

"Oil and US GDP: A Real-Time Out-of-Sample
Examination"
by Francesco Ravazzolo and Philip Rothman

Discussant: Efrem Castelnuovo (UniPD)

"Empirical Business cycle modelling and policy in the
aftermath of the financial crisis"
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 1. Oil prices matter
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 3. Oil price might proxy omitted variables, e.g. global real economic activity (Kilian 2009)

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- ▶ Exercise with revised data, comparison

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- ▶ [note: you go for one year - justify!]

Non-linear effects (cont'd)

$$\begin{aligned}
 y_t = & \frac{0.98}{(0.13)} + \frac{0.22}{(0.07)}y_{t-1} + \frac{0.10}{(0.07)}y_{t-2} - \frac{0.08}{(0.07)}y_{t-3} - \frac{0.15}{(0.07)}y_{t-4} \\
 & - \frac{0.024}{(0.014)}x_{t-1}^\# - \frac{0.021}{(0.014)}x_{t-2}^\# - \frac{0.018}{(0.014)}x_{t-3}^\# - \frac{0.042}{(0.014)}x_{t-4}^\#.
 \end{aligned}$$

Figure: Source: Hamilton (2010).

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- ▶ Hamilton (2003, 2010): robust to inclusion of linear terms
- ▶ Support for non-linear model. Everything smooth and easy?

Censoring bias

Figure 1: The Effect of Censoring Negative Values of the Explanatory Variable

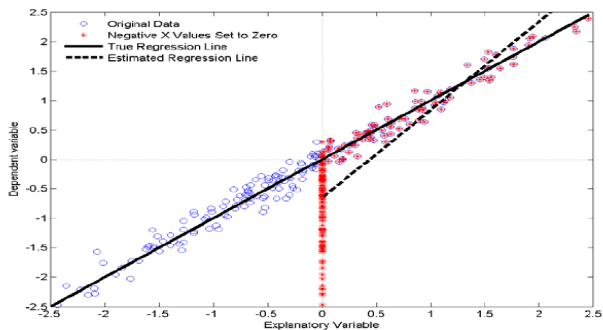


Figure: Source: Kilian and Vigfusson (2010).

Non-linear models and censored covariates

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- ▶ Hamilton vs. Kilian and Vigfusson: on going debate
- ▶ Discussion on the use of NOPI
- ▶ Linear vs. non-linear models: Take a position

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- ▶ Kilian (2009): Real oil price's volatility mainly explained by a **global demand shock for all industrial commodities** - proxy: linearly detrended **real** freight rate index (U.S. CPI deflator)

Global vs. domestic indicators

- ▶ Global pressures: A déjà vu? Borio and Filardo (2007) vs. Ihrig et al (2007)

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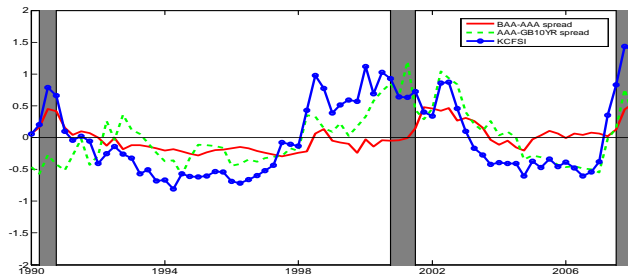
- ▶ Global pressures: A déjà vu? Borio and Filardo (2007) vs. Ihrig et al (2007)
- ▶ Kilian (2009, page 1060): "[The identification scheme] used in this paper allows for the possibility that **the high real price of oil in recent years, as well as in the 1970s, was driven in part by unusually low US interest rates, reflecting the low opportunity cost of holding oil inventories, as well as the weakening dollar**"

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- ▶ Other "competitors": real interest rates, exchange rates; unemployment, housing prices, measures of financial stress, ...

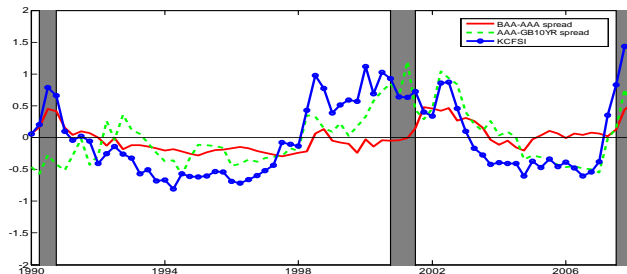
FCIs

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- ▶ Extra "domestic" macro factors?

Miscellaneous

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- ▶ Missing literature: Amelie Benear Carlton, 2010, "Oil Prices and Real-Time Output Growth." University of Houston WP.

Wrap up

- ▶ Do oil prices ... ? Yes!
- ▶ Role of real time data still to be established
- ▶ NOPI, linear vs. non-linear effects: discussions
- ▶ More domestic macro factors
- ▶ Look forward to reading the revised version!



Wrap up

TAKK!