Discussion on: Uncertainty and business cycles: Exogeneous impulse or endogenous response? by S. Ludvigson, S. Ma and S. Ng[1]

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[1] The views expressed here are those of the author and do not necessarily reflect those of the Banque de France.

Short summary

Paper on shock identification in a SVAR dealing with the effects of uncertainty shocks on business cycles

Main results:

1. 2 new indexes of uncertainty: Macro Uncertainty (U_M) and Financial Uncertainty (U_F)
2. A new approach to identify shocks in SVAR based on 2 types of constraints on the shocks $e_t(B)$ themselves: *Special event* and *Correlation*
3. Empirical results:
   - U_F is a source of business cycle fluctuations
   - U_M is rather an endogenous response to business cycle

General comments

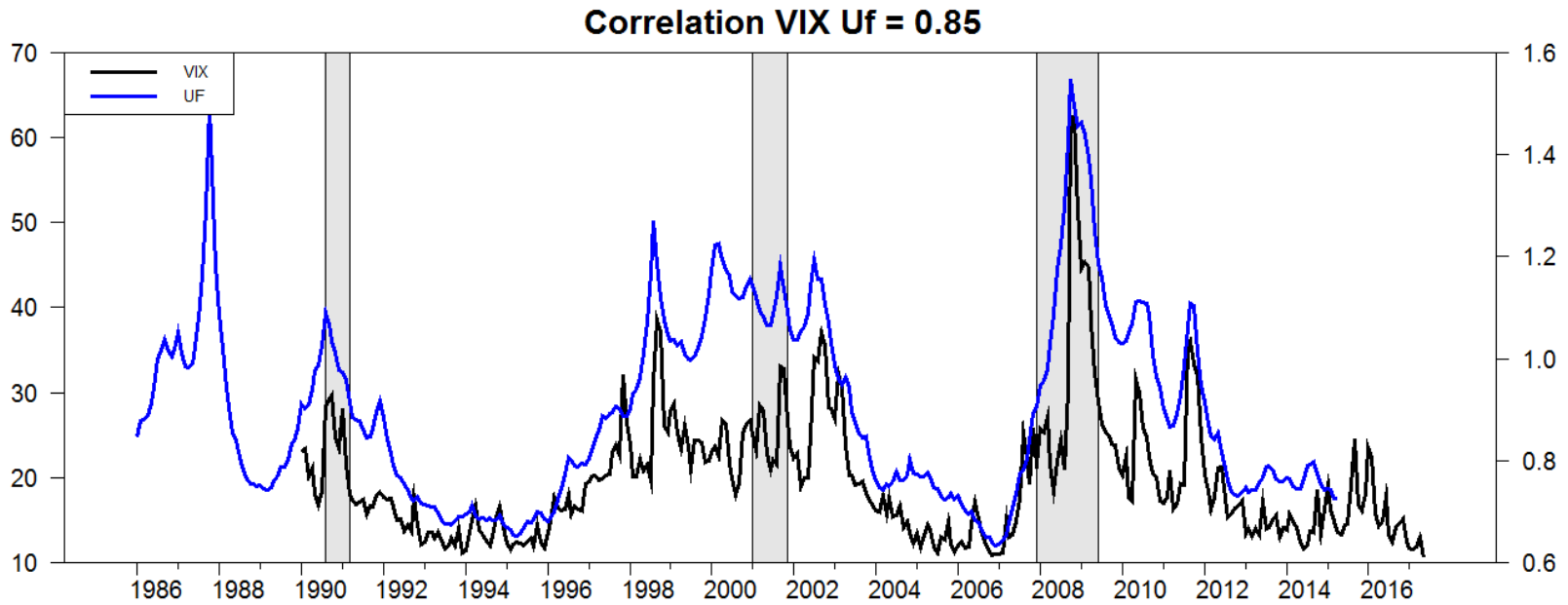
- Very good paper with important implications, very clear, well polished (first version in March 2015), ready to be submitted.
- Uncertainty is a hot topic for both policy-makers and academics: a virtuous circle started in the understanding of this phenomenon. How to measure? What are the main macro effects?
- Recurrent questions from policy-makers and challenges for economists/econometricians:
  1. Which measure of uncertainty should I follow ?
  2. How to disentangle uncertainty shocks from other types of shocks?

Comment 1 - Interpretation of U_F and U_M

Measuring uncertainty: Various approaches

1. Disagreement among forecasters using surveys (Lahiri and Sheng, 2010, Bachmann et al., 2013, Istrefi and Mouabbi, 2017)
2. Macroeconomic uncertainty as measured by deviation to expectations (Rossi and Sekhposyan, 2015, Scotti, 2016, Jurado et al., 2015)
3. News-based metrics : number of articles containing a specific word (EPU indexes by Baker, Bloom and Davis, QJE 16)
4. Financial volatility indexes
5. Micro-level measures

Comment 1 - Interpretation of U_F and U_M



U_F is a proxy of financial volatility, close but smoother than VIX

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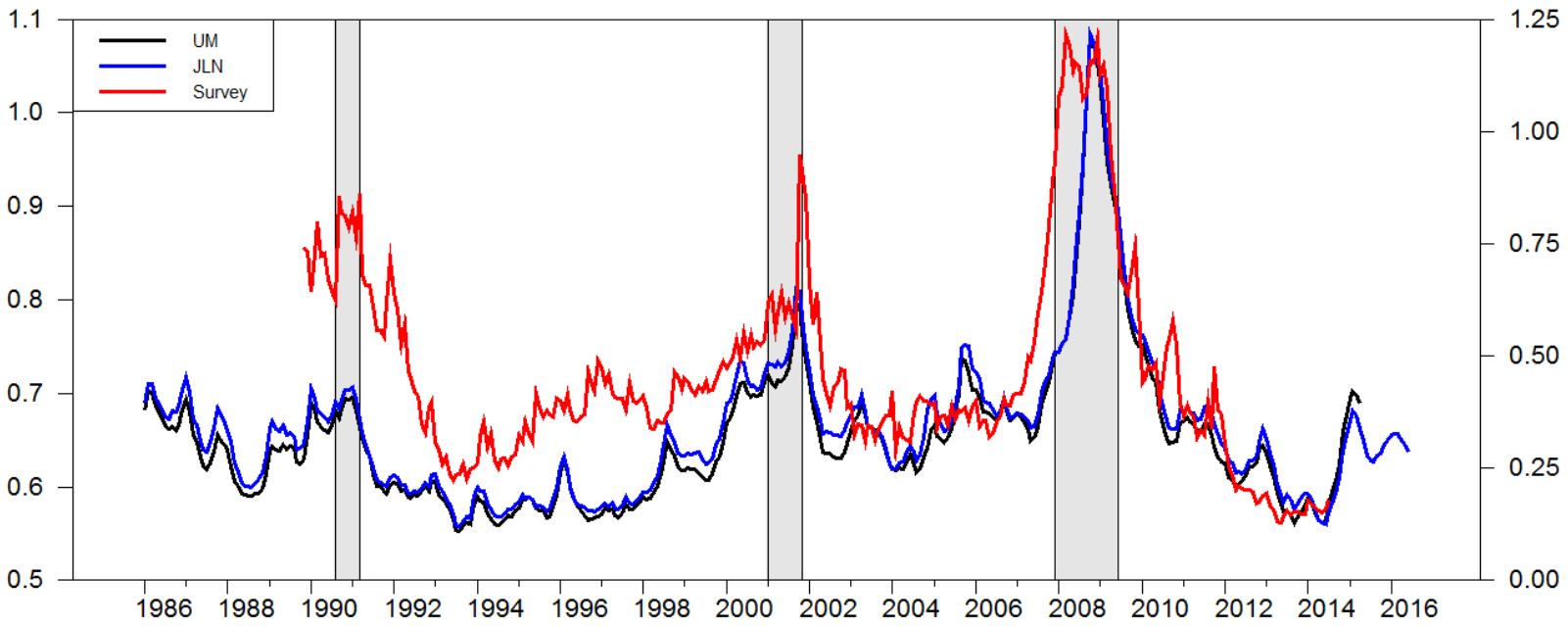
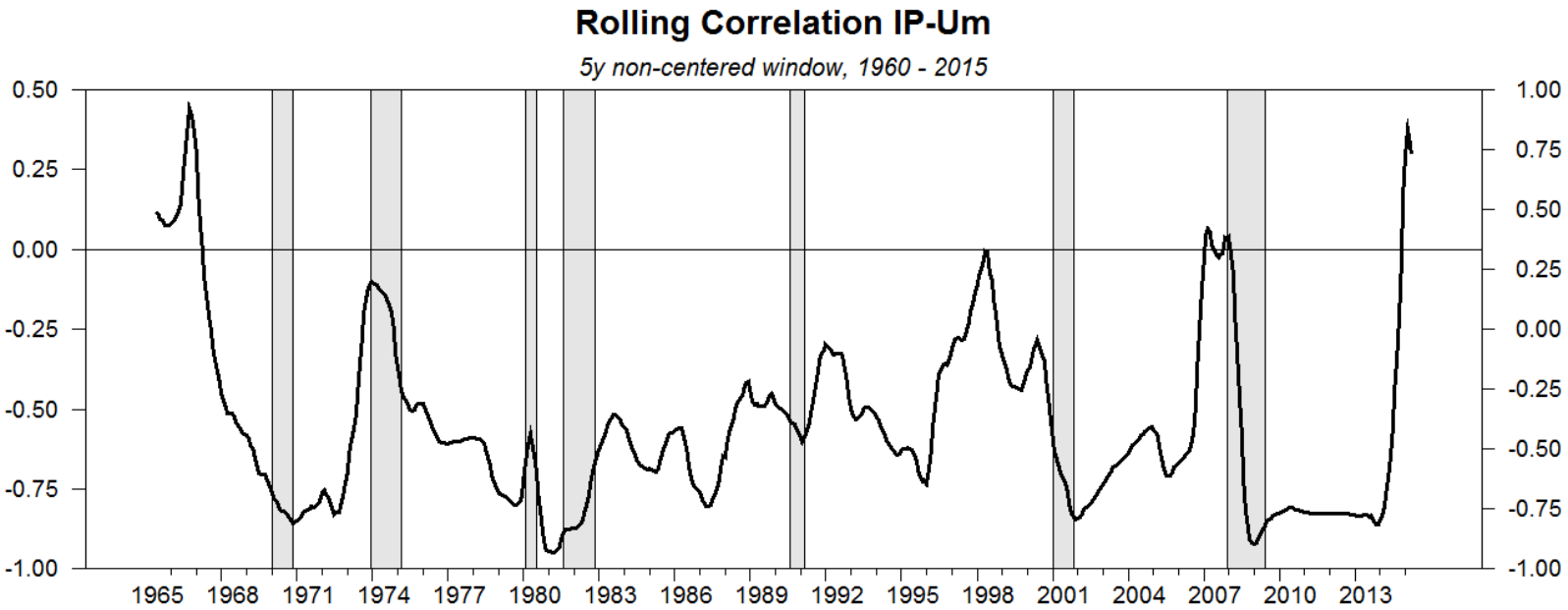


U_M is similar to the uncertainty index by Jurado, Ludvigson and Ng (AER 2015)???

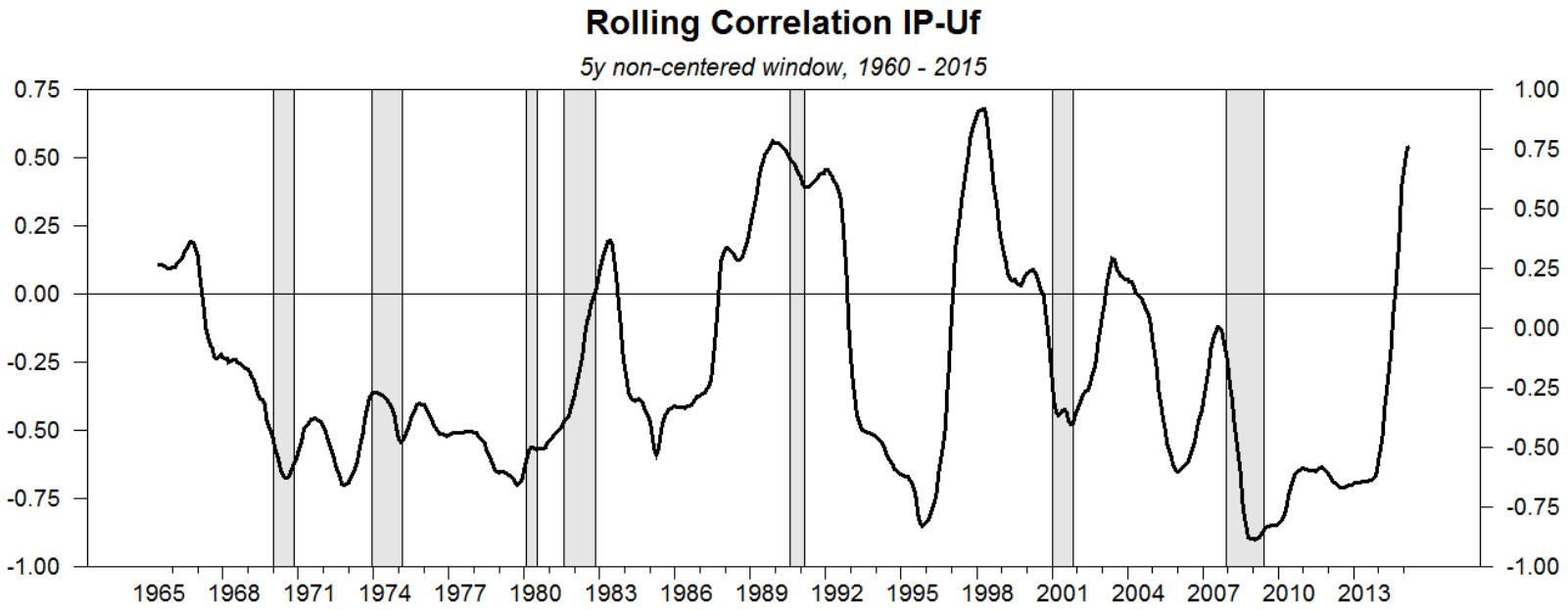
Correlation of U_M with dispersion of forecasts (Ozturk and Sheng, JIMF, 2018) $= 0.76$

Comment 2 - Relationship between IP and U_M



Rather stable negative relationship

Comment 2 - Relationship between IP and U_F



Evidence of a time-varying relationship.
What is the driver of the changes in correlation regimes?
Possible non-linearities in the relationship (Caggiano et al., EL, 2017)

Comment 3 - About the constraints on shocks

Very smart idea to focus on the shocks for the identification

On *Special Events* constraint:

- Why only 3 constraints $\bar{\tau}$? (2 for e_F and 1 for e_M)
- Is there an optimal number of constraints ? For example based on the percentage of elimination in the initial solutions
- Why focusing on the Great Recession for e_M and not on other recessions available in the sample (e.g. 1974-75 or 1990-91)?
- Sensitivity to the choice of $\bar{k}$?

Comment 3 - About the constraints on shocks

On *Correlation* constraint:
Imposing negative correlation between financial uncertainty shock e_F and stock market returns S may be discussed

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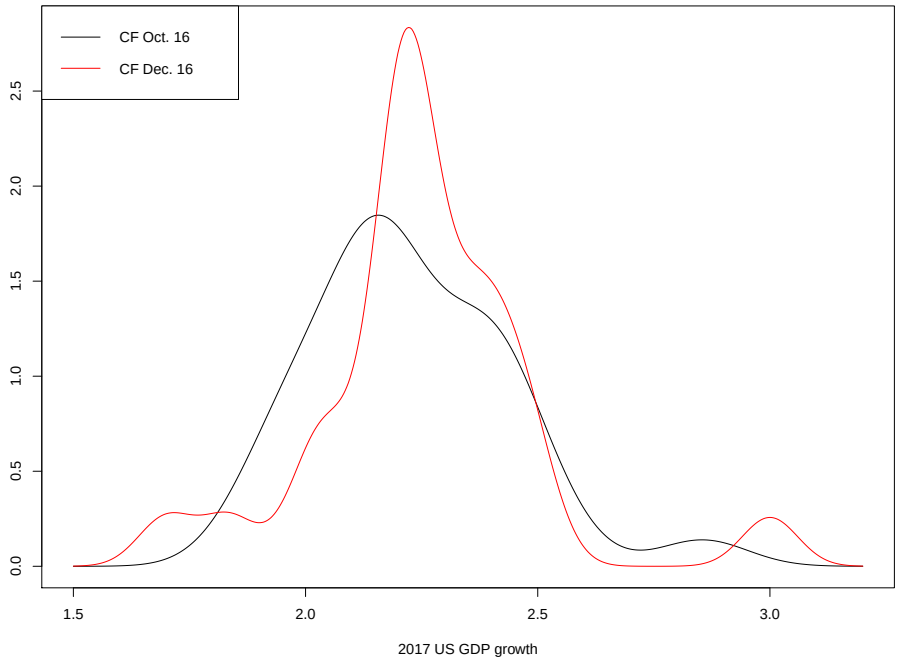

Figure : *US GDP forecasts before and after Trump's election from Consensus*

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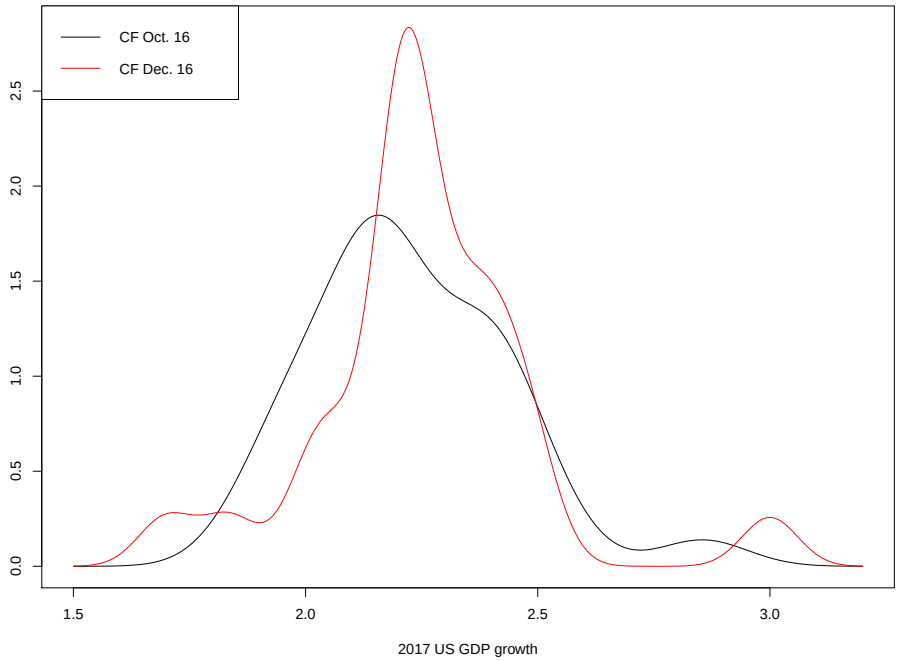

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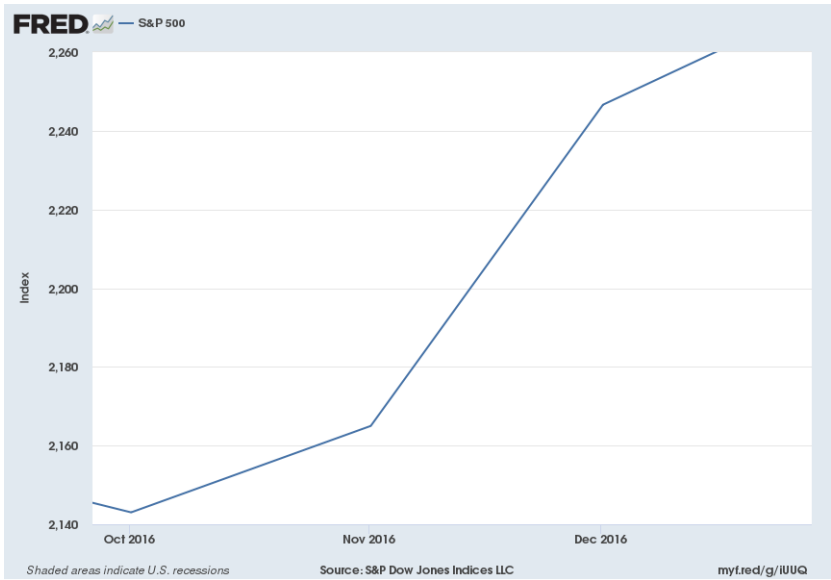
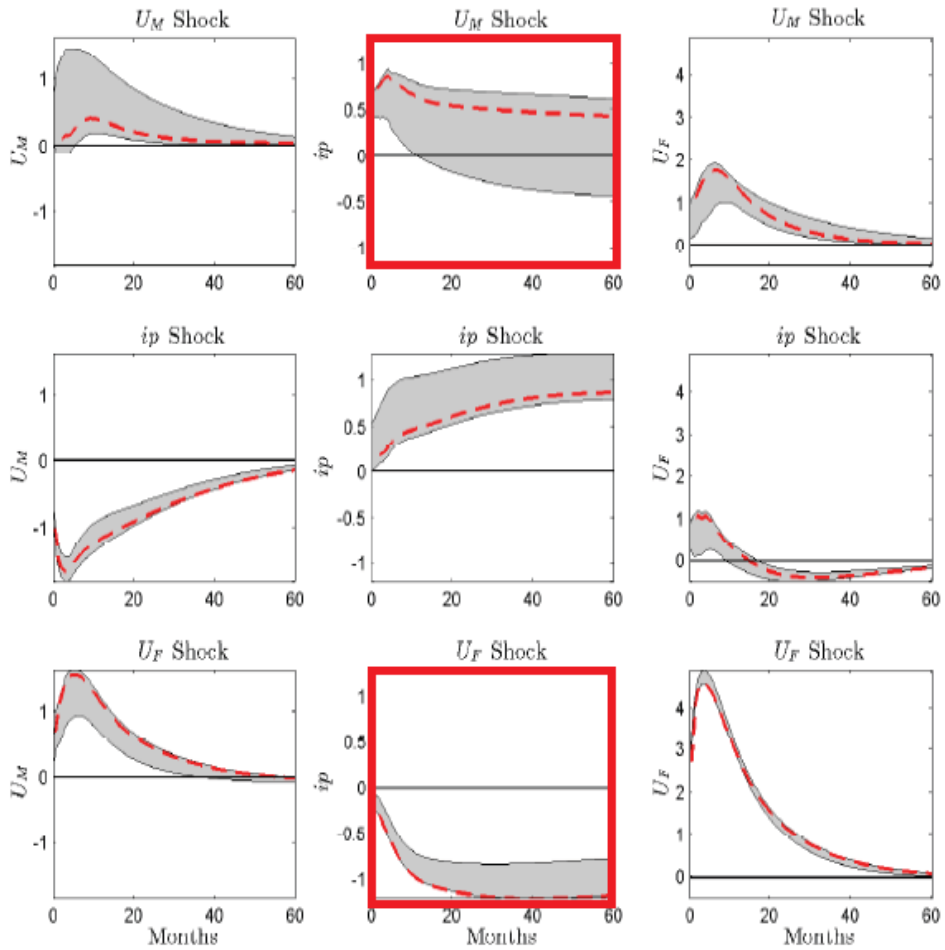


Figure : *Stock prices SP500*

Comment 4 - About IRFs



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2. A financial uncertainty shock generates a **persistent** drop in industrial production.

   Where is the bounced-back effect advocated by the literature?
   To what extent is it related to the fact that *IP* enters in **level** in the SVAR model ?
   Why not using **growth** in *IP* ?

Comment 5 - Robustness of the results to the methodology

Very important and convincing empirical results that should be supported by alternative shock identification strategies to be fully adopted by policy-makers:

1. Imposing constraints on the IRFs
   - Functional approximations of response functions (Barnichon and Matthes, 2017) by mixing basis simple functions
   - Direct modeling of IR (Waggoner and Zha, 2017)

2. Other shock identification in SVARs (non-recursive)
   - Caldara et al. (EER, 2016): Disentangle uncertainty and financial shocks using a penalty-function approach, show that financial shocks are an important source of business cycles and that various uncertainty shocks (not necessarily financial uncertainty) have strong macro effects
   - Cascaldi-Garcia and Galvao (2017): Disentangle the joint effect of technology news shocks and uncertainty shocks