

# PREDICTING MARKET REACTIONS TO NEWS: An LLM-Based Approach Using Spanish Business Articles

Jesus Villota Miranda <sup>a,1,\*</sup>

<sup>a</sup>*CEMFI, Calle Casado del Alisal, 5, 28014, Madrid, Spain*

---

## Abstract

Markets do not always efficiently incorporate news, particularly when information is complex or ambiguous. Traditional text analysis methods fail to capture the economic structure of information and its firm-specific implications. We propose a novel methodology that guides LLMs to systematically identify and classify firm-specific economic shocks in news articles according to their type, magnitude, and direction. This economically-informed classification allows for a more nuanced understanding of how markets process complex information. Using a simple trading strategy, we demonstrate that our LLM-based classification significantly outperforms a benchmark based on clustering vector embeddings, generating consistent profits out-of-sample while maintaining transparent and durable trading signals. The results suggest that LLMs, when properly guided by economic frameworks, can effectively identify persistent patterns in how markets react to different types of firm-specific news. Our findings contribute to understanding market efficiency and information processing, while offering a promising new tool for analyzing financial narratives.

*Keywords:* Large Language Models, Business News, Stock Market Reaction, Market Efficiency

*JEL:* G12, G14, C45, C58, C63, D83

---

---

\*Corresponding author: Jesus Villota Miranda <[jesus.villota@cemfi.edu.es](mailto:jesus.villota@cemfi.edu.es)>

<sup>1</sup>I am deeply grateful to Enrique Sentana, Manuel Arellano, Dante Amengual, Rafael Repullo, Javier Suárez, David Martínez-Miera, Julio Crego, and Francisco Peñaranda for their comments. I am especially indebted to Nicolás Forteza and Matías Covarrubias, whose invaluable guidance and insights have greatly enriched this work. I also thank discussants for their helpful comments, as well as the participants of the Banking & Finance Seminar (CEMFI), the Generative AI in Finance Conference (Concordia University), the Mirian Andrés Seminar (University of La Rioja) and the 3rd Contemporary Issues in Financial Markets and Banking (Nottingham Trent University). Finally, I gratefully acknowledge financial support from Banco de España (BdE).