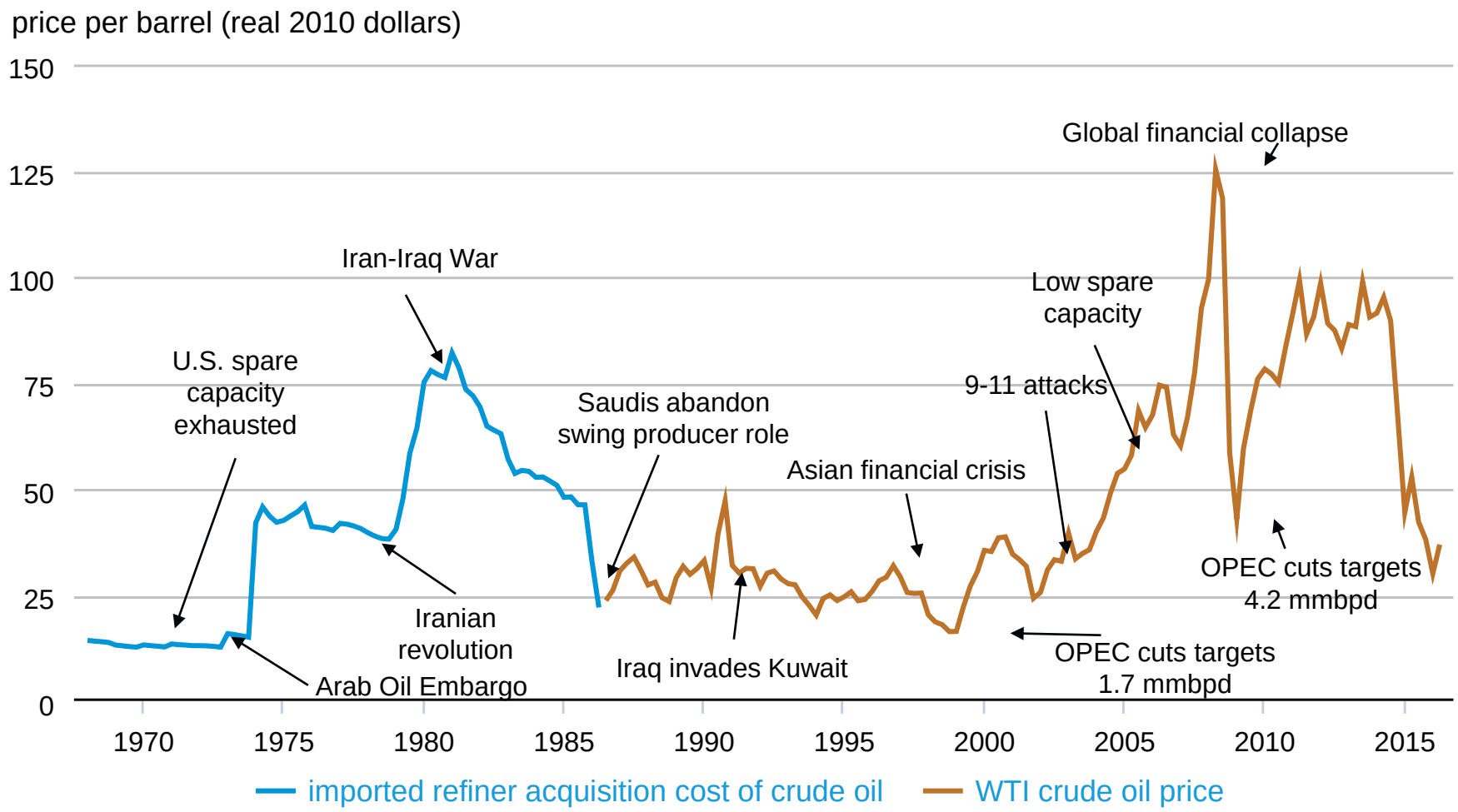
What drives crude oil prices?

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

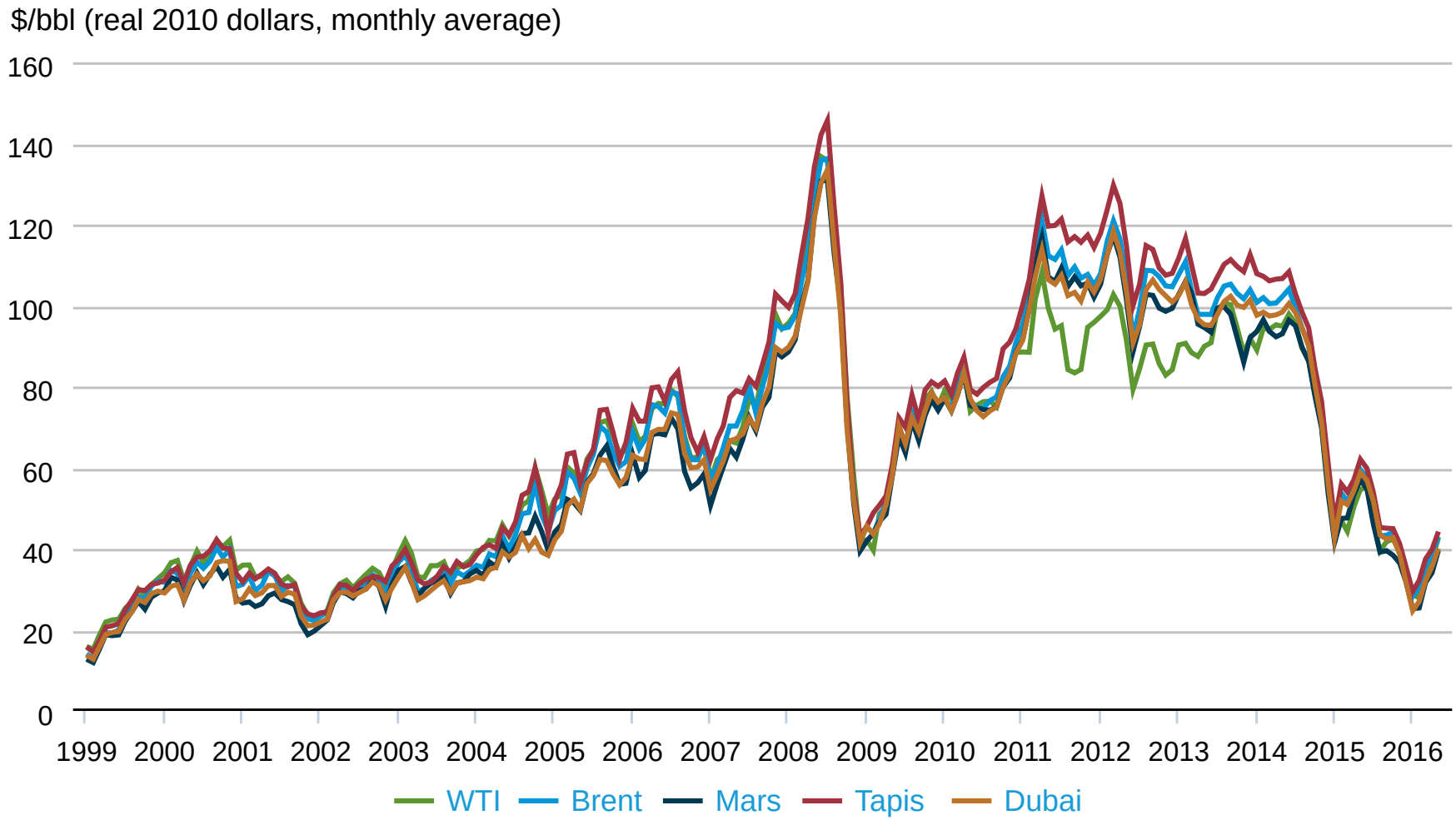
June 7, 2016 | Washington, DC

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



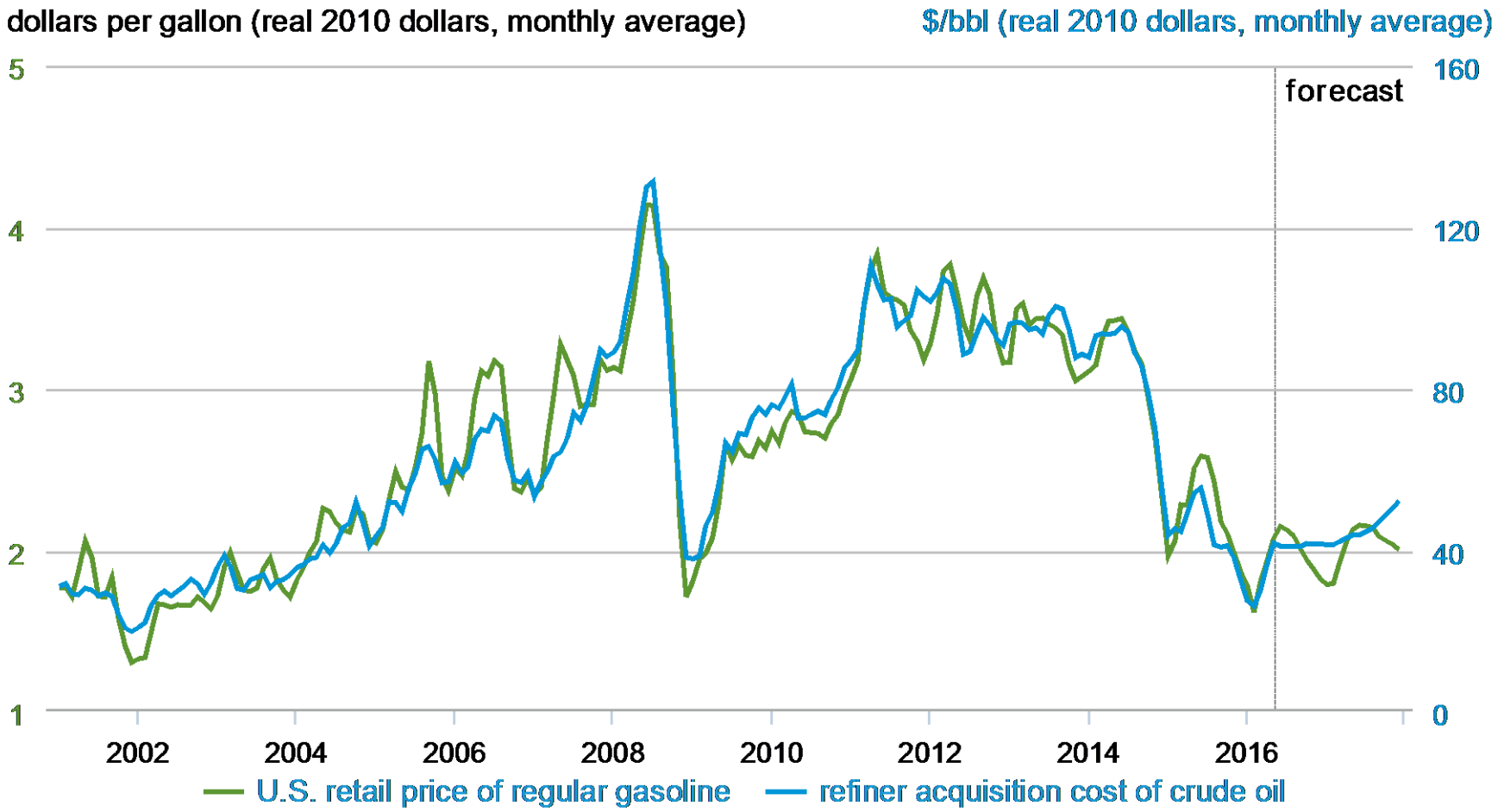
Sources: U.S. Energy Information Administration, Thomson Reuters

World oil prices move together due to arbitrage



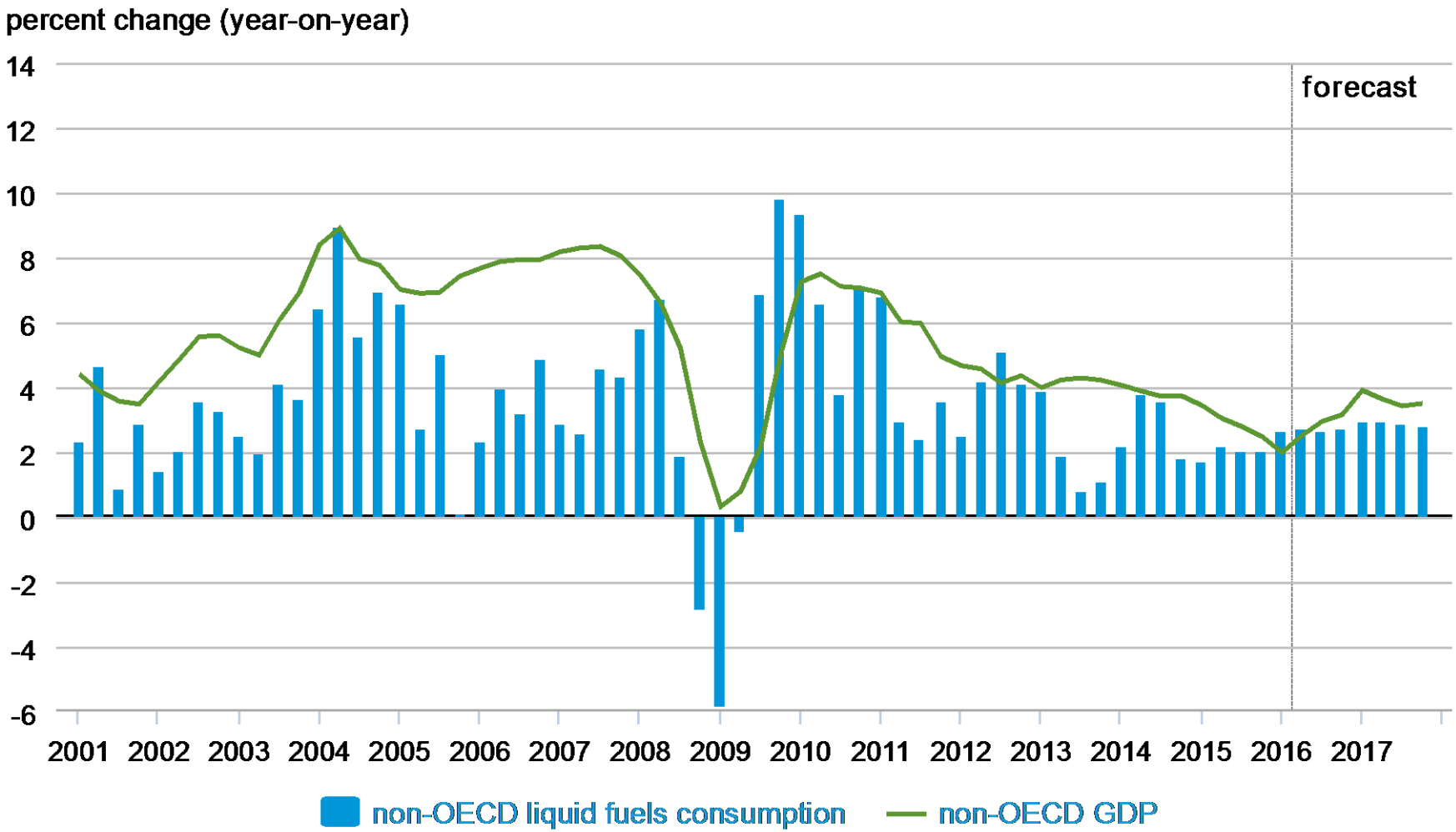
Sources: Bloomberg, Thomson Reuters

Crude oil prices are the primary driver of petroleum product prices



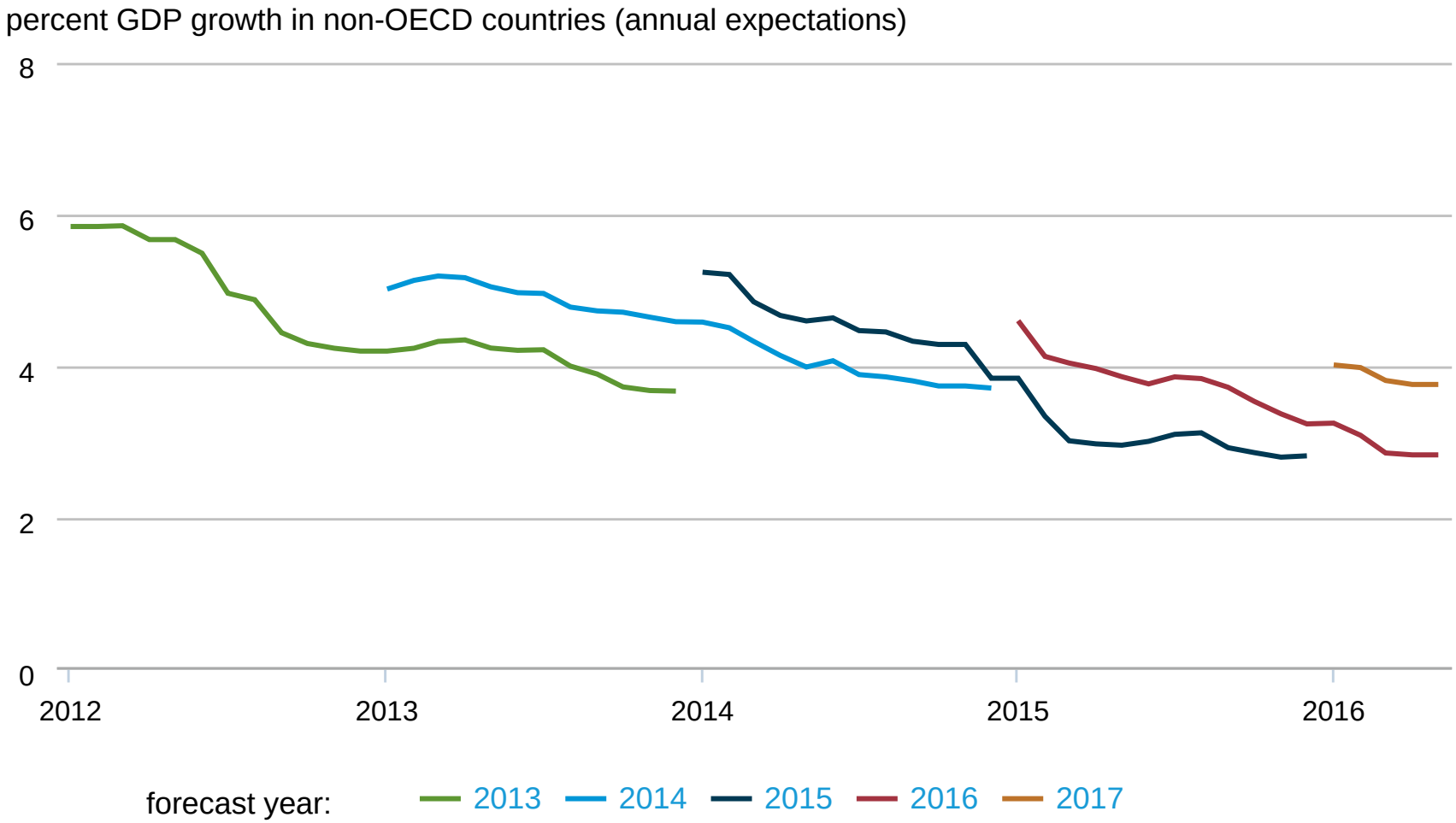
Sources: EIA Short Term Energy Outlook, Thomson Reuters

Economic growth has a strong impact on oil consumption



Sources: U.S. Energy Information Administration, IHS Global Insight

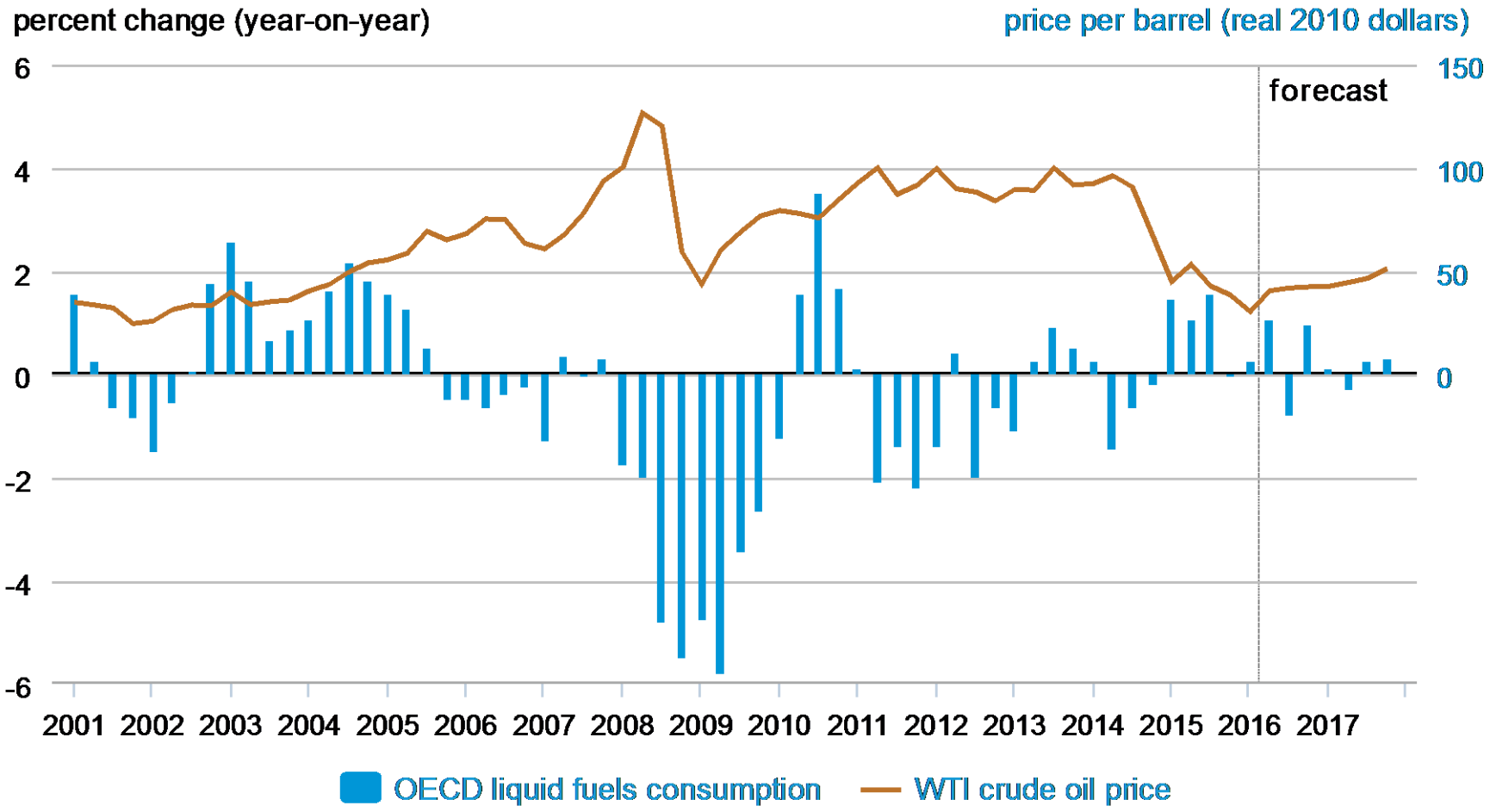
Changes in expectations of economic growth in can affect oil prices



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).

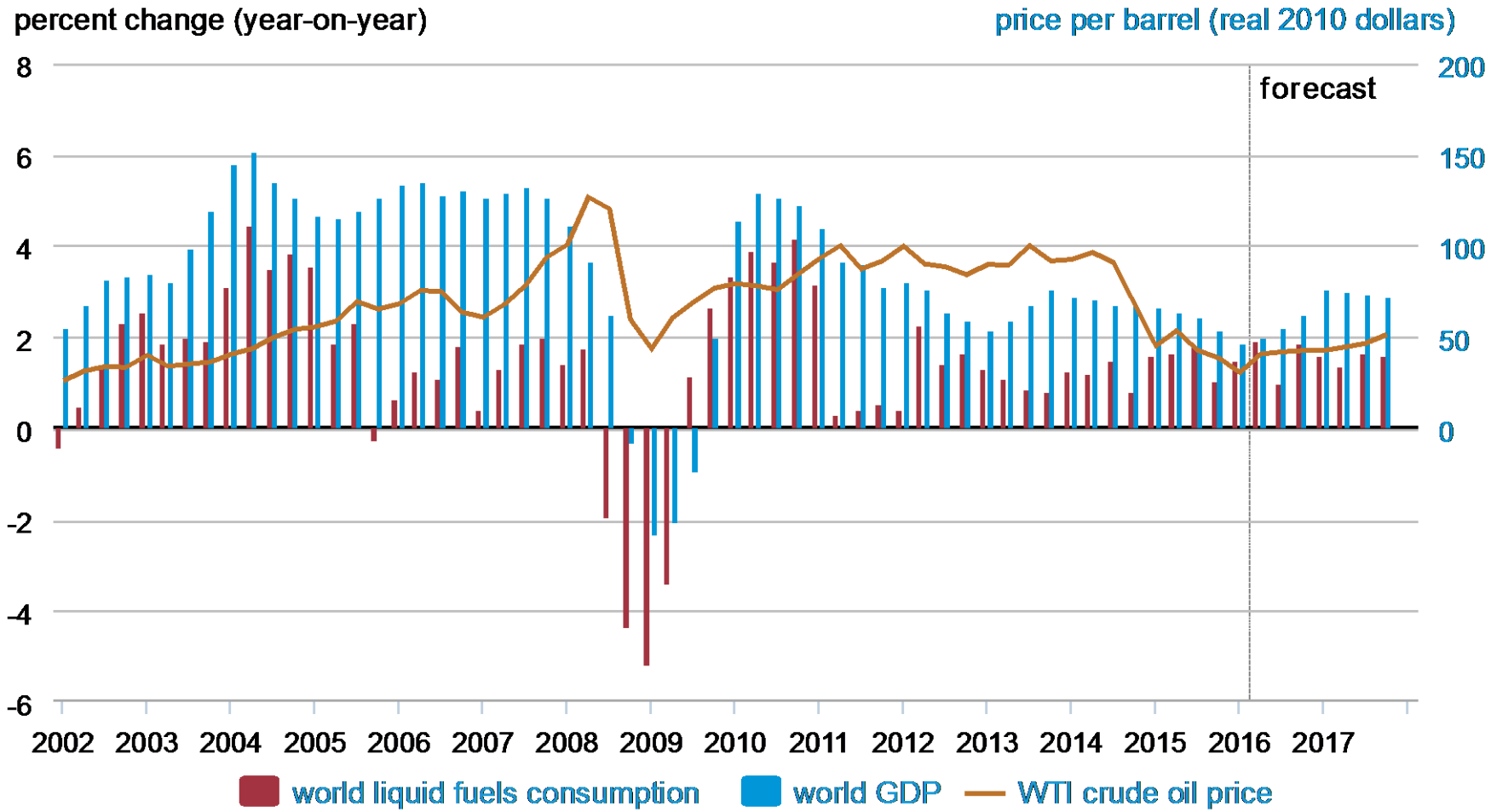
Source: IHS Global Insight

In OECD countries, price increases have coincided with lower consumption



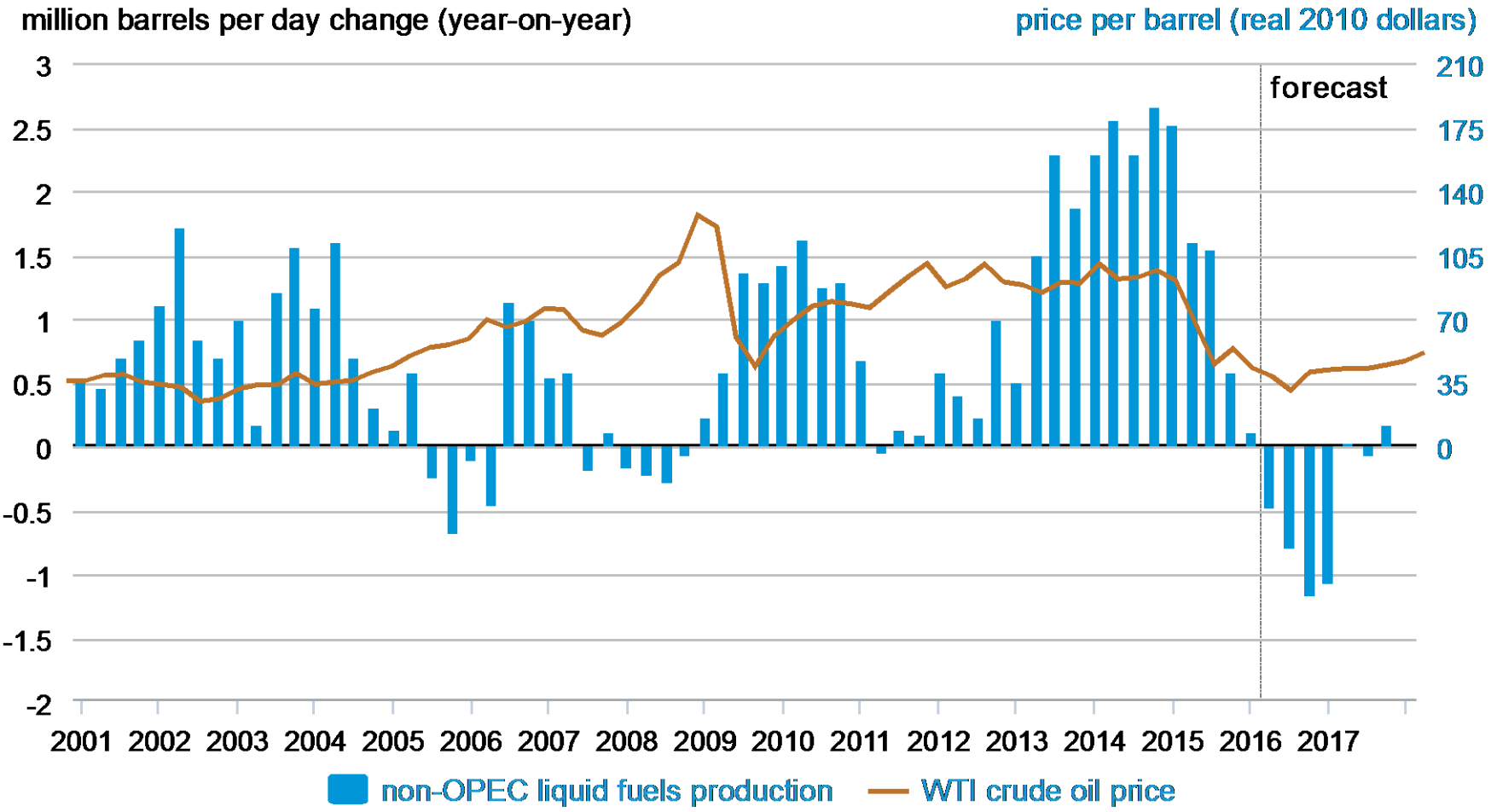
Sources: EIA Short Term Energy Outlook, Thomson Reuters

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



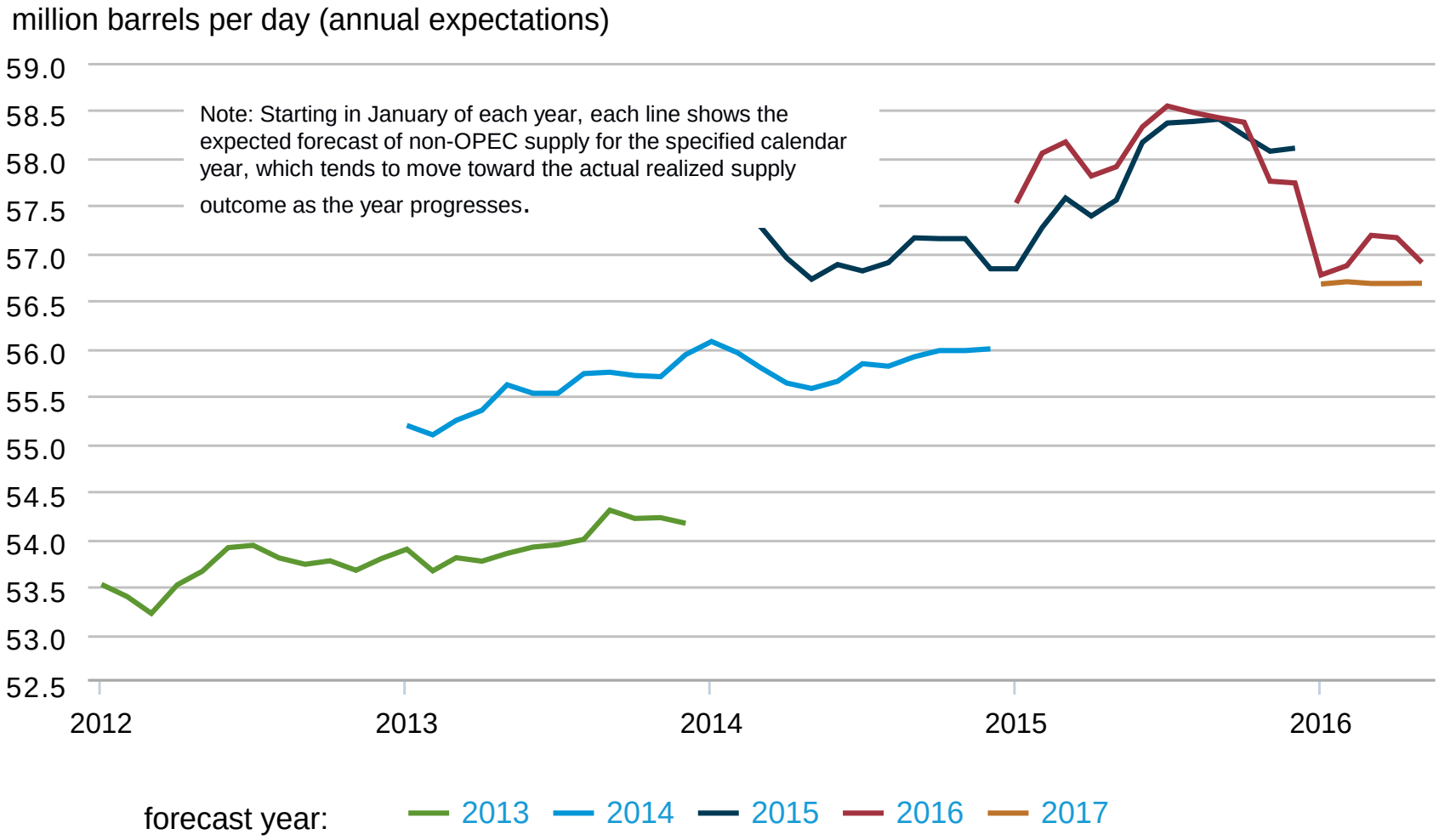
Sources: EIA Short Term Energy Outlook, Thomson Reuters

Changes in non-OPEC production can affect oil prices



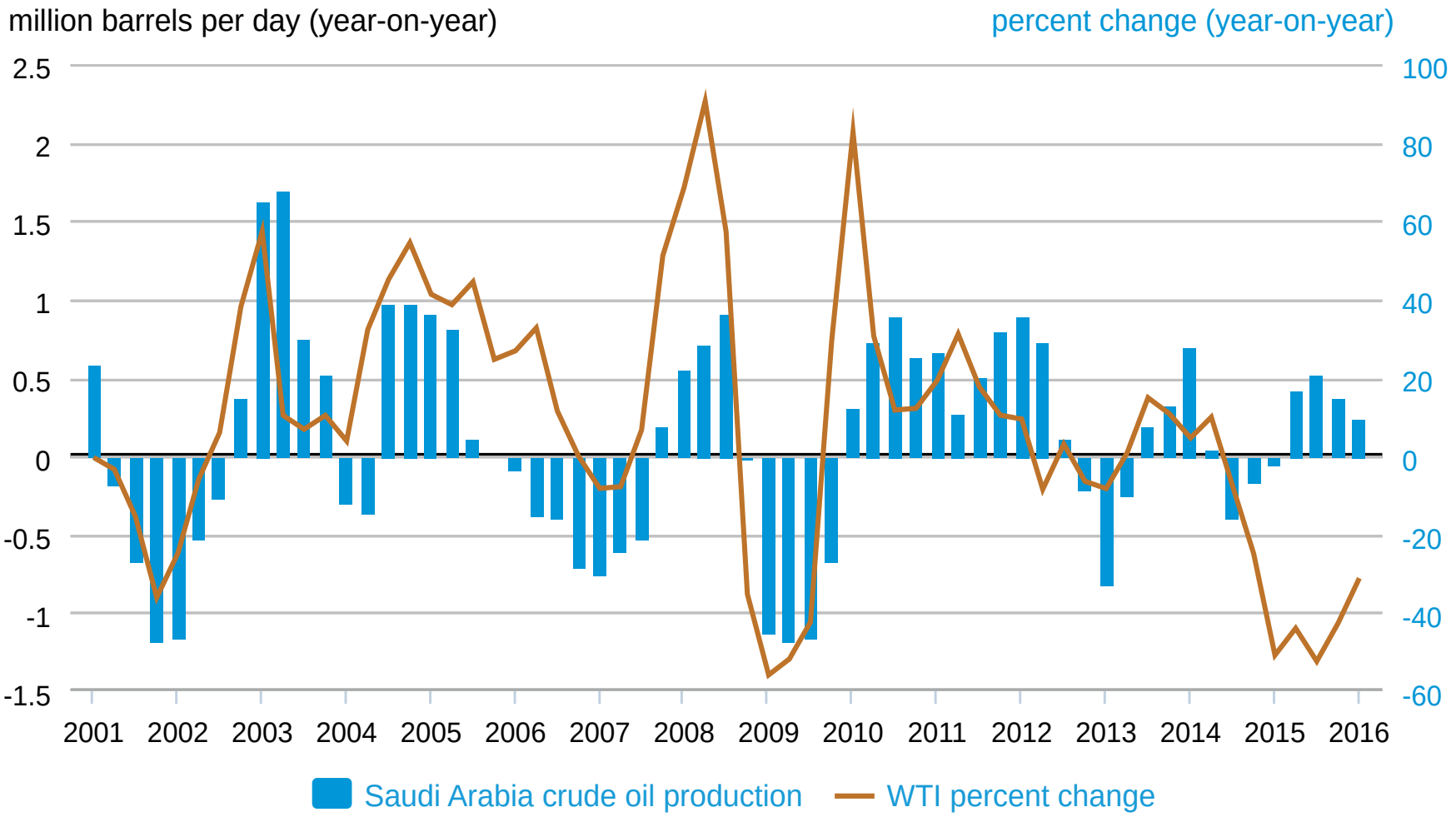
Sources: EIA Short Term Energy Outlook, Thomson Reuters

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



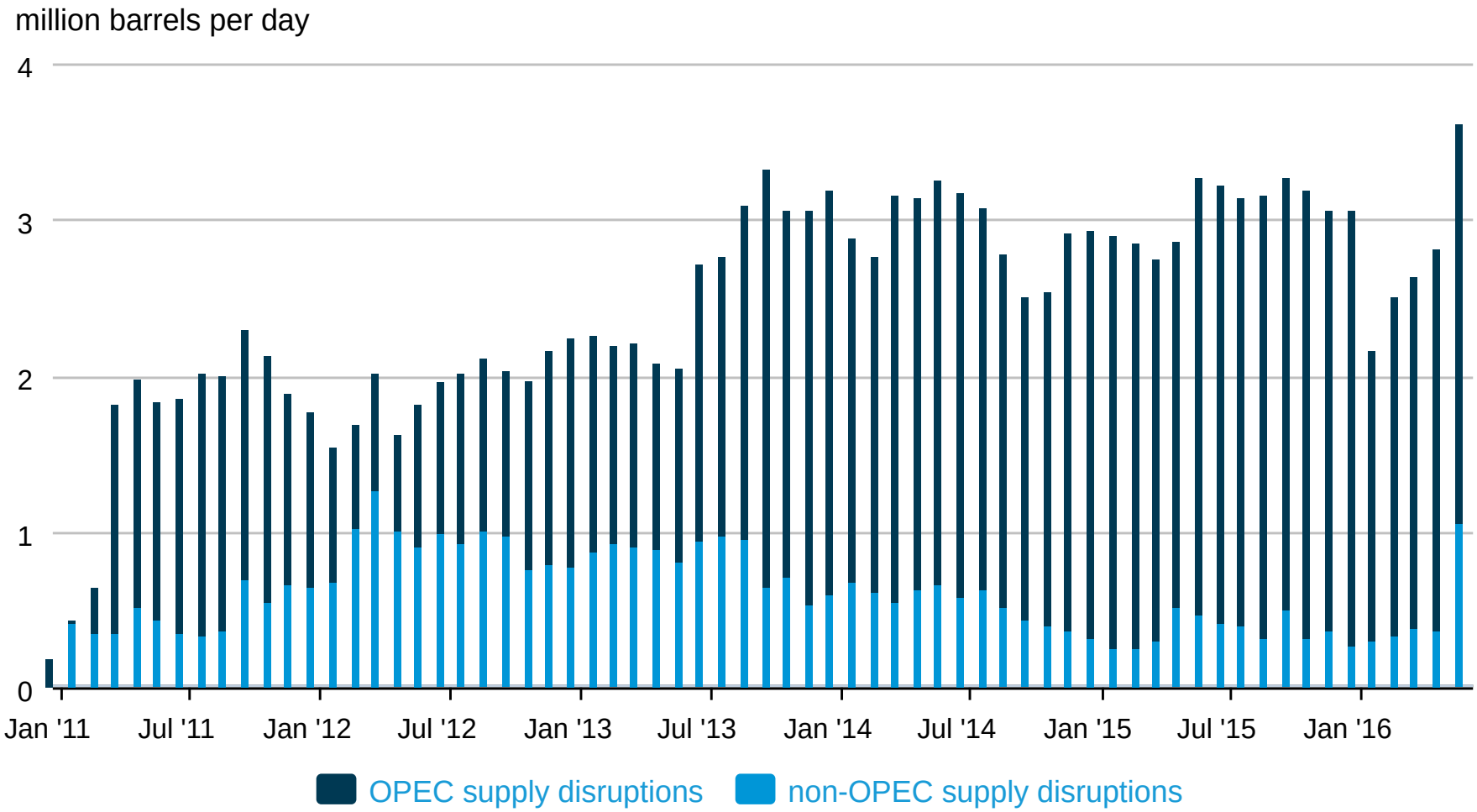
Sources: EIA Short Term Energy Outlook

Changes in Saudi Arabia crude oil production can affect oil prices



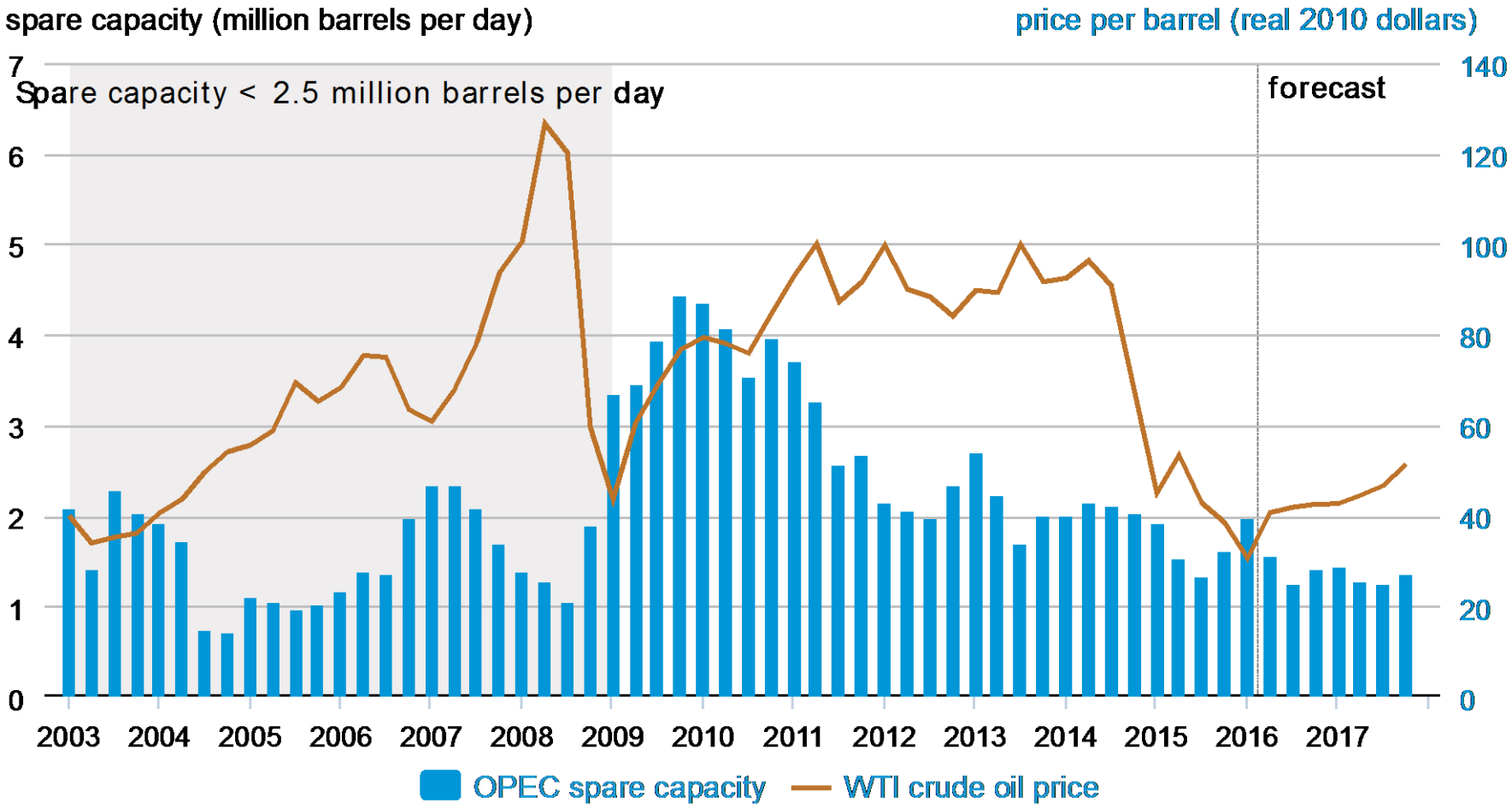
Sources: U.S. Energy Information Administration, Thomson Reuters

Unplanned supply disruptions tighten world oil markets and push prices higher



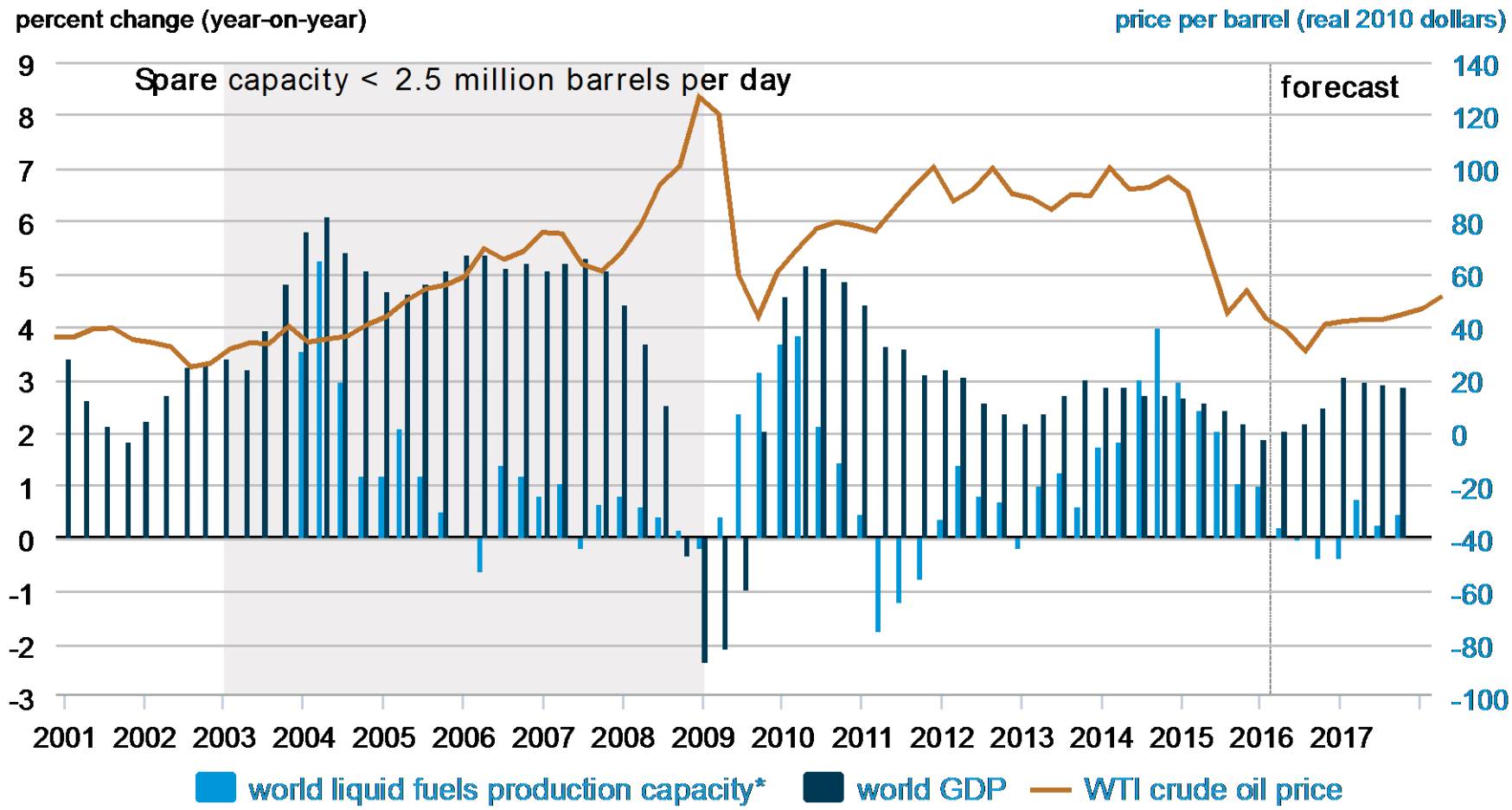
Sources: U.S. Energy Information Administration

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



Sources: EIA Short Term Energy Outlook, Thomson Reuters

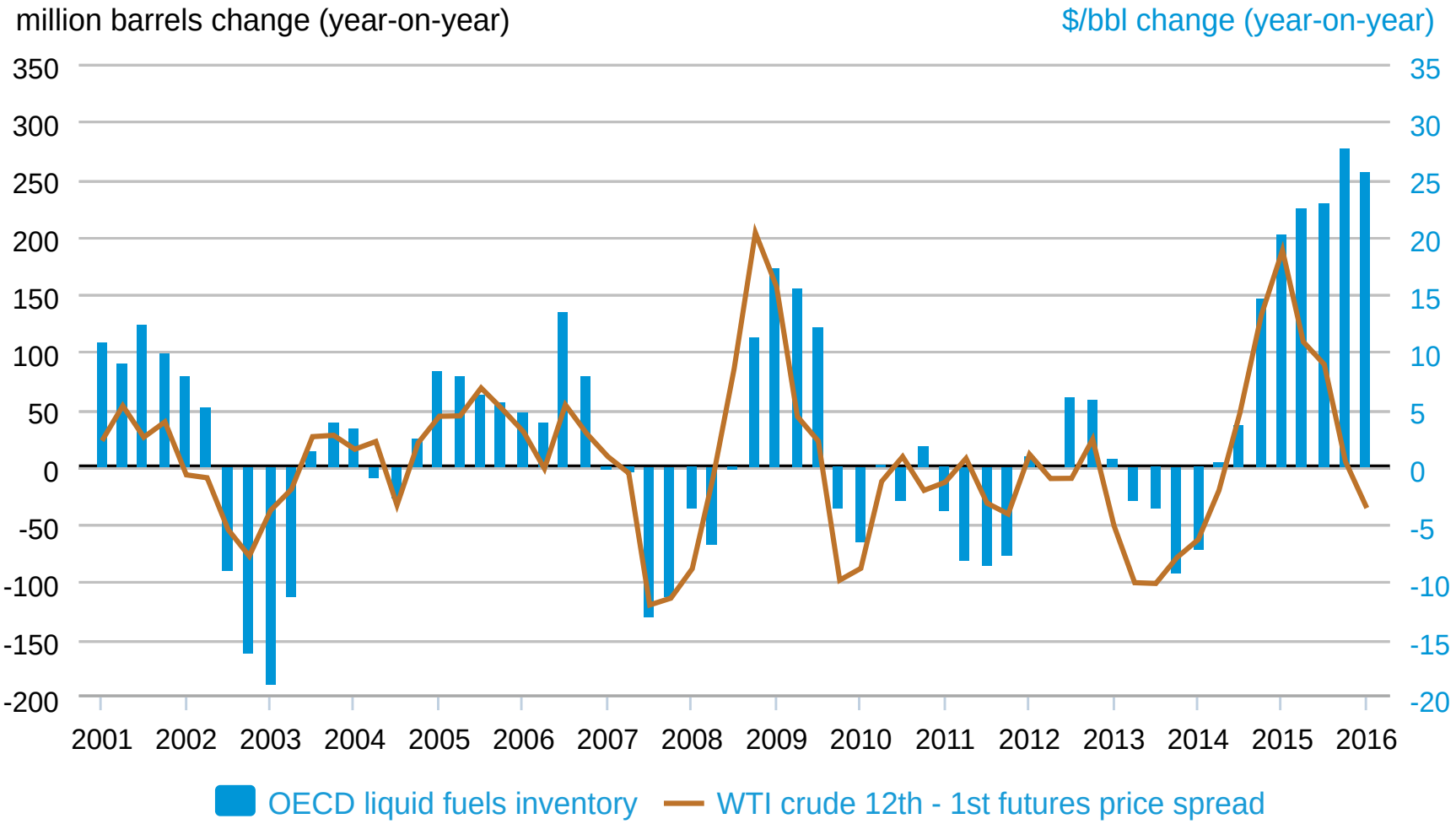
The years 2003-2008 experienced periods of very strong economic and oil demand growth, slow supply growth and tight spare capacity



*World capacity = OPEC capacity plus non-OPEC production

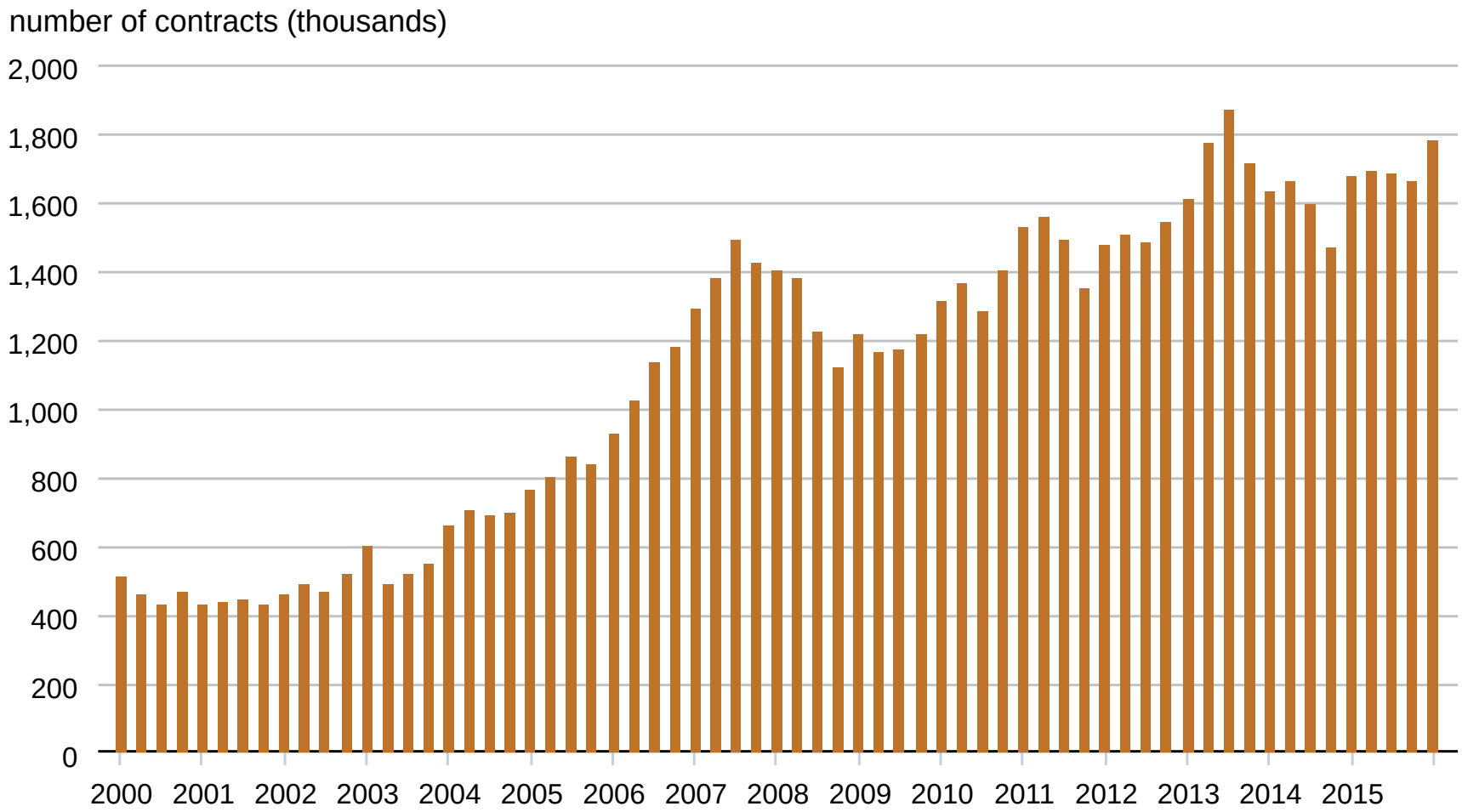
Sources: EIA Short Term Energy Outlook, Thomson Reuters

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



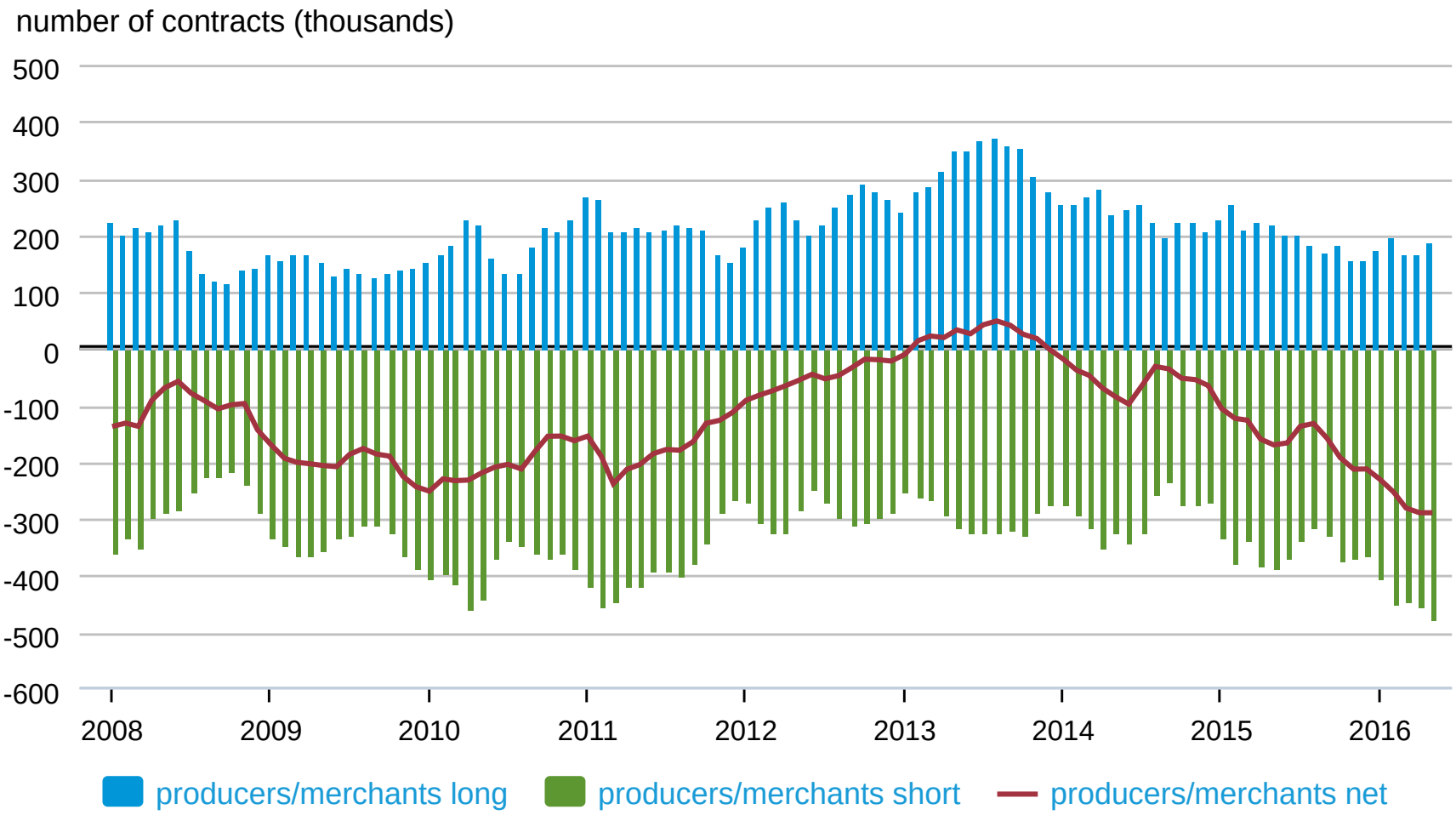
Sources: EIA Short Term Energy Outlook, Thomson Reuters

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



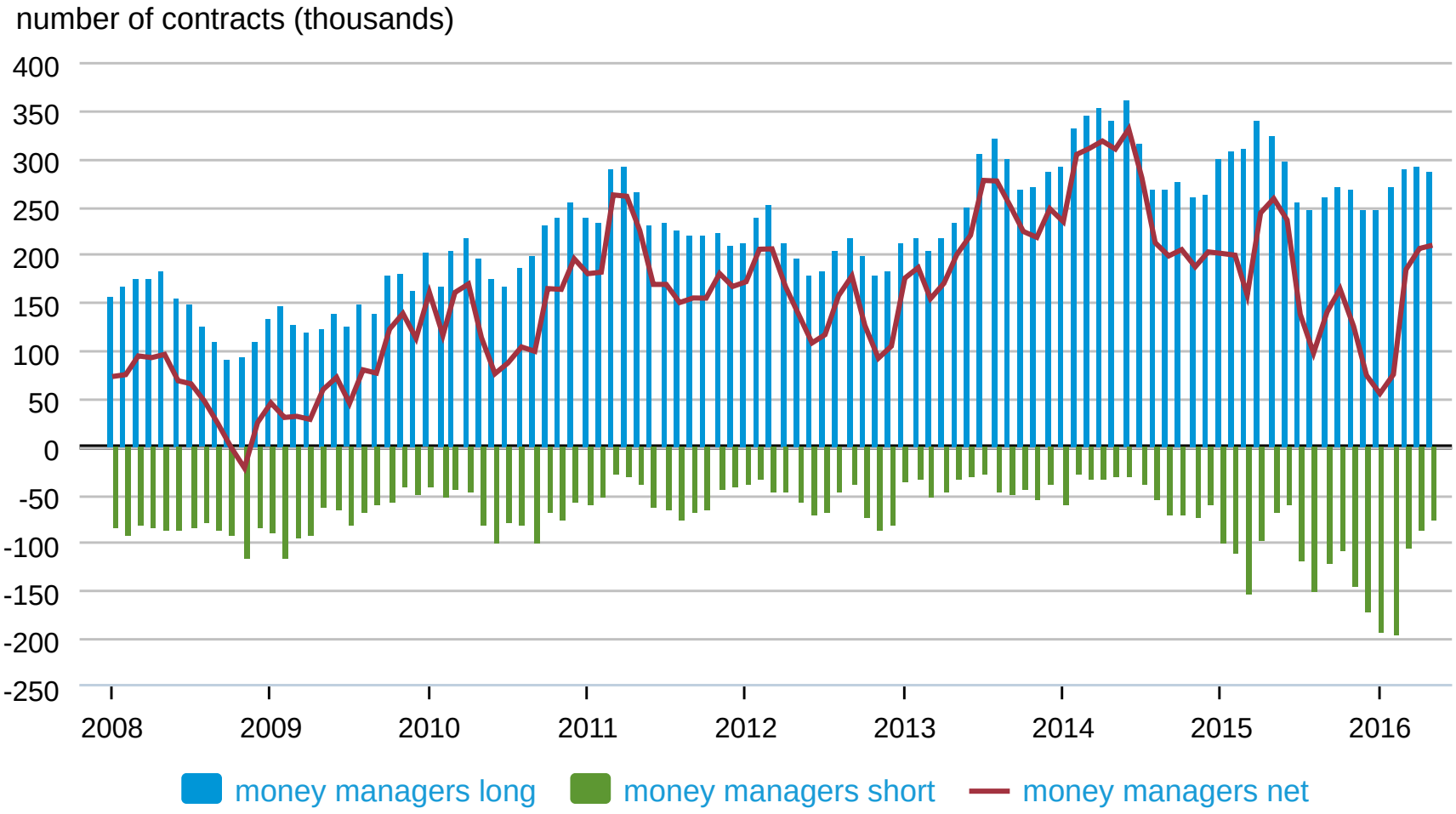
Source: Bloomberg

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



Source: CFTC Commitment of Traders

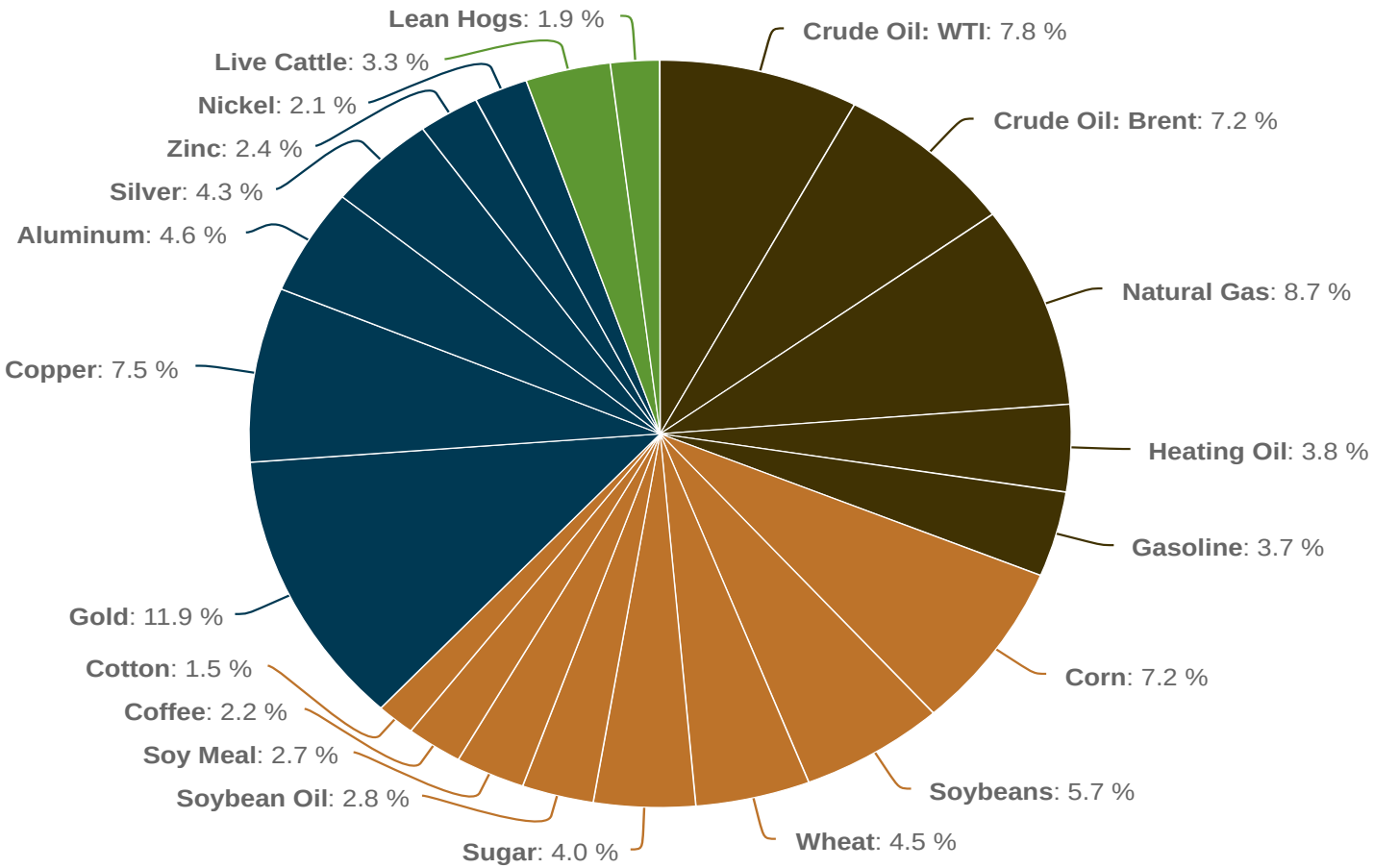
Money managers tend to be net long in the U.S. oil futures market



Source: CFTC Commitment of Traders

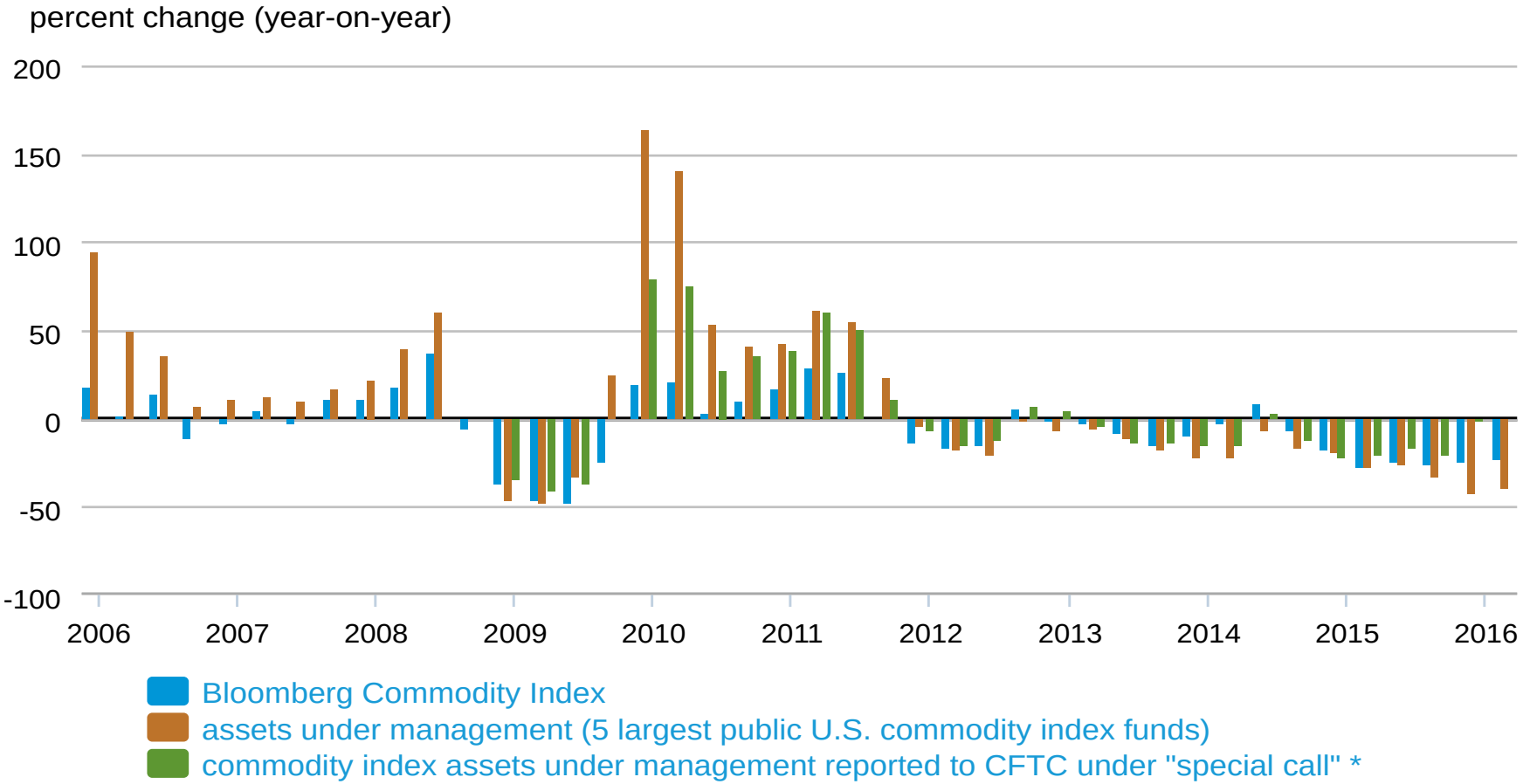
Crude oil plays a major role in commodity investment

2015 Target Weights of the Bloomberg Commodity Index



Source: Bloomberg

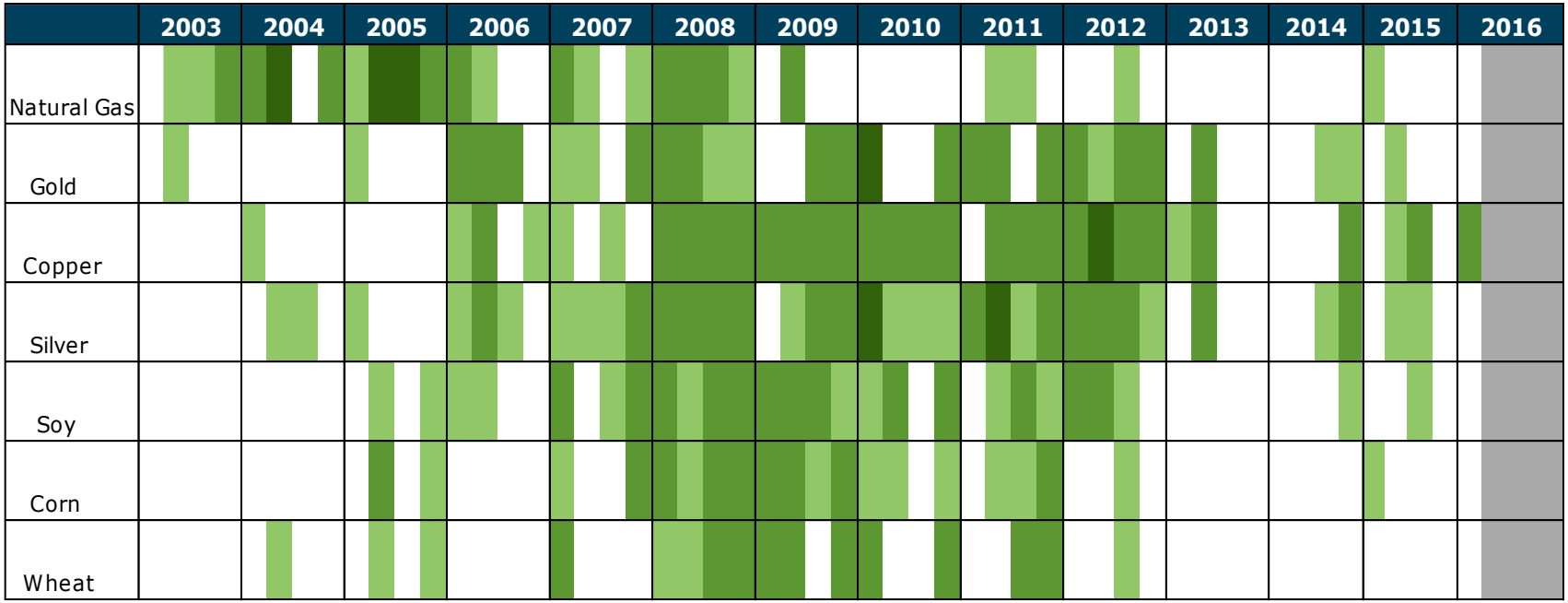
Commodity index investment flows have tended to move together with commodity prices



* Note: CFTC discontinued the collection of index investment data in November 2015.

Source: Bloomberg, Commodity Futures Trading Commission (CFTC)

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

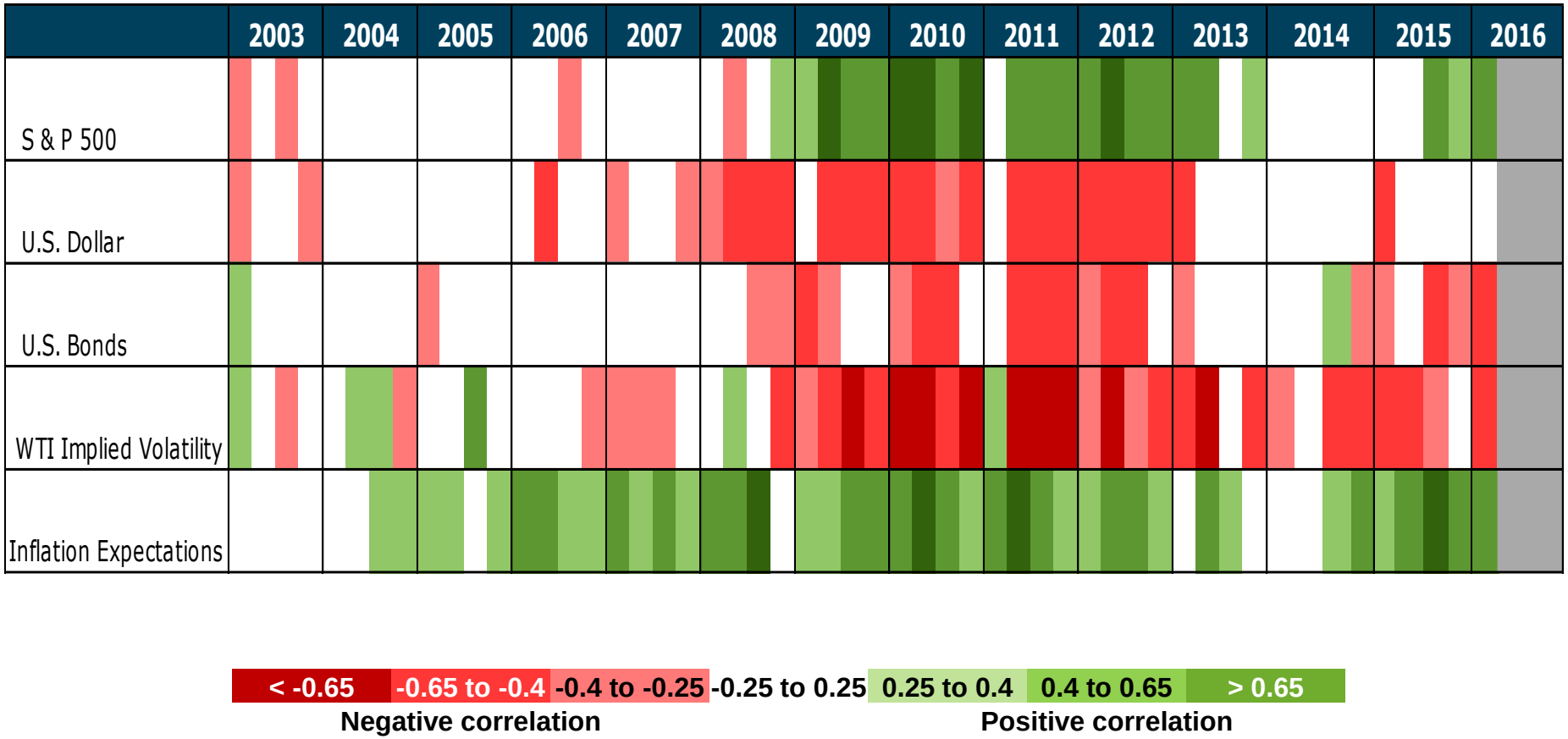


< -0.65	-0.65 to -0.4	-0.4 to -0.25	-0.25 to 0.25	0.25 to 0.4	0.4 to 0.65	> 0.65

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

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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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