Discussion of “Evaluating an Estimated...” by Lindé et al

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Overview

Ambitious model of an open economy (habit persistance, price and wage stickiness, slow exchange rate pass-through, investment adjustment costs, variable capital utilization)

Careful Bayesian estimation

Interesting evaluation of the model (comparison with VAR, forecasting performance)

...the focus is on the UIP equation

My perspective: should macro economists really try to make sense of asset prices (...when no one else can)?

The (typical) UIP Evidence

Regressions give

$$\Delta S_{t+1} = a + b\underbrace{\left(R_t - R_t^*\right)}_{\mathrm{E}_t\,\Delta S_{t+1}+rp_t} + \varepsilon_{t+1},\ b < 0 \text{ instead of } b = 1$$

With RE, need Cov $(\mathrm{E}_t\,\Delta S_{t+1}, rp_t) < 0$ to generate $\hat{b} < 0$

In this paper

$$rp_t = -0.6\,\mathrm{E}_t\,\Delta S_{t+1} - 0.6\Delta S_t - \phi NFA_t + \text{ shock}$$

The effect of this: Figures 1 (solid is with rp) and 3 (lower panel is with rp)

Effect of $\mathrm{E}_t \, \Delta S_{t+1}$: larger jump in S_t...

$$R_t - R_t^* = \mathrm{E}_t \, \Delta S_{t+1} + rp_t$$
$$= 0.4 \, \mathrm{E}_t \, \Delta S_{t+1} + ...$$

$R_t \uparrow$ gives strong immediate appreciation (...and expected future depreciation)

Effect of lag (ΔS_t): prolonged adjustment

$$\underbrace{\Delta S_{t+1}}_{+1} = 0 + (-1.5)\left(\underbrace{\mathrm{E}_t\, \Delta S_{t+1}}_{+1} + \underbrace{rp_t}_{-1.67}\right) + \varepsilon_{t+1}$$

Figure 1: Impulse response functions to a monetary policy shock

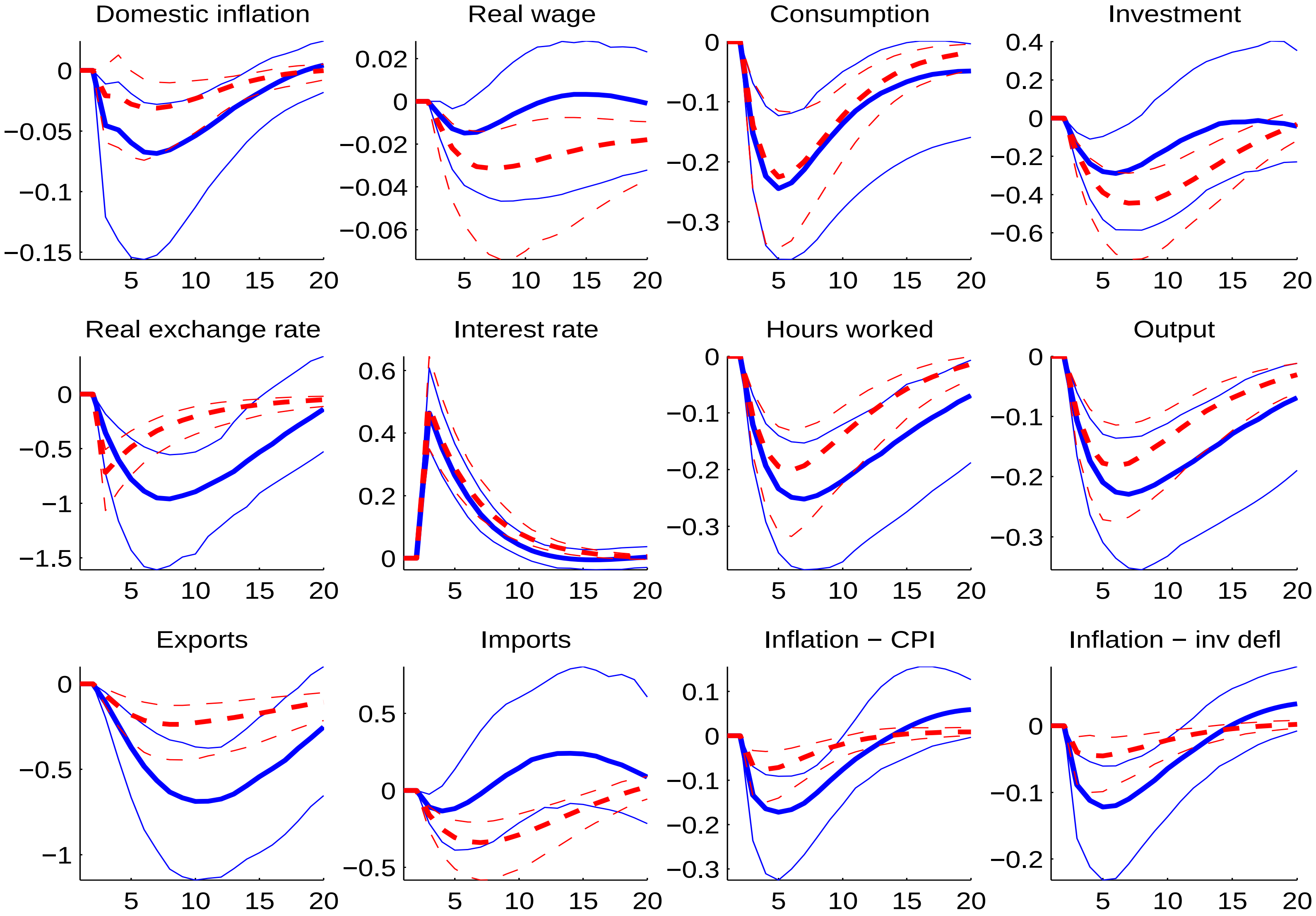
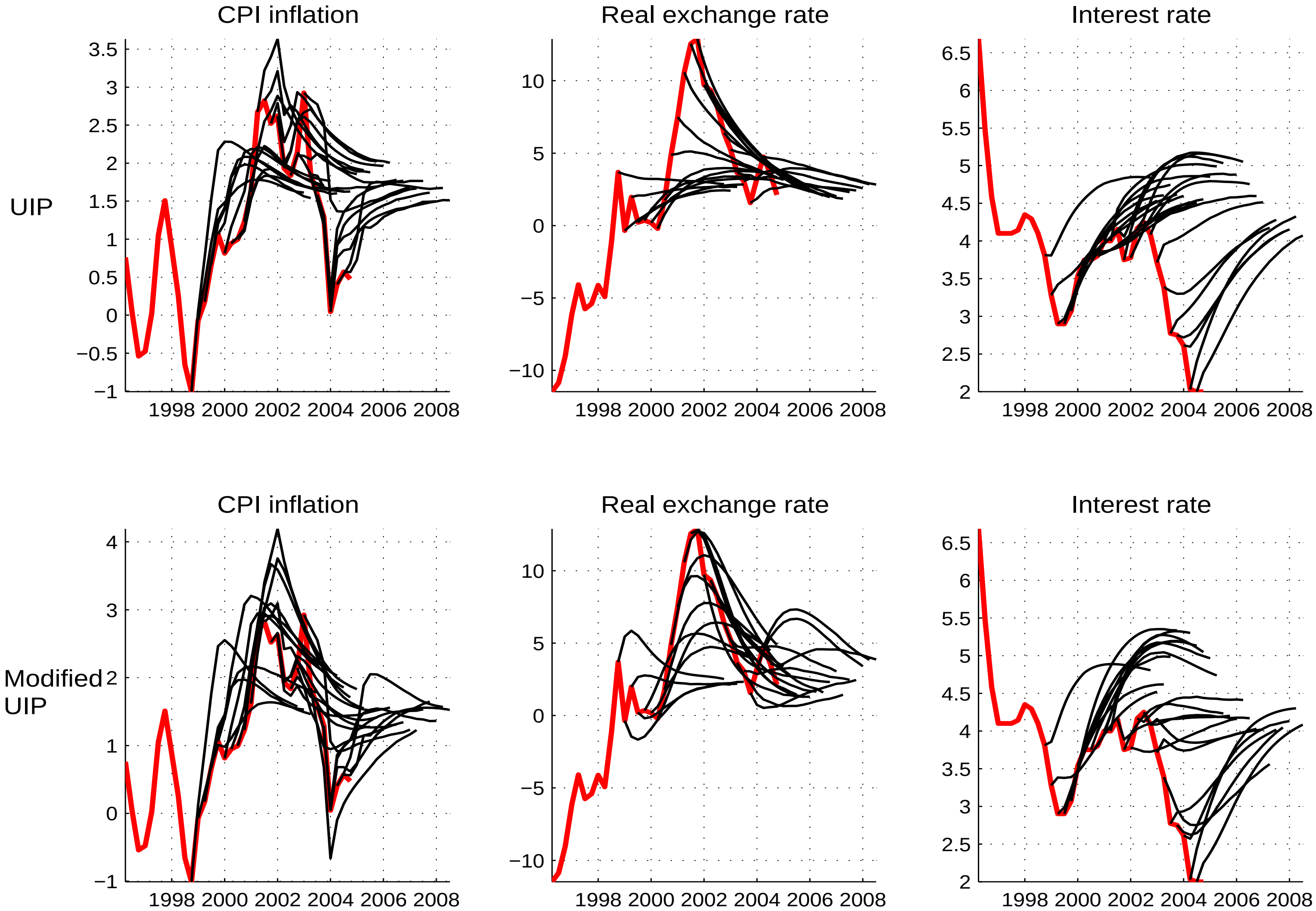


Figure 3: Actual data (thick line) and forecasts (thin lines) $1999Q1 - 2004Q4$ from the DSGE using different UIP specifications



Issues

Empirical Evidence

We know: UIP is rejected

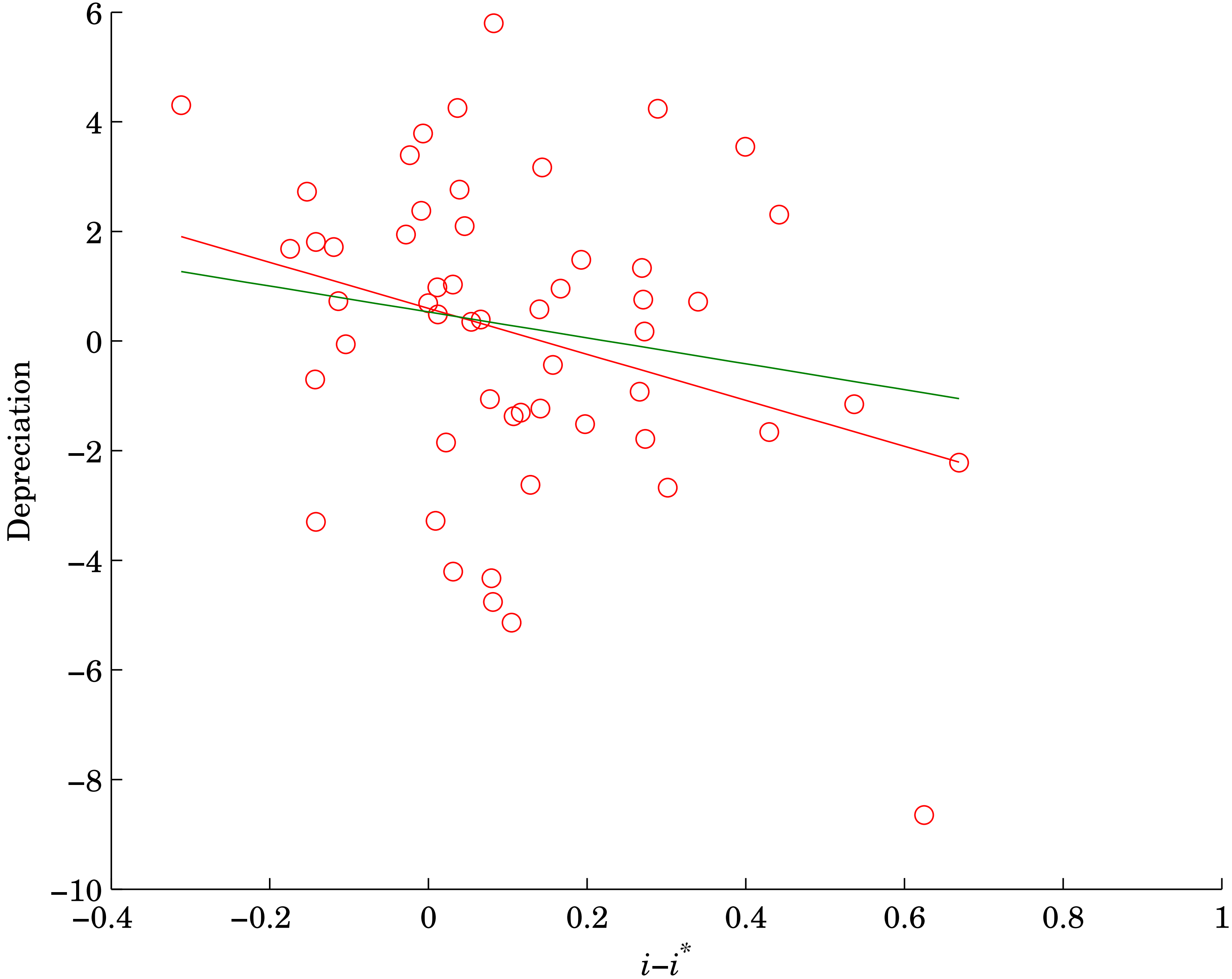
(...but less so if not USD, long horizon, or on survey data)

SEK?

1980s: devaluations (1981 and 1981), devaluation scares in 1985...a few “extreme” observations

1993—: cleaner period, but data still depends on extreme observations (autumn 1995, Toblerone affair)

Q. Should we always try to fit data? Even if, why “OLS”?



Depreciation
6
4
2
0
−2
−4
−6
−8
−10
−0.4
−0.2
0
0.2
0.4
0.6
0.8
1
i–i*

Micro Foundations vs. Reduced Form

Basic asset pricing:

$$rp_t = \text{Cov}_t\left[\ln U'(c_{t+1}) - \pi_{t+1}, \Delta S_{t+1}\right]$$

In current paper: Cov_t [] projected onto $\text{E}_t\, \Delta S_{t+1}$ and $0.6\Delta S_t$. Similar to affine yield curve models.

Q. Reduced forms in DSGE model?

Q. If we really want to model (time varying) risk premia:
(a) Do exchange really have a lot to do with macro? (Duarte&Stockman)
(b) Could a Campbell&Cochrane habit formation fo the job? (Verdelhan)
(c) 3rd order approximation? (Seppälä)

Alternatives?

This paper is mostly about the effect of imported inflation. Relation to specification of price rigidity?