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## Abstract

Since 2008, the WTI oil futures curve has been positively sloped for extended periods. We test whether changes in inventory alone can explain this atypically long contango. To do this, we estimate monthly VARs of the CME WTI oil futures spread and OECD and U.S. inventory in line with standard theory, and add petroleum consumption and implied volatility to the vector of endogenous variables. When we model the futures spread as one continuous series, results confirm two-way causation between inventory and the futures curve, as predicted by the theory of storage. However when we separate negative and positive futures spreads we find that: two-way causation between the futures spread and U.S. inventory breaks down; shocks to OECD petroleum consumption cause more negative spreads and shocks to U.S. consumption cause more positive spreads in addition to inventory-driven changes; and increases in volatility directly raise positive spreads. These new causal channels have become significant since 2008 and can be related to higher inventory, inelastic supply of oil and uncertainty about global economic conditions.

*Keywords:* Oil futures curve, Inventory, Consumption, Implied volatility, VAR

*JEL:* Q40, C58

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