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News and Idiosyncratic Volatility: The Public Information Processing Hypothesis*

Robert F. Engle[1], Martin Klint Hansen[2], Ahmet K. Karagozoglu[3] and Asger Lunde[4]

[1]New York University, [2]Novo Nordisk, [3]Hofstra University; New York University and [4]CREATES, Aarhus University

Address correspondence to Asger Lunde, Professor of Economics, Department of Economics and Business, Aarhus University, Fuglsangs Allé 4, 8210 Aarhus V, Denmark, or e-mail: alunde@econ.au.dk.

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Abstract

Motivated by the recent availability of extensive electronic news databases and advent of new empirical methods, there has been renewed interest in investigating the impact of financial news on market outcomes for individual stocks. We develop the information processing hypothesis of return volatility to investigate the relation between firm-specific news and volatility. We propose a novel dynamic econometric specification and test it using time series regressions employing a machine learning model selection procedure. Our empirical results are based on a comprehensive dataset comprised of more than 3 million news items for a sample of 28 large U.S. companies. Our proposed econometric specification for firm-specific return volatility is a simple mixture model with two components: public information and private processing of public information. The public information processing component is defined by the contemporaneous relation with public information and volatility, while the private processing of public information component is specified as a

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