

Executive Summary

Presentation

How great is the maximum loss if the investment goes wrong? Any investor who has invested or plans an investment will be confronted with this issue. The trend to evaluate financial positions and their down-side loss potential is gaining increasing attention over the recent years. The subject of this bachelor thesis is the value-at-risk forecasting utilizing sentiment weighting. It will be proven that the forecasting quality can be enhanced by using sentiment data. As essential factors, this work will cover the most common stylized attributes and facts of time series. Furthermore, the statistical model which is used in the forecasting framework will be discussed.

Approach

In this research the *Thomson Reuters NewsScope* data is used as sentiment data and serves to create seven sentiment data sets. The forecasting quality will be examined by using the Standard & Poor's 500 index. The time-frame from January 2003 to February 2010 will be applied. Different sentiment weighting schemes will be defined and tested. Based on these tests, the best weighting scheme will be chosen and used for further testing with the above mentioned sentiment sets.

Findings

Of the different schemes, only one weighting scheme proved to be suitable for sentiment forecasting. With this weighting scheme the forecasting performance could be improved in four of seven sentiment sets. Additionally, it could be shown that especially positive news were associated with an improved forecasting performance.

Conclusion

Generally, the results show that sentiment weighting is possible. Consequently, further studies should be expanded by including additional time series. Furthermore it should be evaluated if the sentiment weighting scheme in combination with other schemes (i.e. tail-weighted or time-weighted) can lead to even better results. Since the preferred weighting scheme in this bachelor thesis was deducted by trial and error, and a better scheme is theoretically possible, a further optimization of just the sentiment weighting scheme should be evaluated .

Further Remarks

This bachelor thesis is based on the framework used in the publication "*A DWARF-like Approach*"(2006) by Dr. S. C. Steude and Prof. Dr. M. S. Paoletta. The sentiment weighting is implemented as third weighting component alongside tail-weighted (Ta-WML) and time-weighted maximum likelihood (TiWML), thus, enabling to combine these models and allowing for further adjustments of forecasting performance.