**Research Check-in**

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**10/20/2023**

**Goals for the week:**

* **Finish event study and generalize across multiple companies**
* **If time, data regularization to optimize propensity score regressors**

**What I’d like to focus on this week with Analysis 1**

I did not have an opportunity to regularize/ optimize regressors to maximize propensity scores. This upcoming week, I’d like to work on this and then run two sided t-tests to estimate the effects of pe-treatment.

**Creating the event study**

For my event study model, I am largely relying on [this guide](https://libguides.princeton.edu/eventstudy) from the Princeton Library on how to construct one. As with analysis 1, my goal is to see if EBITDA, Net Income, Liquidity, and Return on Equity growth is sustained or statistically significant pre and post IPO on a per company basis. As of last week, I was able to complete estimation for normal performance, calculated abnormal and cumulative abnormal returns, and then tested for significance. After completing my initial analysis on GoDaddy, I abstract further and

**Steps:**

**Data Preparation**

Company data was already made available given the earlier model that I built, and so what was left now was to split up the financials on a yearly basis based on the years out from IPO. Given the limited timeline, I rely on the interval of years of -3 < year\_i < 5 where year\_i represents the years since the IPO.

**Cleaning the Data and Calculating the Event Window**

Cleaning the Data was pretty straightforward. Because I already had methods to extract rows of company financials based on the amount of years from IPO, all I really had to do in this step was to create a new data table for each company ranging from three years before IPO to five years after. The amount of datapoints ranges from company to company.

For the initial concept of the model, I use the company, GoDaddy, as the company to build the model upon.

**Estimating Normal Performance**

Given the success I had with using the dependent variables in my propensity score estimations in Analysis 1, I decided to use the same regressors to construct the initial estimates of normal performance. Using the Linear Regression extension from the scikit-learn python package, I constructed my regression.

This process is taking longer than expected due to the amount of data manipulation I have to perform in order to get the necessary rows to run the estimations up.

Start out throwing them into one thing and then breaking down on a per industry basis

**What I will focus on this week with the Event Study**

This upcoming week I will be working on calculating abnormal and cumulative abnormal returns, testing for significance, and then abstracting my model to work for all portfolio companies that I have access to.