Project 2 Writeup

Andrew Vallaster, Omar Salemohamed, Yasoob Rasheed

Questions

Our group aimed to answer a series of questions related to Trump's impact on market indexes. Firstly, is there a noticeable trend regarding how market prices have changed since Trump took office, and if so, how have they changed? Also, can variations in prices be clearly attributed to the subject/nature of Trump's tweets? Finally, do markets respond differently to Trump's tweets, and if so, which ones seem to be the most receptive?

Why our Visualization Works

Dynamic/Interactive features:

- **Search for tweets** to find the associated prices for a given index on the days the tweets were made. This feature is important for gauging what 'kind' of Trump tweets, based on vocabulary, affects the market. I.e a search for 'taxes' can allow one to answer the question, 'Do Trump's tax related tweets have a noticeable impact on certain indexes?'
- **Select an index** to allow one to see what types of indexes are impacted (if impacted) by certain kinds of tweets, and to estimate which indexes are generally more volatile and responsive to Trump's tweets.
- **Zoom/brush** over the market graph. This makes it easier to mouseover a given day in the market and, therefore, to find the tweets from that day and get a better understanding of the tweets made and changes in market prices in a smaller interval of time.
- **Hover over bars** to find corresponding tweets from that day as well as the market prices for that day. Our facilitation for 'details on demand' allows one to easily select an extreme and see what Trump tweeted on that day.

The major layout/encoding decisions we had to make were related to how best to represent a market index and connect market prices to Trump tweets. While some kind of line graph would have been the obvious choice for representing data, we thought because we had discrete values (days) a bar graph would be a more accurate representation of our data. Alternatively, we tried a scatter plot but found that that made it more difficult to see market trends when changing the index. 'We also could have made it so that upon scrolling over a market day, a

“tooltip” with Trump’s tweets from that day would appear, but we thought this would be too cluttered, and wouldn’t allow for identifying all the occasions Trump tweets a certain phrase.

Insights from our Visualization

First, it’s clear from our visualization that Trump’s tweets do have some effect on certain indexes, such as the large spike in the volatility index when Trump tweeted about tax cuts. It is also clear that only certain indexes, at first glance, are responsive to these tweets, i.e the volatility index, whereas others are at least seemingly less impacted (10yr Treasury Rate). One can also extract from our visualization, the long-term trends a given market has exhibited since Trump has taken office. For example, NASDAQ has been almost exclusively rising since Trump took office. We also learned that these indexes do not necessarily reflect some of the social sentiments towards Trump’s behavior, as indicated by his tweets, and seem to be more receptive to his economic decisions, which makes sense.

Class Comments

We feel as though your principles of visualization design were very informative for p1, and this carried to p2 as well. The class content made it clear that choices of layout and encoding should be defined by the data and questions you are trying to present and answer, and in doing so, allowed us to make informed decisions regarding how to create our visualization. For example, we originally were going to highlight our bars with red as opposed to orange but realized that doing so would place a hallucinator in our vis, as red and green often convey ups and downs in prices and because we have a reactive red/green arrow that shows this. Thus, red might have suggested that on that day the market price had fallen.

The D3 and React lectures were particularly useful for getting a technical understanding of how to implement our visualization. However, a better understanding of CSS and React earlier on in the course would have helped us build a tidier visualization with more bug-free components. Additionally, we think it would have been helpful to have more opportunities to learn how to implement more advanced reactive features, i.e zoom, and also how best to approach projects that use React and D3 concurrently. Also, although the projects pretty much required us to experience the lifecycle from question to data processing to visualization, we think the opportunity to discuss in class what datasets to look for when answering a given question would have been helpful.