**Final Project:**

**Do Treasury Yields Affect the S&P 500?**

Emilio Flores

Bellevue University

DSC 530 – Data Exploration and Analysis

Professor Matthew Metzger

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**Statistical/Hypothetical Question**

Do the Treasury Yields affect the S&P 500?

**Outcome of your EDA**

The EDA concluded that the one month, three-month, six-month, 20-, and 30-year treasury yields have a statistically significant impact on the S&P 500. Despite the statistically significant impact, no obvious linear relationship was observed between the treasury yields and the stock index. Furthermore, not all the treasury yields had an inverse relationship with the stock index as was originally expected. The one-month and six-month yields have a positive relationship with the dependent variable. Finally, it was also observed that since the 2008 Financial Recession, the treasury yields have been relatively low, between 0% and 2%.

**What do you feel was missed during the analysis?**

The EDA done for this project was effective proving that treasury yields have an impact on the S&P 500. I believe that adding more treasury yield rates to the analysis and/or other financial instruments that are used as a substitute to stocks could have given a broader understanding of the impact of treasury yields on the overall U.S. economy.

**Were there any variables you felt could have helped in the analysis?**

I would have included CPI data, unemployment rates, and GDP growth. A greater understanding of the magnitude of the impact of treasury yield on the U.S. economy would have been obtained. Nevertheless, the hypothesis tested would have changed to “Do the treasury yields affect the U.S. economy?”

**Were there any assumptions made you felt were incorrect?**

The assumption that I feel was incorrect was to pull forward and backward the treasury yields to fill up empty values. I made this assumption thinking that it would facilitate the analysis. I think that this assumption may have skewed my results.

**What challenges did you face, what did you not fully understand?**

It was challenging to work on an EDA with variables that could, technically, increase to infinite levels. For example, the S&P 500 has increased for the last three decades and there is no “limit” to the pricing that this index could reach in the future. It was hard to apply the principles of this book as most of the lessons used data that has a set limit (weeks of pregnancy).