Transmission of High-Frequency Monetary Policy Shocks: A Cross-Country Perspective

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Extended Abstract

In the aftermath of a period marked by historically high global inflation, there has been renewed interest in examining the effects of monetary policy, including unconventional monetary policy tools such as forward guidance and quantitative easing (QE) and quantitative tightening (Gopinath, 2023). A key question is whether monetary policy transmission was different during the post-Covid inflation surge but there is no consensus on the answer to this question yet (see, e.g., D'Amico and King (2023) and Barret and Platzer (2024) for the US).

A substantial body of literature (see, e.g., Bauer and Swanson (2023) and references therein) emphasizes the importance of central bank communication in monetary shock identification. Using narrow time windows around communication events allows to isolate the exogenous component of monetary policy, while more traditional, lower-frequency methods often retain a substantial amount of endogeneity in the shock measure (Rigobon and Sack, 2003). High-frequency methods reliably identify conventional monetary policy shocks and are indispensable for identifying unconventional monetary policy shocks. To date, the existing literature on high-frequency identification has predominantly focused on the United States (US) and a few other advanced economies (AEs). Notably, Bolhuis et al. (2024) is, to the best of our knowledge, the only study that utilizes variations in interest rates around communication events to identify monetary policy shocks across a cross-section of countries; however, it relies on daily data and focuses solely on the target factor.

This paper assesses the transmission of monetary policy using a new state-of-the-art intra-day dataset of monetary policy shocks for 16 AEs and emerging markets (EMs). This dataset represents the most comprehensive coverage to date, enabling an analysis of potential differences in monetary policy transmission between AEs and EMs. As a baseline, we compute monetary policy surprises as changes in asset yields in a 30-minute window around monetary policy announcements following Braun et al. (2025). For Brazil and Chile, where monetary policy announcements occur outside of trading hours, we compute the difference between the trading day's opening rate following the announcement and the closing rate from the previous day. We use the approach in Rogers et al. (2018) to estimate the target, path, and risk premia (QE) components of monetary policy surprises. For the target factor, we use the change in 1-month or 3-month Overnight Indexed Swaps (OIS) fixed leg rates. For the path factor, we use the change in 1-year or 2-year government bond yields, orthogonalized to the target factor. Finally, for the risk premia (QE) factor, we use the change in the 10-year government bond yields, orthogonalized to the target and

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path factors. To address concerns that the resulting shock measures may still be influenced by an information effect, in a robustness exercise, we apply the 'poor man's' sign restrictions proposed by Jarociński and Karadi (2020) to eliminate this component. For comparative analysis, we construct a similar database using daily data.

We assess the impact of target and path surprises on key financial variables. Our baseline specification regresses the 30-minute change in yields, stock prices, or exchange rates on target and path surprises computed in a 30-minute window around the monetary policy announcements. We find significant transmission to yields and asset prices across countries in our sample: The target surprise leads to an increase in medium-term and long-term yields. Furthermore, it leads to a decrease in stock prices and an appreciation of the exchange rate for almost all countries. The finding that stock prices decline implies that any underlying information effect would be overlayed by the strong response to the pure monetary policy shock in our sample. We find a similarly strong transmission to key financial variables for the path factor surprise for AEs, but, interestingly, path factor surprises are less powerful in EMs, which could point to a weaker effect of future path of interest rates (or forward guidance) in these countries.

We repeat the regressions extending the response window of financial variables to two hours, while still using the shocks based on the 30-minute window. This extension is motivated by the fact that in many of the countries in our sample the press releases happen within two hours after the original monetary policy announcement. In this specification, the target factor continues to have significant effects on yields and asset prices in most countries. The effects of path factor become quantitatively more important for AEs, possibly suggesting that press conferences are particularly informative of the central bank's medium-term actions. We also show that these results carry over to a four-hour response window. Finally, to highlight the importance of using a tight event window for our baseline results, we repeat our analysis for shocks identified over a one-day window. While the transmission to medium-term and long-term yields is still significant for most countries in this specification, stock price and exchange rate responses are largely insignificant, and several counterintuitive results arise.

To analyze whether monetary policy transmission changed post-Covid, we estimate regressions including a dummy for the post-Covid period in our baseline specification. Our findings suggest that transmission to the yield curve does not change on average. However, monetary policy transmission to the exchange rate is weaker in EMs post-Covid, which may be due to the synchronized tightening in AEs that has happened in the face of the inflation surge.

In summary, this paper introduces the first cross-country database of high-frequency monetary policy shocks and uses it to analyze monetary transmission. Our findings demonstrate that high-frequency identification enhances the precision of monetary policy shock identification compared to traditional daily data approaches for cross-country analysis. We find that high-frequency target surprises have significant and expected impact on yields and asset prices, with weak information effects, especially in AEs. In contrast, the path factor proves to be less important in EMs. Post-Covid, transmission to yield curve does not change on average; however, the impact on exchange rates is expectedly weaker in AEs, which can be attributed to the synchronized tightening measures implemented across these economies.

References

Altavilla, C., Brugnolini, L., Gürkaynak, R. S., Motto, R., & Ragusa, G. (2019). Measuring euro area monetary policy. *Journal of Monetary Economics*, 108, 162-179.

Barrett, M. P., & Platzer, J. (2024). Has the Transmission of US Monetary Policy Changed Since 2022?. International Monetary Fund.

Bauer, M. D., & Swanson, E. T. (2023). A reassessment of monetary policy surprises and high-frequency identification. *NBER Macroeconomics Annual*, *37*(1), 87-155.

Braun, R., Miranda-Agrippino, S., & Saha, T. (2025). Measuring monetary policy in the UK: The UK monetary policy event-study database. *Journal of Monetary Economics*, *149*, 103645.

Bolhuis, M., Das, S., & Yao, B. (2024). A New Dataset of High-Frequency Monetary Policy Shocks.

D'Amico, S., & King, T. B. (2023). Past and future effects of the recent monetary policy tightening. *Chicago Fed Letter*, *483*.

Gopinath, G. (2023), Three Uncomfortable Truths For Monetary Policy, Remarks by IMF First Deputy Managing Director Gita Gopinath for the European Central Bank Forum on Central Banking 2023.

Jarociński, M., & Karadi, P. (2020). Deconstructing monetary policy surprises—the role of information shocks. *American Economic Journal: Macroeconomics*, 12(2), 1-43.

Rigobon, Roberto, and Brian Sack. "Measuring the reaction of monetary policy to the stock market." *The Quarterly Journal of Economics* 118, no. 2 (2003): 639-669.

Rogers, J. H., Scotti, C., & Wright, J. H. (2018). Unconventional monetary policy and international risk premia. *Journal of Money, Credit and Banking*, *50*(8), 1827-1850.

Swanson, E. T. (2021). Measuring the effects of federal reserve forward guidance and asset purchases on financial markets. *Journal of Monetary Economics*, *118*, 32-53.