

Central Bank Communication: Information and Policy shocks

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Motivation and Data

Motivation

- ▶ How monetary policy affects the economy?
- ▶ The study uses an alternative approach to decompose Fed statements into information and information free parts

Data

- ▶ FOMC statements
- ▶ Changes in ffr futures in 30 min window around announcements
- ▶ Main macroeconomics indicators
- ▶ Total timespan is 1994:M3–2016:M12

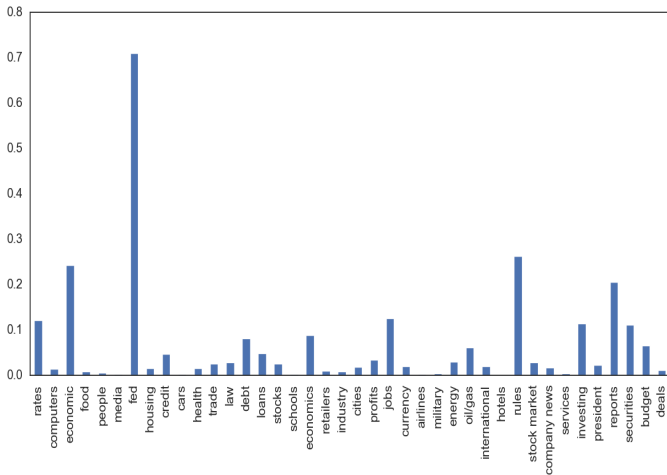
Methodology

- ▶ To train Latent Dirichlet Allocation (LDA) model on business news section from 4 major US newspapers: The New York Times, The Washington post, The Los Angeles Times, Chicago Tribune
- ▶ To employ pre-trained model on Fed statements data
- ▶ To decompose surprises in ffr futures into explained and non-explained parts:

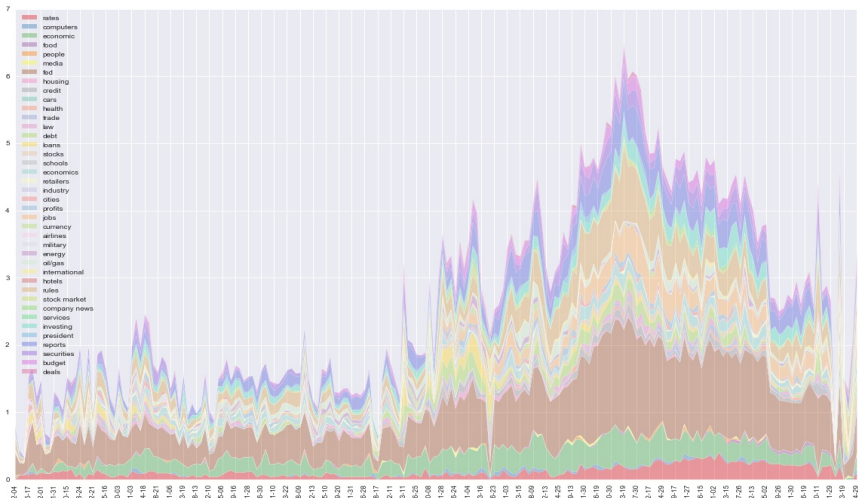
$$ffr_hf_t = \beta_0 + \sum_{i=1}^K \beta_i info_t^i + \epsilon_t \quad (1)$$

where the dependent variable is a policy shocks, $Info_t^i$ is the information contained in FOMC announcements, ϵ_t is an information free part of ffr_hf surprises

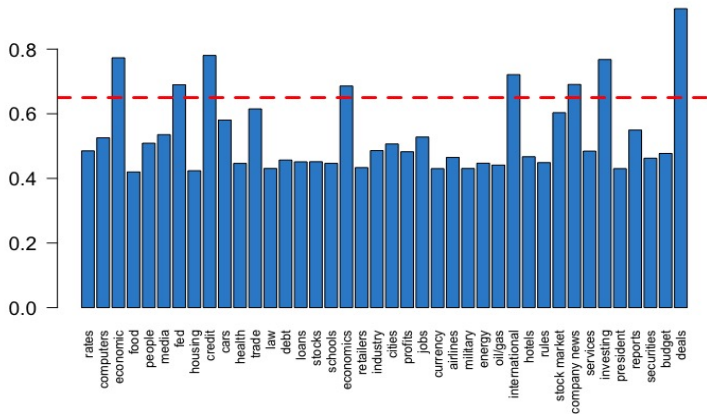
Topic proportions of Fed statements by each sentence



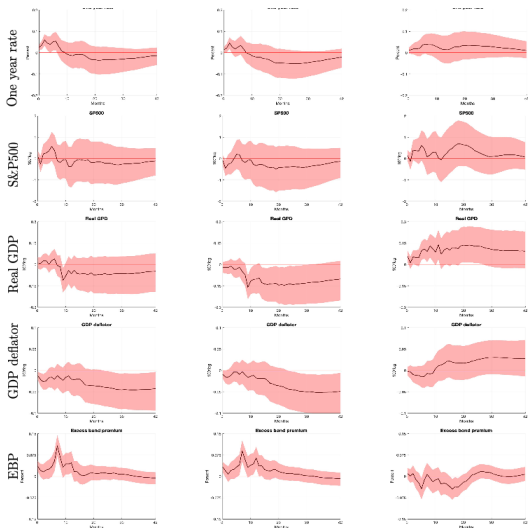
Topic frequencies in Fed statements over time



Bayesian LASSO for topic selection



Decomposed information and policy shocks



(a) Baseline

(b) Policy shock

(c) Information shock

Contribution

- ▶ The paper proposes a novel approach to study monetary policy shocks that are free from information effects.
- ▶ The results show that a policy shock has a more negative effect on GDP and a more prolonged negative effect on inflation compared to the baseline surprises measure. In the short-run it causes S&P500 to decline and the Fed to raise its interest rate.
- ▶ A Fed information shock has positive long-run effects on S&P500, on the interest rate, on real GDP, and a negative short-run effect on inflation. Moreover, it reduces the costs of credit.