



Advanced Logic Analytics

Emotional Finance proof of concept: predicting market index or asset class movements using investor emotions

Outline

Emotional Finance is an emerging field which combines finance, psychology and statistics to provide superior insights into market and investor behaviour by understanding the powerful unconscious processes and wish-fulfilling fantasies that play a key role in all financial decisions.

Many years of research at Warwick Business School, Edinburgh University and elsewhere has resulted in algorithms and statistical models which can be used to forecast and explain asset prices and market dynamics by analysing multiple emotional dimensions simultaneously as they play out.

Objectives

The purpose of this proof of concept is to demonstrate the effectiveness of Emotional Finance algorithms to predict and interpret upward or downward movements in a particular index or asset class over a set period of time employing big data analytics, with the view to extending this to other indexes and asset classes as a future project.

One index or asset class will be selected by the client, such as the S&P 500, FTSE 100, gold etc.

There will be a consolidation of relevant news and other data sources, and the application and tuning of the algorithms and predictive models using historical data. After back-testing for an appropriate time period, the developed model will be applied for forwards predictive capability in a live trial.

Project outline

- Week 1: Scoping and statement of work, selecting target index/asset class
- Weeks 2-3: Sourcing and consolidation of news and other relevant data
- Weeks 4-8: Application and tuning of existing algorithms and predictive models
- Weeks 9-10: Back-testing and further tuning/model development
- Weeks 11-12: Forward testing of final model and presentation of results

Working team: Dr Arman Eshraghi, Professor Richard Taffler and two data scientists

Indicative timescale: 3 months

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