Discussion of "Imperfect Information, Macroeconomic Dynamics and the Yield Curve: An Encompassing Macro-Finance Model" by Hans Dewachter

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Summary

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Key results:

- Encompassing model outperforms competitors.
- Time variation in real rate is an important contributor to "level" factor.

Focus of my comments

Another very impressive Dewachter piece. A few comments, perspectives and questions on

- the model selection and specification
- the specifics of learning

Comments on model specification

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- Encompassing model is highly parametrized. Is it possible to clarify which features (indexation and habit persistence, learning, liquidity premia, departures from EH) are the most important?
- Why does the ecompassing model still need so much indexation ($\delta_\pi = 0.53$) and habit formation ($h = 0.75$)?
- How important are departures from EH once learning is introduced? MPR parameter estimates in the encompassing model are mostly insignificant.

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- What would results for encompassing (MFE) model look without liquidity premia?
- Would liquidity premia be less important if 3-month T bill rate was used instead of Fed funds?

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- How important is inclusion of survey expectations in the vector of observables?
- Good fit of survey expectations probably important for the result that high long rates in the 1980s are mostly explained by high actual and perceived neutral real rate. Is this plausible? Role of inflation risk premia?

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- Does the central bank know ρ? Does it matter?
- Why are endpoint estimates updated using only "univariate" forecast errors (eq. 13)?

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- Results of Orphanides and Wei suggest that learning about more parameters may fit the yield data better.
- But more general learning also creates problems (Laubach-Tetlow-Williams, in progress).

Agnostic learning model: A time-varying VAR

- State vector $x_t \equiv [\pi_t \ q_t \ r_t]'$ of inflation, measure of real activity, one-period rate.

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where

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- Time-varying estimate of volatility Σ_t affects yields through interaction with risk prices, Jensen's inequality terms.

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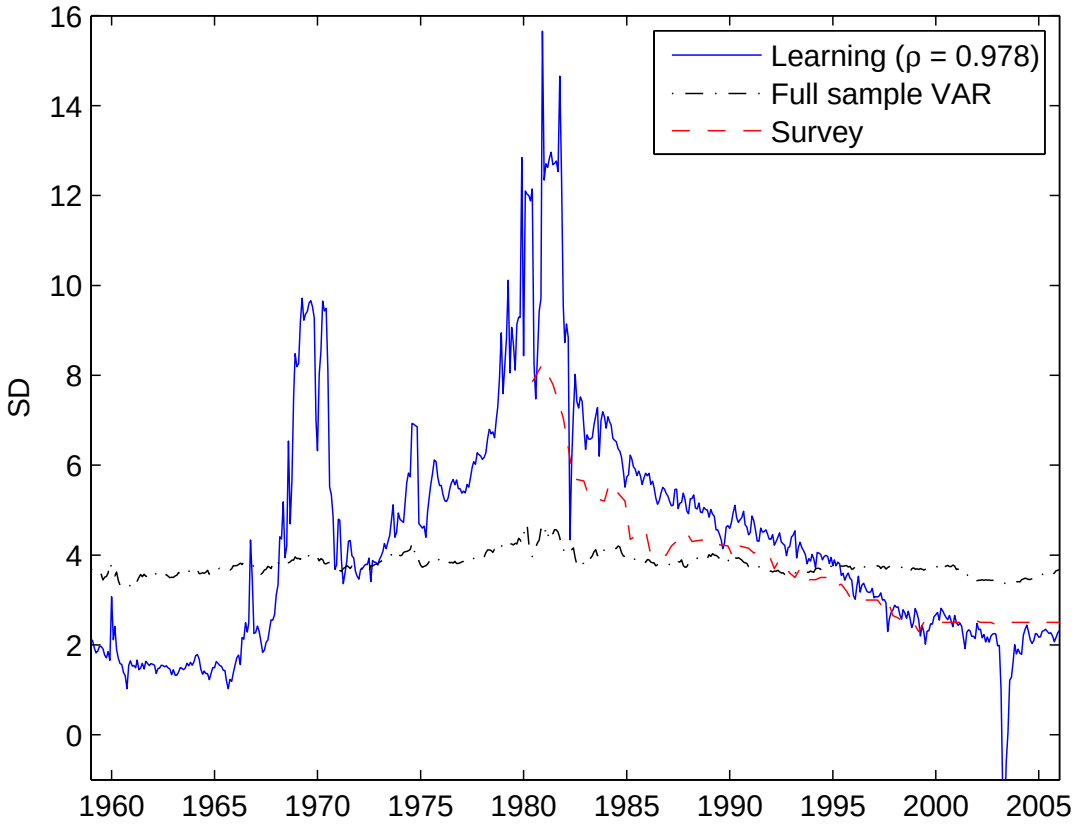
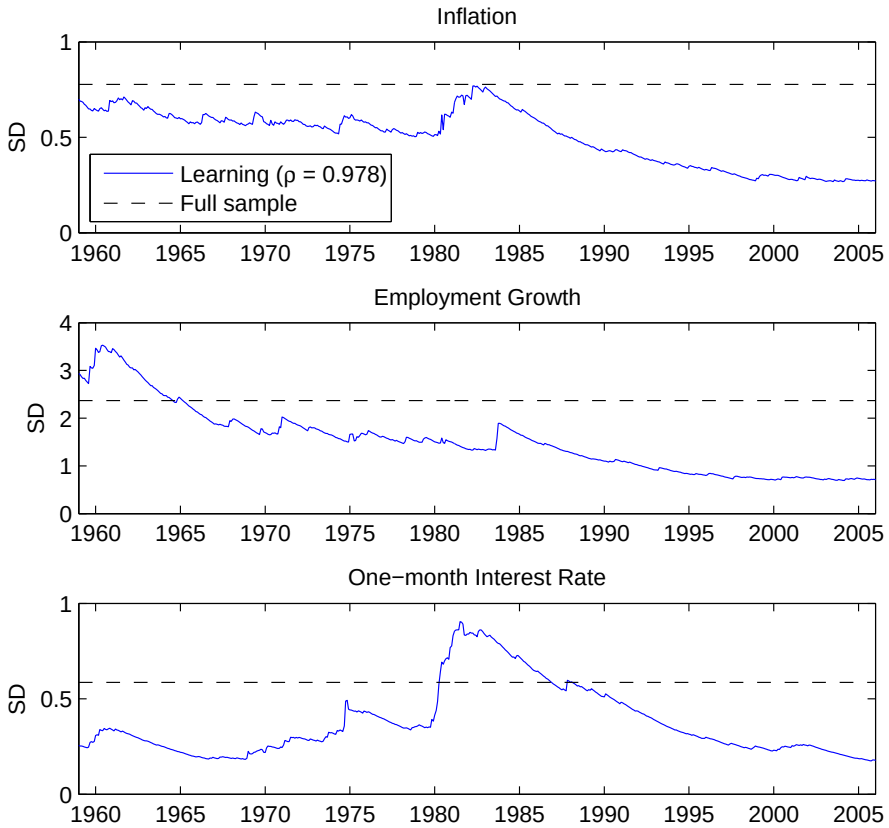
  where η_t is Gaussian measurement error with diagonal covariance matrix Δ.
- Given the time series of VAR parameters $\{\mu_t, \ \Phi_t, \ \Sigma_t\}$, time-invariant parameters $\lambda_0, \ \lambda_1, \ \Delta$ are estimated by ML.

VAR-based long-horizon inflation forecast



Standard deviations of VAR residuals



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- Time variation in perceived volatility of the economy may play an important role in explaining term structure behaviour.

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- Once we take expectations formation seriously, how close are we to the EH?
- How can we reduce number of free parameters?