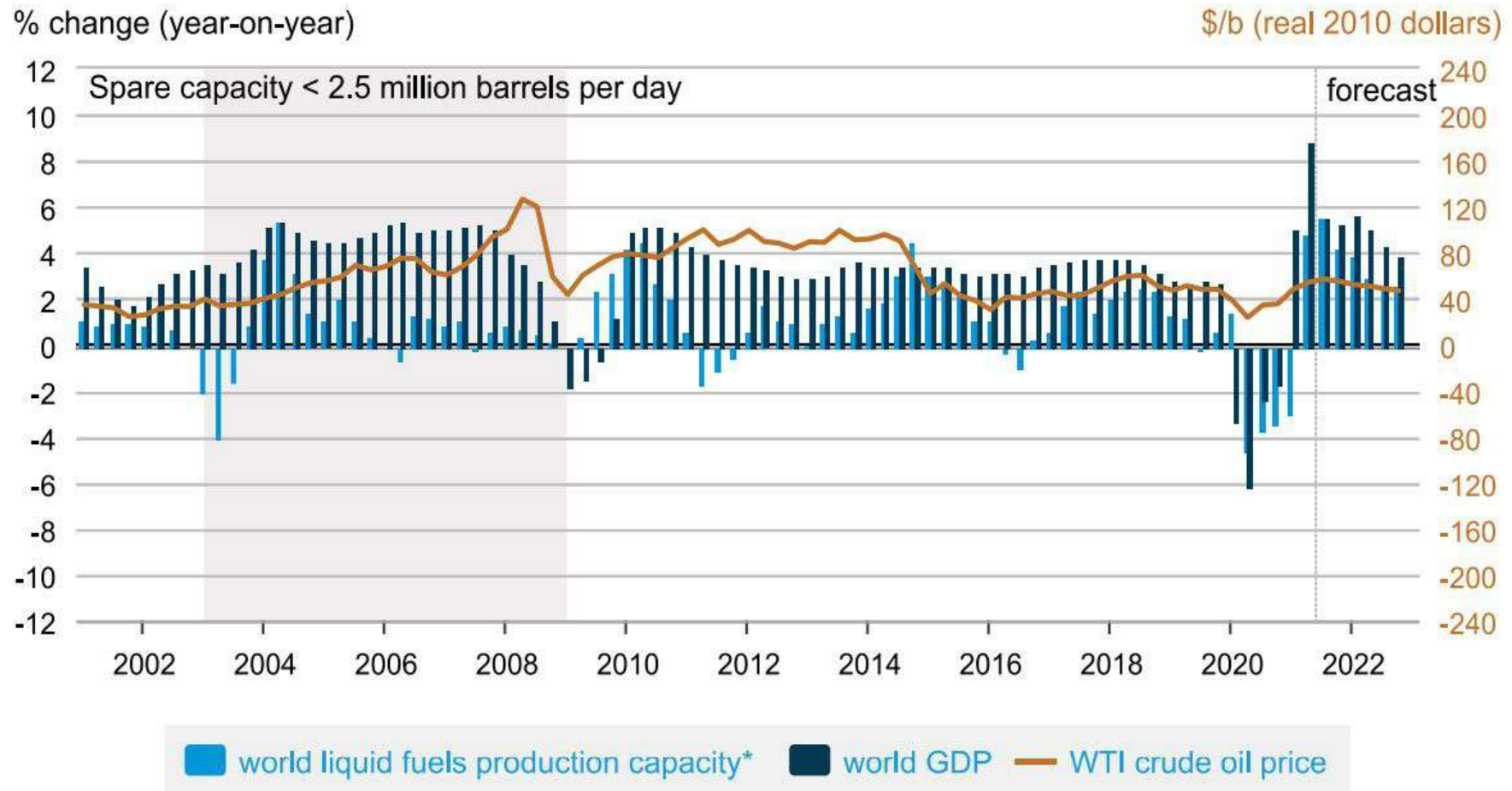
# Unplanned supply disruptions tighten world oil markets and push prices higher



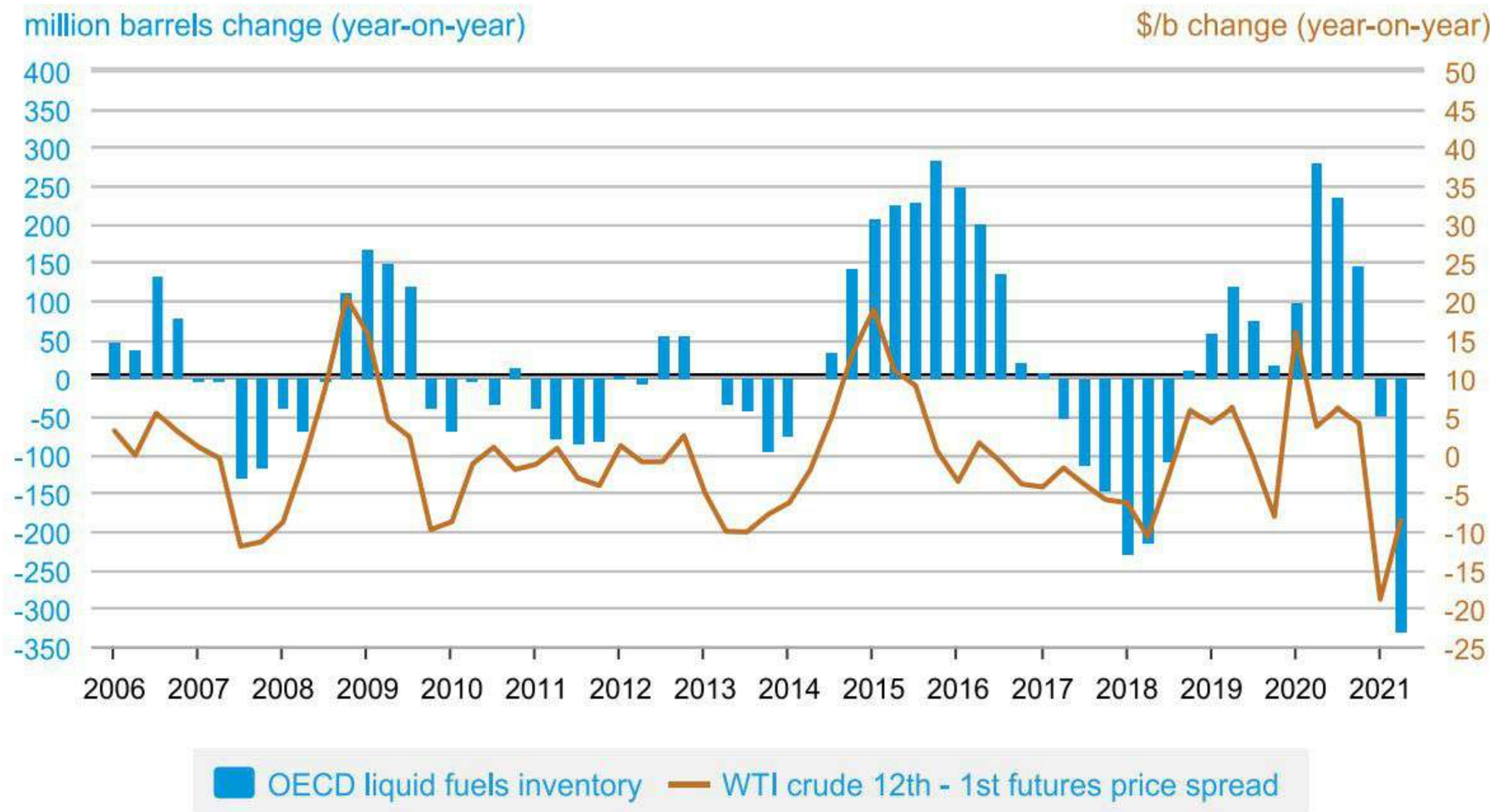
During 2003-2008, OPEC's spare production levels were low, limiting its ability to respond to demand and price increases



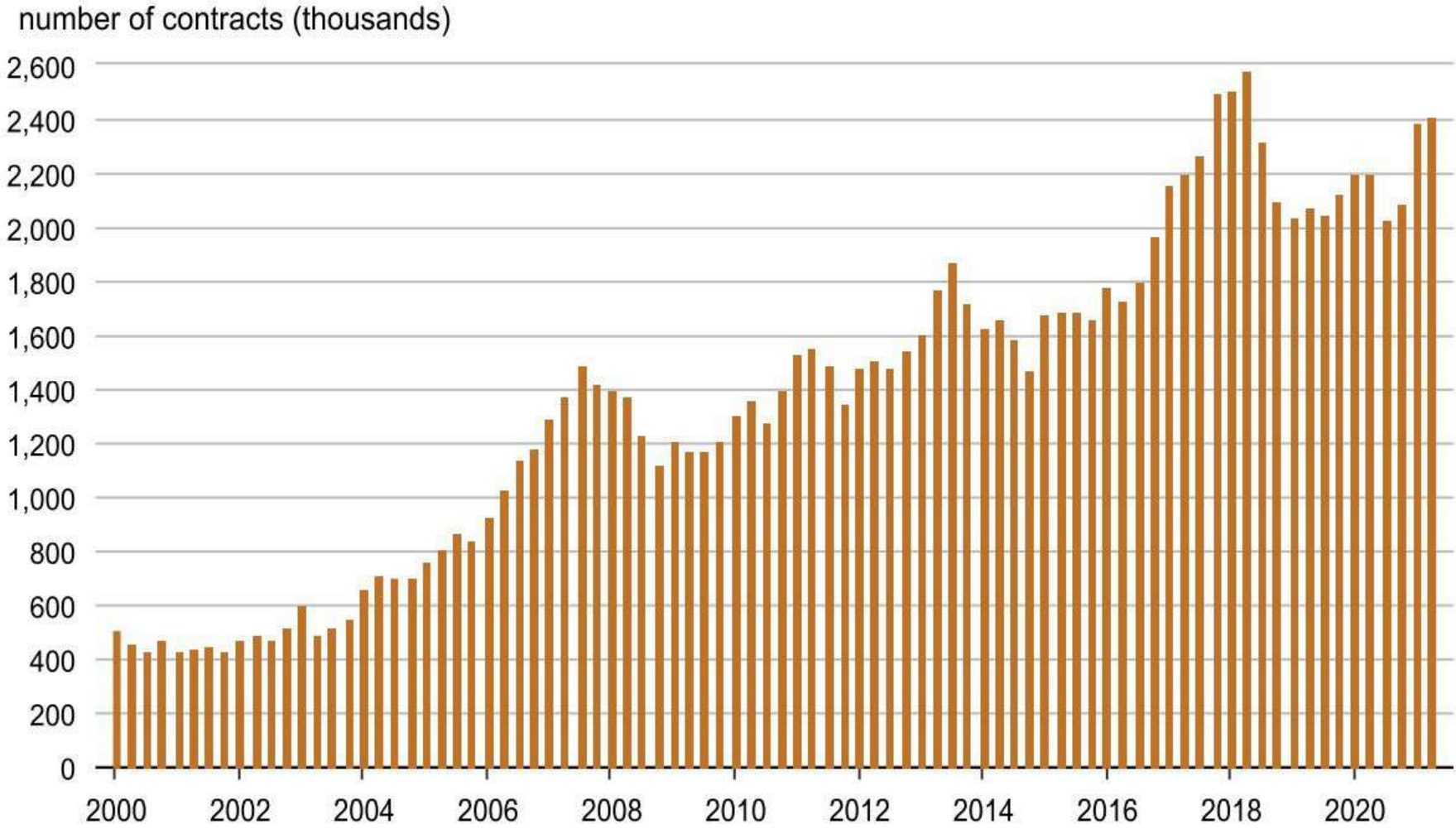
# The years 2003-2008 experienced periods of very strong economic and oil demand growth, slow supply growth and tight spare capacity



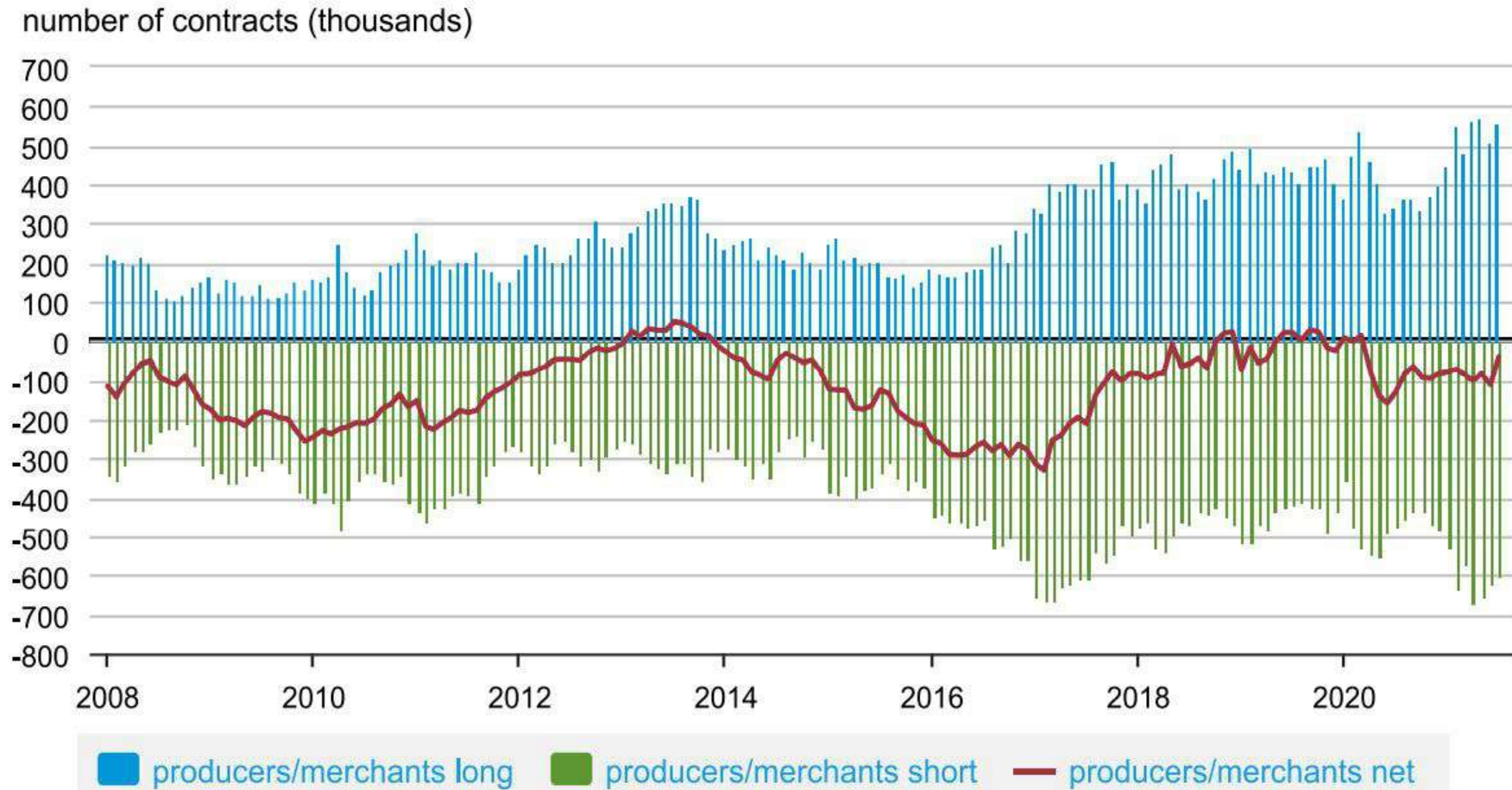
# Inventory builds go hand-in-hand with increases in future oil prices *relative to current prices* (and vice versa)



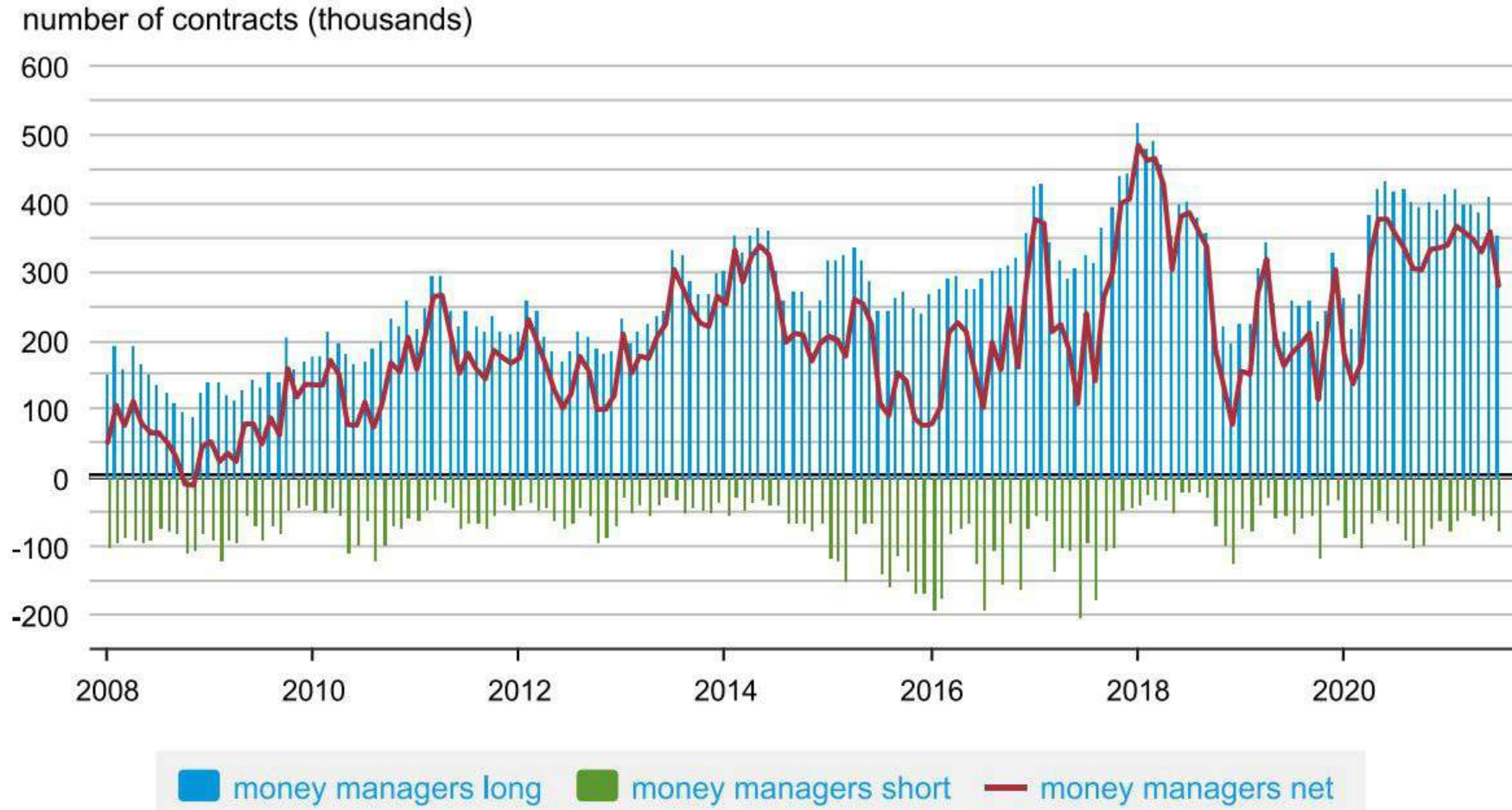
# Open interest in crude oil futures grew over the last decade as more participants entered the market



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

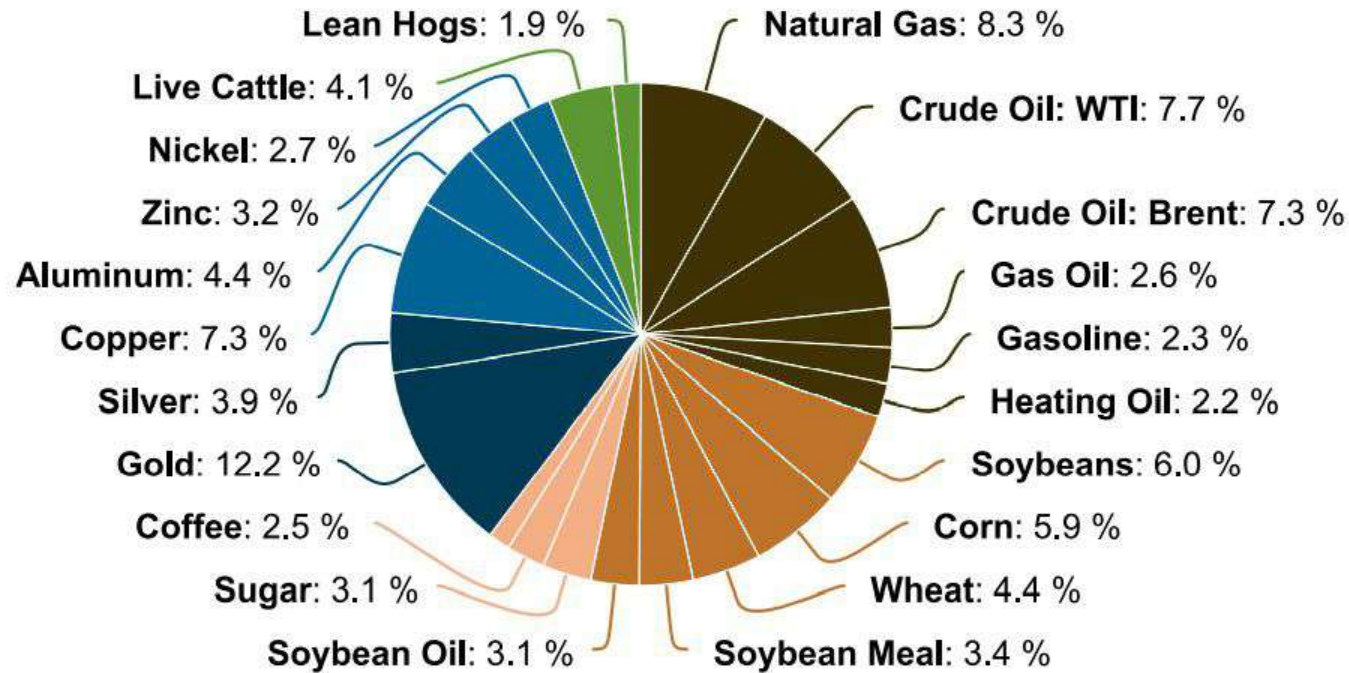


# Money managers tend to be net long in the U.S. oil futures market



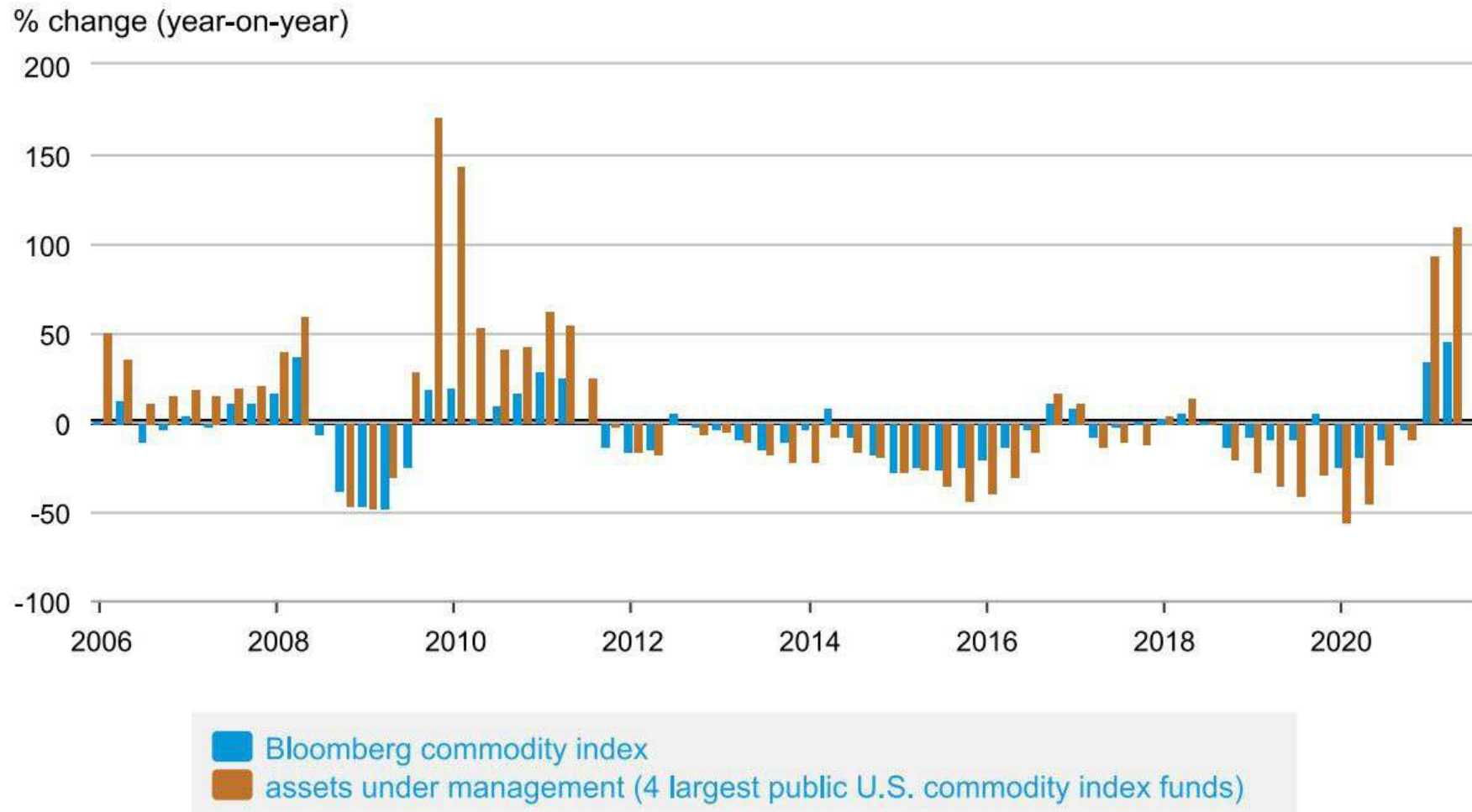


# Crude oil plays a major role in commodity investment

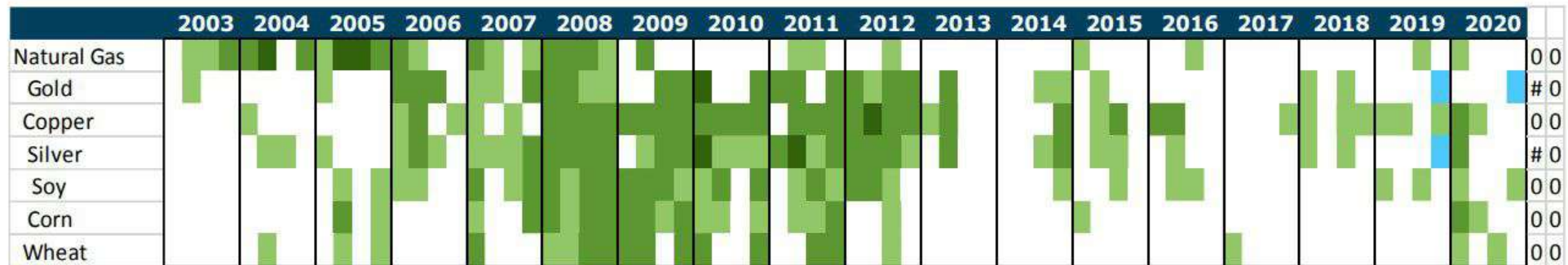


Energy Grains Softs Precious Metals Industrial Metals Livestock

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



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



Note: Correlations computed quarterly

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

