Background

In essence, the hypothesis that I am testing is that sector price movements vary directly with the expansion and contraction of economic activity. As a measure of economic activity I chose to use the Chicago Fed's National Activity Index (CFNAI). CFNAI is a weighted average of 85 macro-economic indicators and is considered by business economists to be a reliable indicator of U.S. economic expansions and contractions. I will use the S&P market/sector ETF's to obtain market/sector price movements.

Study Objective

Determine the Co-variation between S&P Sector Prices and Chicago Fed National Activity Index (CFNAI)

Model Specification

\[ \text{SPY}_t = a + b \cdot \text{CFNAI}_t \]
\[ \text{Si}_t = a + b \cdot \text{CFNAI}_{t-12} \]
Where SPY = S&P 500 ETF
Si = Sector
CFNAI = Chicago Fed National Activity Index
a = Intercept
b = Slope Coefficient
t = Time in Months
t – 12 = 12 month lag

Research Approach

- Univariate Regression Analysis
- Time Periods Analyzed
  1.) 2001-2012
  2.) 2009-2012
- Hypothesis: \( b > 0 \)

Conclusions

- SPY’s slope coefficient had the right sign and was statistically significant for all three regressions.
- For the 2001-2012 period 6 out of the 10 sectors had positive slope coefficients that were statically significant.
- For the 2009-2012 period all sector slope coefficients were positive and statistically significant.
- For the 2001-2012 12 month lag model 6 out of 10 sector slope coefficients were positive and statistically significant.
- Regression results support my hypothesis of a positive correlation between CFNAI and market/sector price movements.