

README — End-of-Month and Mixed-Frequency Commodity Spot Prices

Please cite: Farag, M., S. Snudden, and G. Upton (2024) *Can Futures Prices Predict the Real Price of Primary Commodities?* LCERPA Working Paper 2024-3.

https://www.lcerpa.org/files/LCERPA_2024_3.pdf

File structure and contents

The file AllSpotDataM.xlsx provides all data as monthly time series for the nominal spot prices in U.S. dollars (USD). The tab *All* provides end-of-month and monthly average nominal spot prices for the 17 commodities. There are also commodity-specific tabs that include the end-of-month and monthly average as well as the mixed-frequency observations. The 17 commodities include:

- Energy: WTI crude oil, Henry Hub natural gas, Heating oil, Gasoline, Ethanol
- Metals: Copper, Aluminum, Nickel, Zinc, Tin, Lead, Gold, Silver, Platinum
- Agriculture: Wheat, Corn, Soybeans

1) All (tab / CSV)

All data are provided as monthly time series for the 17 commodities.

- date — Month reference date (e.g., YYYY-MM-01).
- For each commodity x in {wheat, soybeans, corn, zinc, tin, nickel, lead, copper, aluminum, platinum, silver, gold, ethanol, gasoline, heatoil, henryhub, wti}:
 - x_eom — End-of-month spot price. The closing price on the last trading day of the month.
 - x_ave — Monthly average spot price. The simple average of daily closing prices across the month.

2) Commodity-specific tabs

There is one sheet per commodity (e.g., wti, copper, wheat, ...). Each sheet includes:

- month — Numeric month (1–12)
- year — 4-digit year
- eomdate — Calendar date of the month end (trading-calendar consistent with the spot source)
- x_ave — Monthly average spot price
- x_eom — End-of-month spot price
- Mixed-frequency “ k -days-from-EOM” series: $x_eom1, x_eom2, \dots, x_eom20$

Interpretation of mixed-frequency columns:

- x_eomk is the spot price observed k trading days before month end.
- Example for wti: $wti_ave, wti_eom, wti_eom1, wti_eom2, \dots, wti_eom20$. wti_eom = The end-of-month spot price; the closing price on the last trading day of the month. wti_eom1 = Closing price on the second-to-last trading day. wti_eom2 = third-last, ..., wti_eom20 = 20th-last

These mixed-frequency series are “selective month-end samples.” Only the end-of-month and the monthly average series are used for the spot prices in the paper. See Section 2 and Appendix for construction details and rationale.

Ticker & Source Table (from the paper)

The authoritative mapping of each commodity to its source and ticker/code (e.g., exchange, vendor mnemonic, series ID) is provided in the paper’s Appendix A *Data Appendix* Table A.1. Bloomberg Tickers / Sources for Commodity Spot Prices and Sample Periods (“Ticker Table”). The market, data source, and sample periods are also provided in the table. Please consult that table when reproducing or extending the dataset and cite the original sources accordingly.

Usage notes (as in the paper)

- Forecast Targets:
Forecast targets are period averages of spot prices (x_{ave}). Real price forecasts are deflated by the real-time U.S. CPI index (<https://www.philadelphiahfed.org/surveys-and-data/real-time-data-research/pcpi>). See methodology and evaluation design in the paper.
- No-Change Benchmarks:
The paper compares futures-based forecasts of period averages to the end-of-period no-change benchmark (in real terms - deflated by CPI - for real forecasts). The prior literature used monthly average no-change for period average forecasts of real prices.

Terms of Use

This dataset is available for academic use but not for resale. Creative Commons (e.g., CC-BY-NC). When using the data, please cite the working paper and the original data sources listed in the paper.

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