Analysis of Shocks to Stock Indexes Caused by US Presidential Elections

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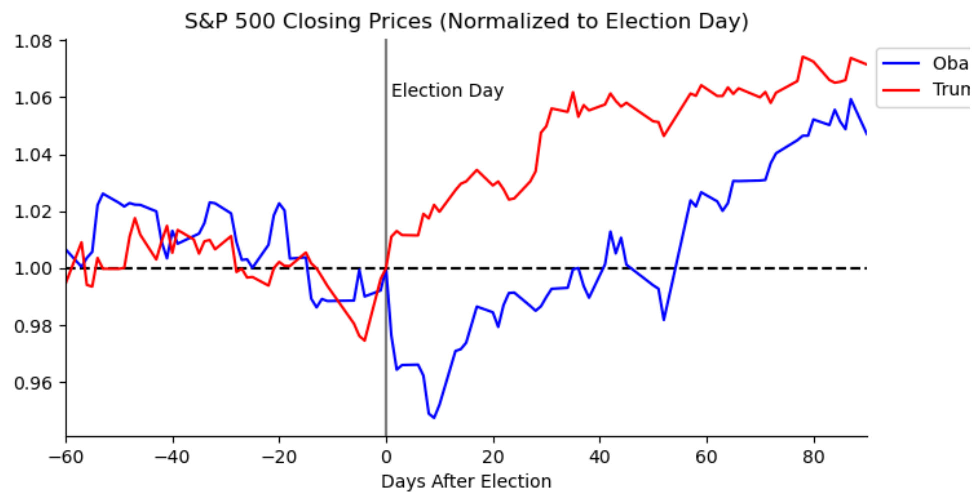
Introduction

Stock markets are often viewed as barometers of economic and political stability, reacting in real time to the uncertainties of major events. Among these types of geopolitical events, elections stand out as critical moments that can send ripples across financial markets, shaping the decisions of investors and policymakers alike. With the advent of any major election, financial experts and analysts are faced with a critical question: how will this geopolitical event impact domestic and international markets? Understanding the effects of elections on the markets is vital for investors, policymakers, or anyone looking to make informed financial decisions. In our project, we aim to explore how the SP500 stock index and its sub-sectors, as well as international indexes respond to national elections, focusing on changes in performance and volatility during these key moments. To explore this relationship, we will examine the historical trends of the S&P 500, 6 sub-sectors of the S&P 500, and 4 major international stock market indexes before, during, and after the elections of Obama in 2012, and Trump in 2016.

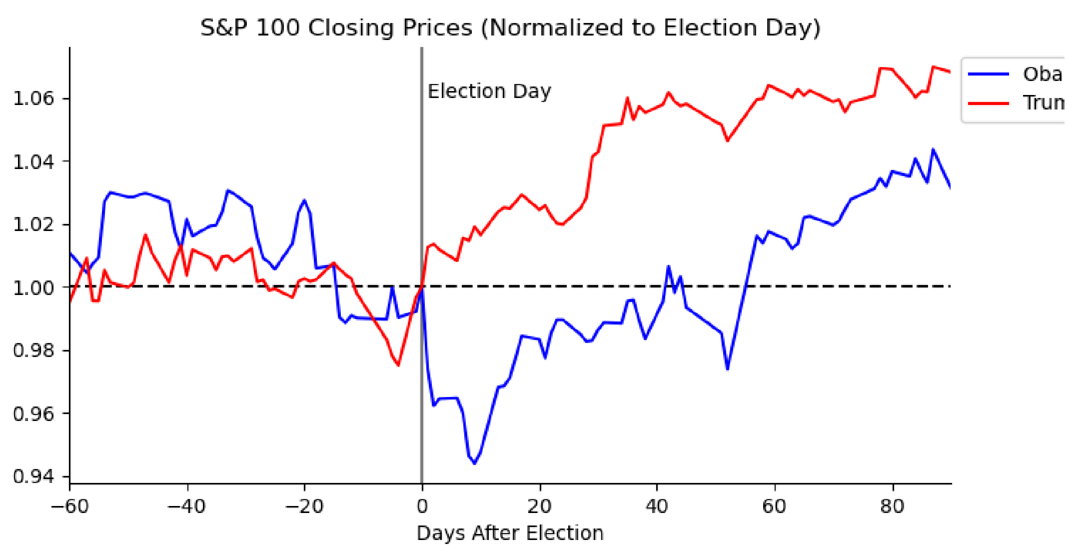
Data Summary

The data used in this analysis includes a combination of domestic and international stock indexes, sourced from Yahoo Finance via an API. All data points represent daily closing prices and were selected for their relevance in capturing market trends and investor sentiment. Dates ranged from mid 2012 to late 2017. Domestic stock indexes included S&P 500 and S&P 100 which serve as representations of the general sentiment of the domestic market. Of the 11 sub-sectors classified under the Global Industry Classification Standard(GICS), we chose to collect data on 6 of the sectors: Healthcare, Technology, Energy, Financial, Consumer Discretionary, and Utilities. These six sectors were selected for their strong relevance to the potential impacts of election-related policies, as well as to ensure clarity and focus in the analysis by concentrating on industries with significant economic and market influence. In addition to the sub-sectors, we also collected data on the Volatility Index(VIX) also known as the “Fear Index” as a measure of volatility and market expectations in the domestic market. The four international indexes utilized in this analysis were from Canada, China, Japan, and Europe(Eurozone). Canada’s S&P/TSX Composite is the 250 largest companies listed on the Toronto Stock Exchange. China’s Shanghai Composite is all stocks listed on the Shanghai Stock Exchange and is the primary representation of mainland China's equity market performance. Japan’s Nikkei 225 are the 225 largest companies on the Tokyo Stock Exchange. Lastly, the European Union’s EURO STOXX 50 are 50 of the largest and most liquid companies in the Eurozone. Each index is serving as the benchmark for the rest of that nation’s stock market, as the S&P 500 is for the domestic market.

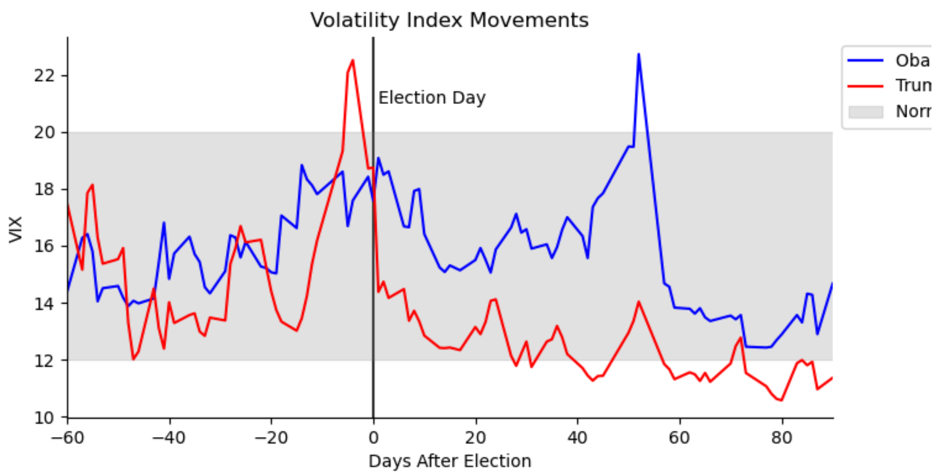
Analysis



Observing a 5-month span surrounding the election dates of Obama in 2012 and Trump in 2016, we can notice differing trends of the S&P 500 in the two cases. Leading up to Obama's election victory on Nov 6, 2012, S&P 500 prices sat relatively stable until it plummets in the following week. It would take several weeks until it would recover to its original price and eventually rise above. In contrast, the aftermath of Trump's election win was a large spike into significant growth over the 2-3 month span following election day. The difference likely had to do with both policy as well as circumstance at the time of the elections. Trump's pro-business and corporate policy is favorable for market sentiment, and as such, prices reflect positively. Obama, while also having less favorable policy to large companies like in the S&P 500, also took office at the time of the "fiscal cliff" where there was large uncertainty caused by expiration of Bush-era tax cuts as well as spending cuts simultaneously.

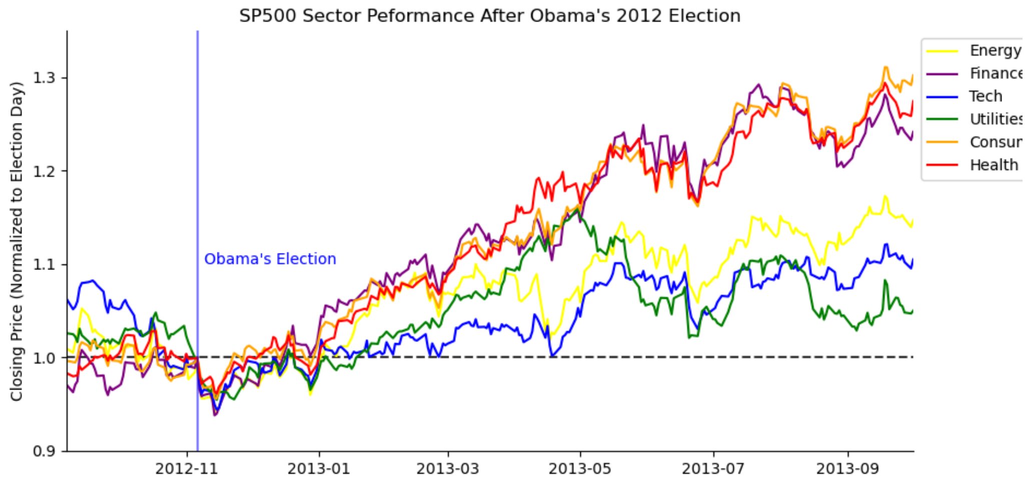


The S&P 100 graph showed nearly identical results, so these effects were likely similar across the board for companies of all sizes within the S&P 500. Looking at the Volatility Index, we can notice similar effects, a spike about 50 days after Obama's win, which lines up with the timing of the fiscal cliff in early 2013. However, there is another large spike prior to Trump's election, and this is likely due to the uncertainty leading into the election itself.

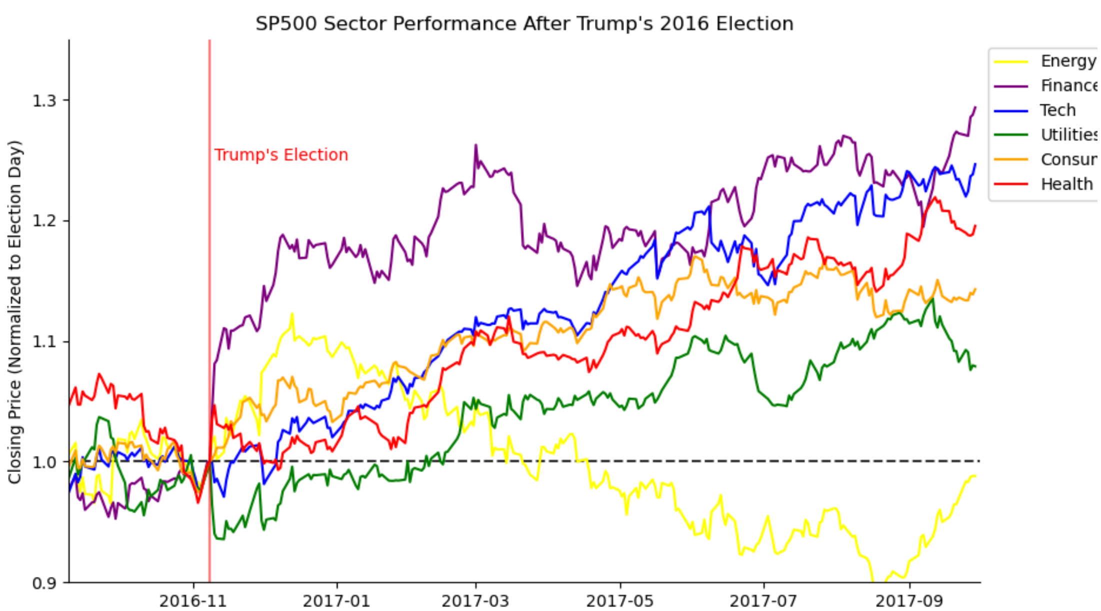


Hilary Clinton and Trump were the two candidates with largely differing policies and attitudes towards large corporations, and with the presidential race being very unclear who was the favorite leading into the election, it is imaginable that the VIX would represent this uncertainty accordingly. All in all, the policies of the president and other circumstances serve to be the two largest reasons for significant movements in price and volatility.

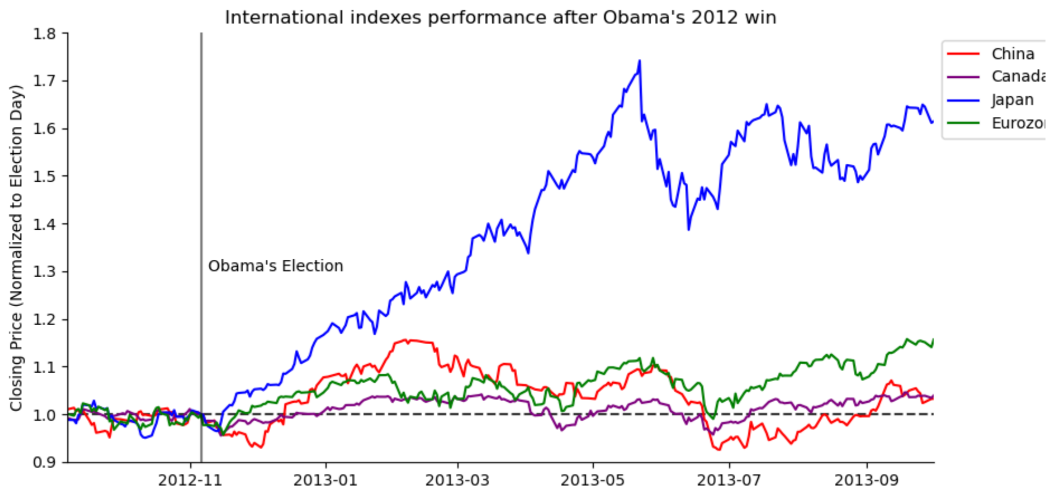
In the following weeks after Obama's re-election win, the closing prices of the SP500's subsectors all followed similar patterns. Collectively, they experienced drops in their closing price, but quickly rebounded in the final weeks of 2012 and into 2013. The SP500 has eleven total subsectors identified under the Global Industry Classification Standard (GICS). We chose to analyze six of these eleven subsectors, prioritizing them for having the highest relevance to election policy impacts, as well as for clarity. The six selected sectors were technology (XLK), healthcare (XLV), energy (XLE), finance (XLF), consumer discretionary (XLY), and utilities (XLU). We conducted our analysis through construction of two time series graphs, looking at the closing index stock price for the six sub-sectors before and after each presidential candidate's victory. In each time series, we normalized the index prices to the closing price during the day of the election, to mitigate the nominal increases that could be attributed to inflationary or other extraneous effects.



All six of the sub-sectors that we analyzed experienced similar decreases in their closing prices after Obama's re-election. Political tensions at the time could be attributed to the decrease in price, as investors feared market changes to business taxes and speculated which party would take control over the senate. Although each sub-sector experienced similar decreasing trends, technology and finance took on more substantial changes in response to the election results. Discrepancies between subsector responses could be reflective of Obama's re-election policies, as he had announced plans to reduce the government's deficit through spending cuts and tax hikes.



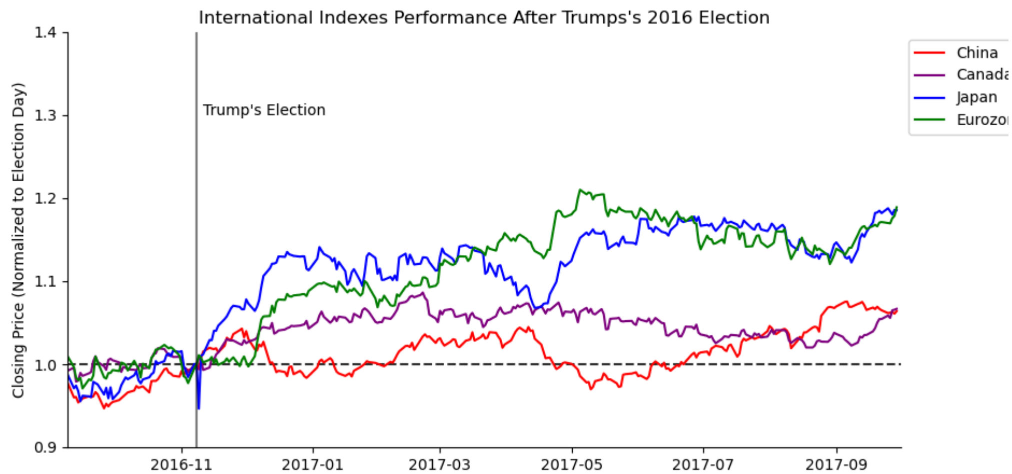
Looking at Donald Trump's 2016 election, the subsectors of the SP500 experienced more drastic variations in closing price compared to the previous presidential race. Following president Trump's victory, the finance, energy, consumer discretionary, and health sectors all saw spikes in their normalized closing prices, while technology and utilities experienced sharp declines. The technology and utility sectors would go on to bounce back from this initial drop in price come the last few weeks of the year. This upward trend of normalized price continued for all sectors except for energy, which saw a significant decline over 2017.



In the weeks following Obama's re-election, the performance of the Eurozone and Canada international indexes trended alongside the S&P 500. Japan's Nikkei 225 and the Shanghai Composite Index were notable exceptions to this pattern. When inferring the causality of these differences to the continued stability of the S&P 500 it is important to consider both domestic and international causes.

On December 26th, 2012, one month following Obama's November 6th 2012 re-election, Shinzo Abe was elected Japan's Prime Minister. He brought along an economic policy of 'Abenomics,' which focused on fiscal stimulus and structural reforms to stimulate growth and combat deflation. These reforms, independent of events in the United States, boosted confidence in Japanese investments. These factors more than the U.S. election's positive global economic impact led to a sharp difference in the Nikkei 225 when compared to the S&P 500. This coincidental timing makes Japan's market performance a notable outlier.

In China, the decrease following Obama's election had a larger influence. The Obama administration continued their firm stance on trade policies developed through Obama's first term. In addition to the U.S. influence, China also transitioned leadership from Hu Jintao to Xi Jinping in early 2013. This transition created uncertainty in Chinese markets as investors speculated on potential economic reforms and shifts in governance.



Following Trump's 2016 election, international indexes increased relative to the 2012 election reaction. The general sustained growth following the 2016 election likely had to do with Trump's pro-business policies brought in with the new administration. Looking at the U.S.'s country specific relations help show why the general trend was upwards and why China deviated from that norm.

The Eurozone index experienced a notable surge between November 2016 and January 2017, reflecting optimism about global trade and economic stability under the new administration. This rise could be attributed to expectations of deregulation and pro-business policies in the United States. This boosted investor confidence internationally which can be seen in the Eurozone.

Canada's index showed a noticeable increase compared to the 2012 election period, reflecting a significant boost in investor confidence. This trend may have been driven by expectations of strengthened trade relations between the U.S. and Canada. Canada's reliance on the U.S. as a trading partner could have made the country particularly responsive to the economic direction set by the Trump administration. The increase in Canada's index suggests that investors remained optimistic about continued trade compared to the decrease following the 2012 election.

China's index demonstrated relatively weaker performance compared to other regions, as reflected in the graphs. This could be attributed to rising concerns about trade tensions between the U.S. and China under the Trump administration. The administration's policies, such as imposing tariffs on Chinese imports, increased uncertainty around China's economy.

Japan's index saw lessened growth following Trump’s 2016 election compared to the significant response after Obama’s 2012 win. This reflects the significant impact of Japan’s change of leadership that occurred simultaneously with Obama’s re-election. The relatively restrained response highlights both Japan’s domestic situation, as well as the positive international effect of anticipating Trump’s economic policies.

The message conveyed through comparing the graphs shows how complex geopolitical factors play into a country's index performance. The reactions following each election were varied. Following Obama’s re-election the indexes generally remained around the normalized closing price. Following Trump’s election the indexes generally showed a positive reaction. The different responses highlight domestic and international reactions to anticipated policies.