The Term Structure of Monetary Policy Uncertainty

by: Brent Bundick, Trenton Herriford and A. Lee Smith

February 25, 2022

FOMC announcements transmit to financial markets and the economy not only by changing the expected path of future interest rates but also by reshaping interest rate uncertainty across different horizons.

RWP 22-02, February 2022; updated August 2023

This paper studies the transmission of Federal Reserve communication to financial markets and the economy using new measures of the term structure of policy rate uncertainty. High-frequency movements in the term structure of interest rate uncertainty around FOMC announcements cannot be summarized by a single measure but, instead, are two dimensional. We characterize these two dimensions as the Level and Slope factors of the term structure of interest rate uncertainty. These two monetary policy uncertainty factors help to explain changes in Treasury yields and forward real interest rates following FOMC announcements, even after accounting for changes in the expected path of policy rates. Finally, compared to high-frequency instruments derived from interest rate futures, our policy uncertainty factors provide stronger first-stage instruments and imply FOMC forward guidance has been more effective in stimulating economic activity in a standard proxy SVAR.

JEL Classifications: E32, E52

Additional Files

Appendix

Replication Files

Article Citations

- Bundick, Brent, Trenton Herriford, and A. Lee Smith. 2022. "The Term Structure of Monetary Policy Uncertainty." Federal Reserve Bank of Kansas City, Research Working Paper no. 22-02, February. Available at https://doi.org/10.18651/RWP2022-02

Related Research

- Hanson, Samuel G., and Jeremy C. Stein. 2015. "Monetary Policy and Long-Term Real Rates." *Journal of Financial Economics*, vol.115, no. 3, pp. 429-448. Available at https://doi.org/10.1016/j.jfineco.2014.11.001
- Creal, Drew D., and Jing Cynthia Wu. 2017. "Monetary Policy Uncertainty and Economic Fluctuations." *International Economic Review*, vol. 58, no. 4, pp. 1317-1354. Available at https://doi.org/10.1111/iere.12253
- De Pooter, Michael, Giovanni Favara, Michele Modugno, and Jason Wu. 2021. "Monetary Policy Uncertainty and Monetary Policy Surprises." *Journal of International Money and Finance*, vol. 112, April. Available at https://doi.org/10.1016/j.jimonfin.2020.102323

Authors

Brent Bundick

Vice President

Brent Bundick is a Vice President and Economist in the Economic Research Department of the Federal Reserve Bank of Kansas City. In that role, he conducts research on the macroeconomy and serves as an advisor to the Bank's leadership on monetary policy and macroeconomic issues. He rejoined the Bank in 2014 after completing his Ph.D. in Economics from Boston College. Prior to graduate school, Brent worked in the Department as a Research Associate and Assistant Economist. He also holds a M.S. in Mathematics and Statistics from the University of Missouri – Kansas City and a B.A. in Economics and Mathematics from the College of William and Mary. Brent's research has examined the effects of uncertainty on the macroeconomy and how changes in central bank communication affect inflation, labor markets, and the broader economy.

A. Lee Smith

Senior Vice President

Andrew Lee Smith is a Senior Vice President and Economist at the Federal Reserve Bank of Kansas City. In this role, Lee has oversight of macroeconomic research and serves as an advisor on monetary policy matters.Lee's research has focused on the effects of expanding and unwinding the Federal Reserve's balance sheet, the impact of forward guidance on financial markets and the economy, and, more generally, how central bank communication can influence expectations and economic conditions.Prior to joining the Bank in 2014, Lee received a Ph.D. in economics from the University of Kansas. He also holds a B.A. in economics and mathematics from Drury University in Springfield, Missouri.