

Comment on “Can Exchange Rates  
Forecast Commodity Prices?”  
by Yu-chin Chen, Ken Rogoff and  
Barbara Rossi

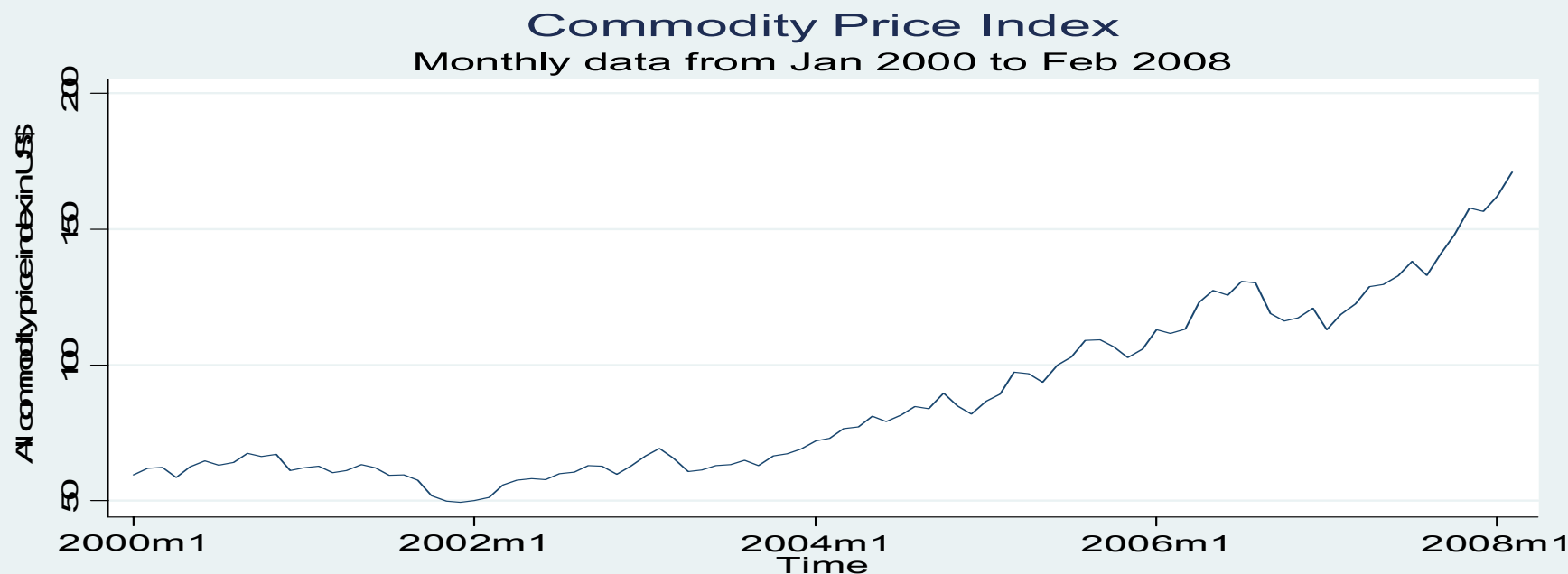
Jeffrey Frankel

Harvard and NBER

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# Commodities are back !

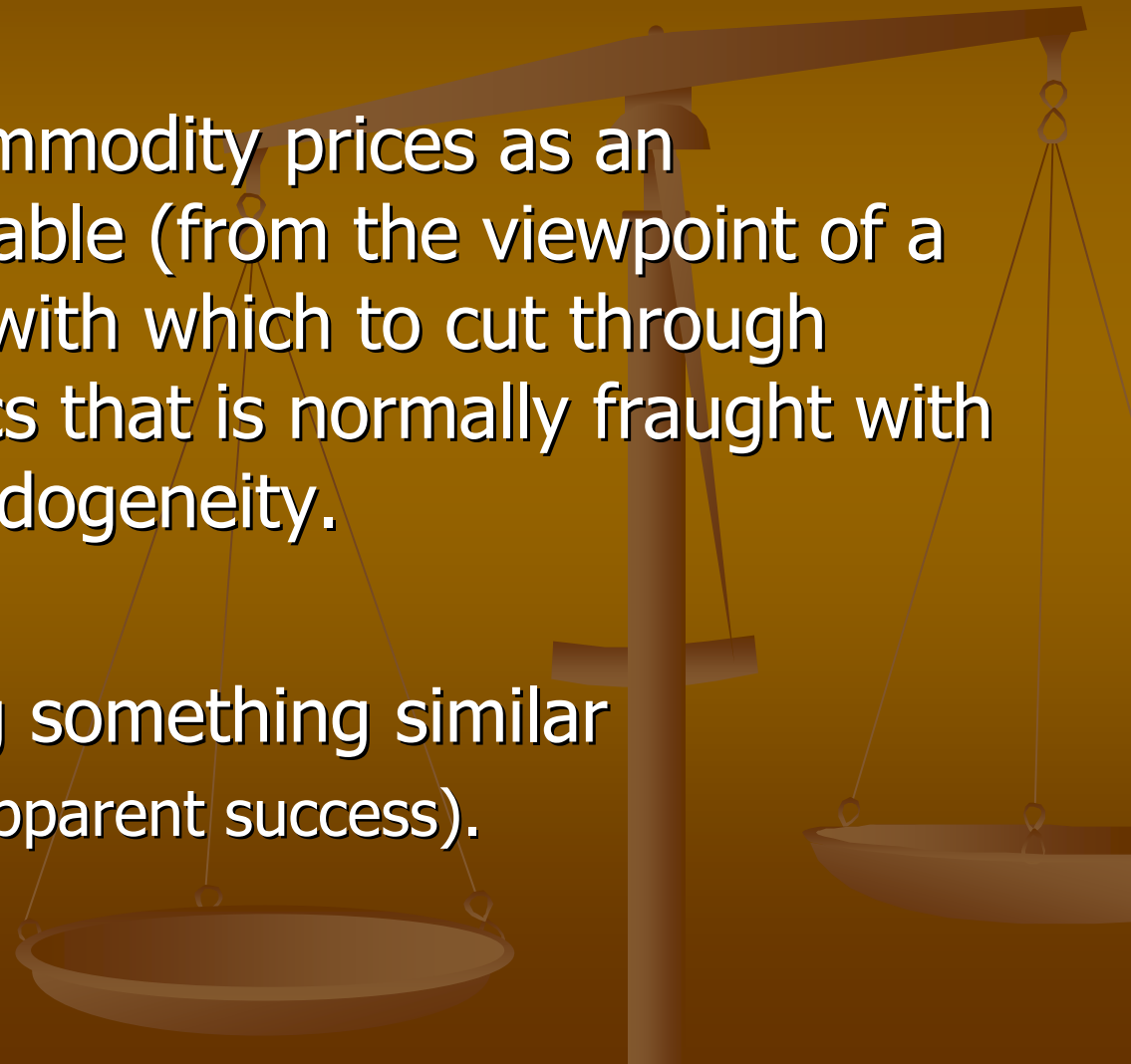
- 10 years ago, agricultural & mineral commodities were not of great interest.
- Huge swings in commodity prices – mostly upward – have put them back in the limelight.




Source: IMF

# The Chen-Rogoff-Rossi research strategy is excellent:

- Using world commodity prices as an exogenous variable (from the viewpoint of a small country) with which to cut through macroeconomics that is normally fraught with simultaneity/endogeneity.
- I've been trying something similar (with much less apparent success).

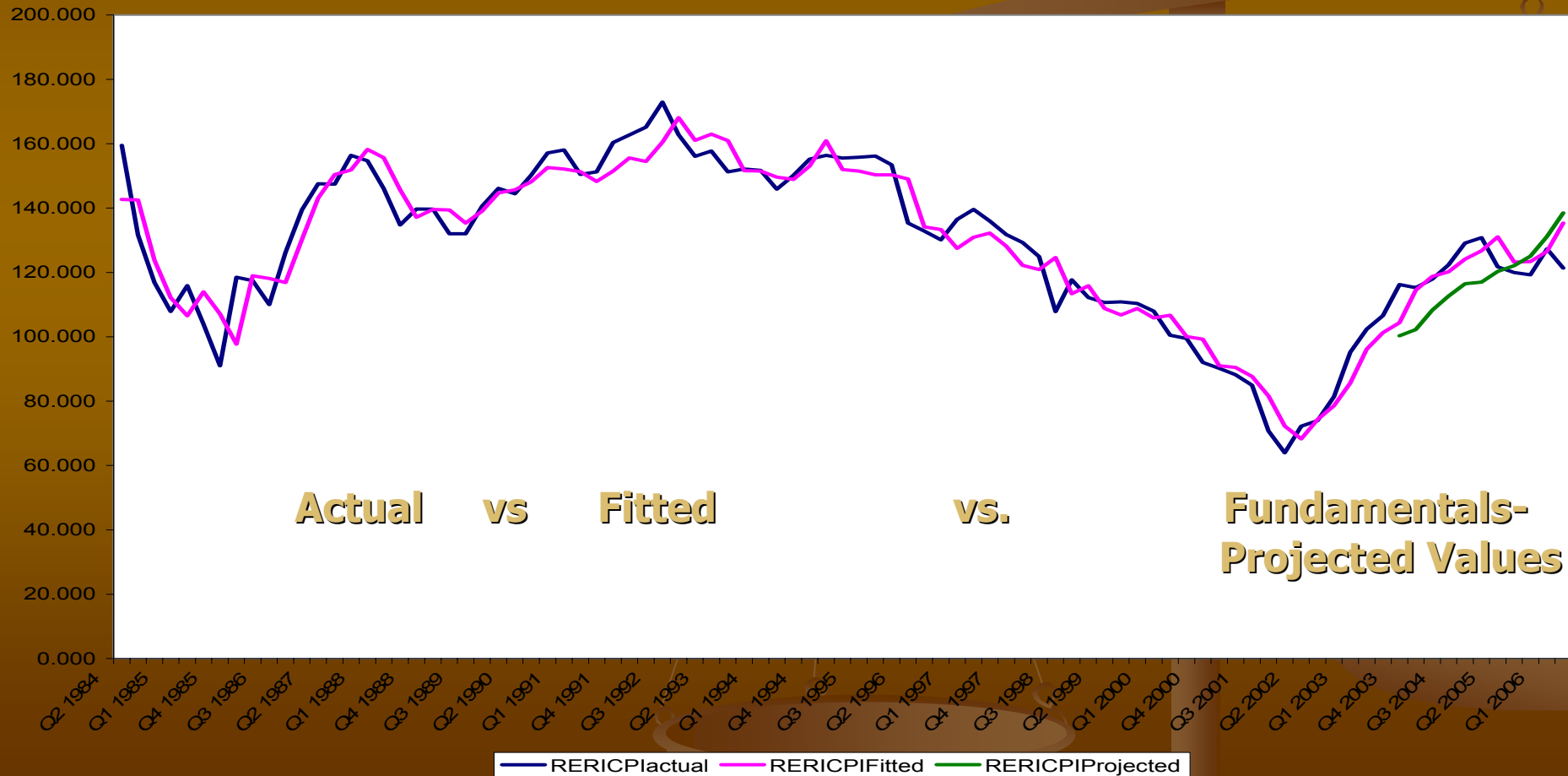


# Commodity Currencies

- Such as Canadian \$, Australian \$ & NZ \$
  - They are indeed commodity-driven currencies.
  - Others: South African rand & Chilean peso
  - Idle thought: Are we sure these countries are small enough *in their export markets* to take commodity prices as given?
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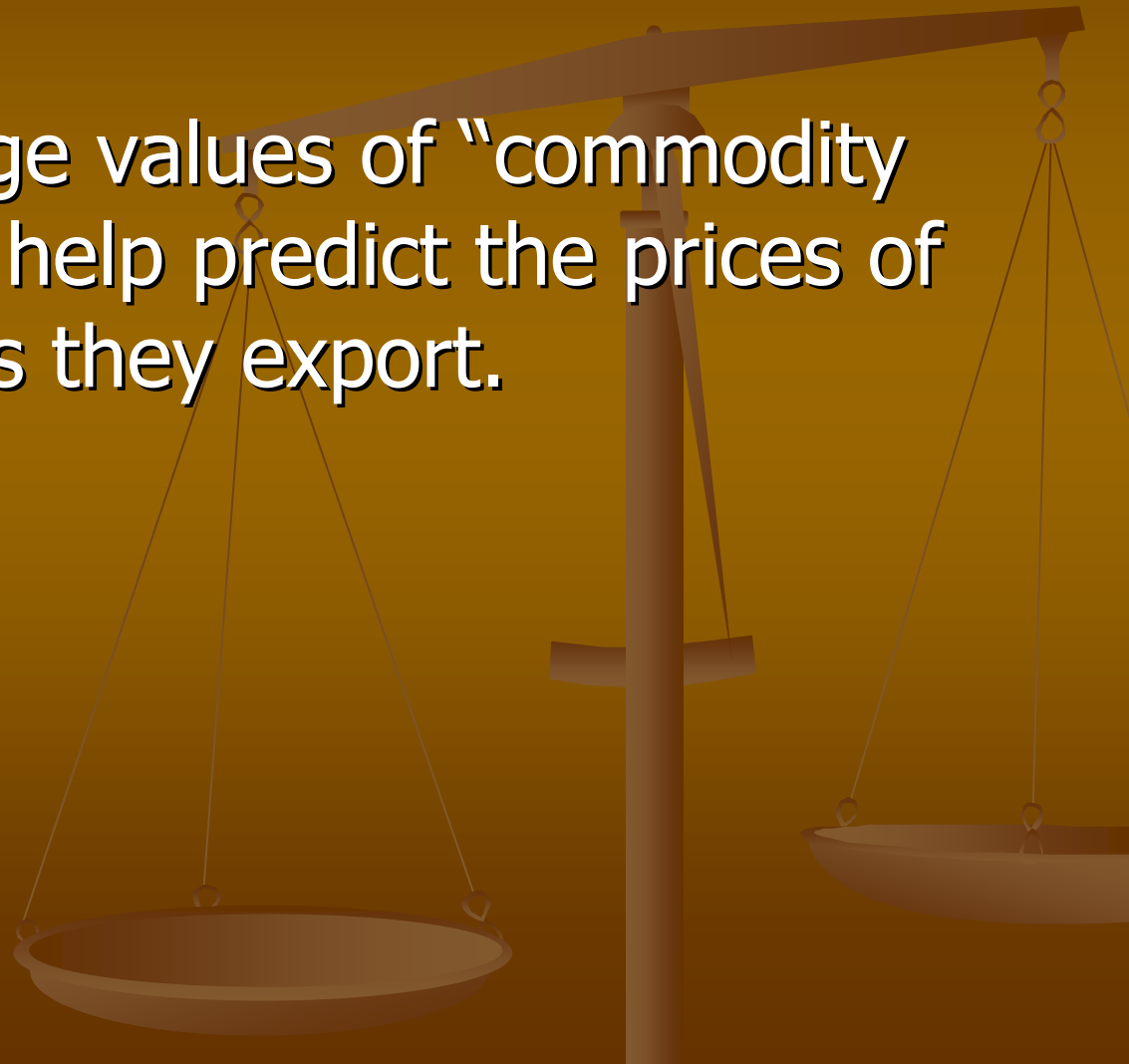
# The Rand, 1984-2006

Fundamentals (real commodity prices, real interest differential, country risk premium, & i.e.v.) can explain the real appreciation of 2003-06 – Frankel (2007).

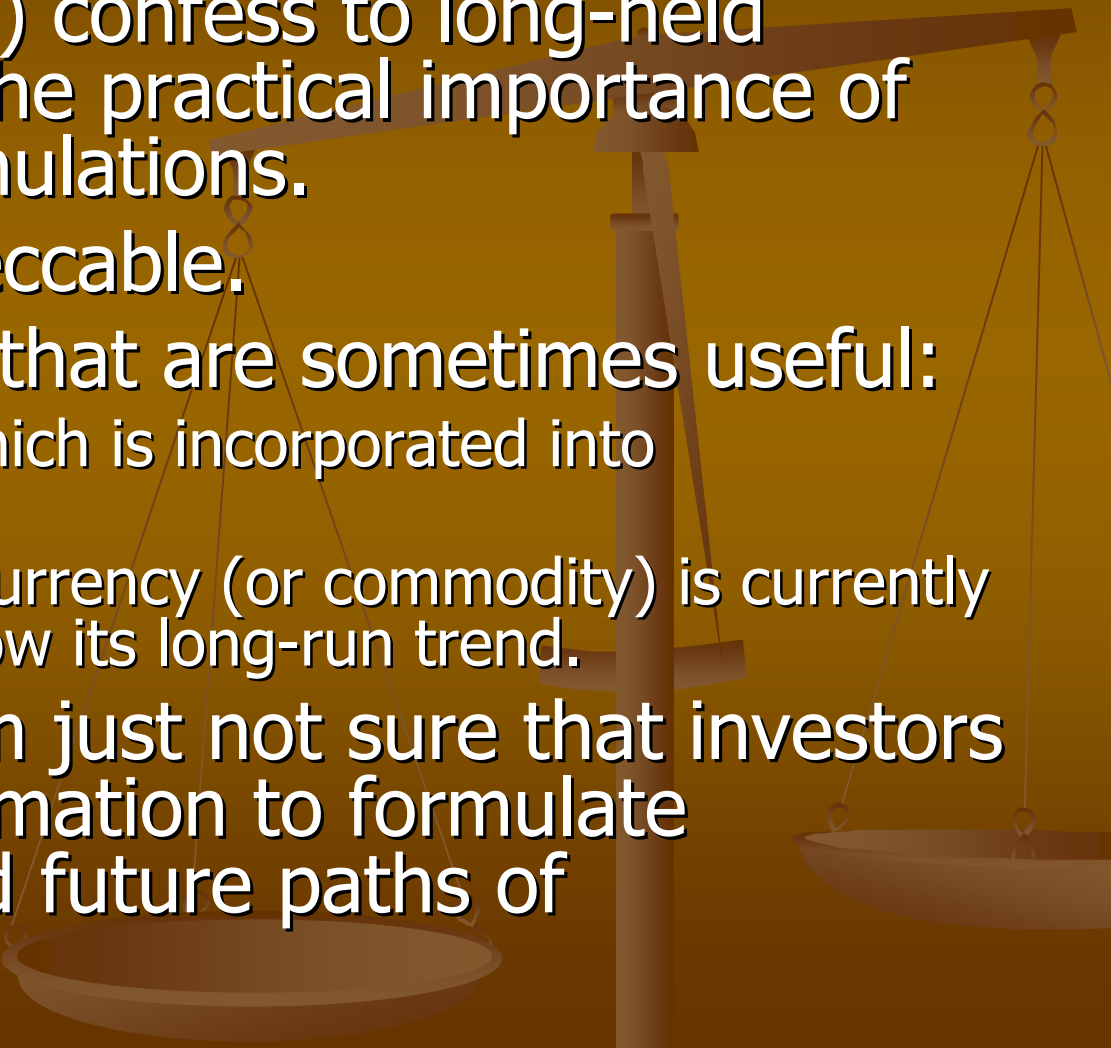


# The claim:

- Foreign exchange values of “commodity currencies” can help predict the prices of the commodities they export.



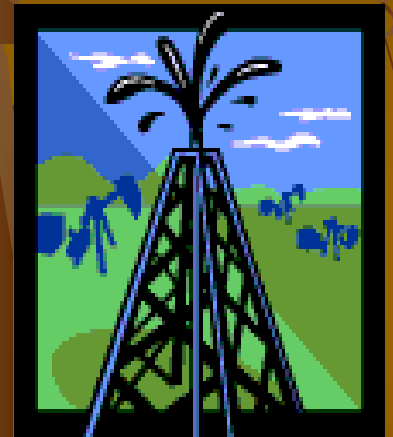
# The question at hand: present value formulation of exchange rates

- I must (reluctantly) confess to long-held misgivings about the practical importance of present-value formulations.
  - The theory is impeccable.
  - Two special cases that are sometimes useful:
    - a long-run trend, which is incorporated into expectations, and
    - perceptions that a currency (or commodity) is currently priced above or below its long-run trend.
  - More generally, I'm just not sure that investors have enough information to formulate elaborate expected future paths of fundamentals.
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# Example:

## Forecasting oil prices can be slippery

- *The Economist* magazine in a 1999 cover story forecast that oil might be headed for a price of \$5 a barrel.
- Even when oil prices rose sharply, forecasters initially judged the rise temporary, measured by the futures market.
- In what sense has the market had much useful ability to look ahead on oil prices?



# Advanced econometric technology

- Beyond addressing the endogeneity problem, the authors also emphasize their use of time-varying parameters.
- Great, but I'm not sure I see the connection:
- "Standard exchange rate fundamentals...are often jointly determined with exchange rates ... For these reasons, reduced form estimations of single-equation exchange rate models are prone to omitted variable problems and are likely to have time-varying parameters."

# Granger causality tests

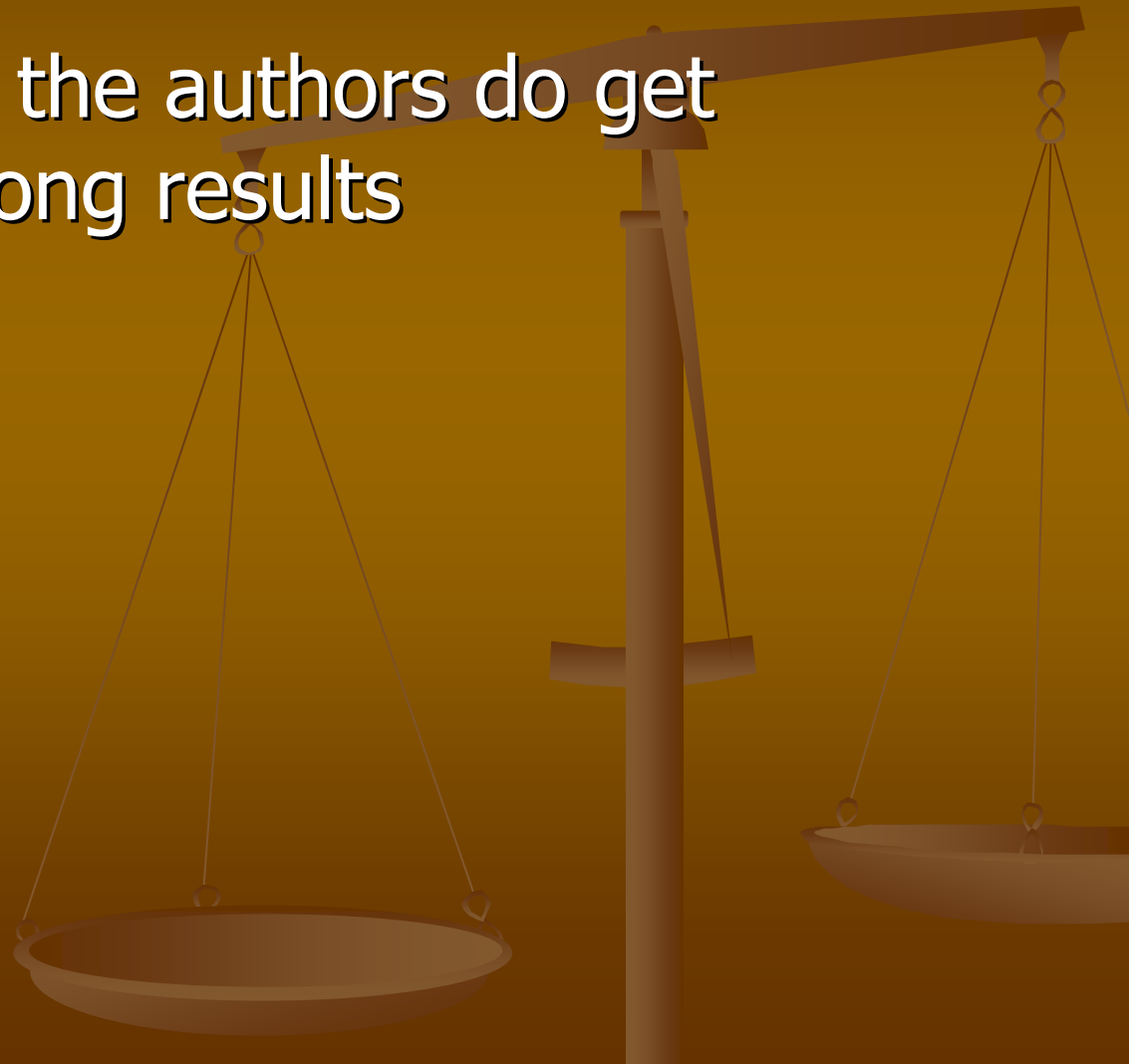
- Always have the problem that they can't address the possibility of simultaneous causality.
- Here the logic is that the currency investors are acting on the basis of future commodity prices.
- $E_t \Delta f_{t+1} = \beta_0 + \beta_1 \Delta s_t$

Fundamentals observed ex post are generally an *extremely* noisy measure of what had been expected ex ante.

- "...we should reject the null hypothesis that  $\beta_0 = \beta_1 = 0$  in the regression." – p.8
- **Only if** there is enough power.
- There won't be, if ex post fundamentals are a noisy measure of ex ante expectations.

# But “the proof is in the pudding”

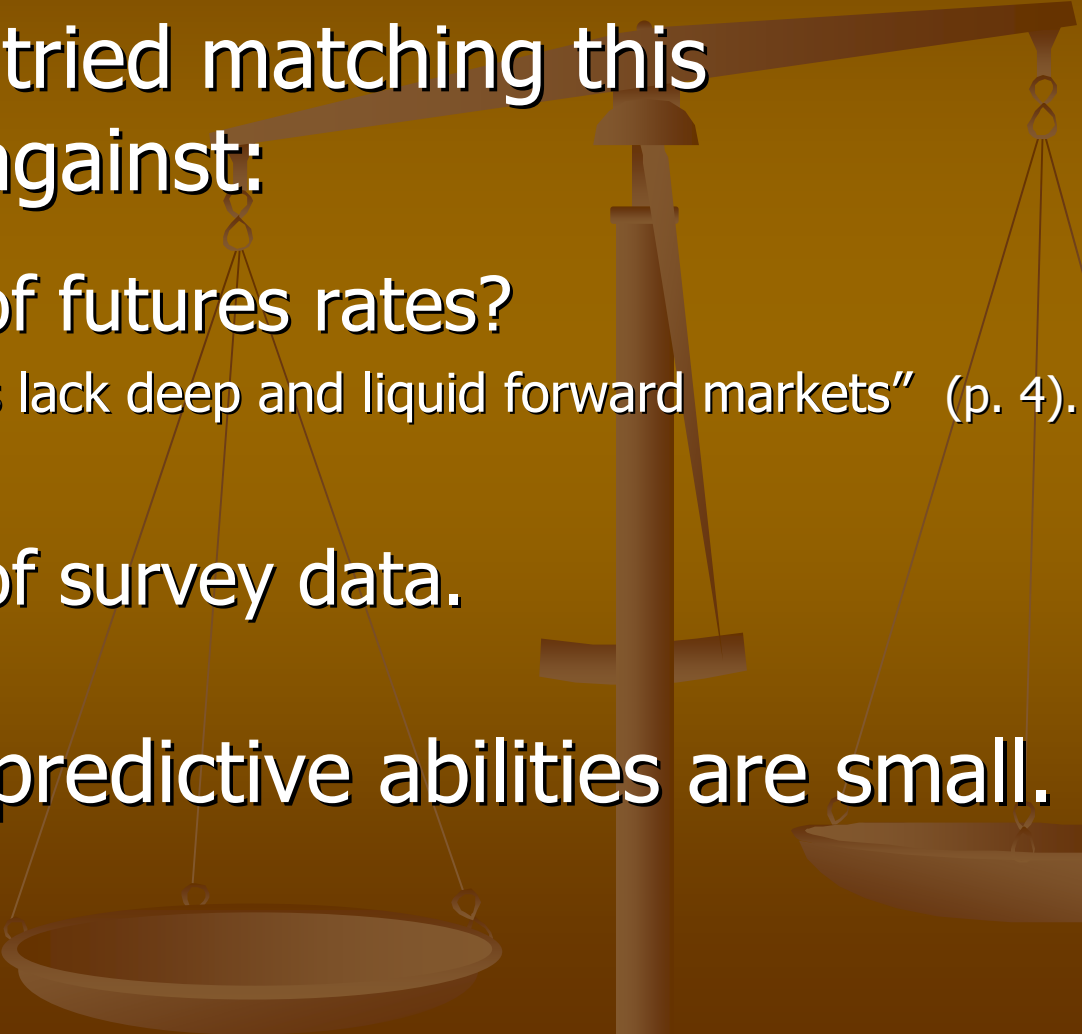
- To my surprise, the authors do get impressively strong results



# My initial suspicion:

- It's a numeraire problem.
- When the values of the commodity currency and the commodity are both measured in terms of US \$, you can get a positive correlation just because of fluctuations in the value of the \$. (1/2, in the case where values are symmetrically variable).
- It would be the same if the £ or ¥ were the numeraire.
- But I take it that in the robustness check (Sect. 4.1), when £ or ¥ are used as numeraires for currency values, the \$ remains numeraire for commodity prices?
  - In that case, my concern is largely addressed.

# One question

- Have the authors tried matching this predictive ability against:
    - Predictive ability of futures rates?
      - "...many commodities lack deep and liquid forward markets" (p. 4). Which ones?
    - Predictive ability of survey data.
  - Admittedly these predictive abilities are small.
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# One remaining suspicion

- Big swings in commodity prices
    - up in 1970s, down in 1980s, up in this decade – might be explained by big movements in US & global monetary conditions (real interest rates down in 70s, up in 80s, down recently).
  - The same is true of big swings in the popularity of emerging-market currencies.
  - = The “carry trade.”
  - Could world interest rates be driving both commodity currencies and commodities?
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