Project Partners: Brett Kaliner, Rishi Gupta, Sarah Wolberg

Project Proposal

Introduction

Financial markets are extremely difficult to predict, and various sectors of the financial markets are affected in different ways and by different things. The best way to look at the performance of the various market sectors is to look at sector Exchange Traded Funds (ETF) to determine how the sectors of the market move. In order to see how a market sector moves, we can look at various outside factors and economic indicators. These factors influence market sectors as well as help us predict how a market sector will perform in the future. A good economic environment is important. When the economic environment is good, so is company profitability. This is important to many companies whose shares trade on the stock market. Additionally, when the economy is expanding and doing well, this usually means that more people are investing and buying goods and services. When the economy is not doing well, this usually means that people are not investing or buying goods and services. This can cause a market sector to increase in value, but, as we have seen in certain black swan events like the current pandemic, it may drive some market sectors through the roof. In this paper, we will look at five factors (Variable X1: Interest Rates, Variable X2: Inflation, Variable X3: Gross Domestic Product (GDP), Variable X4: National Unemployment Rates, and Variable X5: Total Daily Number US COVID cases) to determine which factors influence the ETF value the most and which are the best predictor variables that can be used by financial institutions to predict ETF value.

Research Questions

1. Which variables are significant factors in determining stock market value?
2. Has the total daily number of US COVID cases affected the stock market value since March 2020 until March 2021?

Initial Model Variables:

1. Variable Y: Stock Market Value = Dependent Variable
2. Variable X1: Interest Rates = Independent Variable
3. Variable X2: Inflation= Independent Variable
4. Variable X3: Gross Domestic Product (GDP) = Independent Variable
5. Variable X4: National Unemployment Rates = Independent Variable
6. Variable X5: Total Daily Number US COVID Cases = Independent Variable

Hypothesis

Ho: Initial Model is a good model when predicting market sector performance.
H1: Initial Model is not a good model when predicting market sector performance.

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Data

Data	Variable	Date Accessed	Site Accessed
NASDAQ Composite(^IXIC)	Y	3/29/21	https://finance.yahoo.com/quote/%5EIXIC/history?period1=1522281600&period2=1616976000&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true
Inflation Rates	X1	3/29/21	https://fred.stlouisfed.org/graph/?g=cN69
Interest Rate Data	X2	3/29/21	https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=reallongtermrateAll
GDP	X3	3/29/21	https://fred.stlouisfed.org/graph/?g=cN69
Unemployment Data	X4	3/29/21	https://fred.stlouisfed.org/series/UNRATE
COVID Case Data	X5	3/29/21	https://ourworldindata.org/coronavirus/country/united-states

Shared Folder

FE 541 Final Project