SHORT-TERM ENERGY PRICES: WHAT DRIVERS MATTER MOST?

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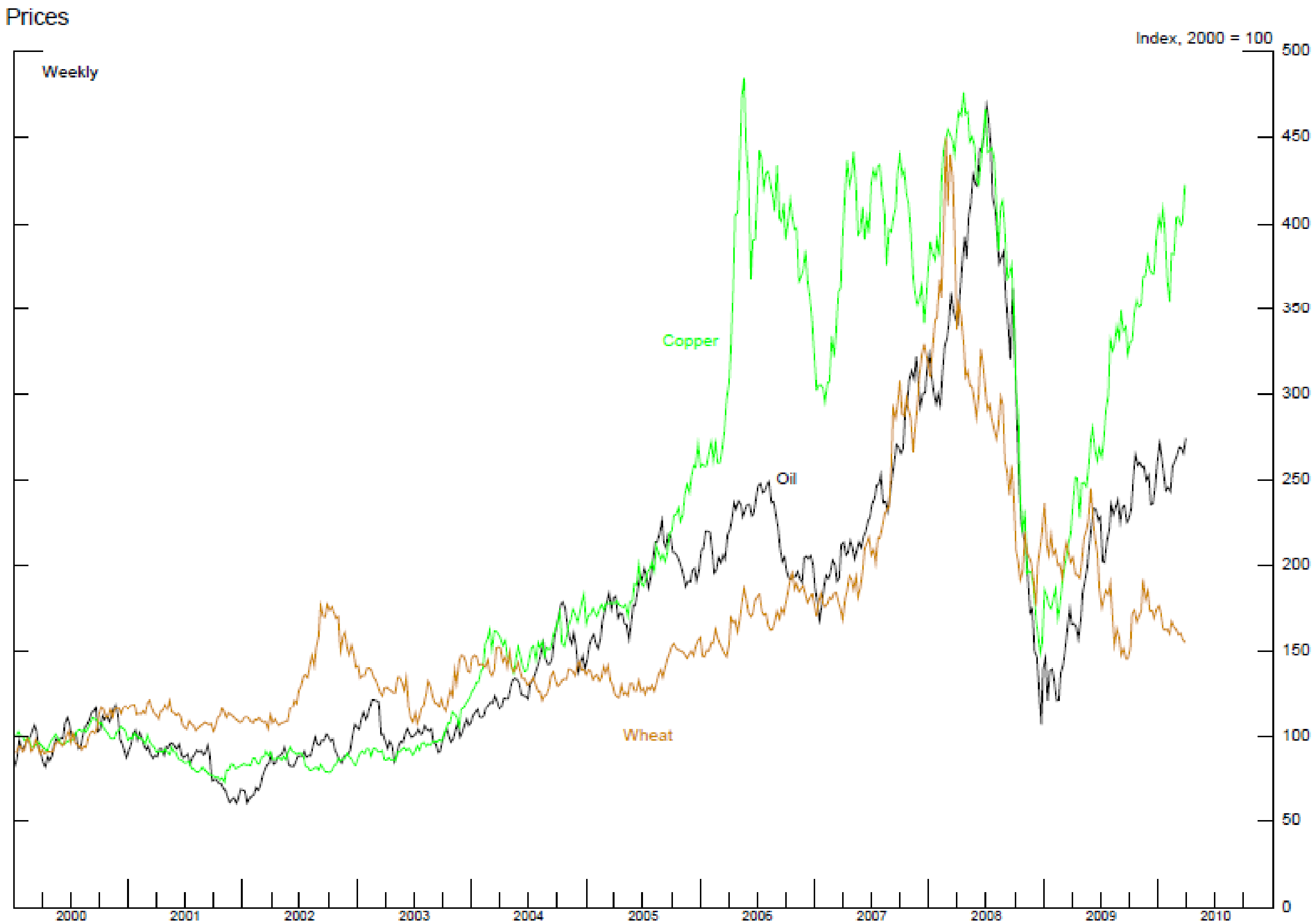
BROAD COMMODITY PRICES SINCE 2000



Oil is West Texas Intermediate. Copper is grade #2, Comex. Wheat is #2 hard winter, Kansas City Board of Trade.

A (GROSSLY OVERSIMPLIFIED) FRAMEWORK …

- **Two candidate explanations:**
  - **"Fundamentals"**
    - **Trend price movements *appear* broadly interpretable through lens of fundamental market developments…**
    - **…*but*, extreme volatility is, admittedly, tough to explain.**
  - **"Speculation"**
    - **We *think* that financial market developments can help explain some of this excess volatility…**
    - **…*but*, we have yet to articulate a specific mechanism by which "speculative activity" drives commodity prices.**
- ***This distinction, though rudimentary, is nonetheless relevant for current policy proposals.***

…But, In Reality, Line Between Is *Blurred*…

- High degree of uncertainty in commodity markets
  - Model uncertainty
    - Consumption dynamics appear to differ:
      (a.) across countries at a given point in time; and
      (b.) over time for a given country.
    - Deepening of financial markets have arguably made commodity markets more forward-looking
  - Parameter uncertainty
    - Income and price elasticities notoriously hard to pin down
  - Uncertainty regarding true state of the market
    - Lack of data transparency / Data mismeasurement
    - No clear anchoring of long run expectations

…WE NEED MORE RESEARCH AND BETTER DATA TO HELP MAKE THE LINE MORE *DISTINCT*.

- **More theoretical guidance → Better econometric identification**
  - **Three areas, in particular, seem fruitful:**
    - **A coherent explanation of cross-country consumption patterns**
    - **Interaction of physical storage market with global economy**
    - **Investment cycles and the supply response**

- **How can we anchor market expectations of long-run oil prices?**
  - **Transparent communication regarding long-run oil prices**
  - **High frequency, publically available data on cost of production and major investment projects**

- **Is this a tall order?**
  - **Yes, it is. But, that shouldn't stop us.**

MY OWN (MODEST) STEP IN THIS DIRECTION:

- **Arseneau (2010)**
  - **Goal: Make sense of heterogeneity in oil consumption over business cycle in a panel dataset of 35 countries.**
  - **Main Findings: Systematic differences emerge in oil consumption between developed and emerging market economies**
    - **Not only in growth rates (which, of course, is well-known) but also in business cycle dynamics.**
    - **Test some simple hypotheses to explain this finding.**
  - **Why Should We Care?**
    - **Policy Implications: Channels by which fundamentals affect global energy prices may change over time.**
    - **Theoretical Implications: Need to be thinking about models that allow shocks propagation at a more "micro-oriented" level.**
    - **Empirical Implications: Pushing the models in this direction would likely help econometric identification of elasticity parameters.**

CONCLUSION

- **Understanding volatility is critical for policymakers**
- **Our current level of understanding is insufficient**
  - **Addressing this short-coming may be difficult, but we need to try**
    - **We need more research, both theoretical and empirical;**
    - **more and better data; and**
    - **open communication regarding a long-run market view in order to help market participants form expectations.**
  - **Better Understanding → Less Uncertainty → Lower Volatility**