



# U.S. Presidential Elections and Stock Markets

Which One Leads the Other?

September 2020

## 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, and 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.

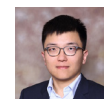
An important disclaimer of this paper is the limited data set we are drawing our conclusions from. We are employing a rather modest amount of data to make any statistically significant conclusions on the relationship between elections and stock market returns. Although our data set goes back to 1927,<sup>1</sup> there have only been 23 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 and 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 coronavirus 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, and the third section



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<sup>1</sup> We would like to thank Katie Deal, a 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.

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# -0.9%

We see a modest decrease in returns in presidential election years compared with other years.

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

(Fig. 1) December 31, 1927, through December 31, 2019

	Election Years	Other Years	All Years
<b>Count</b>	23	69	92
<b>Mean</b>	10.7%	11.6%	11.4%
<b>Median</b>	12.0	14.3	14.0
<b>Standard Deviation</b>	16.9	20.7	19.7
<b>Maximum</b>	37.9	52.3	52.3
<b>Minimum</b>	-37.0	-47.1	-47.1

### Past performance is not a reliable indicator of future performance.

Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

We use the S&P 500 Index Total Return (gross of dividends) for all calculations in this report. Prior to formal S&P 500 Index inception in 1957, data is sourced from Robert J. Shiller. (<http://www.econ.yale.edu/~shiller/data/chapt26.html>)

will focus on the efficacy of the stock market in predicting election outcomes. We conclude with some brief comments as to how the 2020 election might differ from our historical findings.

### Do Elections Matter for Stock Market Returns?

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

In Figure 1, we see a modest decrease in the average and median return during the election years compared with 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.<sup>2</sup> We calculate the average return and the median returns for both election years 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 both average and median differences of returns are of the same sign.

The statistics don't lie: Returns were generally higher before the election during election years than in the other years. However, returns were meaningfully lower after the election 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.

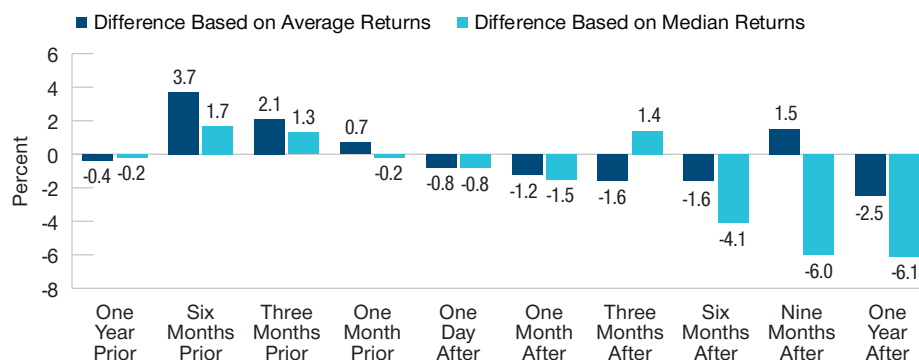
One explanation of this phenomenon is that elected presidents have been particularly unlucky in their timing to get into office. Indeed, when we overlap the years after an election and the years when a recession occurs (as defined by NBER<sup>3</sup>), there is a 57% probability that a recession happened during the year following the election (Fig. 3). This compares with 22%, 30%, and 17% in the other years (election

<sup>2</sup> We selected the first Tuesday of November of all other years as the cutoff date. This allows us to account for seasonality.

<sup>3</sup> <https://www.nber.org/cycles.html>

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

(Fig. 2) Windows around election date, 1928–2019



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Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

Note that the 1-year prior return for the 1928 election was excluded from the sample because of lack of available data.

Prior to formal S&P 500 Index inception in 1957, data is sourced from Robert J. Shiller.

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years, second year after, and third year after, respectively). It appears that the stock market is accurately anticipating weaker economic conditions, which explains the weaker stock market return at the end of an election year given the higher probability of having a recession in the following year compared with other years.

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

Except for the one- and six-month after period, volatilities are, on average, lower during election years than in other years, across all time periods ( $\pm$  one year). This is interesting given the overlap of recession years with postelection years. While 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.

## Presidential Election Years and Recession Years

(Fig. 3) Recession probability<sup>1</sup> in each year of four-year term, 1926–2019

	Probability
Is an election year happening during a recession year?	22%
Is the year following an election a recession year?	57%
Is the second year following an election a recession year?	30%
Is the third year following an election a recession year?	17%

### Past results are not a reliable indicator of future results.

**For illustrative purposes only. Based on historical data. This is not intended to be predictive or forward looking in nature. Future outcomes and occurrences may differ significantly.**

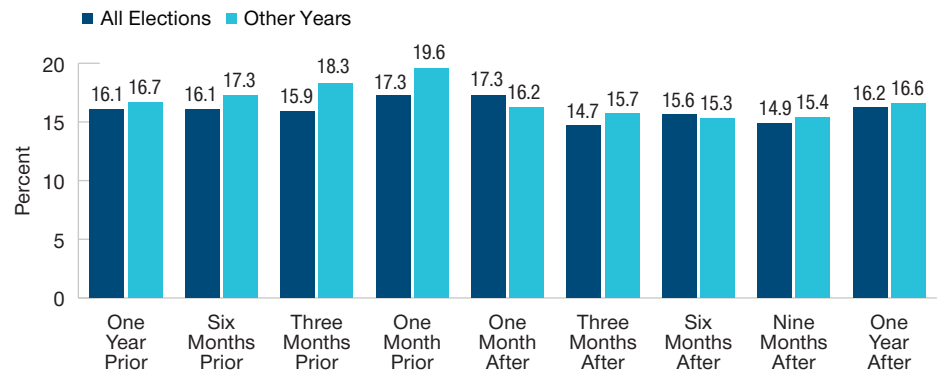
<sup>1</sup> Over 1926–2019, for each year of a four-year presidential term what percentage were recession years as defined by the NBER.

December 1926 to December 2019.

Sources: NBER and Bloomberg Finance L.P.; analysis by T. Rowe Price.

## Average Volatility of S&P 500 Index Around Presidential Elections and Other Years

(Fig. 4) Windows around election date, 1928–2019



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December 31, 1927, through December 31, 2019.

Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

Note that the 1-year prior return for the 1928 election was excluded from the sample because of lack of available data.

Volatility refers to the standard deviation of S&P500 daily price returns for each window. Prior to formal S&P 500 Index inception in 1957, data is sourced from Robert J. Shiller.

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“...only once did the incumbent party win during a recession year (in 1948...).

— Thomas Poullaouec  
Head of Multi-Asset Solutions,  
Asia Pacific

Another point is that during election years, market volatility, on average, was higher closer to the election date: One month prior to 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:<sup>4</sup> The delta<sup>5</sup> between realized volatility and the forward volatility<sup>6</sup> in November to mitigate against a 20% market drop is at a 10-year high. While history

## U.S. Election Year Results

(Fig. 5) Presidential elections when incumbent party wins

Year	Incumbent Party Won	Year	Incumbent Party Won
1928	✓	1976	
1932		1980	
1936	✓	1984	✓
1940	✓	1988	✓
1944	✓	1992	
1948	✓	1996	✓
1952		2000	
1956	✓	2004	✓
1960		2008	
1964	✓	2012	✓
1968		2016	
1972	✓		

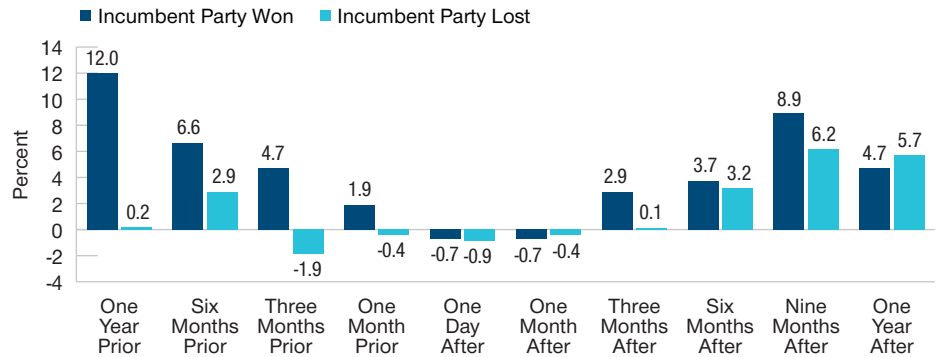
<sup>4</sup> The volatility forward curve is a measure of the implied volatility of a financial instrument at different points in the future.

<sup>5</sup> Delta measures how the price of an option changes compared to the price of the underlying asset.

<sup>6</sup> Realized volatility is based on historical S&P500 returns, forward volatility is based on a 3-month put option with 20% downside hedging (S&P 500 Index), from 8/21/2010 to 8/21/2020. The example shows that there are expectations for higher volatility in November. For informational and illustrative purposes only.

## Average S&P 500 Performance Around Presidential Election

(Fig. 6) Windows around election date, 1928–2016



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Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

Note that the 1-year prior return for the 1928 election was excluded from the sample because of lack of available data.

Prior to formal S&P 500 Index inception in 1957, data is sourced from Robert J. Shiller.

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suggests a spike in volatility around the elections, current market pricing is extreme this time.<sup>7</sup>

### 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 election or not. This further reduces our sample. Figure 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 election. 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 the time that the incumbent party lost, the year after the election was a recession year. Voters are

particularly good at predicting a recession if their votes against the incumbent party are any guide. This confirms our previous finding on stock market returns after the election dates. Basically, voters and stock market investors alike are sniffing the recession around the corner and are reacting rationally.

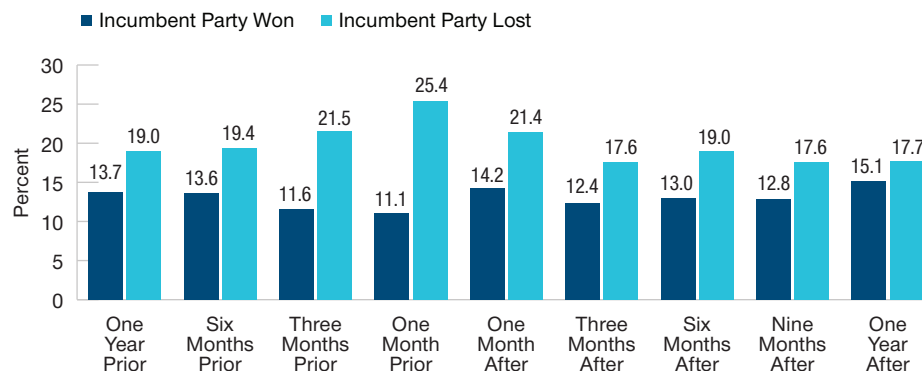
We calculate the average returns prior to and after the elections depending on whether the incumbent party won or lost (Fig. 6).

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 loses. Conventional wisdom argues that stock markets tend to perform poorly ahead of elections. Since 70% of the years when the incumbent party lost were followed by a recession year, it makes sense that equity markets performed poorly in the wake of the elections when the incumbent party lost.

<sup>7</sup> Source: T. Rowe Price. As of August 2, 2020.

## Average S&P 500 Volatility Around Presidential Elections

(Fig. 7) Windows around election date, 1928–2016



### Past results are not a reliable indicator of future results.

December 31, 1927, through December 31, 2019.

Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

Note that the 1-year prior return for the 1928 election was excluded from the sample because of lack of available data.

Volatility refers to the standard deviation of S&P500 daily price returns for each window. Prior to formal S&P 500 Index inception in 1957, data is sourced from Robert J. Shiller.

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The volatility experienced around the elections, conditioned on whether the incumbent party wins or loses, confirms the expectation that volatility tends to be 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 toward a Biden victory rather than a Trump reelection.

One other observation on the volatility experience around election dates: The trajectory before and after the elections has depended on the outcomes. If the incumbent party won, the volatility decreased before the elections and modestly rose after. The opposite happened when the incumbent party lost—volatility significantly increased before the election and then receded after.

### Do Stock Markets Predict Election Outcomes?

From the previous section, we can say that data suggest stock market returns have had a strong correlation to the outcomes of U.S. presidential elections.

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

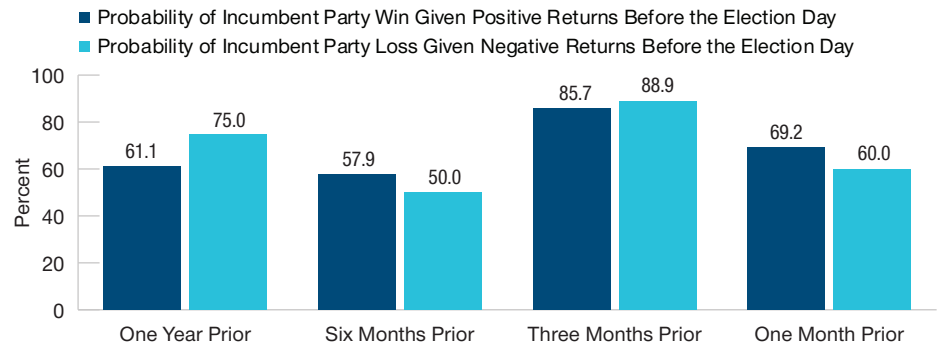
The sign of the stock market return from periods one year to one month before the elections had a more than 50% “hit rate” in calling the election results. The sign of the stock market return was particularly accurate when we looked at the returns three months before the elections. The probability of accurately predicting the result of the elections was higher than 85%. If the three-month return is positive, the data suggest 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 election day itself!

“This year, stock markets and the November elections have something in common: COVID-19....”

— Nathan Wang  
Solutions Analyst, Multi-Asset Solutions, Asia Pacific

## Predictive Power of S&P 500 Historical Performance Before Election Day

(Fig. 8) Windows around historical election dates, 1928–2016



### Past results are not a reliable indicator of future results.

For illustrative and informational purposes only.

Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

Probability is calculated as the ratio of the number of occurrences when the side condition is fulfilled to the total number of occurrences. Note that the 1-year prior return for the 1928 election was excluded from the sample because of lack of available data.

**Based on historical data and assumes a normal distribution of outcomes. This is not intended to be predictive of a future outcome or forward looking in nature. Actual future outcomes and occurrences may differ significantly.**

Prior to formal S&P 500 Index inception in 1957, data is sourced from Robert J. Shiller. (<http://www.econ.yale.edu/~shiller/data/chapt26.html>)

### Conclusion: “It’s COVID-19, Stupid”<sup>8</sup>

In our paper, we found that poor equity returns before the elections don’t bode well for the incumbent party’s chances of 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 tended to underperform other years.

It is interesting to note that volatility around election years remained lower than in other years, contrary to conventional wisdom. However, the volatility experienced before and after presidential elections were completely opposite depending on whether the incumbent party wins or loses: When the incumbent party won the elections, the volatility trended lower

around the election dates, while the volatility increased around the elections when the incumbent party lost.

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 presidential adviser James Carville insisted in 1992, “It’s the economy, stupid.”

Given this analysis, we believe 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: COVID-19 (the disease caused by the coronavirus), 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-19, stupid.”

<sup>8</sup> “It’s the economy, stupid,” is a popular phrase first coined by Bill Clinton’s 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, presidential candidates build their arguments for election around economic progress. Given the all-consuming implications of the coronavirus on the economy, the pandemic has replaced the economy as the first and foremost thing on voters’ minds as they receive their ballots.

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**Additional Disclosure**

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