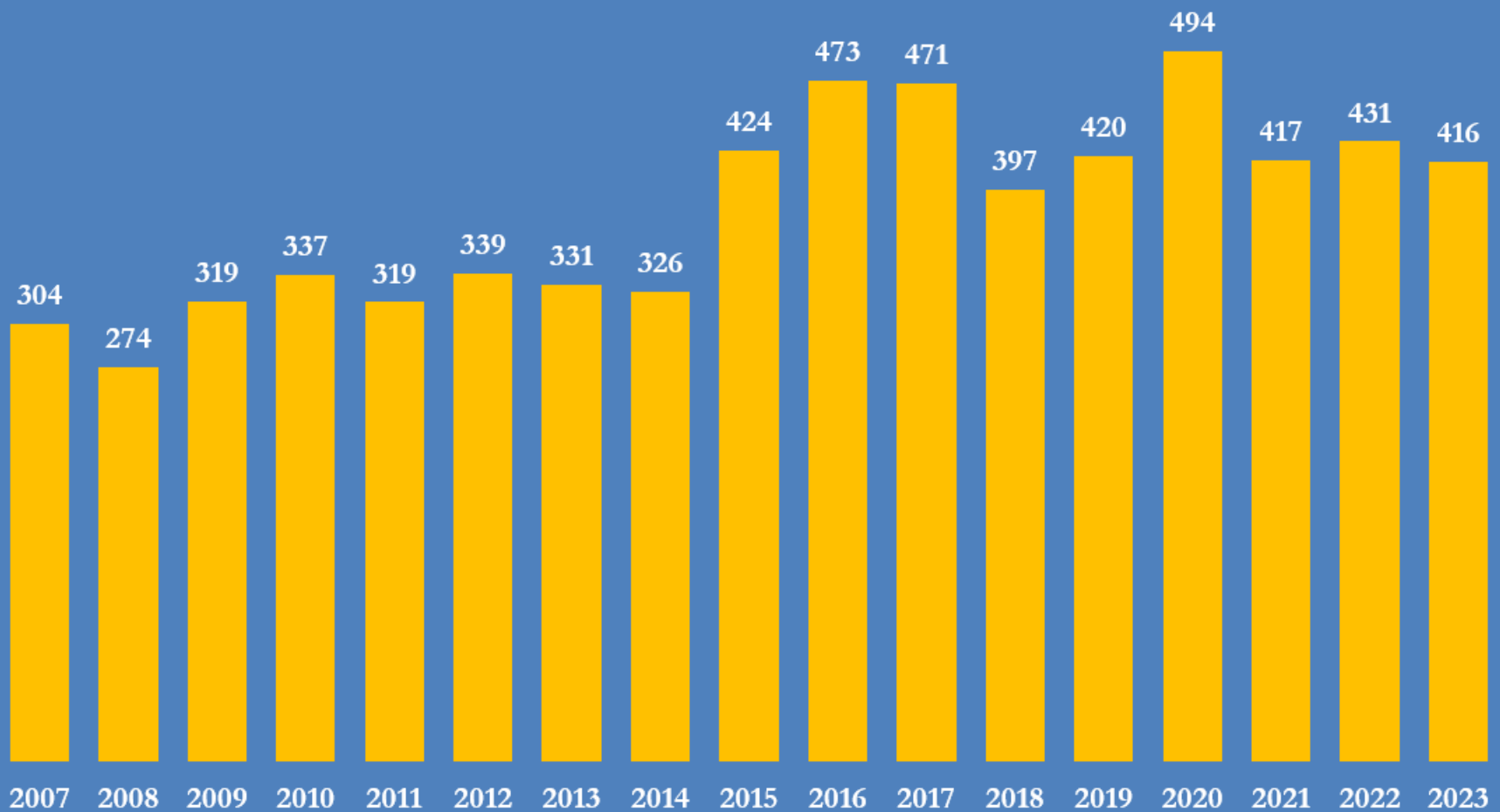


U.S. crude oil inventories and futures prices

Focus on NYMEX delivery point at Cushing

JOHN KEMP
3 October 2023

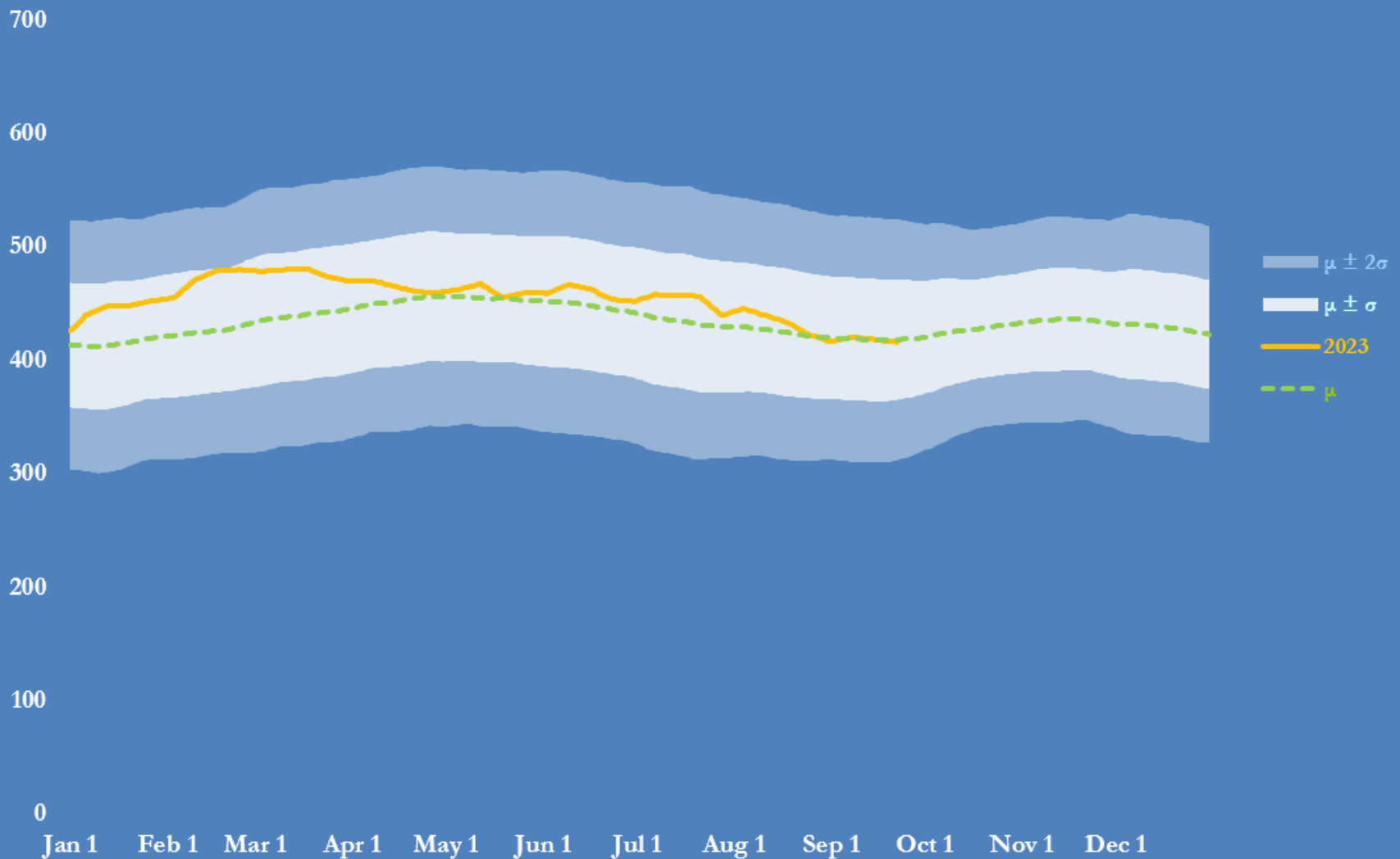
U.S. commercial crude stocks excluding strategic petroleum reserve million barrels, stocks each year on September 22



Source: U.S. Energy Information Administration

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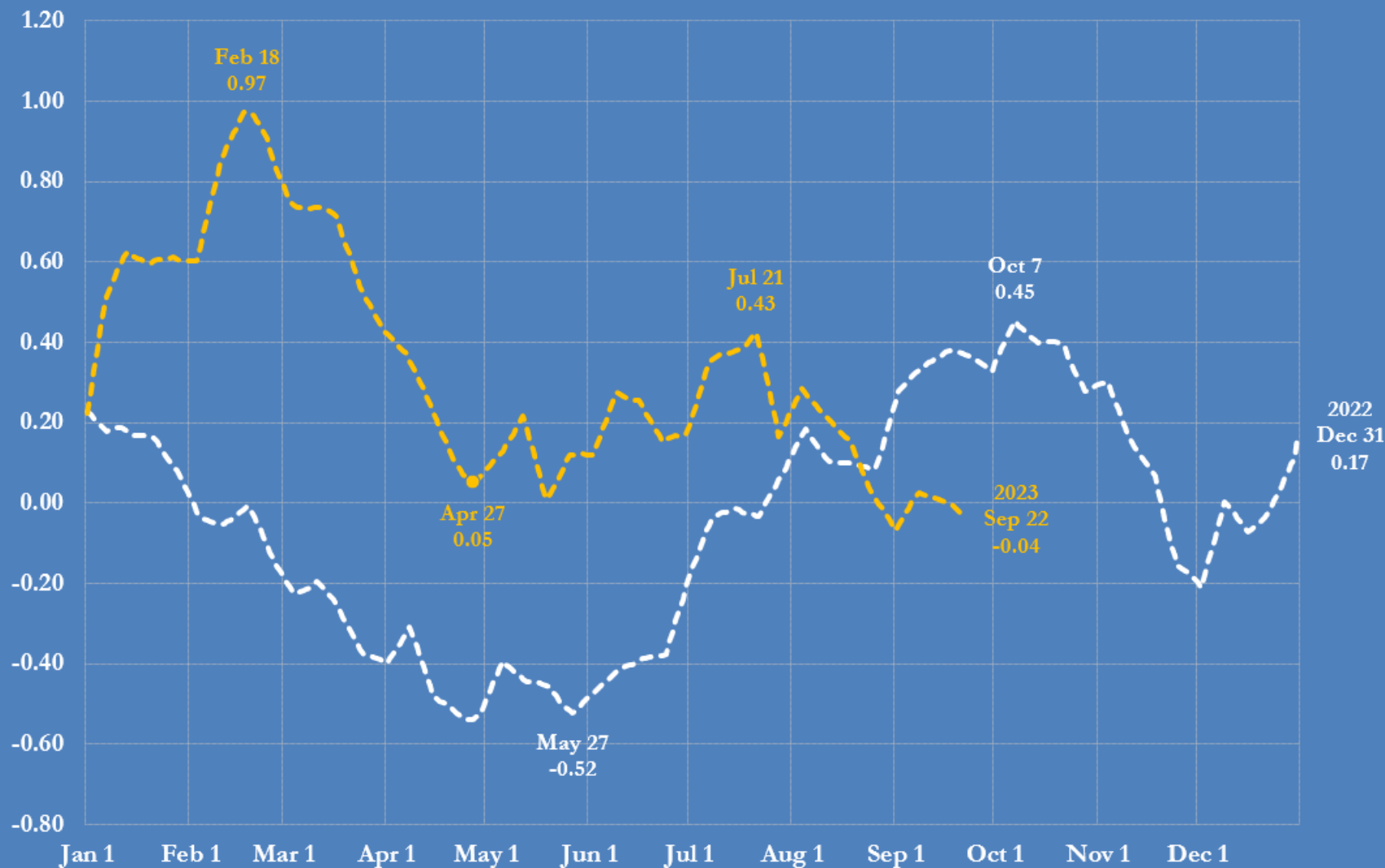
U.S. commercial crude stocks excluding the strategic reserve, 2023 daily, million barrels, prior ten-year average and standard deviations



Source: U.S. Energy Information Administration

@JKempEnergy

U.S. commercial crude stocks excluding the strategic reserve, 2022/23 z-scores, standard deviations away from prior ten-year average

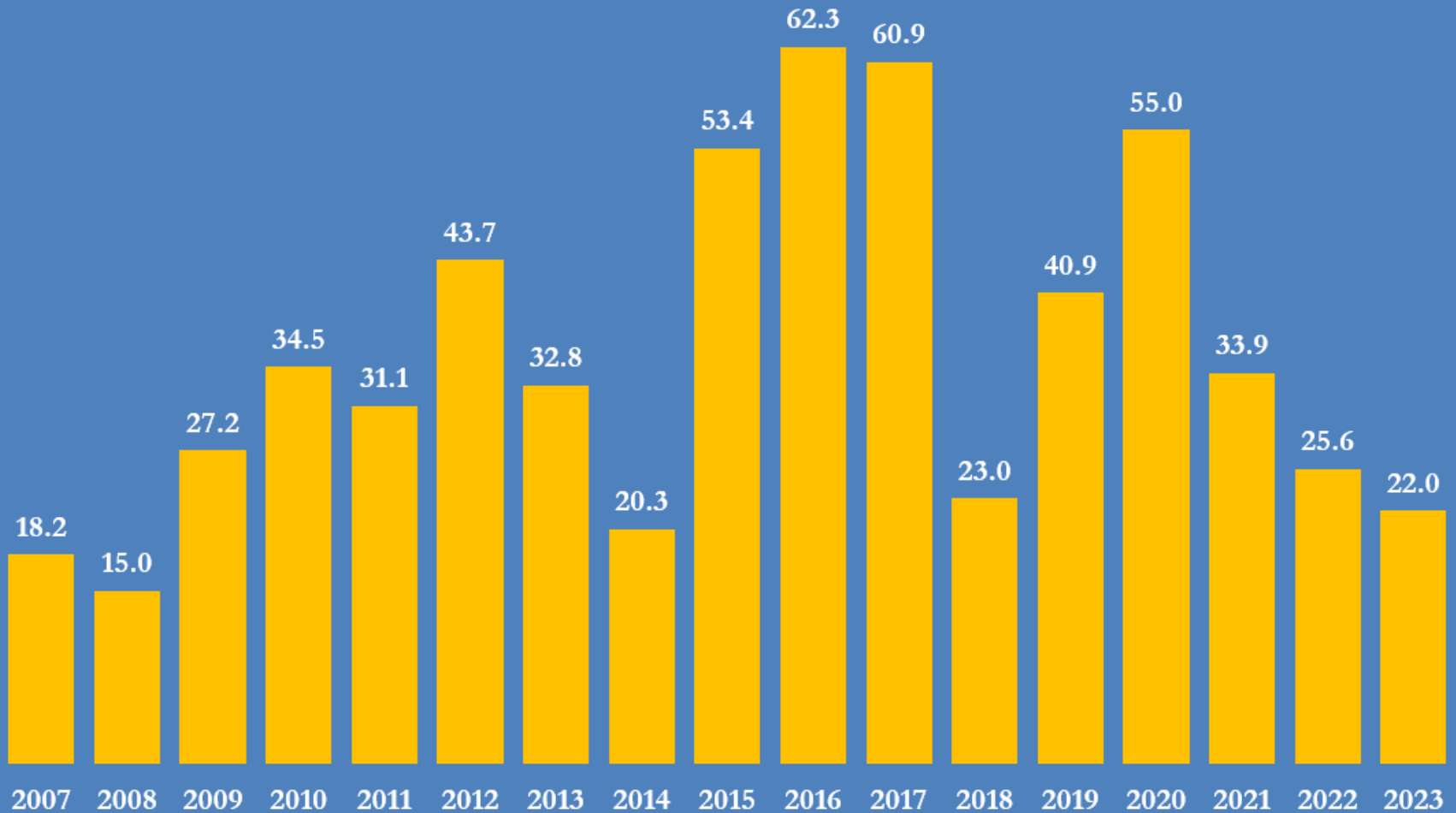


Source: U.S. Energy Information Administration

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U.S. commercial crude oil inventories at Cushing, 2007-2023

million bbl, inventories each year on September 22

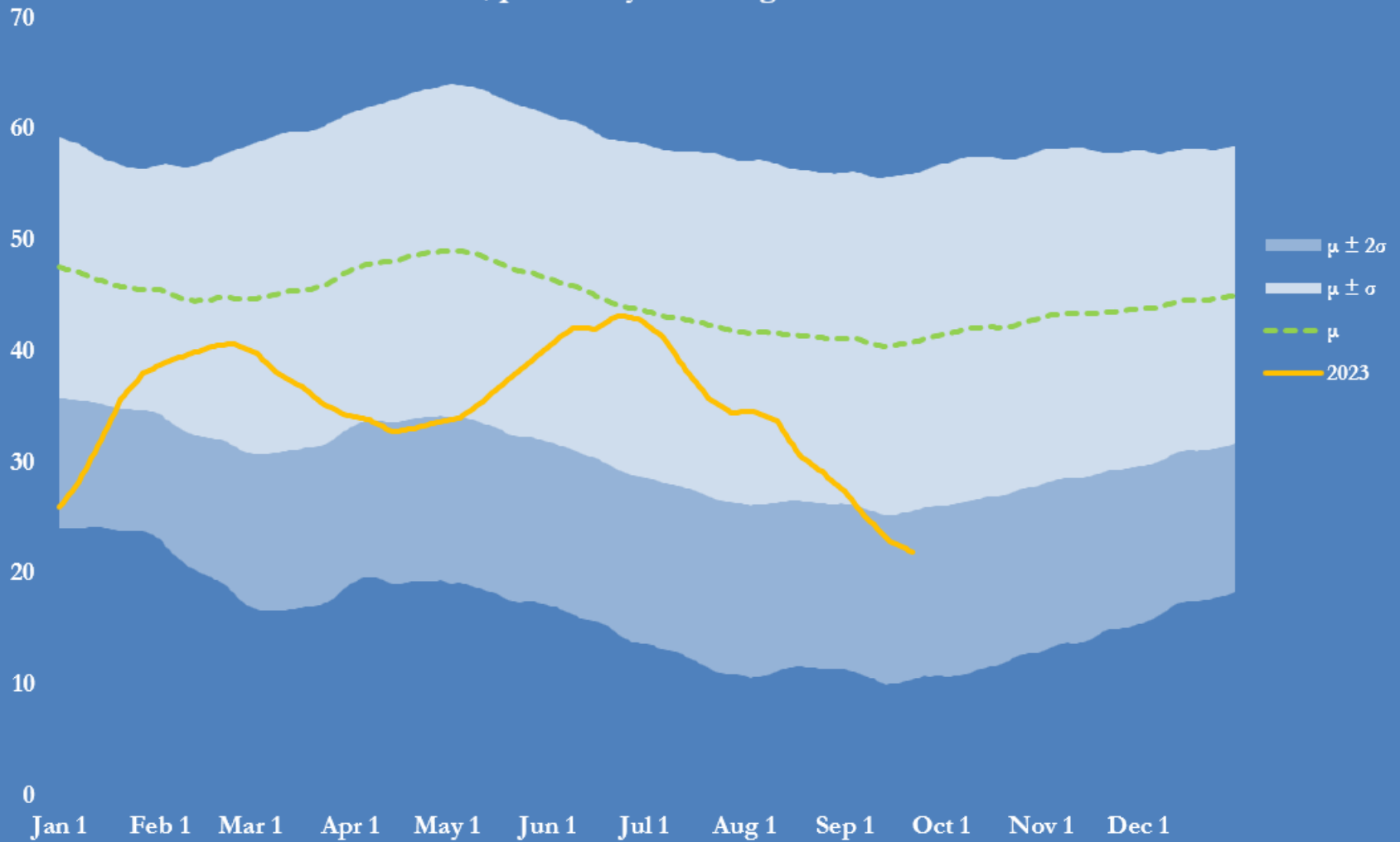


Source: U.S. Energy Information Administration

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U.S. commercial crude stocks at Cushing, 2023

million barrels, prior ten-year average and standard deviations

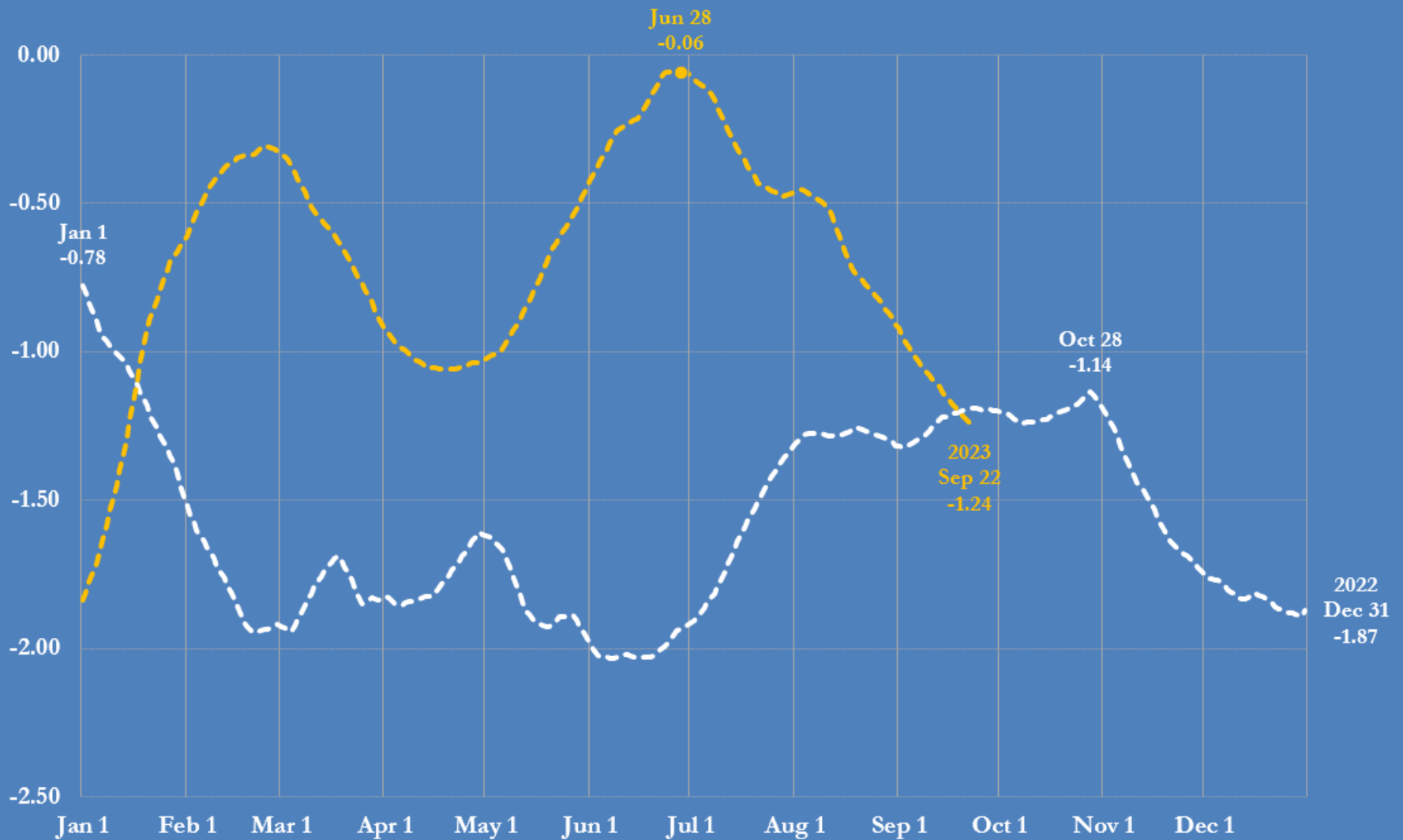


Source: U.S. Energy Information Administration

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U.S. commercial crude stocks at Cushing, 2022/23

z-scores, standard deviations away from prior ten-year average

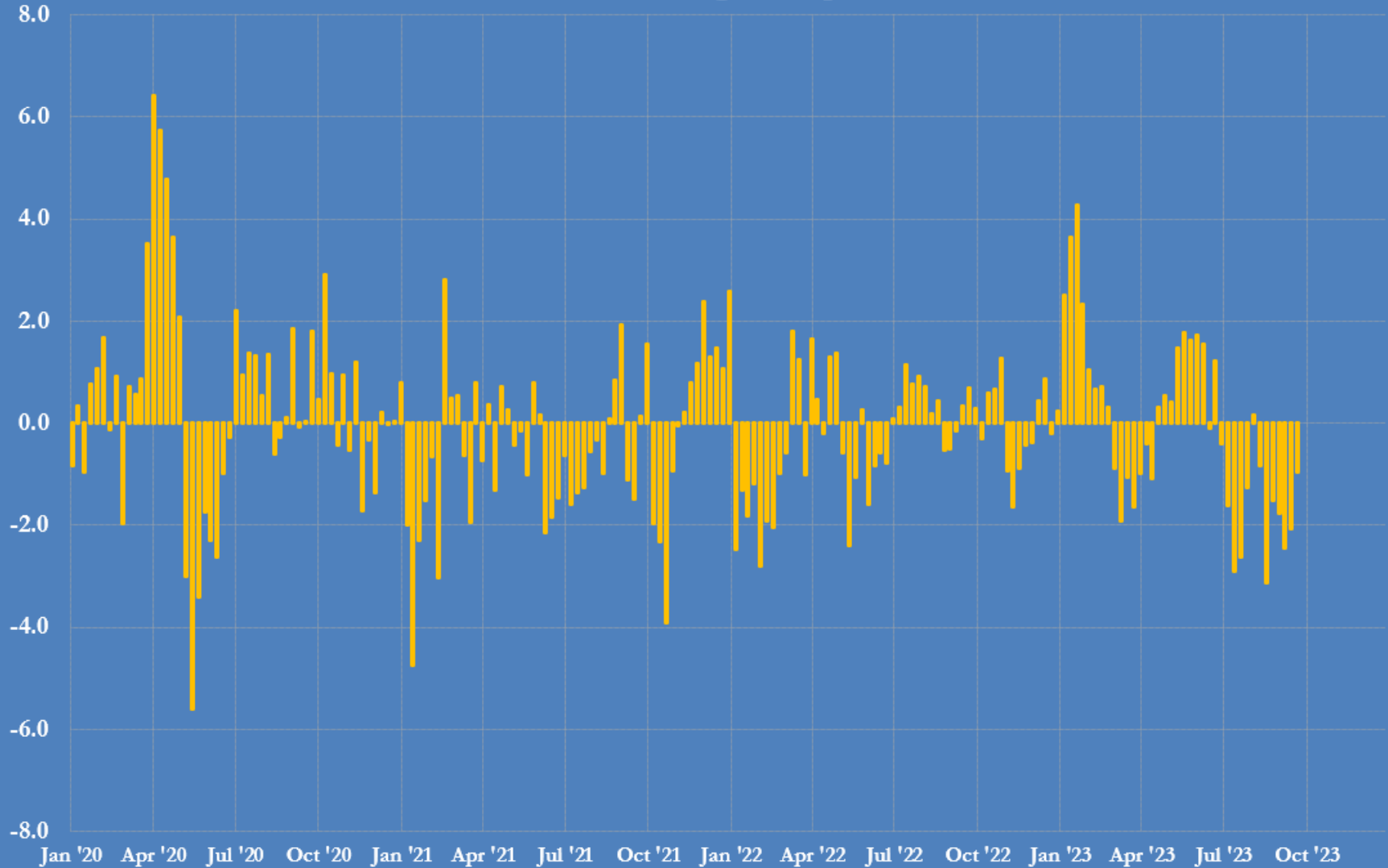


Source: U.S. Energy Information Administration

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U.S. commercial crude inventories at Cushing, 2000-2023

million barrels, change from prior week



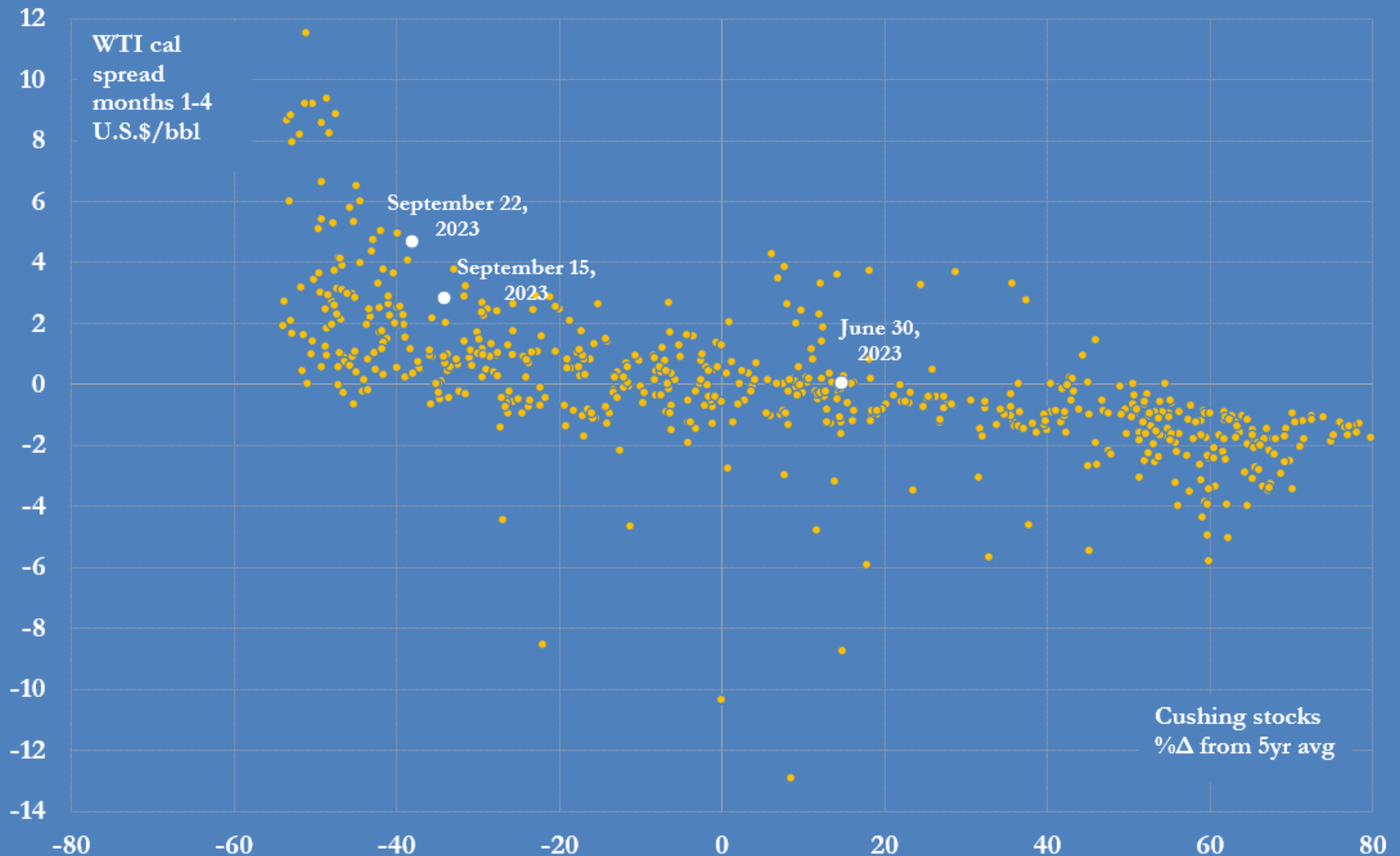
Source: U.S. Energy Information Administration

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Cushing crude oil inventories and WTI calendar spread

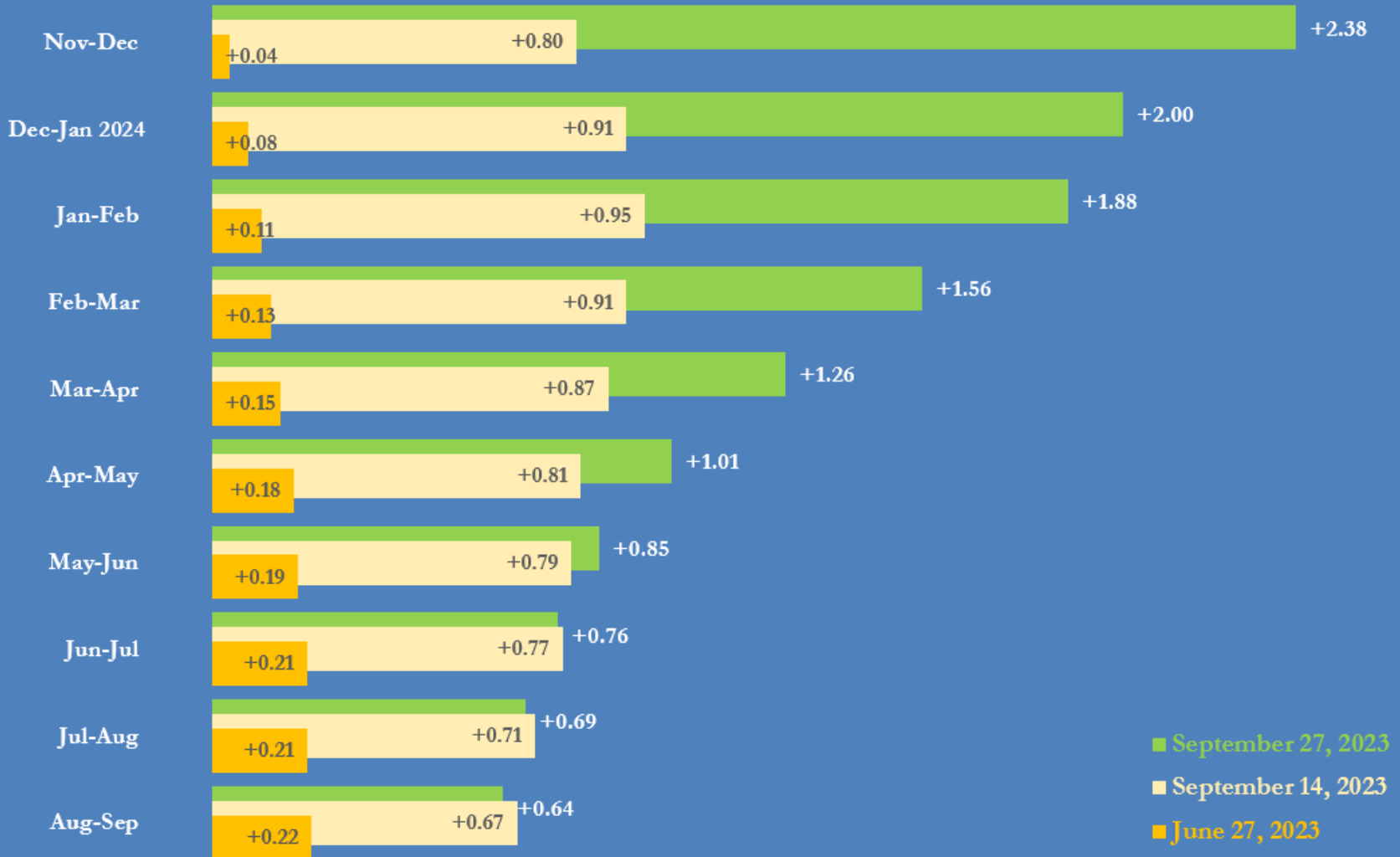
X-axis: Cushing inventories percent deviation from prior 5-year average

Y-axis: WTI spread for months 1-4 (U.S.\$ contango (-) or backwardation (+))



WTI inter-month calendar spreads, 2023-2024

U.S.\$ per barrel, contango (-) or backwardation (+)

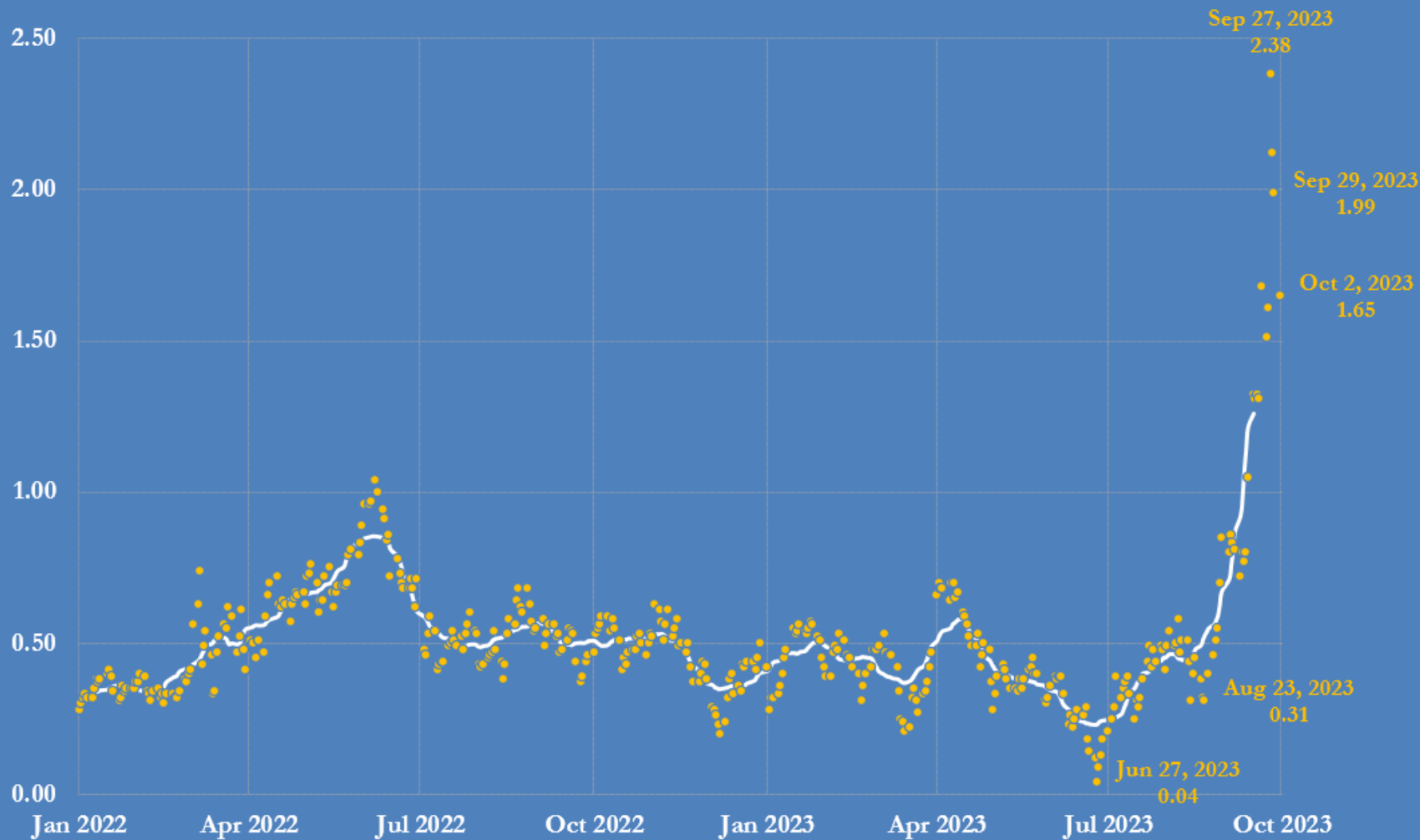


Source: CME Group

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U.S. crude oil futures calendar spread from November to December 2023

U.S.\$ per barrel, contango (-) or backwardation (+), daily and 21-day centred average

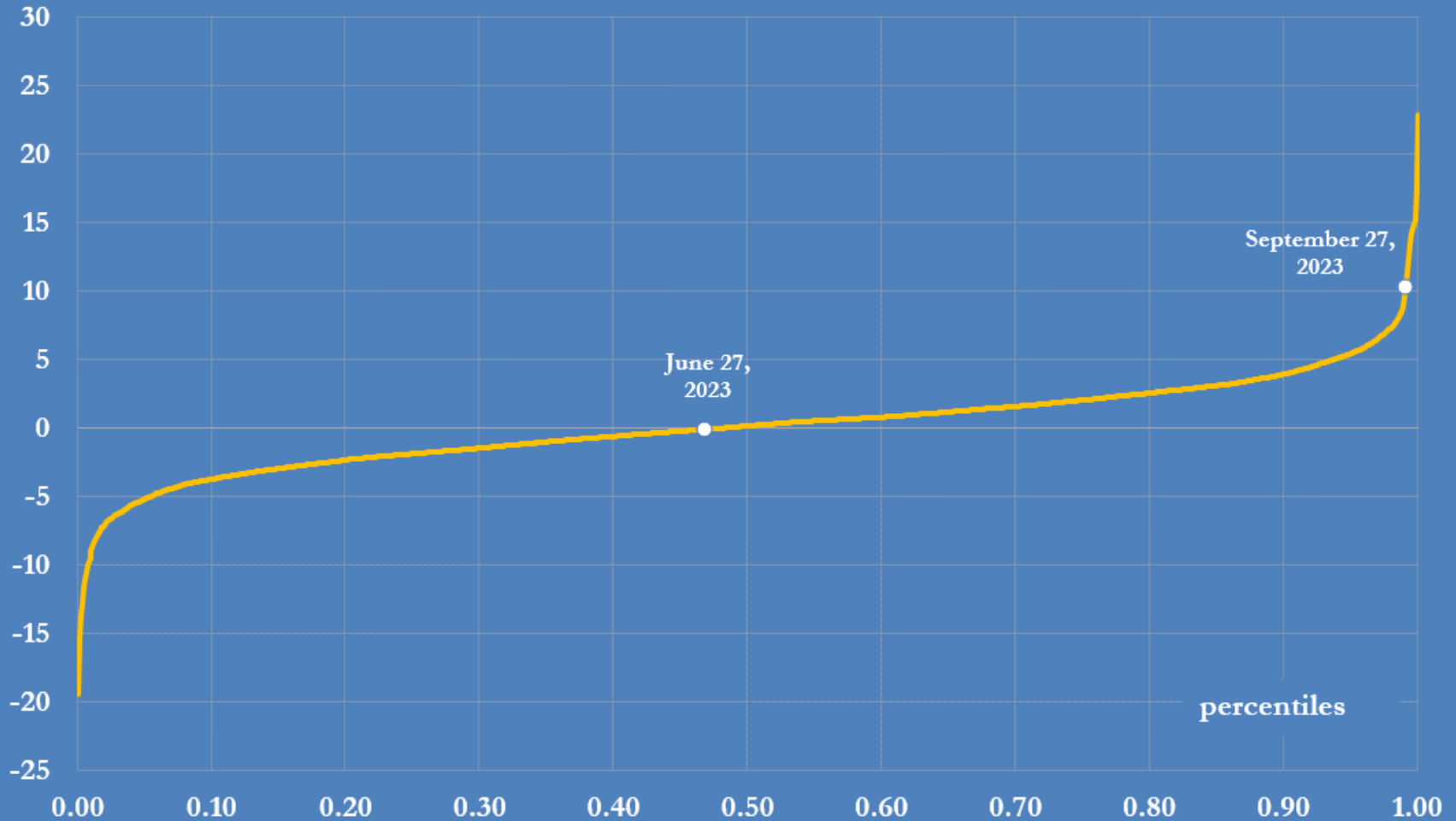


Source: CME Group

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WTI six-month calendar spread, 1990-2023

percentiles, U.S.\$ per barrel, daily, contango (-) or backwardation (+)

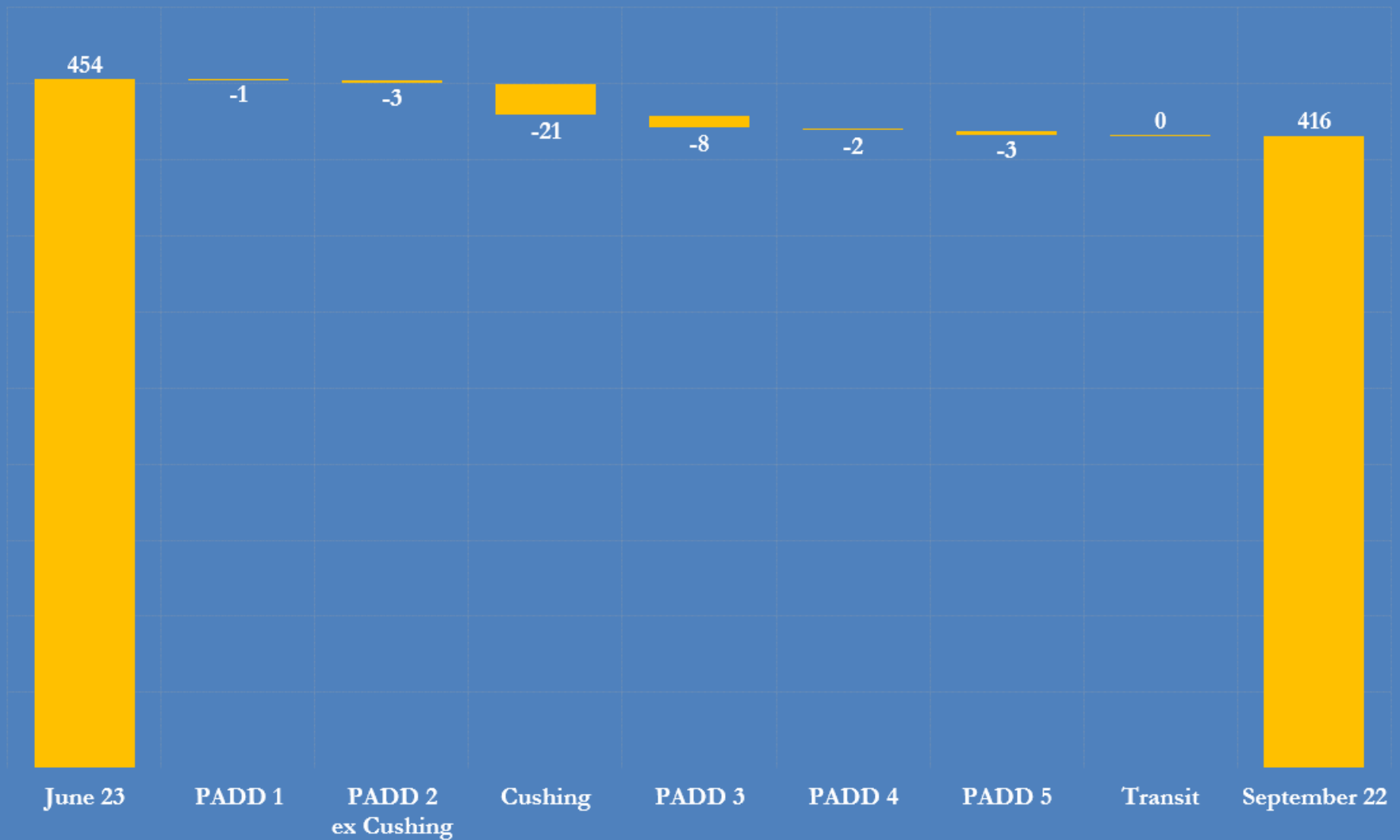


Source: CME Group

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For clarity and convenience, I have removed the clearly aberrant spread of -\$69 contango reported on April 20, 2020

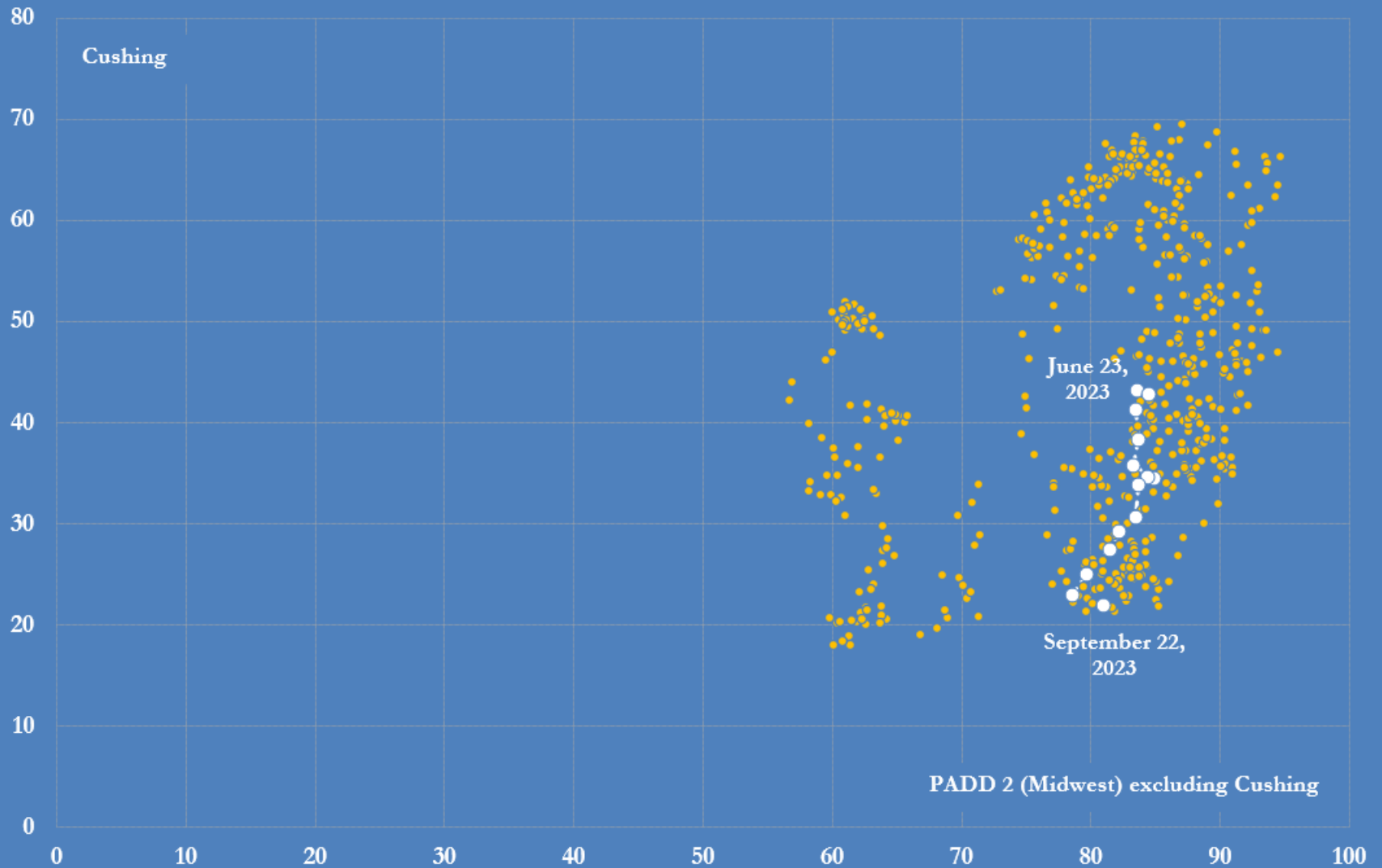
U.S. commercial crude oil inventories million barrels, change from June 23 to September 22



Source: U.S. Energy Information Administration

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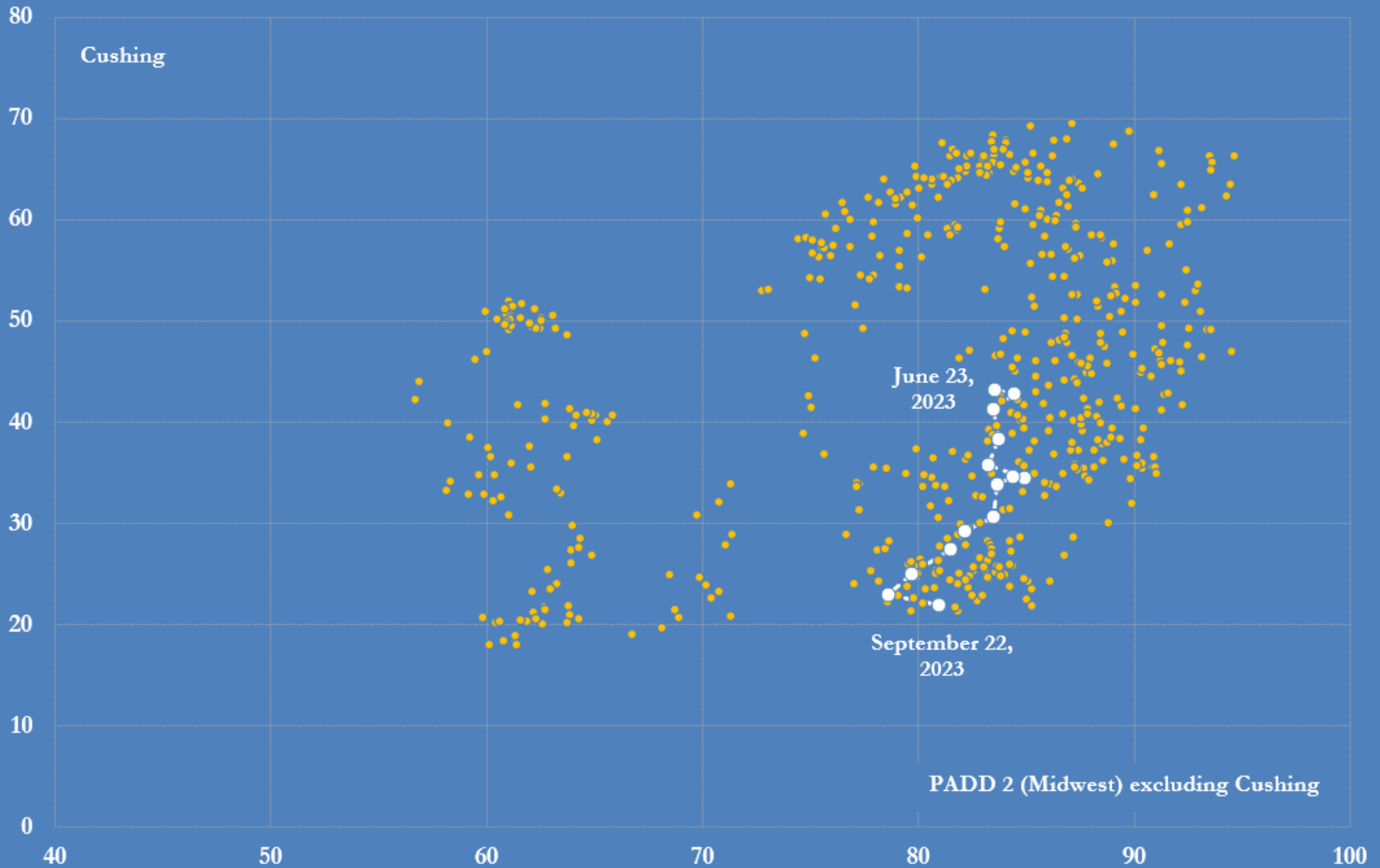
U.S. crude oil inventories at Cushing and at other locations in Midwest weekly, million barrels, 2013-2023



Source: U.S. Energy Information Administration (Weekly Petroleum Status Report)

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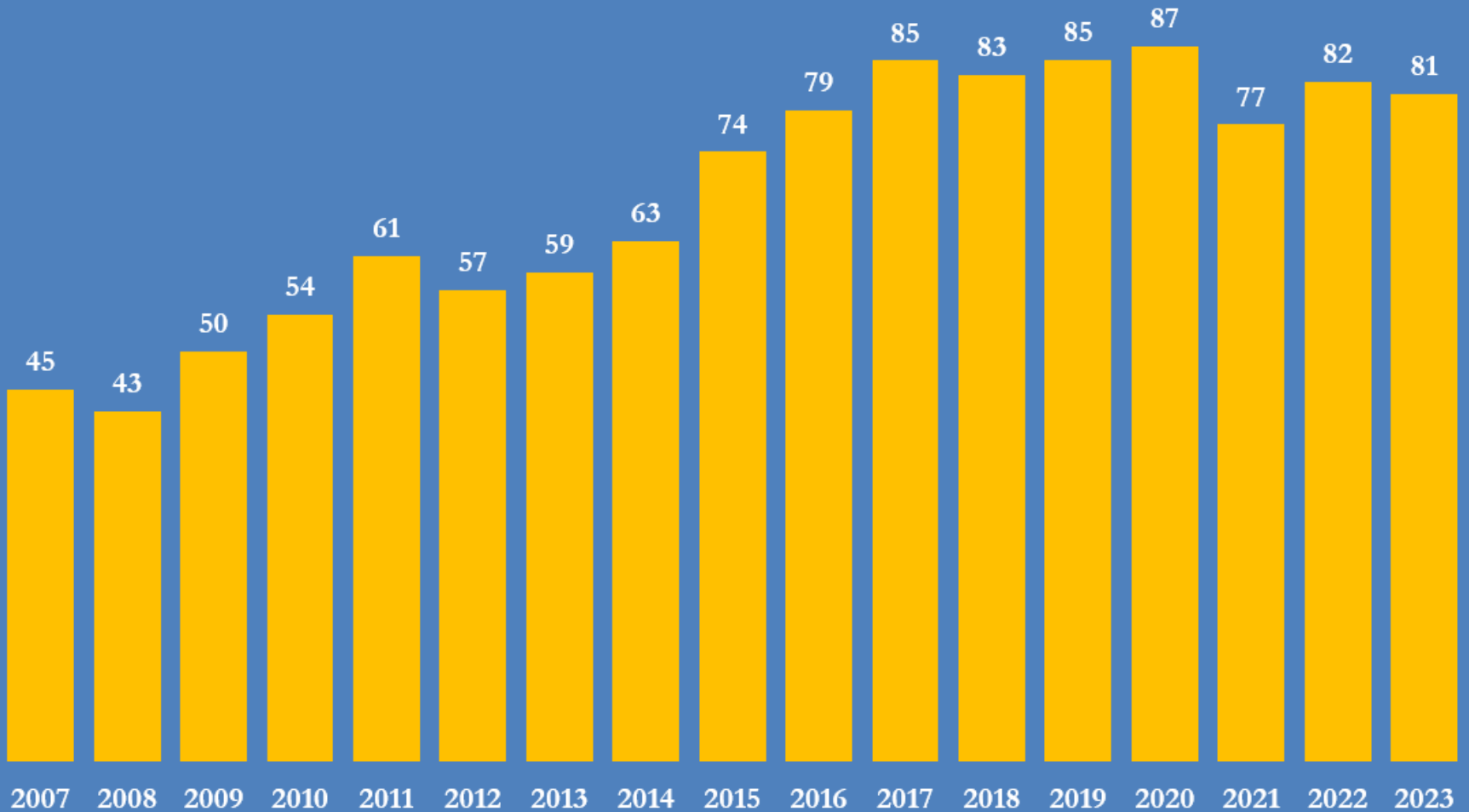
U.S. crude oil inventories at Cushing and at other locations in Midwest weekly, million barrels, 2013-2023



Source: U.S. Energy Information Administration (Weekly Petroleum Status Report)

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Commercial crude stocks in PADD 2 (Midwest) ex Cushing, 2007-2023
million bbl, each year on September 22

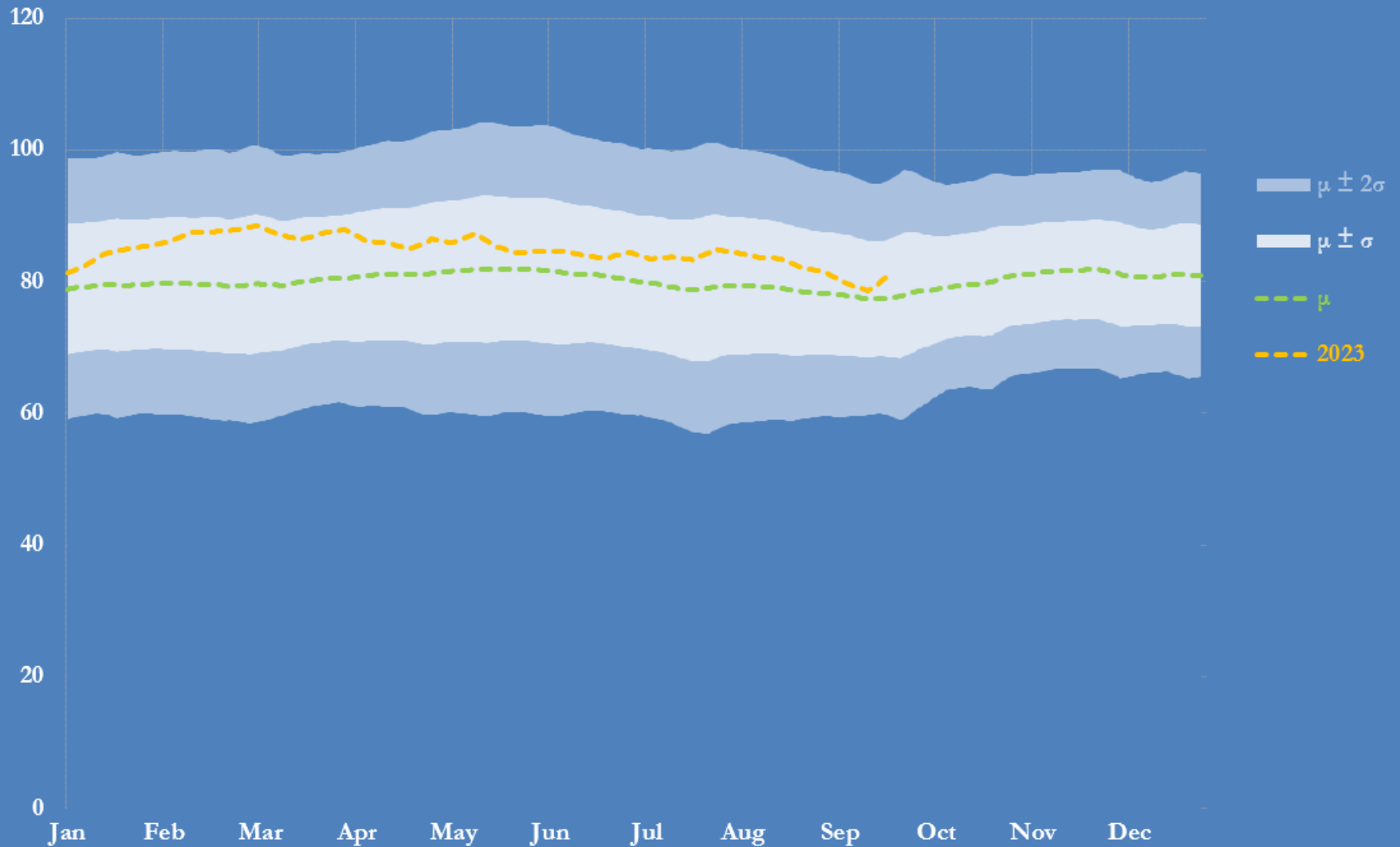


Source: U.S. Energy Information Administration

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Commercial crude stocks in PADD 2 (Midwest) ex Cushing, 2007-2023

million bbl, standard deviations away from prior ten-year average

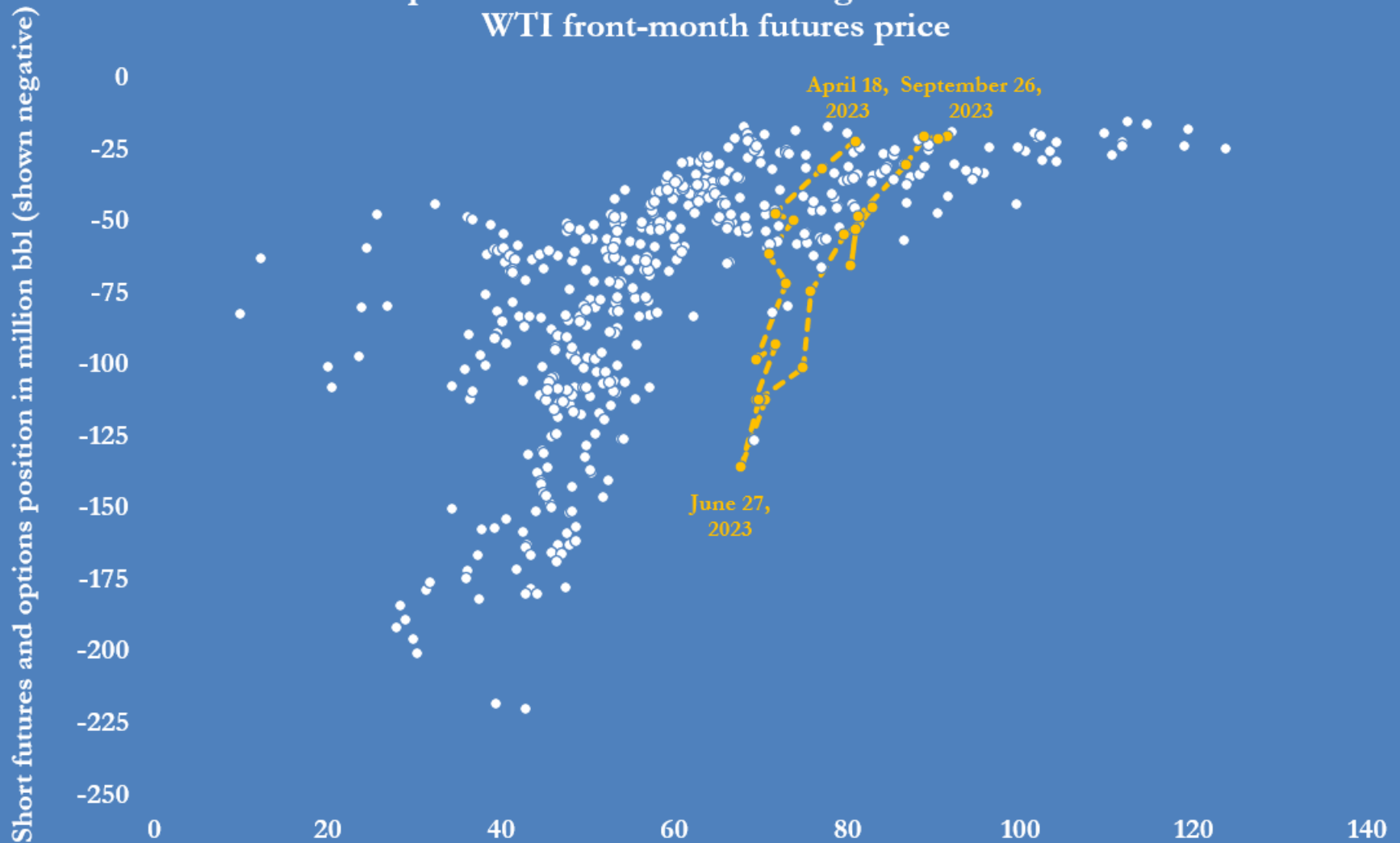


Source: U.S. Energy Information Administration

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Money managers' short positions and U.S. oil price in 2015-23

Gross short position in main NYMEX light sweet crude contract
WTI front-month futures price



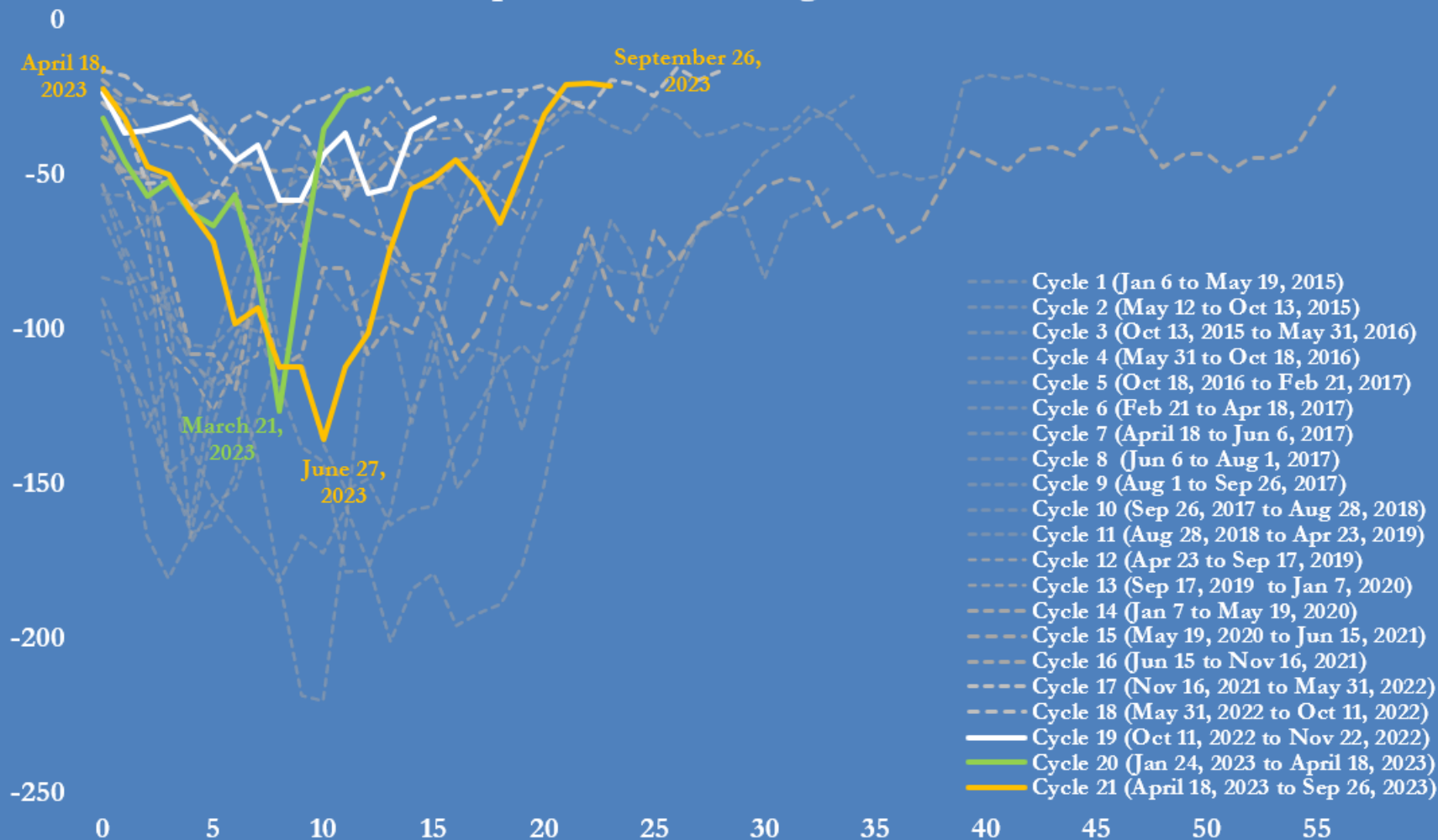
Sources: CFTC, NYMEX, @JKempEnergy
Most recent values highlighted in orange

US\$/bbl

Money managers' short positions in NYMEX WTI in 2015-23

Accumulation and liquidation of short positions

Short positions shown negative, million bbl

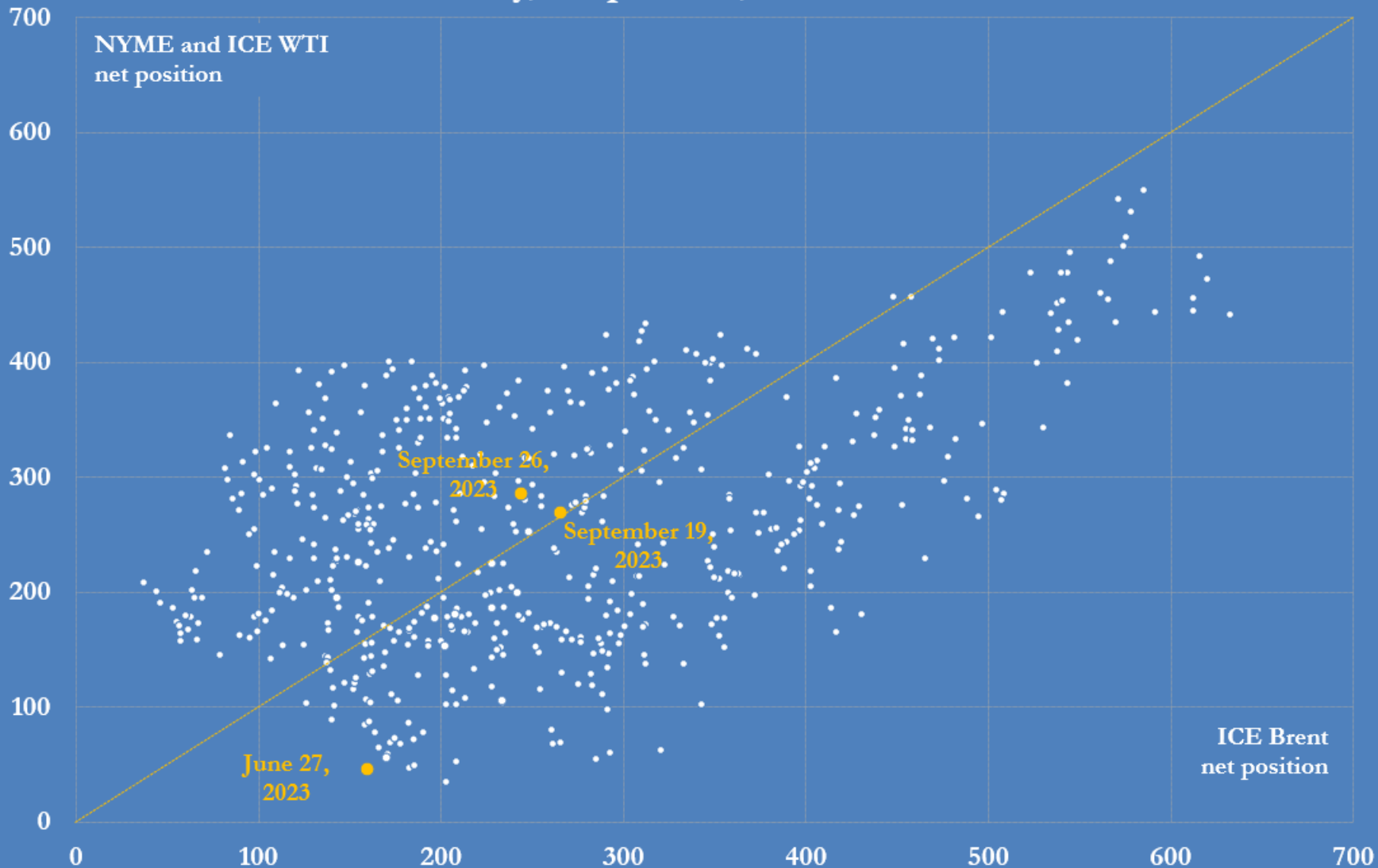


Source: U.S. Commodity Futures Trading Commission
@JKempEnergy

Weeks from start of cycle

Money managers' Brent and WTI positions, 2013-2023

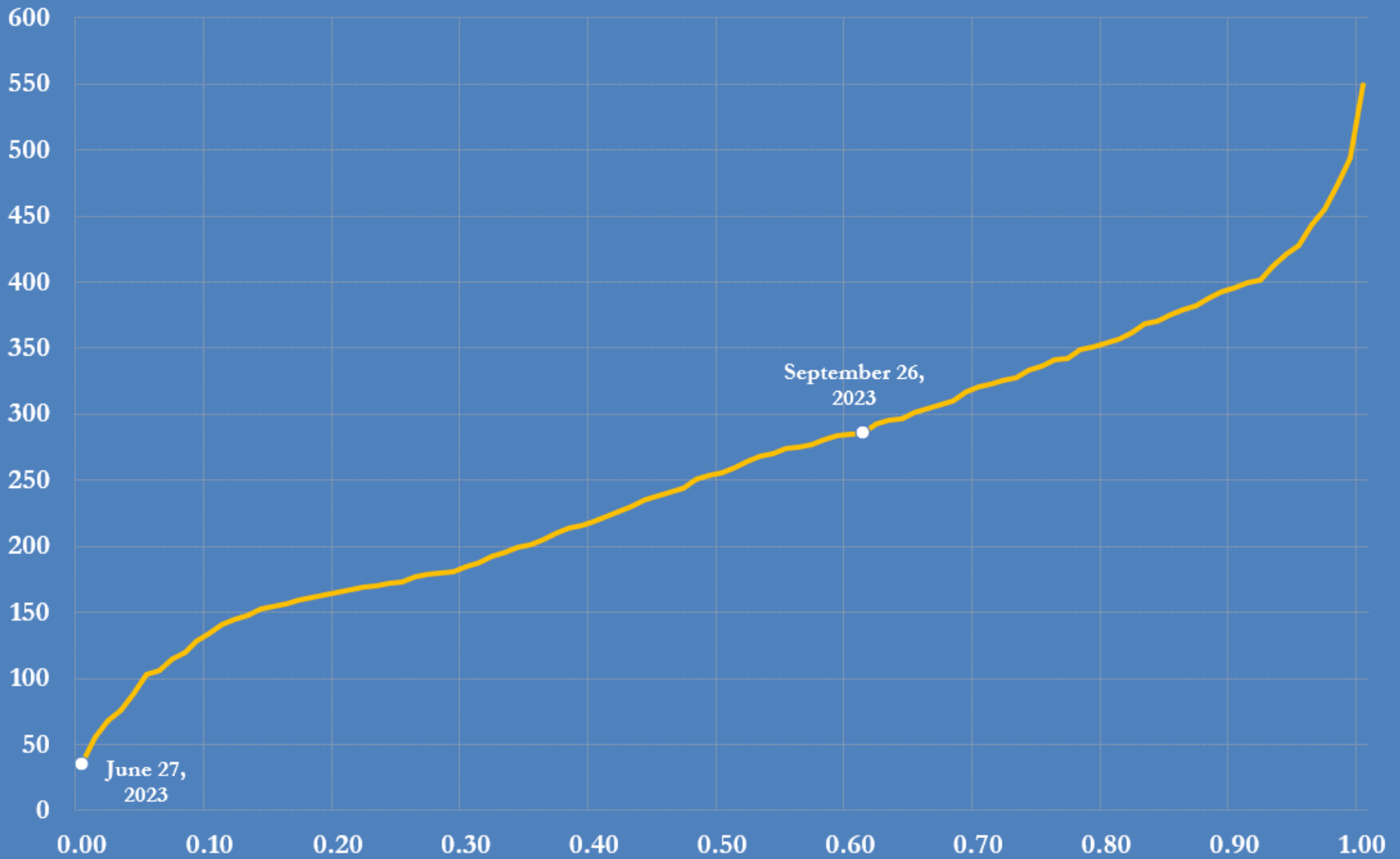
weekly, net position, million barrels



Sources: CFTC and ICE Futures Europe

@JKempEnergy

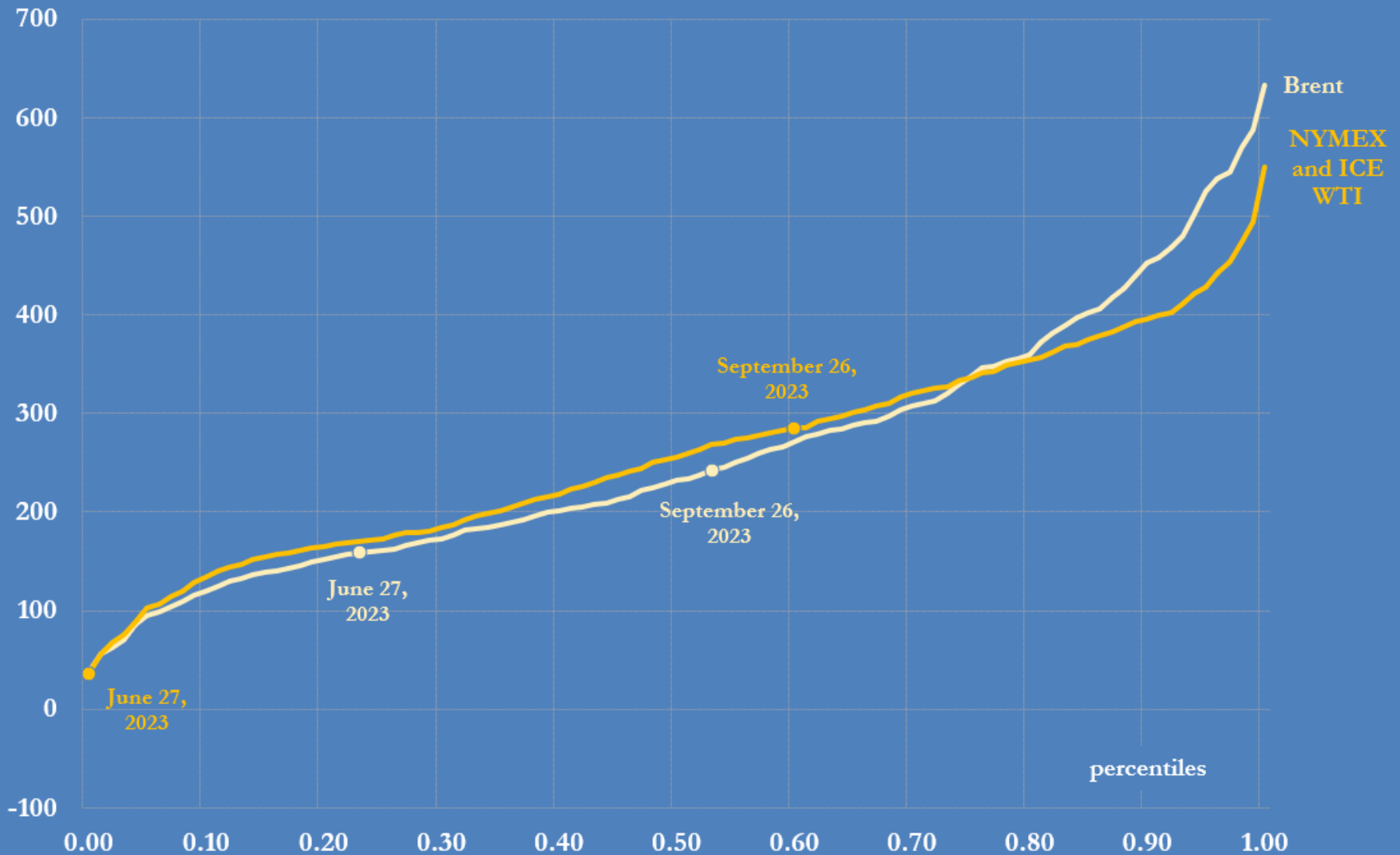
Money managers' total net long positions in WTI percentiles, NYMEX+ICE, 2013-2023



Sources: CFTC and ICE Futures Europe

@JKempEnergy

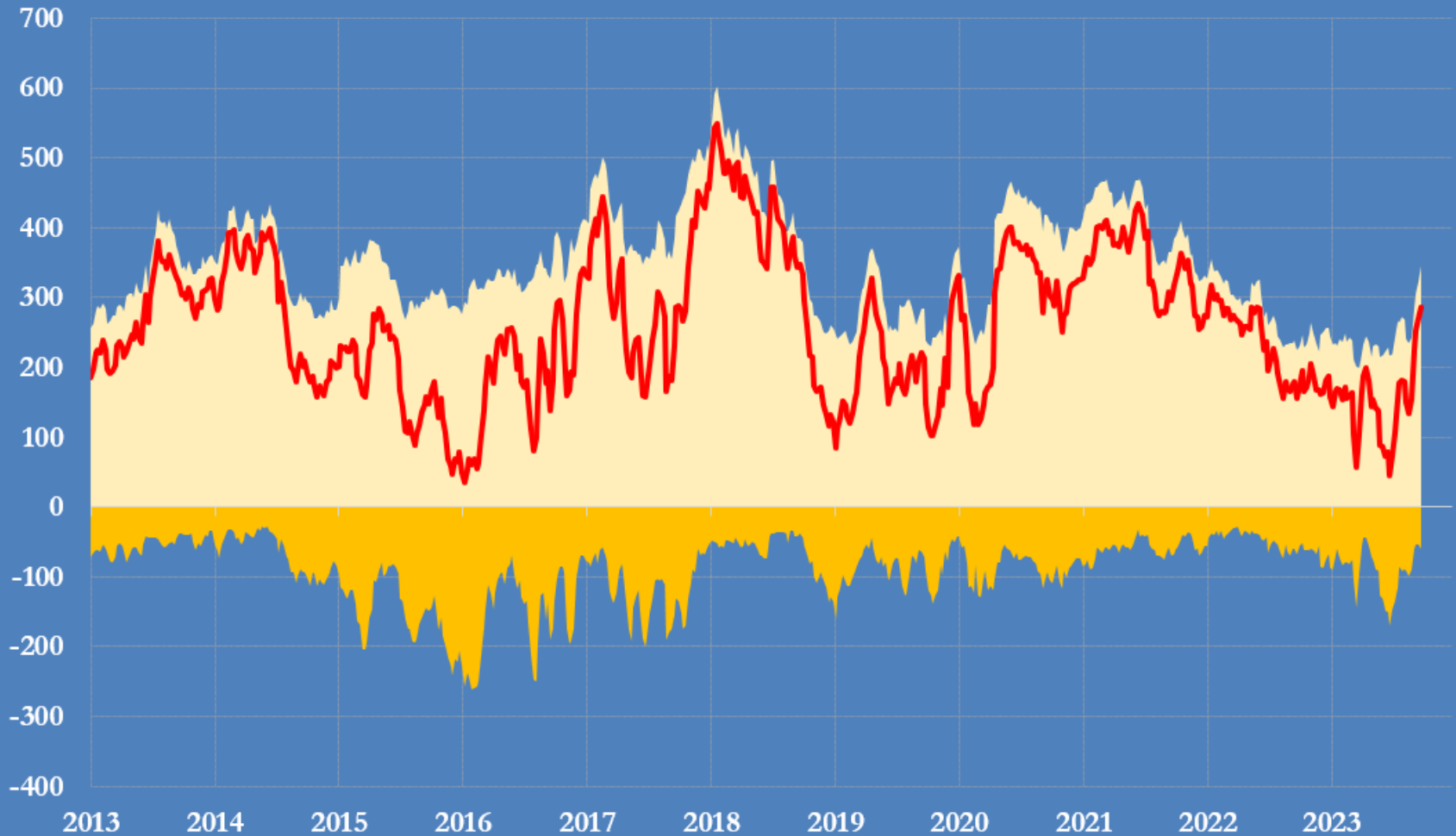
Money managers' net position in crude futures and options, percentiles, million barrels, 2013-2023



Sources: CFTC and ICE Futures Europe

@JKempEnergy

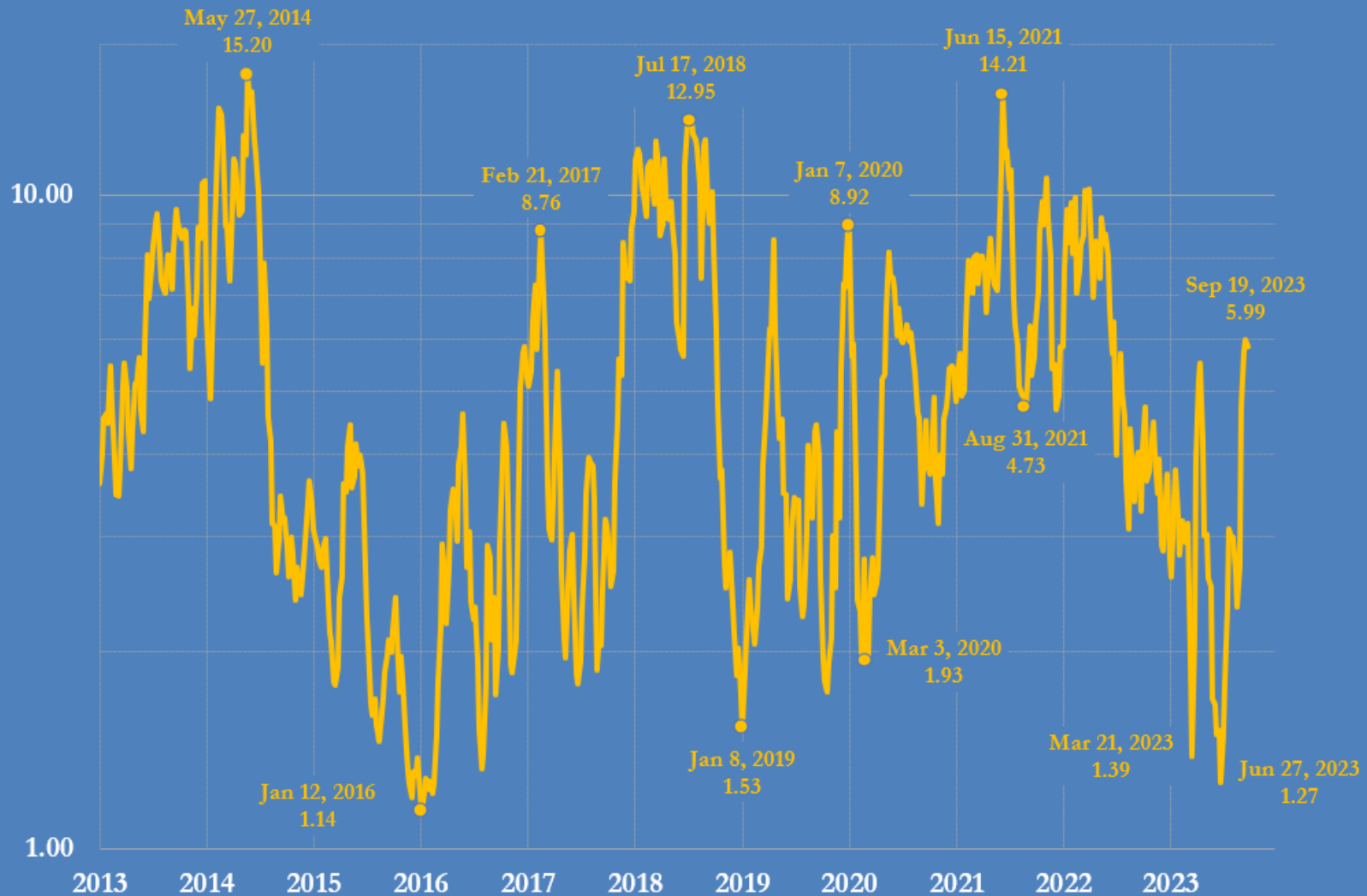
Money managers' total long and short positions in WTI NMYMEX +ICE, million bbl



- Long positions
- Short positions
- Net position

Sources: CFTC and ICE Futures Europe
@JKempEnergy

Ratio of money manager long to short positions in NYMEX +ICE WTI (semi-log scale)



Sources: CFTC and ICE Futures Europe

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