Business Fundamentals
Project Write-up
April 30, 2021

Abstract

The Pension Benefit Guaranty Corporation (PBGC) is a US government agency with the role of providing insurance to private sector companies sponsoring defined benefit plans. Their existence ensures plan participants will receive earned retirement benefits even in cases when the company/plan cannot meet all obligations. My project is a hypothetical pitch to the PBGC attempting to engage them in a full blown project using data science to predict and provide an early warning indicator when a plan/company is exhibiting certain criteria (variables). Accomplishing this objective will allow the agency to mitigate risk where possible or be able to plan the appropriate needed resources in cases where they must assume the obligation.

Many variables will ultimately need to be examined to build the best model. Examples include:

- Current funding levels
- Industry
- Overall economy
- Asset mix
- Contribution policy
- Etc.

For this presentation I will be focusing on the industry a company operates in and showing how the past is still relevant today and we would be able to draw relationships to other variables/characteristics as well.

Data Description

All data used for this project was gathered using the open data sets on pbgc.gov and dol.gov (Form 5500). Complete information for 7,800 defined benefit plans was analyzed. Plans not used due to lack of information were primarily smaller plans and not relevant to overall analysis in presentation.

Algorithms

Exploratory data analysis was used to gather and analyze the data used. Further data science algorithms would be necessary in the entire project. These steps were not completed in this project.

Tools

Exploratory data analysis – Excel
Visualizations – Tableau Public
Presentation – PowerPoint

Communication

I will be presenting to the Business Fundamentals cohort on April 30, 2001. A PDF of the presentation is also included on my personal GitHub repository.