

Master Thesis: Prediction of Recurrent Financial Intermediary Misconduct

Selecting a trusted intermediary is a key challenge for various players in financial markets. While a large number of individuals and companies offer such financial services, not every intermediary can be trusted equally. Through different sources, information about intermediaries can be obtained to assess their trustworthiness. In this context, also information on misbehavior in the past is available. In order to restore their credibility, intermediaries can comment on disclosures regarding their past offenses. But since it is difficult to evaluate such comments individually, machine learning techniques can be used as a decision support tool to analyze how intermediaries behave after such statements and whether investors should give them a second chance.

The goal of this master thesis is to review the existing academic literature on various forms of financial market misconduct, fraud detection, and data mining techniques for financial fraud detection. The student is expected to systematically sort and present related literature in order to draw possible conclusions based on the findings. Further, the student is expected to analyze occurrences of financial misconduct based on a data base and a scraper provided by the chair. On this basis and based on textual information from intermediaries' comments, the student shall develop and evaluate different machine learning models that predict intermediaries which will potentially continue to misbehave in the future after an offense in the past. The student is expected to have advanced coding skills and to be able to deal with large amounts of data. The thesis can be written either in English or German.

Supervisor:

Jens Lausen

Literature:

- Abbasi, A., Zhang, Z., Zimbra, D., Chen, H. and Nunamaker, Jr., Jay F. (2010): Detecting fake websites: The contribution of statistical learning theory, *MIS Quarterly*, Vol 34 (3), pp. 435–461.
- Allen, F. and Gale, D. (1992): Stock-price manipulation, *Review of Financial Studies*, Vol. 5 (3), pp. 503–529.
- Ngai, E., Hu, Y., Wong, Y., Chen, Y. and Sun, X. (2011): The application of data mining techniques in financial fraud detection: A classification framework and an academic review of literature, *Decision Support Systems*, Vol. 50 (3), pp. 559–569.
- Siering, M., Clapham, B., Engel, O., Gomber, P. (2017): A Taxonomy of Financial Market Manipulations: Establishing Trust and Market Integrity in the Financialized Economy Through Automated Fraud Detection, *Journal of Information Technology*, Vol. 32 (3), pp. 251-269.