

"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
 2. Point vs. density forecasts - discrepancy
 3. Oil price might proxy omitted variables, e.g. global real economic activity (Kilian 2009)

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 3. **global vs. domestic indicators**

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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)

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

Figure: Source: Hamilton (2010).

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- ▶ Support for non-linear model. Everything smooth and easy?

Censoring bias

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

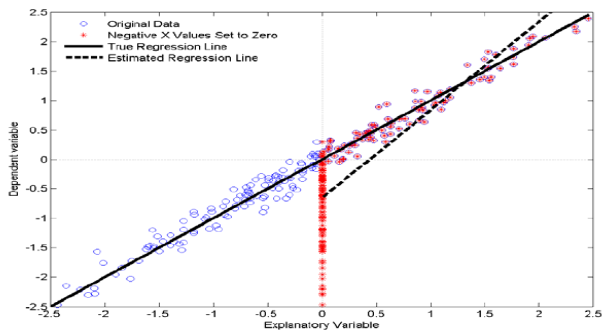


Figure: Source: Kilian and Vigfusson (2010).

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

Kilian's (2009) global indicator

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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

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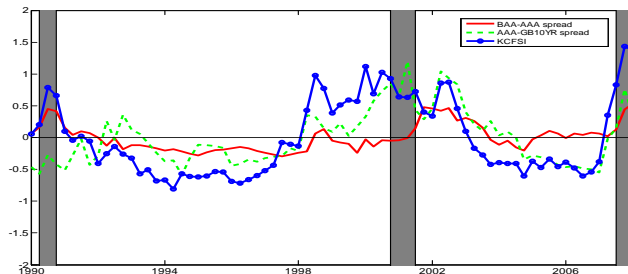
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- ▶ Other "competitors": real interest rates, exchange rates; unemployment, housing prices, measures of financial stress, ...



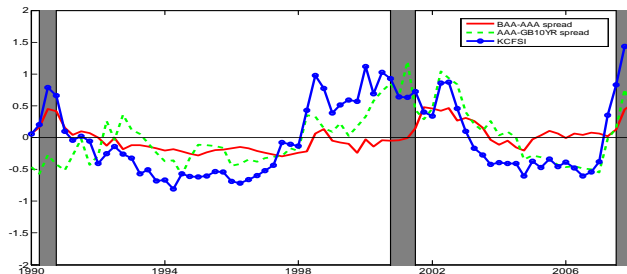
FCIs

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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!