

Short and Variable Lags

BUDA, CARVALHO, CORSETTI, DUARTE, HANSEN,
MOURA, ORTIZ, RODRIGO AND MORA

Discussion by Thomas Drechsel (University of Maryland)¹

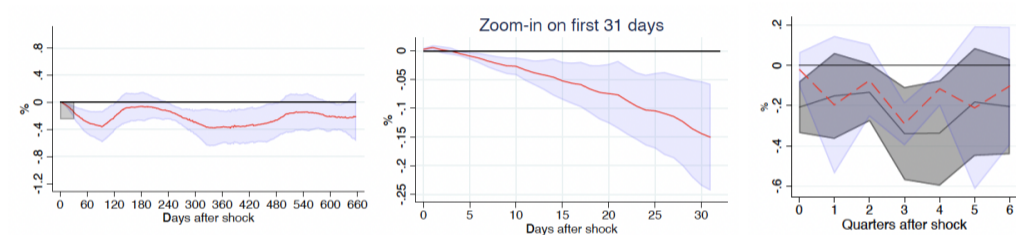
CEBRA Annual Conference, Columbia SIPA

July 6, 2023

¹I thank Boragan Aruoba and Miguel Bandeira for helpful conversations about this paper.

A SUMMARY IN PICTURES

SPANISH CONSUMPTION RESPONSE TO ECB MONETARY POLICY TIGHTENING



- ▶ Newly constructed data allows to trace out daily IRFs to monetary shock
- ▶ Quarterly IRFs mask important details about transmission mechanism

HIGHLIGHTS OF THIS PAPER

- ▶ Uses rich data to establish new facts about monetary transmission mechanism
- ▶ Authors address new challenges that working with such data entails
 - ▶ Enormous data construction effort → see companion paper ([Buda et al., 2022](#))
 - ▶ Daily IRF computation requires some careful thinking from technical point of view
- ▶ Clearly written, exposition does not get lost in details

OVERVIEW OF MY COMMENTS

1. Challenges: seasonality, noise, sample length
2. Choice of shock measure
3. Punchline

COMMENT 1: SEASONALITY, NOISE, SAMPLE LENGTH

- ▶ New type of data brings about technical challenges
- ▶ Seasonality, day-of-week effects
 - ▶ E.g. ECB meets on Thursdays, but Thursday consumption and sales might be special
- ▶ Daily data can display other noisy patterns, e.g. one-off jumps
- ▶ Sample is short in terms of capturing macroeconomic events
 - ▶ 5-7 years depending on variable
- ▶ I was glad to see the authors are thinking carefully about these issues

COMMENT 1: SEASONALITY, NOISE, SAMPLE LENGTH

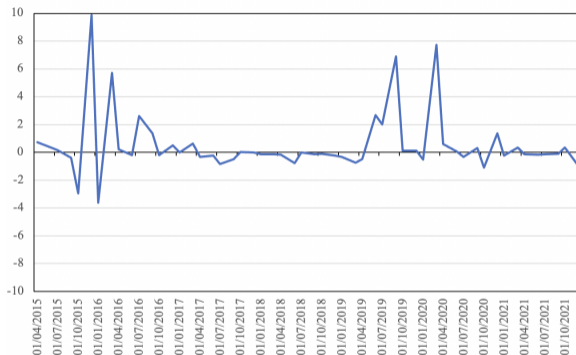
- ▶ Paper can become an important reference point for working with such data
- ⇒ Even if some choices don't matter for the results here, the authors should aim to **establish best practice** for future work (goes beyond showing robustness!)
- ▶ What is the best practice? I am not yet 100% sure. Examples:
 - ▶ Authors use 90-day moving average (MA) of daily variables
 - ▶ Doesn't this make variable of interest an estimator of a latent component? Does this mean that the uncertainty bands need to be adjusted somehow?
 - ▶ Can smoothing interact in spurious way with potential serial correlation in the shocks? (more in next comment)
 - ▶ How different is MA from regressing on day-of-week or day-of-month dummies?
 - ▶ It would be nice to see examples of raw daily data and different smoothed versions

COMMENT 2: SHOCK MEASURE

- ▶ Potential issue 1: not a “true” shock
 - ▶ A problem for everybody, but perhaps especially worrying at high frequency
 - ▶ Authors use [Jarocinski and Karadi \(2020\)](#) logic to exclude informational shocks
 - ▶ Suggestion: also try cleaning out macro news following [Bauer and Swanson \(2023\)](#)
- ▶ Potential issue 2: serial correlation in shock measure
 - ▶ A problem for everybody, but perhaps especially worrying when LHS is 90-day MA
 - ▶ Suggestion: first regress shocks on its own lags ([Miranda-Agrippino and Ricco, 2021](#)) or control for lags of shocks in the local projections ([Ramey, 2016](#); [Montiel Olea and Plagborg-Møller, 2021](#))
- ▶ In any case I would appreciate a plot of $shock_t$ in the paper!
(see my attempt on the next slide)

SHOCK MEASURE

OIS 1-YEAR (IN BASIS POINTS) OVER SAMPLE PERIOD FROM ALTAVILLA ET AL. (2019)



- ▶ Noteworthy that sample period features almost exclusively tightening shocks
- ▶ Serial correlation: -0.28 – worrying?

COMMENT 2: SHOCK MEASURE

- ▶ Are there any alternative methods that could be tried in addition to high-frequency identification + local projections?
- ▶ Why not try to also run a daily VAR and use Cholesky ordering?
 - ▶ Back to the good old [Christiano, Eichenbaum, and Evans \(1999\)](#)
 - ▶ Recursiveness assumptions actually easier to justify at higher frequency!
 - ▶ Can set up a standard monetary VAR with y, π, i
 - ▶ For π could perhaps use Euro Area inflation from *Billion Prices Project*
- ▶ Getting similar daily IRFs from separate method would be highly compelling to me

COMMENT 3: PUNCHLINE

- ▶ When policy makers think of “long and variable lags”, do they want to know:
 1. the point at which response of a variable becomes significant
 2. the point at which most of the response of a variable has unfolded
- ▶ If 2. is important, then we already know what we want to know without this paper
- ▶ Paper needs to make the best possible case for why 1. is important
- ▶ In addition to what the paper already does in this direction, perhaps helpful to ask:
Does 1. teach us something new about the structure of the economy?

COMMENT 3: PUNCHLINE

- ▶ Theories of lagged responses are based on adjustment frictions
 - ▶ Sticky prices, sticky information, investment adjustment costs, habits, ...
- ▶ Can the results teach us more about these mechanisms?
- ▶ Might uncover some tensions between models and data. Something like this:
 - ▶ In model, all agents might respond in hump-shaped pattern
 - ▶ In data, agents might respond in decaying way but at different points in time
 - ▶ Aggregate response looks hump-shaped but this is only a compositional pattern
 - ▶ So model would be incorrectly microfounded, even though it replicates aggregate IRF

COMMENT 3: PUNCHLINE

- ▶ Cross-sectional breakdowns in the paper already very promising
 - ▶ Although we already knew that durables are more responsive to monetary policy
 - ▶ Breakdowns along dimensions other than good category could be interesting
- ▶ Construct breakdowns also by HH or firm *types* and link to theories of adjustment?
- ▶ Could be hugely valuable, as macro models increasingly aim to match macro *and* micro moments (Auclert, Rognlie, and Straub, 2020)
 - ▶ Daily frequency cross-sectional dynamics could be very insightful here
- ▶ Doing this comprehensively is for another paper, but one powerful example of why short lag response matters for theories would sharpen the punchline of this paper

TO SUM UP

- ▶ True pioneer work!
- ▶ For technical implementation, aim to provide general best practice
- ▶ Explore further tests regarding the shock and identification
- ▶ Perhaps speak more to theory to sharpen the punchline
- ▶ Good luck for the publication process

BIBLIOGRAPHY

- ALTAVILLA, C., L. BRUGNOLINI, R. S. GÜRKAYNAK, R. MOTTO, AND G. RAGUSA (2019): "Measuring euro area monetary policy," *Journal of Monetary Economics*, 108, 162–179.
- AUCLERT, A., M. ROGNLIE, AND L. STRAUB (2020): "Micro jumps, macro humps: Monetary policy and business cycles in an estimated HANK model," Tech. rep., National Bureau of Economic Research.
- BAUER, M. D. AND E. T. SWANSON (2023): "An Alternative Explanation for the "Fed Information Effect" ," *American Economic Review*, 113, 664–700.
- BUDA, G., S. HANSEN, T. RODRIGO, V. M. CARVALHO, Á. ORTIZ, AND J. V. R. MORA (2022): "National accounts in a world of naturally occurring data: A proof of concept for consumption," .
- CHRISTIANO, L. J., M. EICHENBAUM, AND C. L. EVANS (1999): "Chapter 2 Monetary policy shocks: What have we learned and to what end?" Elsevier, vol. 1 of *Handbook of Macroeconomics*, 65–148.
- JAROCINSKI, M. AND P. KARADI (2020): "Deconstructing Monetary Policy Surprises—The Role of Information Shocks," *American Economic Journal: Macroeconomics*, 12, 1–43.
- MIRANDA-AGRIPPINO, S. AND G. RICCO (2021): "The Transmission of Monetary Policy Shocks," *American Economic Journal: Macroeconomics*, 13, 74–107.
- MONTIEL OLEA, J. L. AND M. PLAGBORG-MØLLER (2021): "Local projection inference is simpler and more robust than you think," *Econometrica*, 89, 1789–1823.
- RAMEY, V. A. (2016): "Macroeconomic shocks and their propagation," *Handbook of macroeconomics*, 2, 71–162.