US Presidential Elections and Stock Markets: Which one leads the other?

KEY INSIGHTS

■ We look at historical data to answer two simple questions: “Do U.S. presidential elections really matter for stock markets?” and “Which one leads the other?”

■ We find using election dates as a market timing indicator is inconclusive, while volatility around presidential elections is slightly less than in other years, contrary to common belief.

■ However, stock market returns have historically been good predictors of presidential election outcomes, particularly three month returns prior to the election.

Let’s make our position clear upfront: if readers are searching for insights on how a Trump or a Biden presidency might impact stock market returns in the coming years, please stop reading now. For readers who are curious about historical relationships between the timing of U.S. Presidential Elections and stock market returns, please proceed.

An important disclaimer of this paper is the limited data set we are drawing our conclusions from. We are employing a rather modest amount of data to be able to make any statistically significant conclusions on the relationship between elections and stock market returns. Although our data set goes back to 1927, there have only been twenty-three presidential elections since then. Some of them occurred at very interesting times, such as after the Great Depression (1932), during the second world war (1940, 1944) and, closer to the present, at the onset of the tech bubble burst in 2000 and the global financial crisis in 2008. This means that market returns around those elections were largely impacted by these historic events rather than by the results of the elections. Of note, isn’t that dynamic similar to what we are experiencing today, where the COVID-19 pandemic is expected to dominate both market returns and the election?

In this paper, we will cover the following topics: the first section will look at whether there are any consistent patterns of stock market returns around U.S. presidential election dates. The second section will investigate whether election outcomes have an impact on the stock market. The third section will focus on the efficacy of the stock market in predicting election outcomes. We conclude with some brief comments as to how the 2020

---

1 We would like to thank Katie Deal, T Rowe Price Washington Analyst, in our U.S. Equity Division for her insights. We would also like to thank our friends at Strategas Research for their helpful assistance in this research.
Do elections matter for stock market returns?

First, we calculate the calendar year returns of the S&P 500 Index during presidential elections years and then we compare them with the calendar year returns of all the other years, and all the years.

From Fig.1, we see a modest decrease in the average and median return during the election years compared to the other years. It also appears that the dispersion of returns during election years is lower than in other years as seen by the reduced standard deviation and the lower extreme values (Maximum and Minimum).

Secondly, we calculate the cumulative returns of the S&P 500 Index around the election dates: from one year prior to one year after. We compare these election year returns with other year returns. We calculate the average return and the median returns for both election and other years. We then plot the difference of these numbers between the election years and the other years (Fig. 2). We use both median and average statistics to check if any outlier datapoint may be skewing the results in one or another direction. The conclusions are stronger when years as seen by the reduced standard deviation and the lower extreme values (Maximum and Minimum).

### Calendar Year Returns for the S&P 500 Index

(Fig. 1) 12/31/1927 through 12/31/2019

<table>
<thead>
<tr>
<th></th>
<th>Election Years</th>
<th>Other Years</th>
<th>All Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>23</td>
<td>69</td>
<td>92</td>
</tr>
<tr>
<td>Mean</td>
<td>10.7%</td>
<td>11.6%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Median</td>
<td>12.0%</td>
<td>14.3%</td>
<td>14.0%</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>16.9%</td>
<td>20.7%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Maximum</td>
<td>37.9%</td>
<td>52.3%</td>
<td>52.3%</td>
</tr>
<tr>
<td>Minimum</td>
<td>-37.0%</td>
<td>-47.1%</td>
<td>-47.1%</td>
</tr>
</tbody>
</table>

Past performance is not a reliable indicator of future performance.

Source: T Rowe Price analysis, data from Bloomberg. 12/31/1927 through 12/31/2019. We use the S&P 500 index Total Return (gross of dividends) for all calculations in this note. S&P 500 data includes proxy returns prior to formal index inception in 1957.

### S&P 500 Return Difference between Election Years and Other Years

(Fig. 2) 1927 - 2019

Past performance is not a reliable indicator of future performance.

Source: T Rowe Price analysis, data from Bloomberg. Note that the 1-year prior return for the 1928 election was excluded from the sample because of lack of available data. 12/31/1927 through 12/31/2019.

S&P 500 data includes proxy returns prior to formal index inception in 1957.

2 We selected the first Tuesday of November of all other years as the cutoff date. This allows us to account for seasonality.
both average and median differences of returns are in the same sign.

The statistics don’t lie: returns were generally higher before the elections during election years than in the other years. However, returns were meaningfully lower after the elections during the election years than in the other years. Are elected presidents that influential for equity returns? Stock market investors might be taking electoral promises for granted and could be disappointed by what gets finally implemented.

One explanation of this phenomenon is that elected presidents have been particularly unlucky in their timing to get into office. Indeed, when we overlap the following years after the election and the years when a recession occurs (as defined by NBER3), there is a 57% probability that a recession happened during the year following the election. This compares with 22%, 30% and 17% in the other years (election years, second year after and third year after respectively). It appears that stock market is accurately anticipating weaker economic conditions which explains the weaker stock market return at the end of an election years given the higher probability of having a recession in the following year compared to other years.

Third, we look at whether the elections dates have an impact on market volatility (Fig.4).

Except for the one-month and six-month after period, volatility was on average lower during election years than in other years, across all time periods (+/- 1 year). This is interesting given the overlap of recession years with the post-election years. While

### Presidential Election Years and Recession Years (Fig. 3)

<table>
<thead>
<tr>
<th>Event</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is an election year happening during a recession year?</td>
<td>22%</td>
</tr>
<tr>
<td>Is the year following an election a recession year?</td>
<td>57%</td>
</tr>
<tr>
<td>Is the second year following an election a recession year?</td>
<td>30%</td>
</tr>
<tr>
<td>Is the third year following an election a recession year?</td>
<td>17%</td>
</tr>
</tbody>
</table>


### Average Volatility - S&P 500 Index Around Presidential Elections and Other Years (Fig. 4) 1927 - 2019

Source: T Rowe Price analysis, data from Bloomberg. Note that the 1-year prior return for the 1928 election was excluded from the sample because of lack of available data. 12/31/1927 through 12/31/2019. S&P 500 data includes proxy returns prior to formal index inception in 1957.

---

3 https://www.nber.org/cycles.html
returns are lower, this doesn’t mean that volatility is necessarily more elevated. We would highlight that there seems to be some seasonality at play in this chart as volatility in all years (election and other) seem to be higher before November than after.

Another point is that during election years, market volatility on average was higher closer to the election date: one month prior or after the election volatilities were higher than in the other time periods. This confirms what we currently see being priced into the volatility forward curve: the delta between realized volatility and the forward volatility in November to protect against a 20% market drop is at a 10-year high. While history suggests a spike in volatility around the elections, current market pricing is extreme this time.4

**Do election results change the market return impacts?**

We now look at stock market returns around the election periods, conditioned by whether the incumbent party wins the elections or not. This reduces further our sample. The table (Fig. 5) summarizes all presidential election years since 1928 and whether the incumbent party wins or not.

Based on historical data, there was a 57% chance that the incumbent party won the elections. In our sample, there were 13 occurrences when it happened and 10 when the incumbent party lost.

Note that only once did the incumbent party win during a recession year (in 1948, although the recession started in November of that year). The incumbent party has a higher chance of renewing its mandate if the following year is not a recession. Indeed, in 70% of time that the incumbent party lost, the following year after the election was a recession year. Voters are particularly good at predicting a recession if their votes against the incumbent party is any guide. This confirms our previous finding on the stock market returns post-election dates. Basically, voters and stock market investors alike are sniffing the recession around the corner and are reacting rationally.

We calculate the average returns prior and after the elections depending on whether the incumbent party won or lost (Fig. 6).

If the stock market is strong before the election date, there is a good chance that the incumbent party stays in power. On the other hand, the stock market is soft before the election dates when the incumbent party loses. We would relate that comment to the recessions that typically occur after the incumbent party lost. Conventional wisdom argues that stock markets tend to perform poorly before a recession. Since 70% of the years when the incumbent party lost were followed by a recession year, this makes sense that equity markets

---

performed poorly in the advent of the elections when the incumbent party lost.

The volatility experiences around the elections, conditioned on whether the incumbent party wins or loses, confirm the expectation that volatility is significantly higher when the incumbent party loses than when it wins. This is particularly acute in the last month before the election. Given what we noted on the current market pricing a spike in volatility in November, this suggests that volatility market investors are leaning towards a Biden victory rather than a Trump re-election.

One other observation on the volatility experience around election dates. The trajectory before and after the elections depends on the outcomes. If the incumbent party wins, the volatility decreases before the elections and modestly rises after. The opposite happens when the incumbent party loses, volatility significantly increases before the elections and then recedes after.

Do stock markets predict election outcomes?

From the previous section, we can say that data suggests stock market
returns have a strong correlation to the outcomes of US presidential elections.

We calculate the probability of the outcome for the incumbent party (win or lose) given the pre-election performance of the stock market (positive or negative, respectively).

The sign of the stock market return from periods one year to one month before the elections has a more than 50% 'hit rate' in calling the election results. The sign of the stock market return is particularly accurate when we look at the returns three months before the elections. The probability is higher than 85% to accurately predict the result of the elections. If the three-month return is positive, the data suggests the incumbent party would have won. If it is negative, the incumbent party is more likely to lose. Unfortunately for gamblers, we only know the three-month return on the day of the election day itself!

**Conclusion: “It’s COVID, stupid”**

In our paper, we found that poor equity returns before the elections don’t bode well for the incumbent party’s chances at a second term due to the trend of recessions following election years where incumbent parties lost.

Regardless of party or incumbency, newly-elected presidents have a higher-than-usual chance of facing a recession in their first year of office. This trend explains why returns after an election year tend to underperform other years.

It is interesting to note that volatility around election years remains lower than in other years, contrary to the conventional wisdom. However, the volatility experienced before and after presidential elections are completely opposite depending on whether the incumbent party wins or loses: when the incumbent party wins the elections, the volatility trends lower around the election dates while when the incumbent party loses, the volatility increases around the elections.

Based on our quantitative analysis, we can conclude that some relationships do indeed exist between stock market returns and U.S. presidential election outcomes, as both are connected to the same variable: the health of the economy. As James Carville insisted in 1992, “It’s the economy, stupid.”

Given this analysis, we assert that the 2020 presidential election won’t be that different from the historical trend. This year, stock markets and the November elections have something in common: the COVID-19 pandemic, which has caused secular and immediate shifts in economic and market trends. In this election year, we are tempted to amend Mr. Carville’s statement – “It’s COVID, stupid.”

---

5 “It’s the economy, stupid,” is popular phrase first coined by Bill Clinton adviser James Carville to emphasize that voters – above all other campaign issues – use their personal perception of economic prosperity as an indicator of the incumbent party’s success. Consequently, candidates for president build their arguments for election around economic progress. Given the all-consuming implications of coronavirus on the economy, COVID-19 has replaced the economy as the first and foremost thing on voters’ minds as they receive their ballots.”
INVEST WITH CONFIDENCE®

T. Rowe Price focuses on delivering investment management excellence that investors can rely on—now and over the long term.