DATA 607 FINAL PROJECT MILESTONES AND TIMELINE

Version: 1.0 Updated: March 15, 2019 By: Alexander Ng

Due Dates: Week 12 Proposal 6:45pm Wed April 17

Week 16 Submission 6:45pm Wed May 15 All times in Eastern Standard.

Topic:

The Federal Reserve conducts monetary policy for the US economy through its FOMC committee meetings. These meetings announce interest rate policy and rate setting decisions which impact financial markets and real economies globally. Past research has shown that FOMC meetings and their statements’ sentiment are correlated to both financial market movements and macroeconomic trends. Our project explores the impact of the FOMC statements and those movements and seeks to provide the nature of those trends. This project has potential applications in helping to forecast future FOMC statement sentiment and financial market variables.

Key Modules

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| Number | Task Name | Representation Tasks |
| 1 | Organization | Set up collaboration environment to share code/data/papers in Github.  Agree timeline to work on project.  Agree cadence for weekly progress.  Divide up work based on interests and abilities.  Set up weekly meetups and send out action items. |
| 2 | Background Reading | Agree scope of basic reading  Get familiar with 2-3 key papers or resources.  FOMC sentiment paper/ Text mining and sentiment / |
| 3 | Specialized Research | Text mining  FOMC Sentiment measures  Web scraping of documents |
| 4 | Data Collection | Webscrape FOMC statements  Wrangle FOMC statements into uniform format  Gather time series data for GDP, Stock Indices, Interest Rates  Wrangle financial data into R dataframes |
| 5 | Sentiment Analysis | Advice from Investment managers who follow FOMC  Calibrate dictionary for sentiment analysis  Test out sentiment on small set of statements  Run analysis on all statements |
| 6 | Exploratory Data Analysis | Data Visualization  Statistical summaries |
| 7 | Model & Interpret Results | Sentiment analysis vs external time series: regression & backtest  Comparison with known research literature |
| 8 | Paper & Presentation | Write narrative and background  Write results and conclusion  Prepare markdown report and graphics  Review Final Draft  Rehearse Presentation and Timings |