Macroeconomic Forecasting with LLM Speaking Fed's Dialect*

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September 2026

Abstract

Macroeconomic forecasting increasingly relies on machine learning, yet standard models seldom incorporate central bank communication, and existing approaches that do so tend to lack transparent links between textual signals and numeric forecasts. This paper proposes a forecasting framework that adapts large language models to the vocabulary and discourse of the Federal Reserve, with the goal of producing forecasts alongside interpretations traceable to specific elements of policy communication. Within this framework, a large language model is exposed to Federal Reserve communications, and forecasts are conditioned on textual representations aligned with the target macroeconomic series. We focus primarily on US CPI inflation, while designing the framework to extend to other macroeconomic indicators. To assess the marginal contribution of policy text and the sensitivity of forecasts to the underlying language model, we evaluate the framework against a univariate autoregressive baseline across several backbone LLMs. By anchoring forecasts to the semantic structure used by policymakers themselves, the proposed framework aims to deliver predictions that are not only quantitatively competitive but also interpretable in policy terms, contributing to the literature on text-augmented macroeconomic forecasting and on the integration of large language models into time-series modeling.

Keywords: macroeconomic forecasting, large language models, Federal Reserve communication, text analysis, inflation forecasting

JEL Classification: C45, C53, E37, E58

*The views expressed in this paper are those of the authors and do not necessarily reflect the official views of the Bank of Japan.

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