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Non-linear Logit Models for Binarized High Frequency Financial Data NAOYA SAZUKA, Sony Corporation — We propose a non-linear logit model for binarized high frequency data of yen-dollar exchange rate indicating up or down price movement. We show a non-trivial probability structure from the binarized data, which is invisible from the price change itself. The model successfully captures the structure, which is not possible by the conventional analysis such as an AR model and a logit model. In addition, a similar and a stronger bias can be observed from other binarized high frequency active stock data on NYSE, for example GE, INTL, MSFT, WMT and so on. Our model could be useful for a wide range of binary time series with non-trivial dynamical structures.
References [1]N. Sazuka and T. Ohira, in *Computational Finance and its application*, pp.275-305, WIT press 2004. [2]N. Sazuka, et. al., Physica A 324 pp.366-371, 2003. [3]T. Ohira, et. al., Physica A 308 N1-4, pp.368-374, 2002.

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