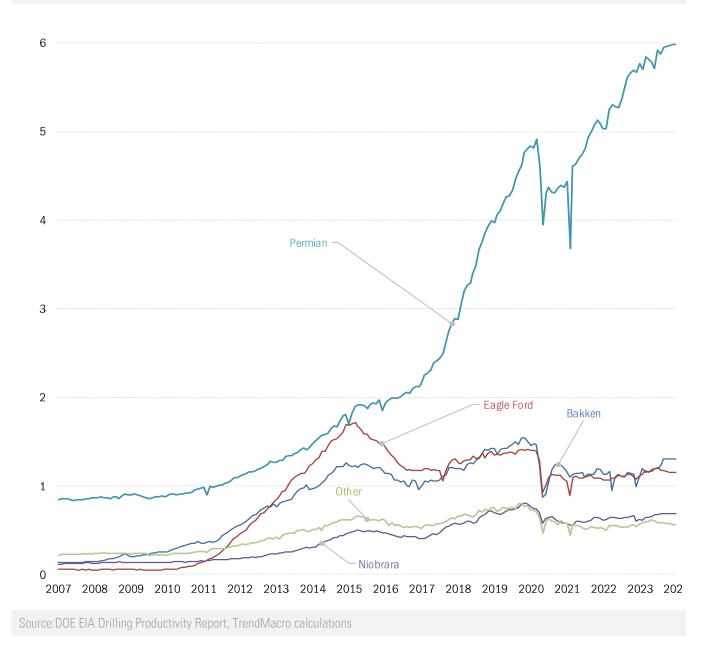


Trend Macrolytics, LLC Donald Luskin, Chief Investment Officer Thomas Demas, Managing Director Michael Warren, Energy Strategist

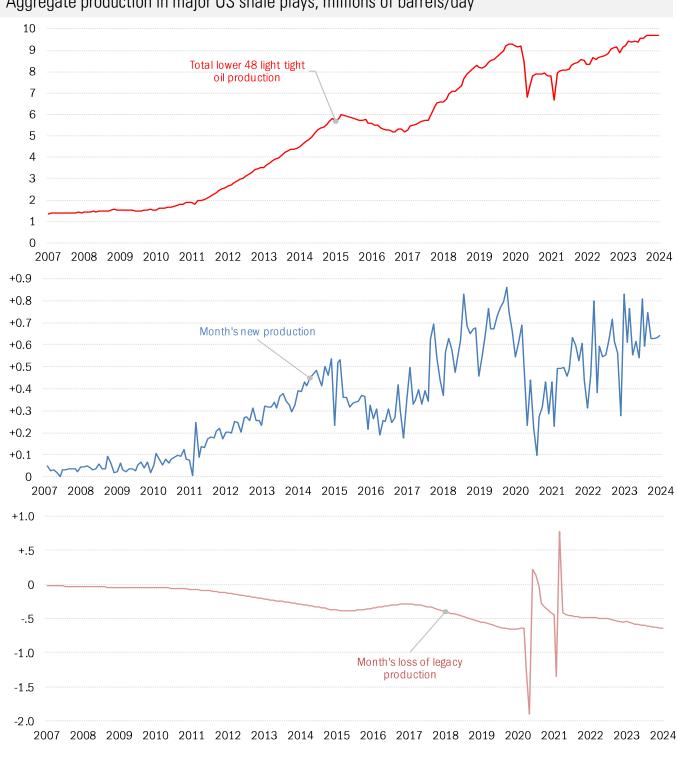
Data Insights: Oil

Monday, December 18, 2023

The light tight oil revolution -- the rollover, the recovery and the lockdown Production in major US shale plays, millions of barrels/day

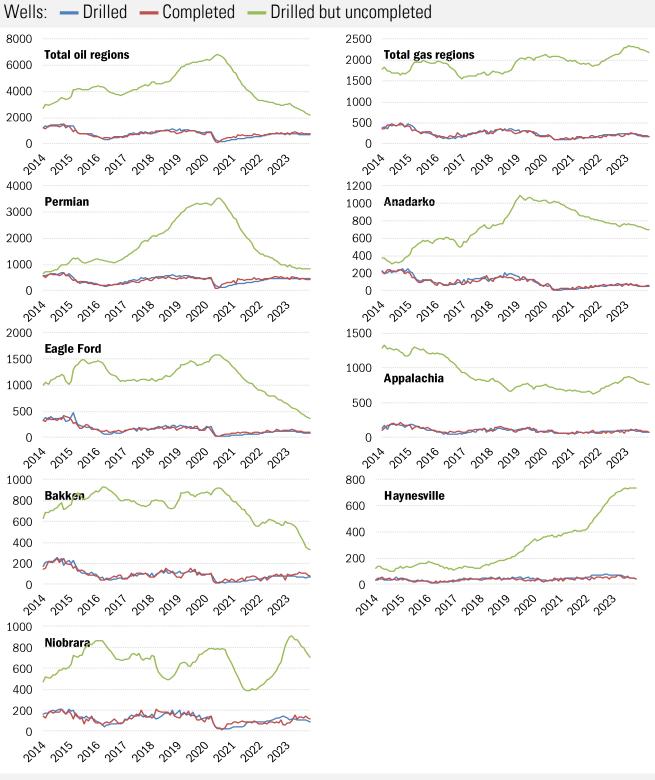


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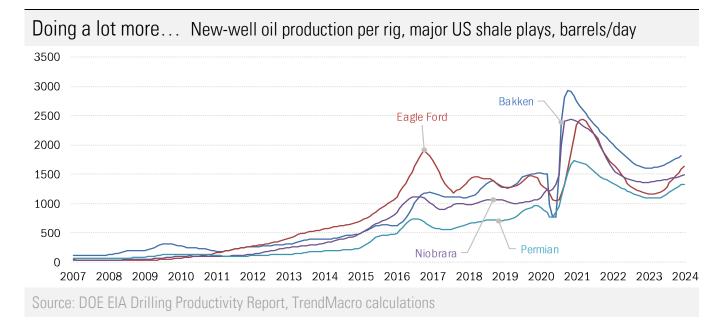
Sustaining the revolution: the arms-race with the shale decline-curve Aggregate production in major US shale plays, millions of barrels/day

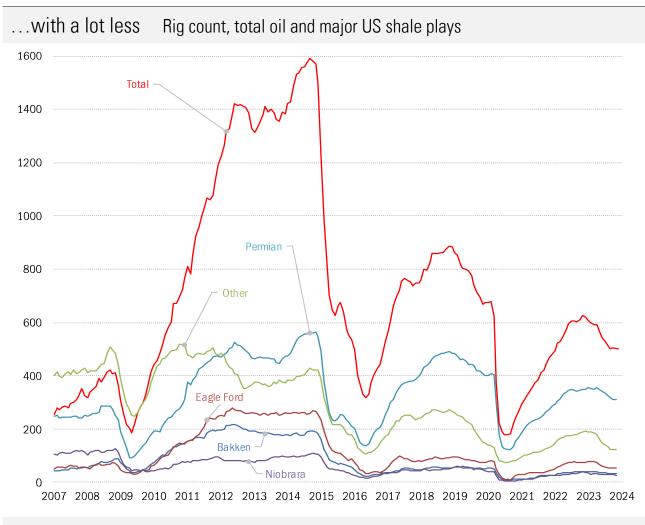
Source: DOE EIA Drilling Productivity Report, TrendMacro calculations



Low fracking fruit: the inventory of drilled but uncompleted wells (DUC) Wells: — Drilled — Completed — Drilled but uncompleted

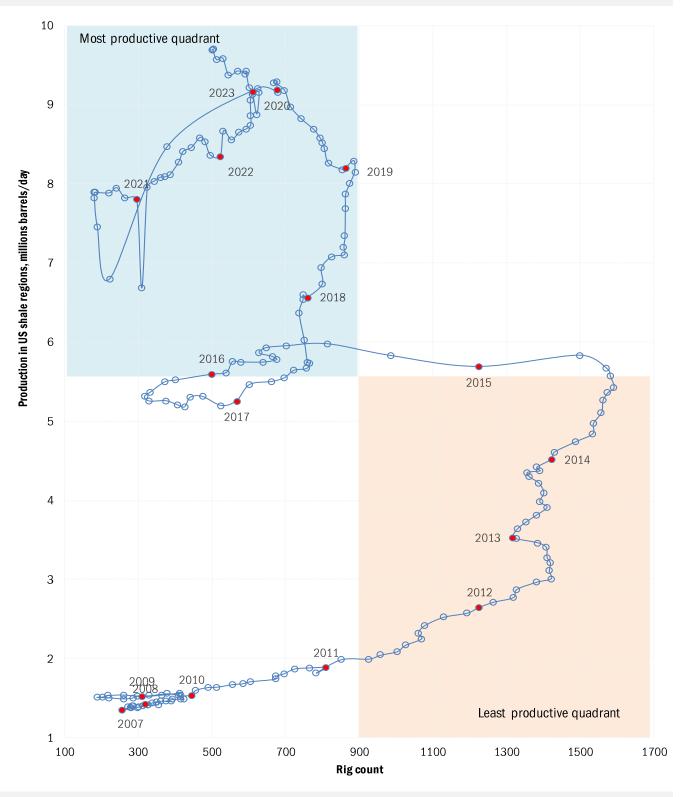
Source: DOE EIA Drilling Productivity Report, TrendMacro calculations



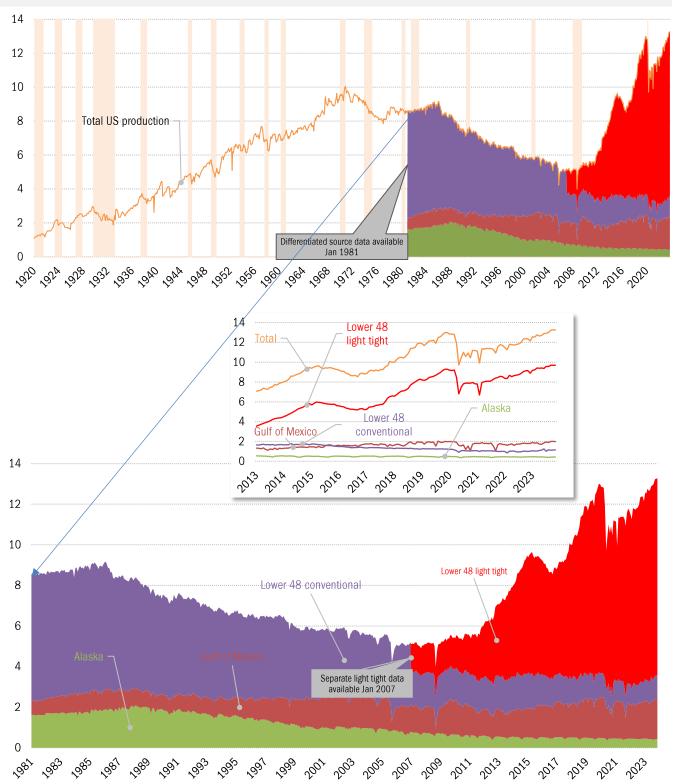


Source: DOE EIA Drilling Productivity Report, Baker Hughes, TrendMacro calculations

Flooding the productivity zone

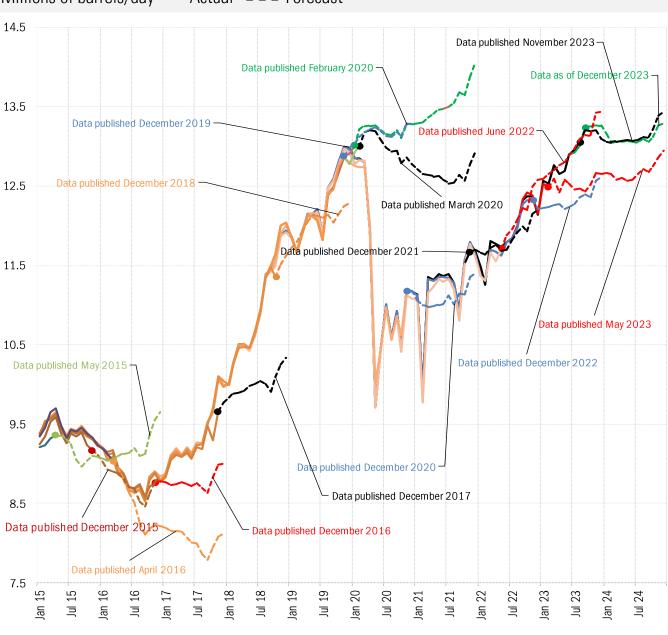


Source: DOE EIA Drilling Productivity Report, TrendMacro calculations



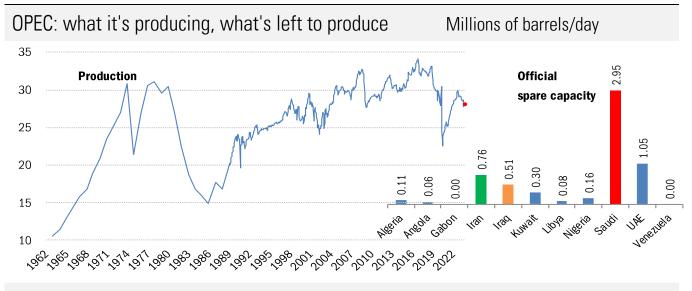
US crude oil production -- deep history, and the modern transformation of sources Millions of barrels/day Recession

Source: DOE EIA Short Term Energy Outlook, Drilling Productivity Report, TrendMacro calculations

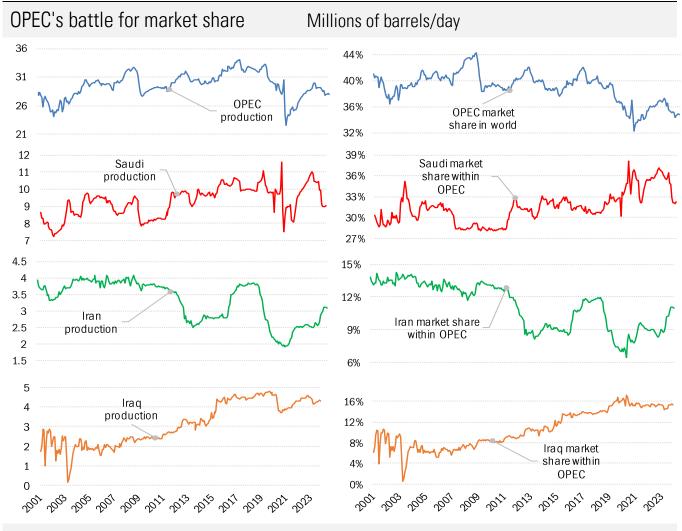


The evolution of expectations: booms and busts in US production outlooks Millions of barrels/day — Actual _ - - Forecast

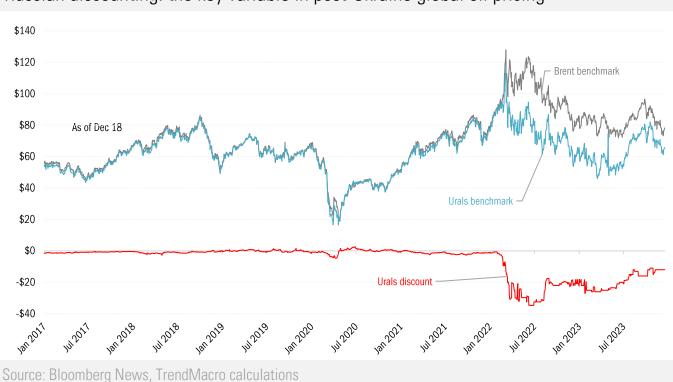
Source: DOE EIA Short Term Energy Outlook, TrendMacro calculations



Source: Bloomberg News, TrendMacro calculations

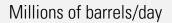


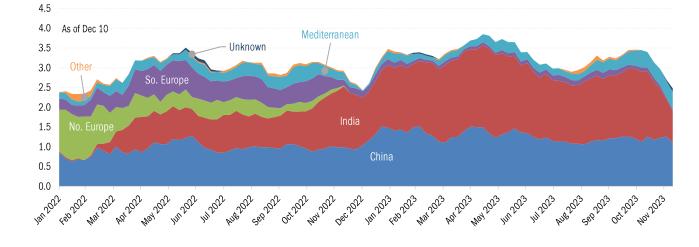
Source: Bloomberg News, TrendMacro calculations



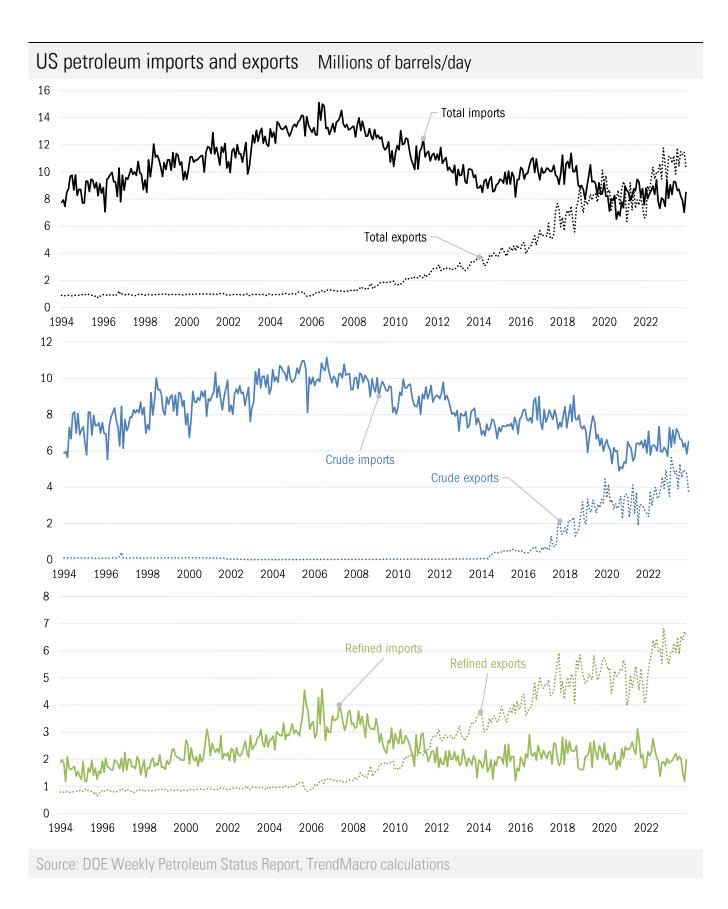
Russian discounting: the key variable in post-Ukraine global oil pricing

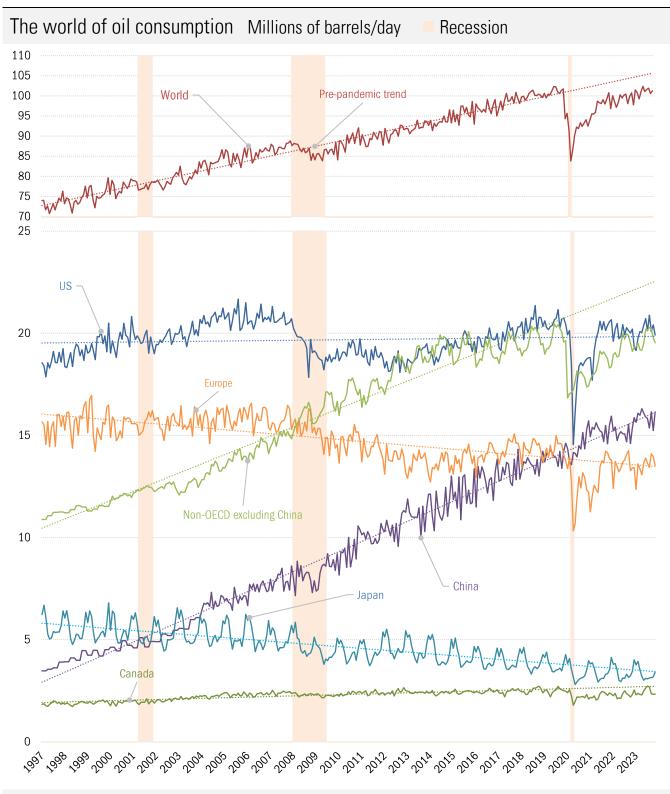




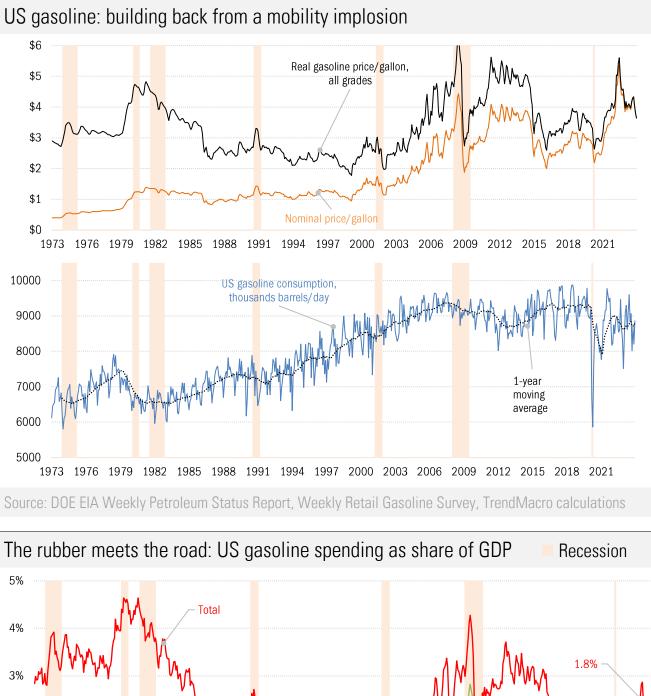








Source: DOE EIA Short Term Energy Outlook, TrendMacro calculations





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 81 83

Source: BEA, DOE EIA, TrendMacro calculations

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