Nonprofit Credit Score

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Background

The traditional approach to assess nonprofit organization is problematic:

- An excessive emphasis on low overhead ratio (overhead fallacy)
- A lack of digestible information of the achievement of nonprofits for general public
- No standardized benchmarks to compare different nonprofits

People need a better way to assess nonprofit financial efficacy

The NPS Score

- We created a metric that encapsulates the most important financial metrics

- The score is scaled from 300-850 and should be judged along the lines of a FICO credit score

Breakdown of NPS

- **Operating reserve**

- **Growth in net assets**

- **Operating efficiency**

- **Net margin**

- **Growth in total assets**

- **Leverage efficiency**

- **Debt ratio**

- **Financial leverage**

Technical Overview

- MVC (Model-View-Controller) Framework

  - Bootstrap for the View

  - Flask for the Controller

  - Python scripts for the Model

- MySQL for the database

  - Optimal for storing data with fixed schema

  - Excellent read speed (which is good for our read intensive web app)

- Amazon Cloud Platform

  - Our web server is hosted on AWS EC2 instance and global accessible

  - The data source is provided by Amazon via S3, in JSON and XML form.

Future Work

- ## Improve Score Quality

  - Include various data source. Currently, we only leverage the tax data
  - Apply statistical hypothesis tests and data mining technique to the raw data to extract more value from the raw data
  - Analyze the difference between nonprofits and commercial organizations for more accurate evaluation algorithm of the nonprofits

- ## Improve Web Application Quality

  - Add a layer of web server, such as Nginx, for cache control, load balance and proxy server
  - Integrate with external tools, such as Tableau, for more impressive data visualization
  - Integrate with NoSQL database to store adhoc data specific to individual non-profit