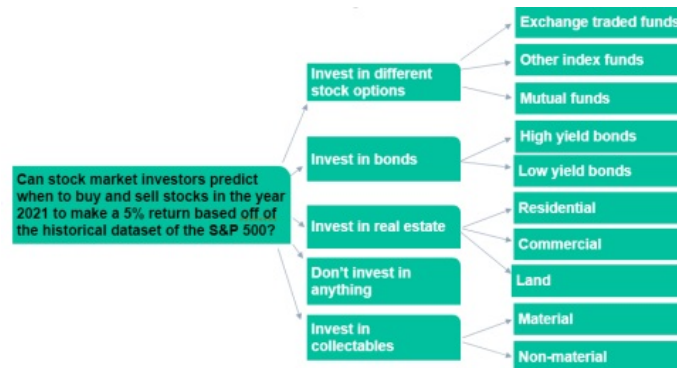# Capstone 1: S&P 500 Indicators

These indicators of the stock market can be used for investing purposes by predicting the market.	All but one indicator have few outliers past the interquartile range resulting in little variance.	M1, GDP, CPI, and PPI show a positive/associated relationship to the S&P 500 regecting the null hypothesis.	Regression equation showing the indicators in alignment with the S&P 500.

Executive Summary:
- You can predict the S&P 500 index using certain indicators that explain the market.
- R-squared values above 0.5 show a positive correlation to the S&P500 index.
-P-Values under 0.05 show a statistically significant correlation.

Indicators proven to be statistically significant to predict the S&P500 (All USA BLS):

GDP- Gross Domestic Product
PPI- Producer Price Index
CPI- Consumer Price Index
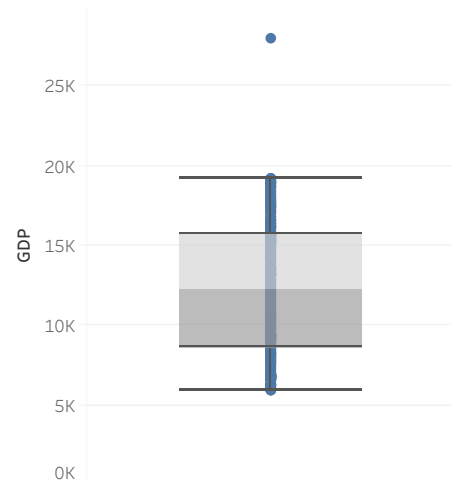M1- Narrow Measure of the Money Supply

Regected due to low correlation of R-squared:

10YT2YT- 10 Year Tresury Constant Maturity - 2 Year Tresury Constant Maturity

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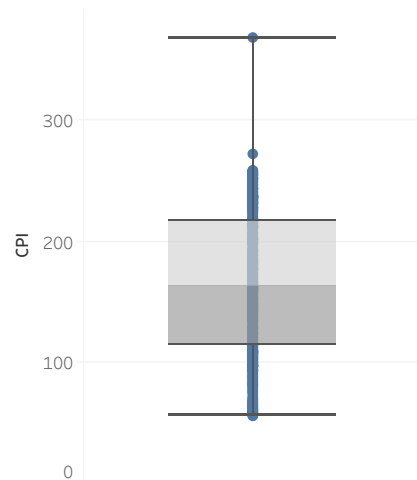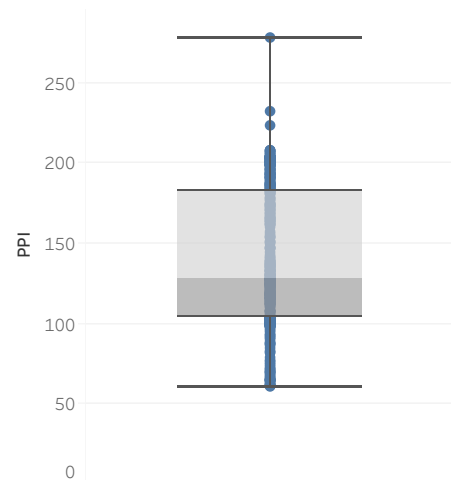### Narrow Measure of the Money Supply Boxplot
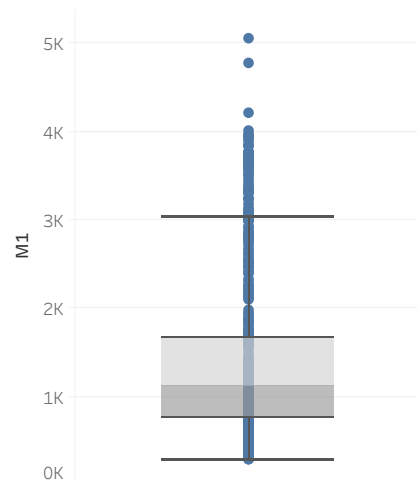
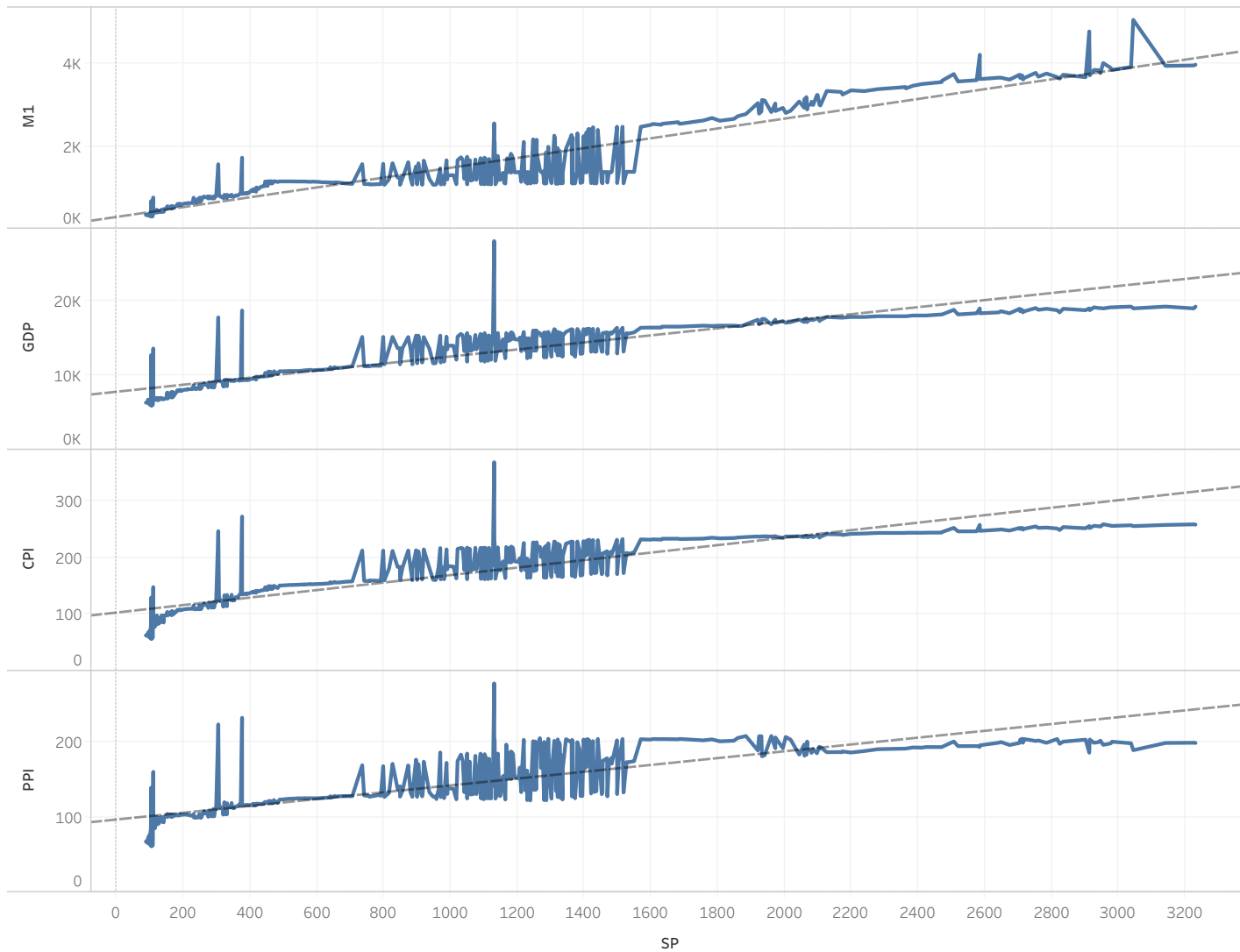### Gross Domestic Product Boxplot

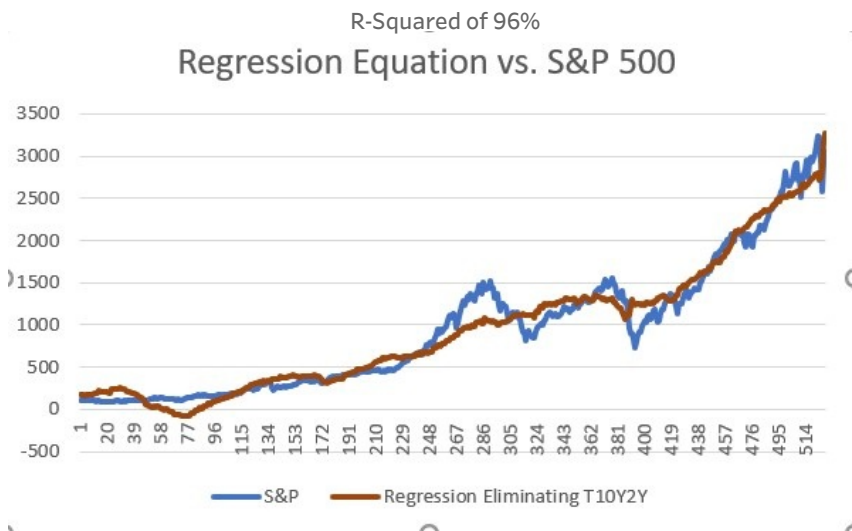### Consumer Price Index Boxplot

Producer Price Index Boxplot

Capstone 1: S&P 500 Indicators

| These indicators of the stock market can be used for invest.. | All but one indicator have few outliers past the interquartile range resulting in little variance. | M1, GDP, CPI, and PPI show a positive/associated relationship to the S&P 500 regecting the null hypothesis. | Regression equation showing the indicators in alignment with the S&P 500. | M1, GDP, CPI, and PPI should be considered if investing in an index fund of the .. |

Capstone 1: S&P 500 Indicators

All but one indicator have few outliers past the interquartile range resulting in little variance.	M1, GDP, CPI, and PPI show a positive/associated relationship to the S&P 500 regecting the null hypothesis.	Regression equation showing the indicators in alignment with the S&P 500.	M1, GDP, CPI, and PPI should be considered if investing in an index fund of the S&P 500.

R-Squared of 96%

Regression Equation vs. S&P 500

Capstone 1: S&P 500 Indicators

All but one indicator have few outliers past the interquartile range resulting in little variance.

M1, GDP, CPI, and PPI show a positive/associated relationship to the S&P 500 regecting the null hypothesis.

Regression equation showing the indicators in alignment with the S&P 500.

M1, GDP, CPI, and PPI should be considered if investing in an index fund of the S&P 500.

Final Conclusions of the data:
- The indicators in this analysis showed a associated/strong correlation to the stock market due to their R-squared and P-values.
-M1, the liquidity of money, should be the most looked at indicator of the stock market due to the regection of the null hypothesis at 88% certainty.
-M1 has the most varience due to the influx of money with the government supply of money.
-All should be considered together for a more accurate picture of the stock market by reflection of the regression.

Limitations:
- The regression equation does not reflect the dips in the stock market as severely as they do in the S&P500.