Central Bank Information Effects and the Transmission of the Global Financial Cycle

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Abstract

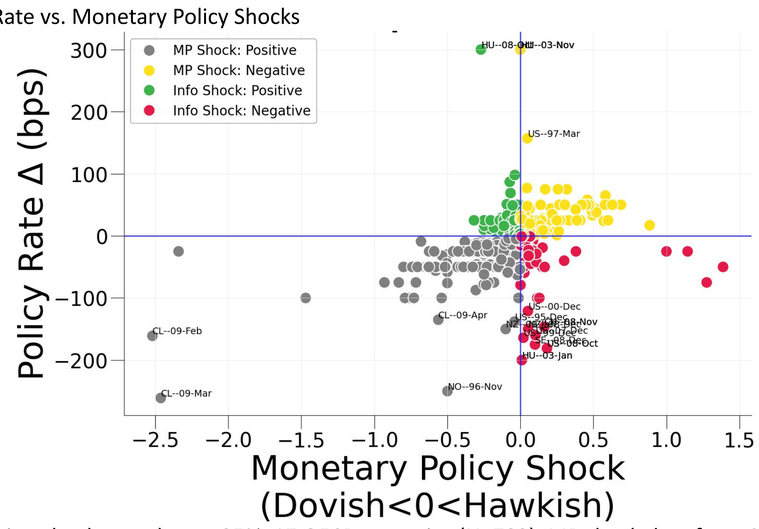
Using an existing high-frequency monetary policy shock database, we document that roughly 25% of policy rate increases (decreases) are accompanied by risk-on (risk-off) asset market reactions, commonly termed **information shocks**. Leveraging our novel **Monetary Policy Statements Database (MPSD)**, we provide **multi-country evidence** on the linguistic origins of these anomalous responses by testing whether **central bank communication language (statement) predicts information shocks** after controlling for contemporaneous economic conditions.

Our findings support Bauer and Swanson's (2023) 'Response to News' channel over the Fed information effect, i.e., statement sentiment

- robustly **predicts conventional monetary policy shocks.**
- shows **no significant relationship with information shocks.**

Finally, we find that information shocks significantly correlate with the Global Financial Cycle (GFC), suggesting that central bank communication acts as a synchronization mechanism, while conventional policy actions act as a dampener.

Chart 1. Policy Rate vs. Monetary Policy Shocks



Notes: Information shock prevalence: 25%. 17 OECD countries (N=783), MP shock data from Choi et al. (2024).

Introduction

The debate over anomalous market reactions to monetary policy announcements centers on **two mechanisms**: the Fed 'Information Effect' (Nakamura and Steinsson, 2018; Jarociński and Karadi, 2020) and Bauer and Swanson's (2023) 'Response to News' channel.

- Under the 'Information Effect', central banks reveal private information about the economic outlook through their announcements.
- Under the 'Response to News' channel, both policymakers and markets react to publicly available data but may weight the same information differently.

We provide complementary evidence to Bauer and Swanson (2023) through the first multi-country application of textual analysis to this question. Our approach offers a distinct test: if central banks reveal private information, statement language should systematically differ during information shock episodes. However, we find no such relationship. This pattern holds across multiple text-based measures, suggesting that both central banks and markets are responding to the same publicly available economic data rather than central banks revealing private information. These findings strengthen the 'Response to News' interpretation and extend it beyond the Federal Reserve to a broader set of OECD central banks.

Methodology

We estimate how the tone of central bank communication affects monetary policy surprises (MPS) across OECD countries by estimating:

$$MPS_{i,t} = \alpha_i + \gamma_t + \beta\, Sentiment_{i,t-1} + \delta' X_{i,t-1} + \varepsilon_{i,t}$$

- $MPS_{i,t}$ is the monetary policy surprise in country *i* at time *t* (Chart 1).
- $Sentiment_{i,t}$ captures various text-based measures of central bank statement tone.
- $X_{i,t}$ is a vector of control variables: lagged interest rate change, change in equity prices, change in unemployment, inflation differential, capital account openness, exchange rate regime dummy, and the number of statements.
- All regressions include country (α_i) and year–month (γ_t) fixed effects.

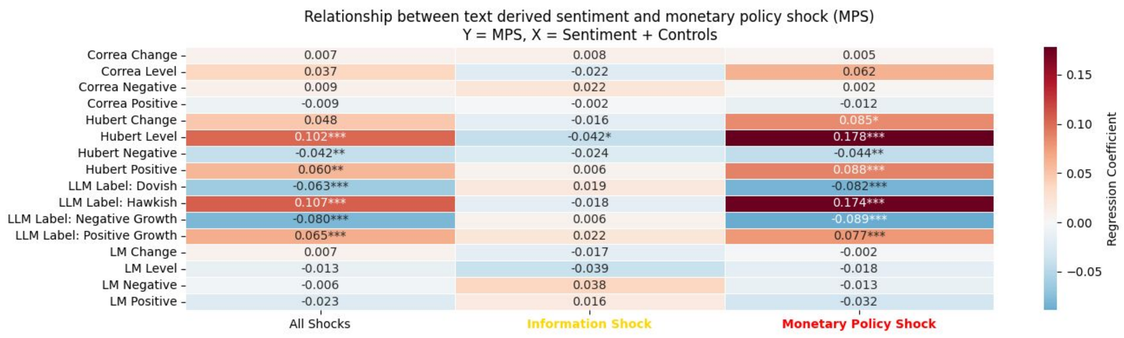
Sample: **OECD central banks**, monthly frequency (2060 observations; 18 countries).

Results

We regress MPS on the tone of central bank policy statements across OECD countries to examine their relationship. Chart 2 reports the resulting regression coefficients after decomposing the sample into all shocks, information shocks, and conventional monetary policy shocks.

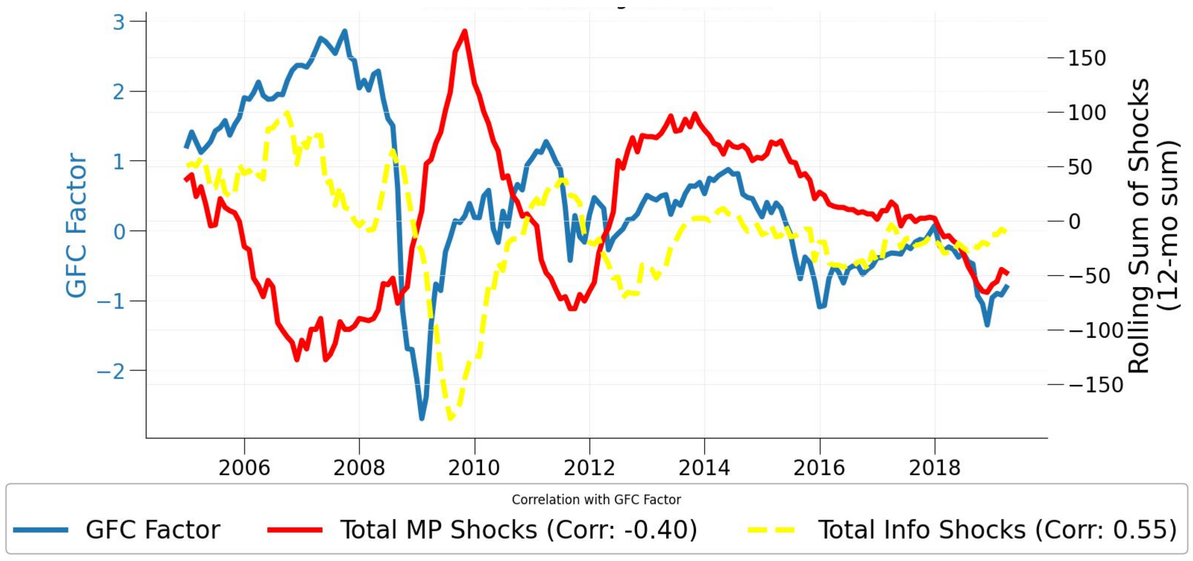
- Linguistic measures that strongly predict conventional monetary policy shocks show essentially **no relationship with information shocks**.
- For conventional shocks, more hawkish and more positive growth language are strongly and **significantly associated with contractionary surprises** (higher MPS).
- For information shocks, coefficients are close to zero across all measures, with at most marginal significance, suggesting that **sentiment does not predict information shock magnitudes**. We also show that information shocks correlate with the GFC (Chart 3).
- The "All Shocks" results lie between the information and conventional cases, blending both shock types.

Chart 2. Effects of Central Bank Sentiment on Monetary Policy Surprises



Notes: Specifications are described in the methodology section. *** p<0.01, ** p<0.05, * p<0.10

Chart 3. Global Financial Cycle Factor vs. Rolling Sum of Shocks



Notes: The blue line plots the GFC factor constructed by Miranda-Agrippino and Rey (2022). The red and yellow lines show the 12-month rolling sum of total monetary policy shocks and information shocks, respectively.

Discussion

- **Novel Multi-Country Evidence:** We leverage the novel **MPSD** to regress statement sentiment against decomposed information and conventional shocks across OECD central banks (Chart 2).
- **Support for 'Response to News' channel:** Our results contradict the information-revelation hypothesis. We find that linguistic sentiment strongly predicts conventional shocks but has no significant relationship with information shocks, implying central banks and markets respond to the same public data rather than central banks revealing private information.
- We adopt the Bauer and Swanson (2023) orthogonalization strategy (not shown), regressing high-frequency surprises on economic news to purge the 'Response to News' component. While they focused on the Fed, we apply this identification to OECD central banks to demonstrate that information shocks act as a proxy for global economic news rather than central bank private disclosures.
- We suggest that central bank communication acts as a **synchronization mechanism**—validating global economic news and propelling risk appetite—while conventional policy actions act as a dampener (Chart 3).

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