CHARLES Amélie and Olivier DARNÉ
Outliers and GARCH models in daily financial data

We propose to extend the additive-outlier identification procedure developed by Franses and Ghijsels (1999) to take into account the innovative outliers in a GARCH model. We apply it to eleven daily stock market indexes time series. We identify outliers for all the series and attempt to associate them with economic and financial events. We show that the detected outliers affect the normality coefficients, and mostly, the evidence for non-normality is reduced after correcting for outliers. We also find that GARCH models for outlier corrected series yield substantial forecasting improvement over GARCH models for the original returns.