

## [Interest Rate Surprises: A Tale of Two Shocks](#)

CFM-DP2023-20

Ricardo Nunes<sup>1,2,5</sup>, Ali Ozdagli<sup>4</sup> and Jenny Tang<sup>3</sup>

Centre For Macroeconomics<sup>1</sup>, Centre for International Macroeconomic Studies<sup>2</sup>, Federal Reserve Bank of Boston<sup>3</sup>, Federal Reserve Bank of Dallas<sup>4</sup>, University of Surrey<sup>5</sup>

The paper addresses a fundamental question in macroeconomics—how to properly identify and understand the effects of monetary policy shocks. To achieve this, the authors propose an innovative approach using high-frequency interest rate changes around key events, such as Federal Open Market Committee (FOMC) announcements and macroeconomic data releases. By focusing on interest rate movements rather than macroeconomic data surprises themselves, the authors aim to disentangle two crucial channels in monetary policy: the pure monetary policy shock and the central bank information channel.

The literature on identifying monetary policy shocks has used interest rate futures and financial data around FOMC announcements. The authors extend this approach to construct external instruments for identifying shocks in vector autoregressions (VARs). They argue that interest rate shocks around FOMC announcements capture both financial market surprises and central bank reactions to private assessments of the economy. To separate these channels, the authors use interest rate movements during macroeconomic data releases. These data release days provide a unique advantage as they are pre-determined and do not overlap with FOMC meetings, allowing the identification of the systematic component of monetary policy.

The paper's results reveal that interest rate surprises around FOMC announcements encompass both pure monetary policy shocks and information shocks. After separating these components, the estimated effects of pure monetary policy shocks are more pronounced than the overall FOMC announcement interest rate surprise. Properly identified contractionary monetary policy shocks lead to lower inflation, economic activity, stock prices, and higher bond risk premia, while information shocks manifest as positive interest rate surprises that lead to higher prices and activity, and dampened responses of bond risk premia and stock prices.

The paper's contribution lies in its ability to disentangle the two crucial channels of monetary policy shocks using interest rate movements around macroeconomic data releases. The approach provides flexibility in capturing time-variation in the underlying interest rate policy rule and reflects the expectations of financial market participants. By isolating the information component, the authors offer valuable insights into the effects of exogenous shocks to information through the systematic component of monetary policy. The paper is relevant to the broader literature examining the relationship between macroeconomic announcements, financial markets, and monetary policy.