Stat 107 Project and Research Paper Instructions

A well-written and highly analytical report can serve as a good writing sample when you are looking for a job in the financial industry. To this end, a group-based project and research paper is required of all students. Your paper is **due before midnight on December 8th, 2015**. A short one-page **proposal is due before midnight on November 20th, 2015.**

You must work in a group of 2-5 students. Exceptional circumstances will allow smaller or larger groups; email Michael Parzen (michaelparzen@gmailcom) for permission if you want to work in a larger or smaller group.

The TF of the highest id number of your group will be your group's TF contact unless told otherwise.

Examples of projects from previous years may be found on the course website.

Project Choices

There are (at least) two directions one can take for the final project:

- Reproducing an existing study in the literature
- Simulating or Reporting on a particular stock trading strategy
- (Your own idea at discretion of Instructor)

Reproducing an existing study in the literature

There are several journals that provide articles at the appropriate level for reproduction purposes. In particular, look at papers from

- *The Financial Analysts Journal (excellent source of ideas)*
- *International Review of Financial Analysis*
- *Journal of Empirical Finance*

The Harvard Library system has electronic access to all three journals. I have placed some example articles on the course web site; you are welcome to choose from these articles or look for something else.

Simulating or Reporting on a Stock Trading Strategy

There are many ways to trade stocks, and on the course web site we list some methods and techniques. For this type of project, you would take a well-defined trading method, and apply it to a basket of stocks. Ideally you would investigate the performance of the strategy against various time frames, and bull/bear markets. A detailed analysis of risk, drawdown, returns and implementation should be reported. Note that this project is considered slightly easier than reproducing research, so more will be expected in terms of work for an equivalent grade.

Deliverables

November 20th (midnight): Project Proposal

You must turn in a brief project proposal (1-page maximum) by November 20th.

Project proposal format: Proposals should be one page maximum. Include the following information:

- Project title
- Project idea. This should be approximately two paragraphs.
- Papers to read. Include titles and sources for information.
- Teammate(s): will you have teammate(s)? If so, whom? Maximum team size is five students.

December 8th (midnight): Final Project

The research paper should be 10-20 pages of text, tables and figures. These page numbers are not absolute. The report should be typed.

The research paper should consist of the following elements:

a) An appropriate title that briefly describes the focus of your analysis.
b) Your names as authors.
c) An "**Abstract**" of 100-300 words giving the following: Background, Methods, Results, Conclusions. The abstract should be written in a style suitable for a general audience.
d) An "**Introduction**" section that states the focus of your analysis and ends with a sentence stating the primary goal of this analysis, and any possible secondary goals.
e) A "**Methods**" section
f) A "**Results**" section
g) A "**Conclusions and Discussion**" section which should be written in the same "non-statistical" style as the abstract (see comments above for the abstract).
h) A "**References**" section that gives 2-5 references (such as software used, data from websites, research paper you are reproducing, etc.)
i) An "**Appendix**" section. The Appendix may include any R or Excel code (and possible discussion) that you feel is important in the analysis that you ran.

For reference, you may want to examine examples of last year's projects which may be found on the class web site.