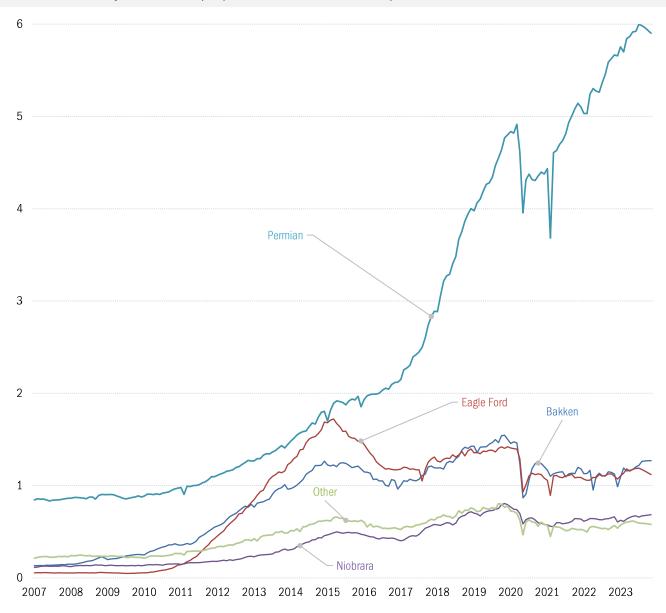


Trend Macrolytics, LLC Donald Luskin, Chief Investment Officer Thomas Demas, Managing Director Michael Warren, Energy Strategist

## Data Insights: Oil Monday, October 16, 2023

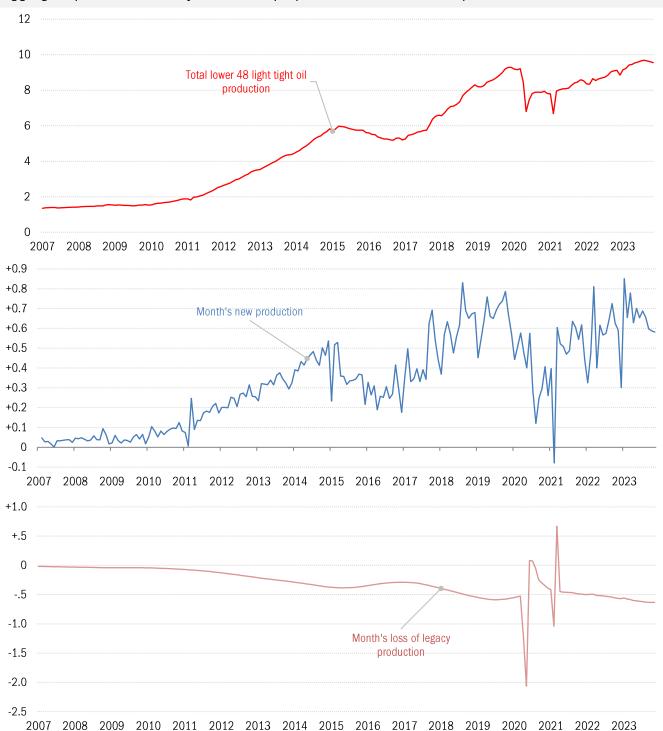
The light tight oil revolution -- the rollover, the recovery and the lockdown Production in major US shale plays, millions of barrels/day



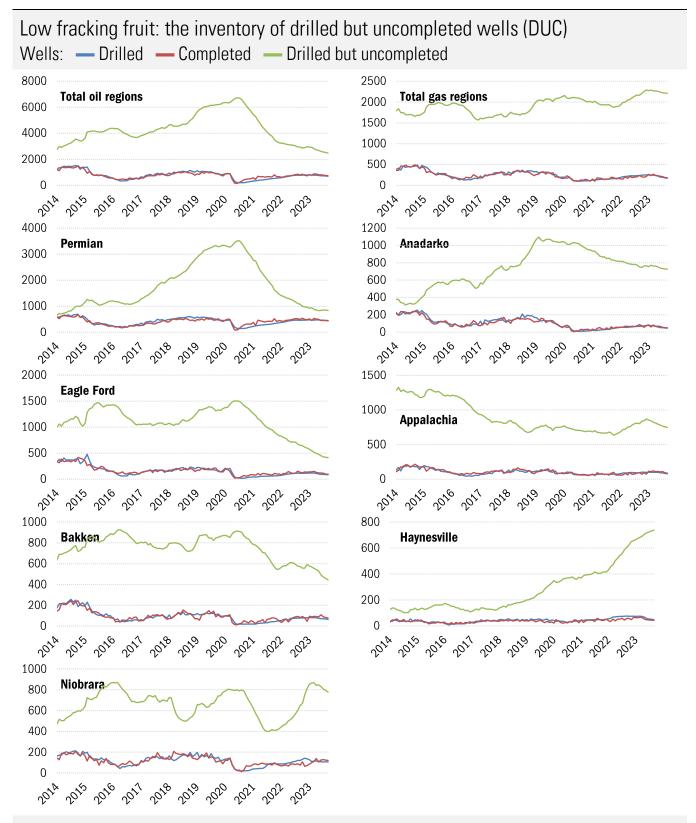
Source: DOE EIA Drilling Productivity Report, TrendMacro calculations

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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



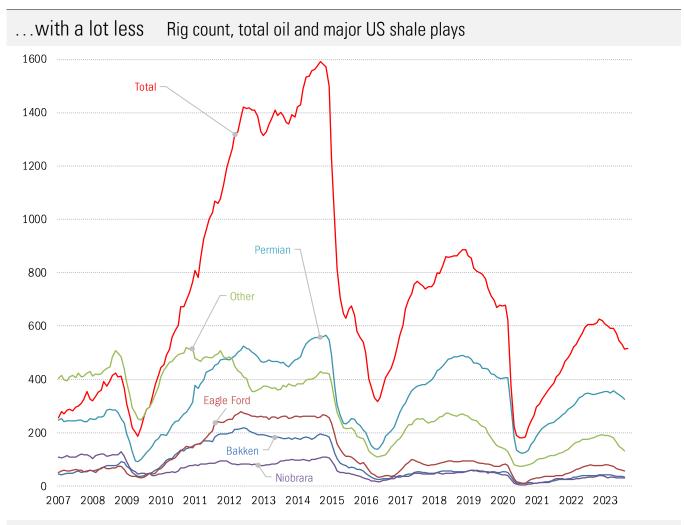
Source: DOE EIA Drilling Productivity Report, TrendMacro calculations

# Doing a lot more... New-well oil production per rig, major US shale plays, barrels/day 2500 Eagle Ford 1000 Niobrara Permian

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Source: DOE EIA Drilling Productivity Report, TrendMacro calculations

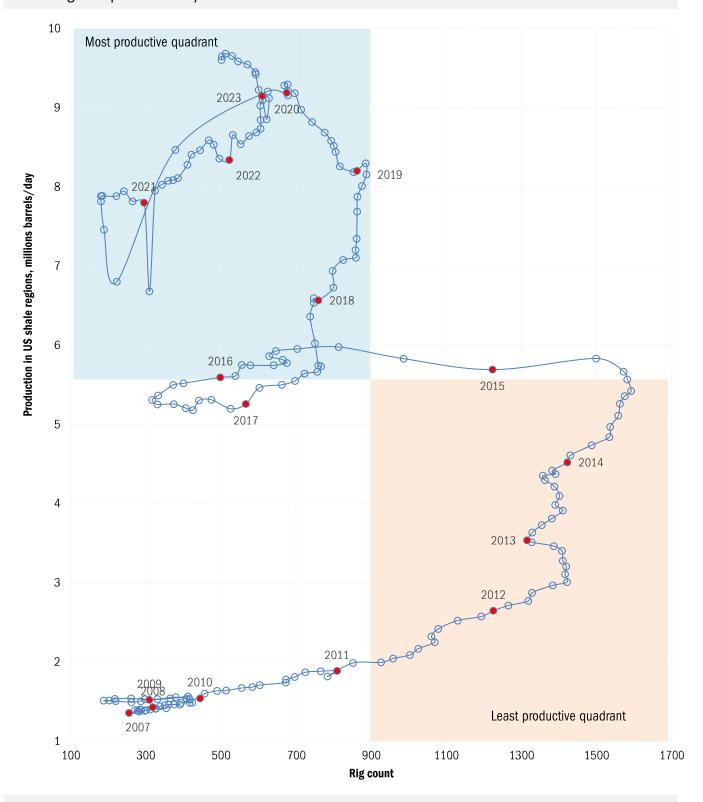
2008 2009



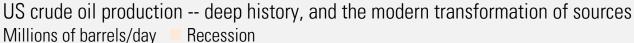
Source: DOE EIA Drilling Productivity Report, Baker Hughes, TrendMacro calculations

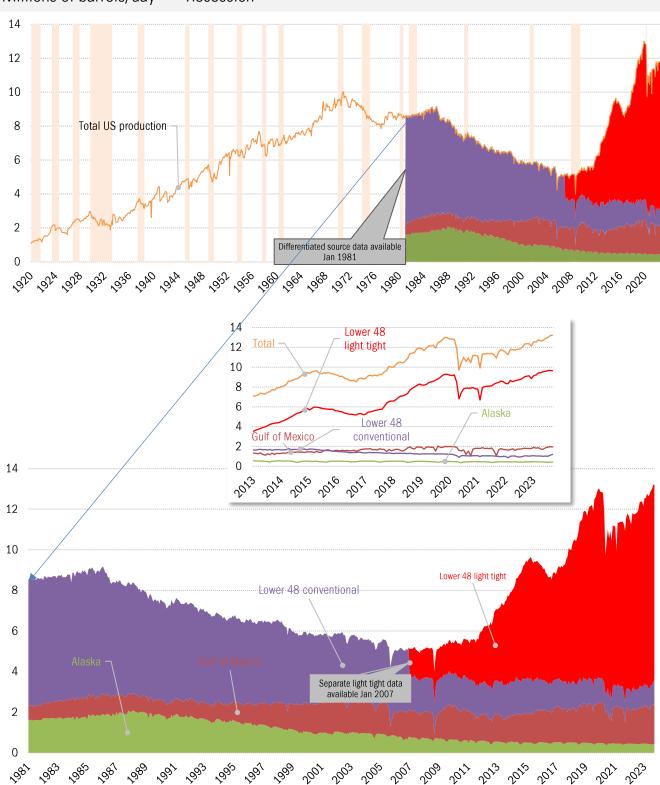
2020 2021 2022 2023

### Flooding the productivity zone



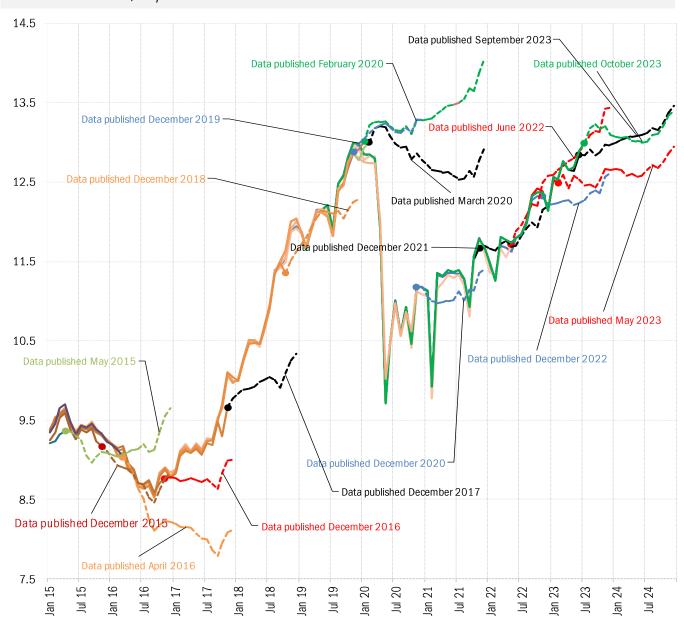
Source: DOE EIA Drilling Productivity Report, TrendMacro calculations



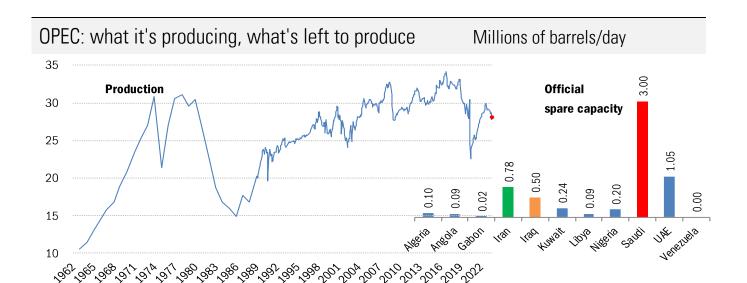


Source: DOE EIA Short Term Energy Outlook, Drilling Productivity Report, TrendMacro calculations

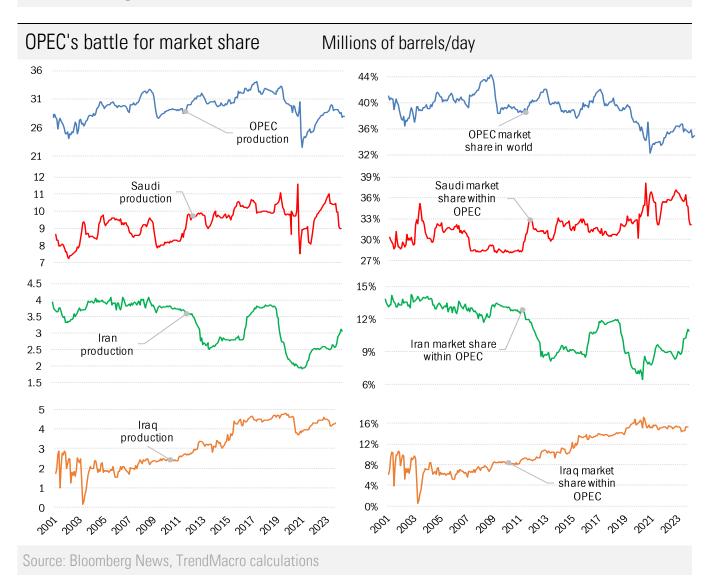
# The evolution of expectations: booms and busts in US production outlooks Millions of barrels/day — Actual – – – Forecast



Source: DOE EIA Short Term Energy Outlook, TrendMacro calculations



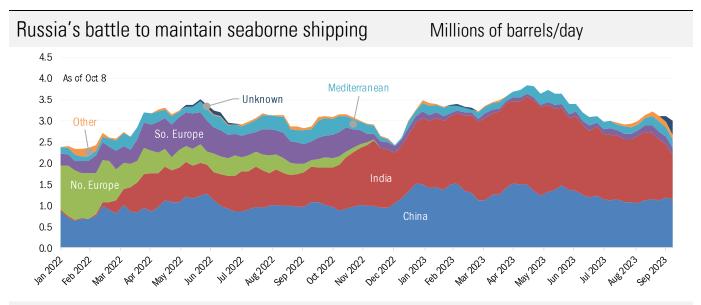
Source: Bloomberg News, TrendMacro calculations



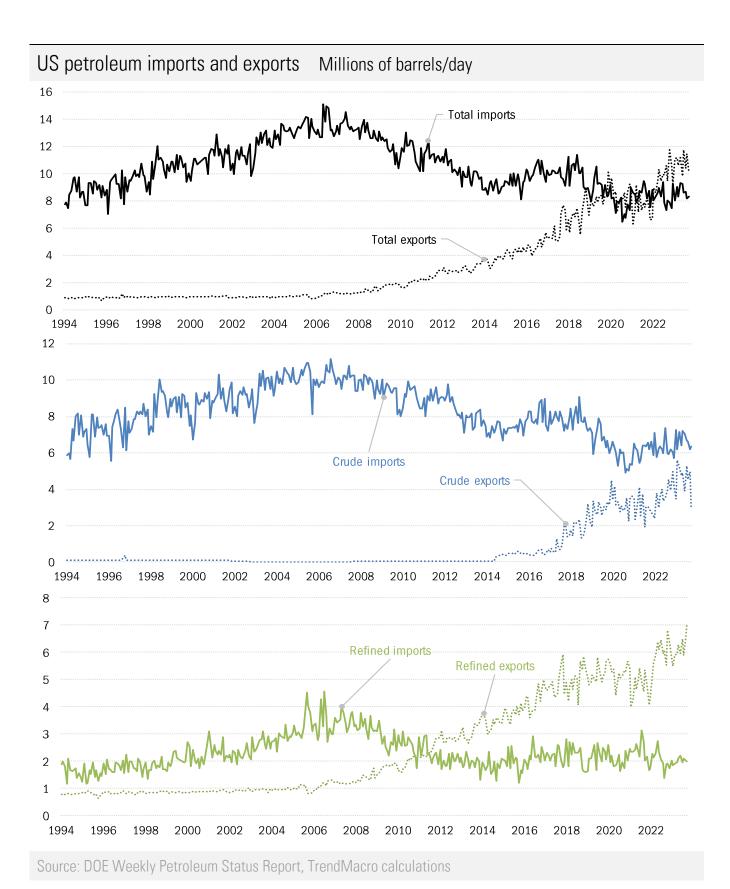
### Russian discounting: the key variable in post-Ukraine global oil pricing

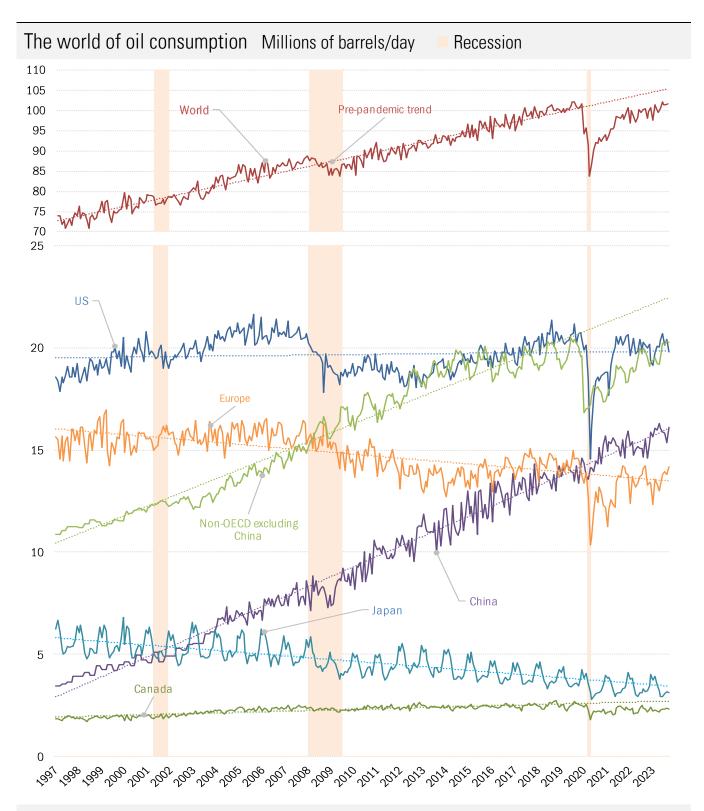


Source: Bloomberg News, TrendMacro calculations

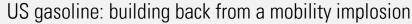


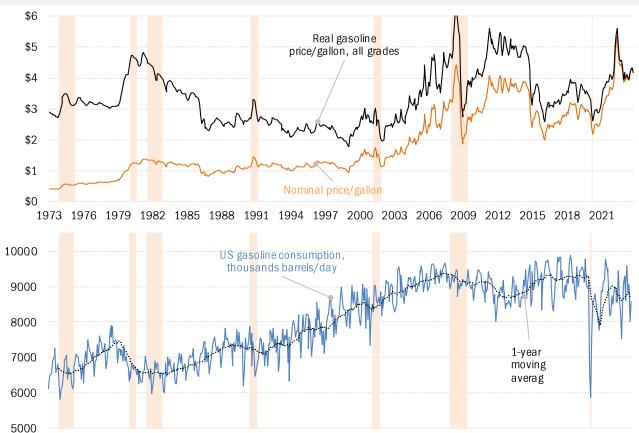
Source: Bloomberg News, TrendMacro calculations





Source: DOE EIA Short Term Energy Outlook, TrendMacro calculations





Source: DOE EIA Weekly Petroleum Status Report, Weekly Retail Gasoline Survey, TrendMacro calculations

1973 1976 1979 1982 1985 1988 1991 1994 1997 2000 2003 2006 2009 2012 2015 2018 2021

