An Analysis of CEO Pay Ratio | Alex Tursi, Class of 2020

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Abstract

The CEO Pay Ratio is a new required disclosure for most publicly traded companies under the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank") beginning in 2017. I collected CEO Pay Ratio, revenue, and market capitalization for the 65 companies composing the Dow Jones Industrial, the Dow Jones Transportation, and the Dow Jones Utilities indices. The study sought to understand the effect of industry, revenue, and market capitalization on the pay ratio. Industry was found to be the most important factor in determining the ratio..

Introduction

Congress passed the Dodd-Frank Act in response to the 2008 financial crisis. The law aimed at increasing transparency in the financial system. Item 402(u) of Regulation S-K requires disclosure of the pay ratio. Most publicly traded companies must disclose the total compensation of their CEO, the salary of the median employee excluding the CEO, and the ratio of the CEO total compensation to the median employee salary. Exempt companies include small reporting, emerging growth, foreign private issuers, and registered investment companies. The law tasked the Securities and Exchange Commission ("SEC" or the "Commission") with issuing implementation regulations. The law became effective in 2018 and required companies to disclose the ratio for fiscal year 2017.

The computation of the pay ratio is more difficult than it seems. The total compensation for the CEO has been required to be disclosed prior to this law being passed. However, finding the median employee salary and including the ratio are new. To find the median employee, companies may not use an industry average and must utilize one of several allowed methods[KM4] to determine the median employee. A company may use their total population of employees, a sample of their employees, or a combination of both methods. The company can use annual compensation for the median employee salary . The median employee compensation must be calculated every three years. All employees, including seasonal, temporary, part-time, and foreign employees are included in the calculation.

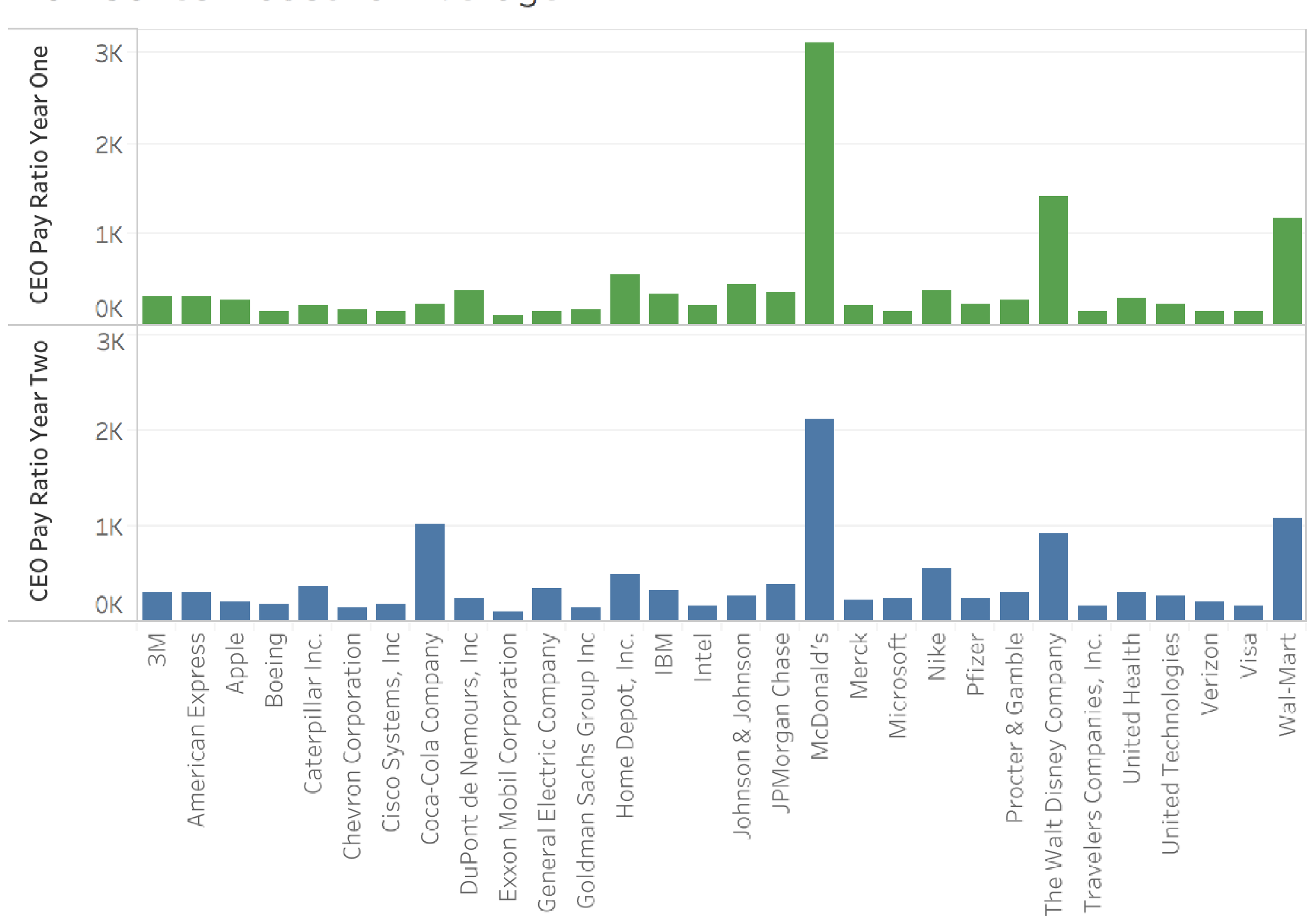
Hypotheses

My first hypothesis is the pay ratio is positively correlated to changes to the company's market capitalization ("market cap") and revenue. The data population consists of the Dow Jones Industrial Average, the Transportation Average, and the Utilities Average companies.

Payratio= a+b1(Market Cap)+b2(Revenue)+e

My second hypothesis is that industrial companies will have a higher pay ratio than transportation and utility companies

Dow Jones Industrial Average

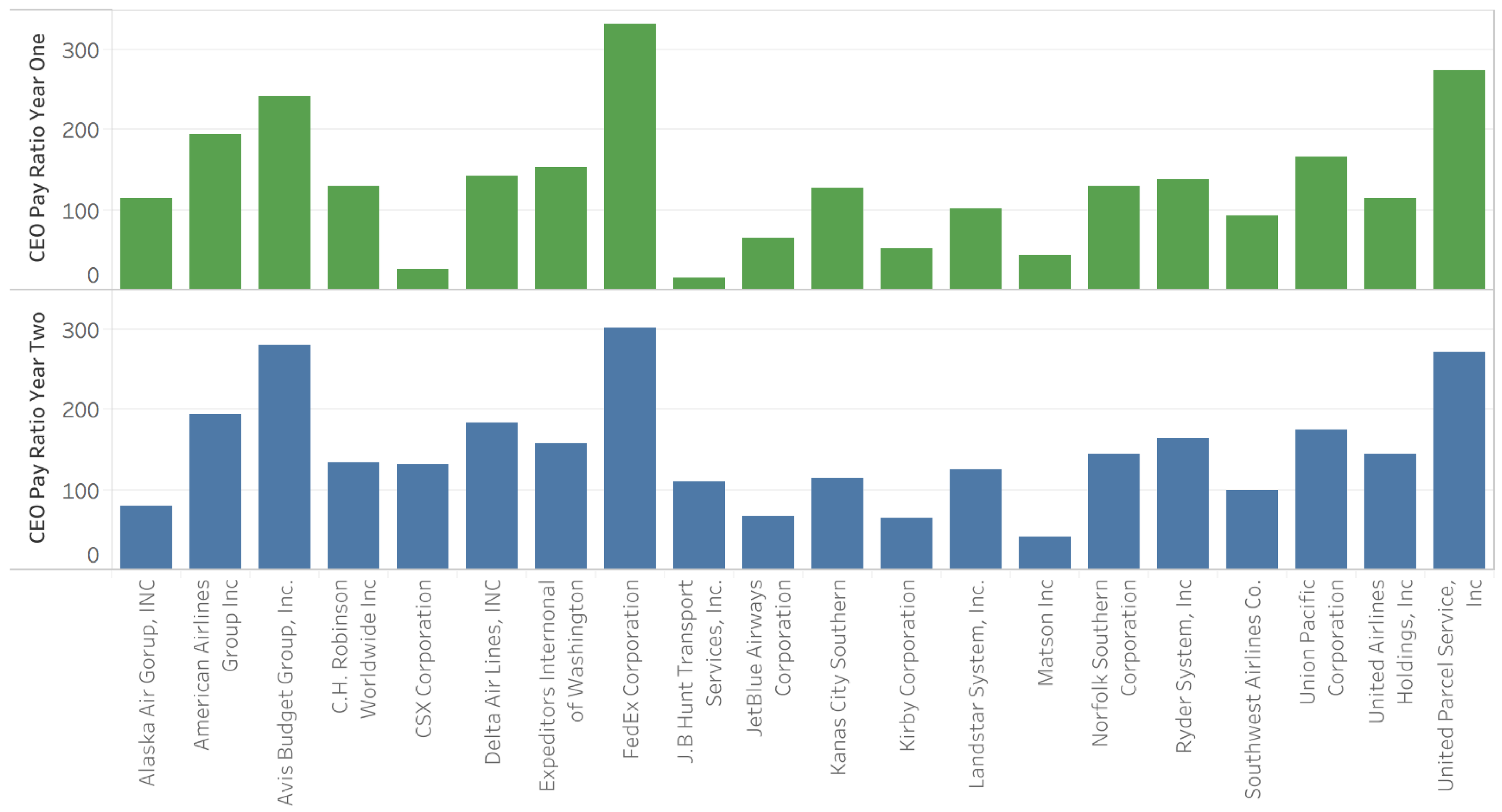


Dow Jones Industrial Index 2018[a]

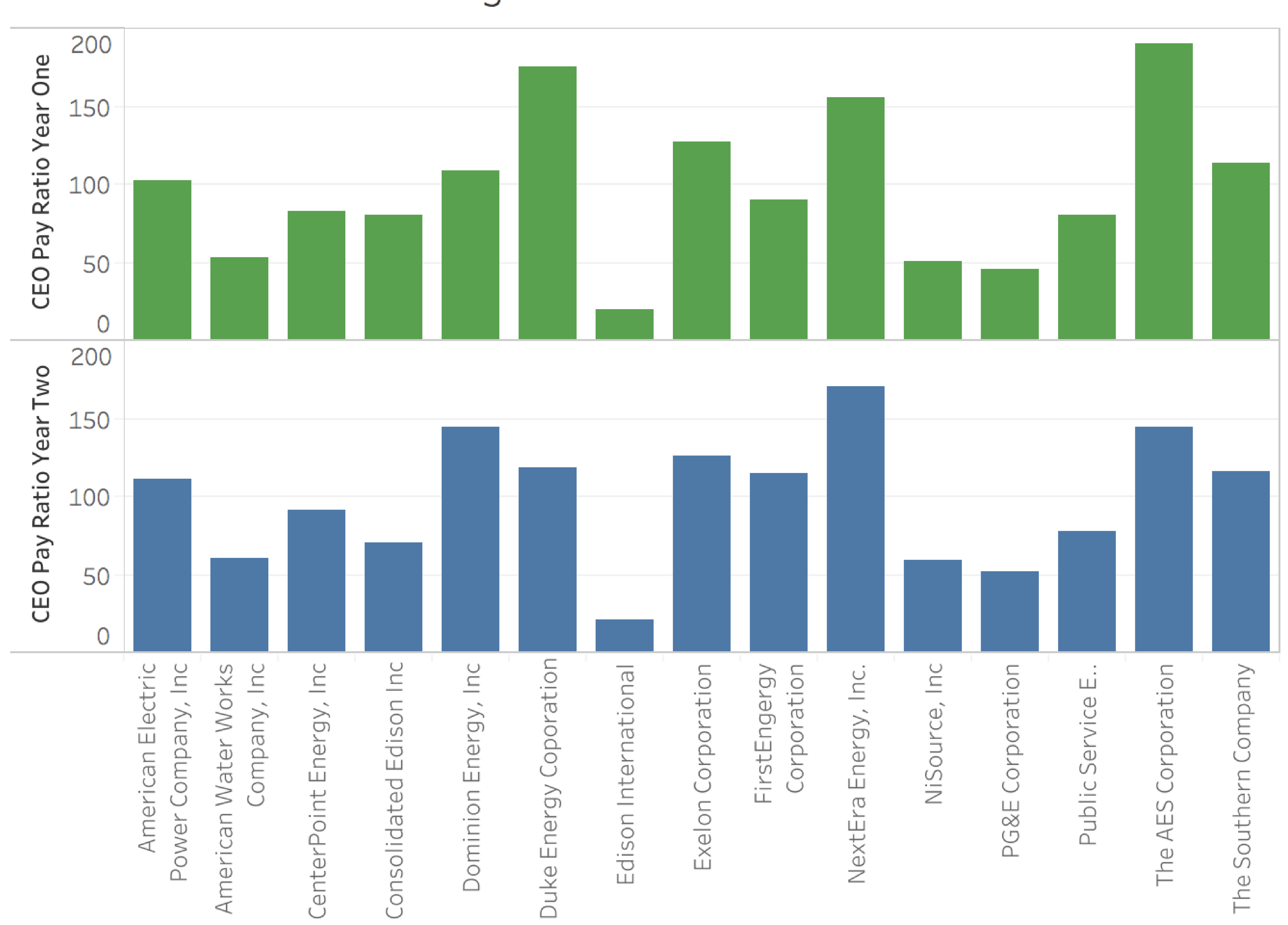
Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	454.603	128.865		3.528	.002
	2018 Revenue In Millions	.001	.001	.156	.797	.432
	2018 Market Cap In Billions	-.522	.440	-.232	-1.186	.246

a. Dependent Variable: DJI Pay Ratio 2018

Dow Jones Transportation Average



Dow Jones Utilities Average



Methodology

I gathered information on the 65 companies constituting the three Dow Jones Indices. I compared the ratios of companies inside of an industry and against other industries. I collected two years of CEO Pay Ratio, the company's revenue, and the company's market capitalization data. The data was retrieved from the SEC database. The CEO pay ratio is disclosed on the Form DEF-14A, more commonly known as the proxy statement. The market capitalization, or market cap, of a stock is calculated by the number of shares outstanding multiplied by the stock's price on a given day. Every year, public companies are required to file a Form 10-K, or annual report, that includes the companies audited financial statements and other financial disclosures. The Form 10-K provides the total revenue of the company.

After collecting the data from the various sources, the collected data was entered into an Excel data table[KM12] . The data was separated by index, and also separated by year. The data from Excel was uploaded to SPSS (a statistical package) used to run six different regressions and obtain statistics. The regressions were run with CEO pay ratio as the dependent variable and market cap and revenue as independent variables for both years. Finally, I used Tableau in order to create graphs to better display the data.

Analysis

The results indicate the industry sector is the most significant influence in determining the CEO pay ratio. Multiple regression results demonstrate the alpha coefficient was statistically significant for all three indices. This can be interpreted as the CEO compensation package relative to the industry of his/her company. These results do not account for other variables excluded from the scope of this research. Companies in the Dow Industrials had the largest unstandardized beta coefficient, followed by the Dow Transportation stocks, and the Dow Utility stocks. Revenue showed significance, but only for the companies in the transportation index. Market capitalization did not indicate any significance as factors influencing the pay ratio.

Indexes Average CEO Ratio