Midterm Elections' Stock Market Surge: An Unintentional Gift from U.S. Politicians

Jędrzej Białkowski and Aynaz Nahavandi

The aim of this article is to examine the so-called midterms election effect on the U.S. equity market. The effect has not been previously documented in the academic literature (see Wisniewski [2016] for a comprehensive literature survey), despite the fact that some initial evidence has been presented in the financial press. In September 2014, the Financial Times published a column by Ken Fisher [2014], who called the performance of the stock market after the midterm election an “86.4% miracle” because of a very predictive pattern. In November 2014, a contributor to the Forbes website, Bill Greiner [2014], described the oddity of post-election stock market cycles in the November–January period after midterm elections. In a 2010 BlackRock newsletter, Robert C. Doll [2010], chief equity strategist, referred to the average S&P performance and its higher return in the 6 months and 12 months after midterm elections. He noted that “regardless of what the new legislative priorities are in the coming year, one immediate and positive result of the elections is that the outcome has gone from being an ‘unknown’ to a ‘known.’”

Our article offers a scholarly scrutiny of the midterm election effect on the U.S. equity market. We first examine whether any pattern is present in the U.S. stock returns after the midterm elections and then carefully document the magnitude of it. Second, we compare the post-election stock market cycles for the presidential and the midterm elections. Finally, we examine whether fiscal or monetary policies are solely causing the distinctive return pattern.

Our article provides ample evidence that the midterm effect is a stand-alone effect and is not fully explained by fiscal or monetary policies. The U.S. stocks perform extremely well in the fourth quarter of a midterm election year and the two following quarters: on average, 8.89%, 8.02%, and 6.15% return per quarter, respectively. The historical average return hovers around 3%. Finally, our analysis shows that the midterm election effect is stronger than the third year of the presidential-term effect.

A number of studies have explored the behavior of equity markets around national elections. The research is motivated by the idea that when politicians speak, markets respond. The impact of political uncertainty on capital markets attracts substantial attention from scholars. Białkowski, Gottschalk, and Wisniewski [2008] investigated stock market uncertainty around national parliamentary and presidential elections on a sample of 27 Organisation for Economic Co-operation and Development countries and concluded that political uncertainty results in higher stock market volatility. Likewise, Goodell and Vähämäa [2013] confirmed this idea and showed in their study...
that political uncertainty around the U.S. presidential elections affects stock market volatility. Julio and Yook [2012] provided evidence that political uncertainty matters for firms. For a sample of 48 countries, they found that political uncertainty reduces firms’ investment expenditures until the uncertainty is resolved; it is reasonable to accept that changes in firms’ investment behavior will also affect market investors’ attitudes. In another example, Li and Born [2006] reported that stock market volatility and average returns are higher for U.S. presidential elections, preceded by polling data sending ambiguous signals about the likely winner. Those empirical studies are followed by Pastor and Veronesi [2012, 2013], whose studies developed the first general equilibrium model in which equity prices respond to the political climate.

No less important, and very appealing to the investment community, is the topic of the political business cycle and elections. The performance of the stock market during the four-year presidential cycle has attracted the attention of several scholars. Studies by Allvine and O’Neill [1980], Booth and Booth [2003], Gärtner and Wellershoff [1995], Huang [1985], and Stovall [1992] emphasized the so-called second-half effect. They also confirmed that stock market returns exhibit a four-year U.S. presidential cycle and that returns are significantly higher during the last two years of presidential administrations. Furthermore, Ramchander, Simpson, and Webb [2009] found a presidential election cycle pattern in real estate investment trust returns. They reported higher excess returns in the second half of the U.S. presidential cycle.

Studies by Beyer, Jensen, and Johnson [2008], Booth and Booth [2003], Sturm [2013], and Wong and McAleer [2009] scrutinized the so-called third-year effect in the U.S. presidential cycle and found that the average returns of the third year are the highest among the four-year presidential cycle. Beyer, Jensen, and Johnson [2008] offered a detailed analysis of the effect. They examined quarterly returns of S&P 500 firms between 1957 and 2004 and reported a strong market performance in the third year of the U.S. presidential term. They did not find evidence that higher returns are a compensation for higher risk; however, their analysis indicated that fiscal and monetary policy may play a role in explaining the observed return patterns. On the other hand, Sturm [2013] showed that although tax legislation may drive the presidential cycle, the third-year effect is independent of the government’s influence on economic policy. Sturm found no strong evidence supporting the effect of fiscal and monetary policies on the presidential cycle in the period between 1972 and 2007; however, he stated that tax acts were mostly passed during the first half of the president’s term (68.75%), and considering the one- or two-year delay in seeing the effect of tax legislation on the economy, the presidential cycle might be explained with the timing of the tax legislation.

The remainder of this article is organized as follows. In the next section, we formulate hypotheses concerning stock market performance after midterm and presidential elections. The third section presents the data and methodology. The fourth section presents the results of the empirical analysis of the midterm effect on the stock market. The fifth section summarizes the findings and concludes.

HYPOTHESES

Political signals contain information about government plans and the government’s commitment to implement them. Political signals are closely monitored by investors, who use them to update their beliefs about the government’s future policy decisions. Market participants’ interpretation of signals leads to actions on the capital market. Thus, stock prices respond to political signals, and their movement is stronger when political uncertainty—about future legislative priorities—is larger (see Pastor and Veronesi [2012, 2013]). In the majority of cases, the post-election period brings one immediate and positive result: a clear outcome in terms of which party/presidential candidate has won. In other words, the post-election periods resolve some of the political uncertainty and reduce the market volatility. This may have an impact on the level of returns.

The analysis of the Economic Policy Uncertainty Index, which measures political uncertainty (see Baker, Bloom, and Davis [2016] for details), shows that, on average, political uncertainty is higher after presidential elections. We calculated the average of the index in the three quarters around the midterm elections and the presidential elections. The value of the Economic Policy Uncertainty Index was, on average, 17.5% higher in the case of the presidential elections versus midterm
elections in the period 1985 Q1 to 2017 Q2. Recent U.S. elections have brought an increase in the average percentage; indeed, in the period between 2004 Q1 and 2017 Q2, it exceeded 45%.

Taking into account the difference between the levels of uncertainty observed after a presidential and a midterm election, we expect to observe higher returns in the first quarters after midterm ballot-casting.

DATA AND METHODOLOGY

To examine the potential effect, we collect the data on midterm and presidential elections and quarterly returns on the S&P 500 Total Return Index for the period of 1954 Q2–2017 Q2. The sample selection is determined by the availability of data for the approximate fiscal and monetary policy. The latter is approximated by the number of expansive quarters (change in the discount rate) and degree of monetary policy stringency (mean federal funds premium). A given quarter is classified as subject to an expansive monetary policy if the most recent change in the Federal Reserve Bank (Fed) discount rate was a reduction. The federal funds premium is measured as the federal funds rate less the three-month T-bill rate. The impact of government action on the economy and the stock market is measured by the change in federal government spending and the percentage change in federal tax receipts. The variables describing the fiscal and monetary policy were sourced from FRED Economic Data, St. Louis Fed. The S&P 500 Total Return Index comes from Global Financial Data. The information on the time of elections and the results were collected from the US House of Representatives website.

To evaluate the robustness of our findings, we consider two alternative subperiods: 1954 through 1989, and 1990 through 2017. Exhibit 1 (Panels A and B) provides a description of the selected time frame.

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**EXHIBIT 1**


<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A: Presidential Election</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democrat</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Republican</td>
<td>9</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td><strong>Panel B: Midterm Election (Senate)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democrat</td>
<td>11*</td>
<td>8</td>
<td>3*</td>
</tr>
<tr>
<td>Republican</td>
<td>6*</td>
<td>1</td>
<td>5*</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td><strong>Panel C: Midterm Election (House)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democrat</td>
<td>11</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Republican</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

Notes: The exhibit summarizes the midterm and presidential elections in the period between 1954 and 2017.
* denotes a special case: In the 2006 midterm election, both parties won 49 seats. Therefore, both parties are considered as a party gaining power.

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In the period under consideration, there were 32 elections, with an equal number of presidential and midterm elections. The ballot-casting left Democrats the winner 10 times, and the Republicans 5 times. The 2006 midterm elections gave to both parties the same number of seats. In the case of presidential elections, 9 times out of 16 a Republican candidate was elected as the head of state.

RESULTS

The main result of the article is illustrated in Exhibit 2. As shown, the average S&P 500 return during the mid-election quarter and the two quarters following the midterm election is at least two times higher than that during the non-election quarters. The comparison with presidential election quarters reveals that quarter returns after a midterm election are much higher. The exhibit confirms the anecdotal observation mentioned in the financial press: There is indeed a midterm effect, and it is substantial. The average gain in the S&P 500 Total Return Index is 8.9% in the quarter that includes the midterm election (Quarter 4 in the exhibit) and 8.02%

1 The results are available upon request. The starting date of the index is January 1985. (Data source: Baker, Scott R., Nick Bloom, and Stephen J. Davis, Economic Policy Uncertainty Index for United States [USEPUINDXD], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/USEPUINDXD, November 5, 2017)

2 The election data were retrieved from the following website: http://history.house.gov/Institution/Election-Statistics/Election-Statistics/.

3 A similar graph prepared for medians confirms reported results; it is available upon request.
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d and 6.15%, respectively, in the two following quarters. This compounds to 24.9%.4

Exhibit 3 provides further evidence on the surge of the stock market during the mid-election period. In the case of the examined three quarters in the non-midterm-election periods, the market is in positive territory 65%–70% of the time. For the post-midterm-election period, it is positive 91% of the time, and for the presidential election, it never exceeds 72%. The average return is 7.68%, 2.36%, and 1.82% for the midterm, presidential, and non-election three-quarter period, respectively. The 5% and 95% percentiles are −0.02% and 21.96% for midterm elections and −13.39% and 13.41% for the same quarters in non-election periods. To evaluate the impact of outliers on reported average returns, we report medians in Exhibit 3. Taking into account that medians are not much different from the reported means, we conclude that our results are not driven by outliers.

The further argument that an investment in the post-mid-election periods has a very small downside risk comes from the fact that the average return for negative quarters is in the range of −1.13% and −2.62%. That is not close to the loss of 6.5%, on average, for the non-election periods. In contrast, after presidential elections, market participants are rewarded with a rather modest compounded return of 6.3% (versus 24.9%). The average return of 2.36% is just 0.5% higher than in the case of non-election periods.

The analysis in Exhibit 3 shows that the performance of the stock market after the U.S. elections depends on the type of election and that the time around midterm elections is unique. One may argue that higher returns during the post-midterm-election period are compensation for the higher volatility; however, our analysis shows that annual volatility in the post-midterm-election periods is lower than that in the non-election periods (12.7% versus 15.4%). The analysis of annual volatility calculated from daily returns confirms it.

The careful reader may notice that the two quarters after the midterm elections are exactly the two first quarters of the third year of the presidential term. Does this mean that the midterm effect is a byproduct of the

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4 In addition, we examine monthly average returns calculated for three quarters around midterm and presidential elections, together with the average monthly return for 12 U.S. sectors. The monthly returns for portfolios (equal and value weighted) representing each of the 12 sectors were sourced from the Kenneth R. French Data Library. The analysis confirmed the presence of a midterm election effect.

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Exhibit 2
Average Quarterly Returns from the S&P 500 Total Return Index

Notes: The fourth quarter of a midterm election year and the two quarters following offer superior U.S. market performance in comparison with the same quarters in the non-midterm years.
third-year effect? To answer that question, we calculate the performance of the fourth quarter in the year after midterm elections, which is 4.08%, and then we calculate the performance of the stock market for the period of four quarters, including that of the midterm election, and during the third year of the presidential term. The performance in the extended post-midterm-election period (of four quarters) is 25.7% versus 20.1% achieved in the third year of a presidential term (see Exhibit 4). We conclude that the midterm effect dominates the third year of the presidential-term effect.

In the next step of our analysis, we examine whether the observed effect is caused by monetary or fiscal policy. In the case of the former, we count expansive quarters as a proxy of the Fed policy stance and the federal funds premium as Fed policy stringency. A quarter is classified as subject to an expansive (restrictive) monetary policy if the most recent change in the Fed discount rate was a decrease (increase). Thus, the expansive quarter variable is a dummy variable, where
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1 corresponds to expansive policy in a given quarter. The federal funds premium is defined as the difference between the federal funds rate and the three-month T-bill rate.

Studies by Ho and Saunders [1985], Laurent [1988], Bernanke and Blinder [1992], and Beyer, Jensen, and Johnson [2008] use the federal funds premium as a good measure of the stringency of Fed monetary policy. Directional changes in the discount rate as an identification of broad shifts in Fed policy are pretty common (see Jensen, Mercer, and Johnson [1996], Conover, Jensen, and Johnson [2005], and Beyer, Jensen, and Johnson [2008], among others).

As part of a robustness test, we consider less restrictive definition(s) of expansive monetary policy because the strength of a midterm election effect is independent of definitions. The results of the robustness test are available upon request.

Fiscal policies and the level of spending are measures used by the federal government to stimulate the economy. Studies by Fama [1990], Cochrane [1996], and Campbell [1999] described the relationship between the macroeconomic climate and the equity market. A large body of literature has examined the link between fiscal policy and macroeconomic variables (Ramey and Shapiro [1997] and Blanchard and Perotti [1999], among others). To examine the impact of fiscal policy on the equity market, we consider the percentage change in federal tax receipts and the change in current federal government spending.

Exhibit 5 offers a valuable glance at the fiscal and monetary policies in post-election periods. Panels A–D represent different time periods after U.S. elections. The key comparison is that of Panel A with Panel B, and Panel C with Panel D, which reveals that there is no statistical difference between those proxies (see the last column of the exhibit, where the t-statistics for the test of equal means are reported).

### Exhibit 5
Fiscal and Monetary Policies in Post-U.S.-Election Periods

<table>
<thead>
<tr>
<th>No. of qtrs.</th>
<th>Panel A: Non-Midterm-Election Quarters (Q4, Q1, and Q2)</th>
<th>Panel B: Post-Midterm-Election Quarters (Q4, Q1, and Q2)</th>
<th>Panel C: Non-Presidential-Election Quarters (Q4, Q1, and Q2)</th>
<th>Panel D: Post-Presidential-Election Quarters (Q4, Q1, and Q2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of qtrs.</td>
<td>Change in Tax Receipts</td>
<td>Change in Current Spending</td>
<td>Expansive</td>
</tr>
<tr>
<td></td>
<td>203</td>
<td>1.56%</td>
<td>1.71%</td>
<td>4.02%</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>0.49%</td>
<td>0.37%</td>
<td>1.04%</td>
</tr>
<tr>
<td></td>
<td>204</td>
<td>0.47%</td>
<td>0.23%</td>
<td>0.82%</td>
</tr>
</tbody>
</table>

Notes: The exhibit presents the summary statistics of the fiscal and monetary policy proxies in the post-election periods. The comparison of Panel A with Panel B, and Panel C with Panel D, shows that there is no statistical difference between those proxies (see the last column of the exhibit, where the t-statistics for the test of equal means are reported).
much difference in the examined policies between the post-election and non-election periods. The t-statistics correspond to the t-test for the equal mean between the midterm/presidential election and non-election periods. In the case of the fiscal and monetary measures considered, we are unable to reject the null hypothesis of equal means. This indicates that those policies were not responsible for the reported post-midterm effect.

To better evaluate the contribution of fiscal and monetary policies to the midterm election effect, we also examine two separate regressions. In both cases, the dependent variable in the first regression is the quarterly return, and the independent variable is the dummy variable for the three quarters around the presidential or midterm elections (see Exhibit 6). The dummy variable takes the value of 1 in the midterm (presidential) election quarter and the two quarters following. The three-quarters election dummy is significant (at the 1% level) only for midterm elections.

The objective of the second regression is to determine how much of the midterm election (and potential presidential election effect) is explained by the change in proxies for monetary and fiscal policies. To determine this, we perform a two-step regression. The first step is designed to remove the influence of the monetary and fiscal policy measures on the quarterly stock returns. The second step is designed to quantify the importance of the midterm election effect. The residuals from the first regression are included in the second (reported) regression as the dependent variable, and the independent variable is the three-quarters dummy variable. The analysis of the results reported in Exhibit 6 shows that the monetary and fiscal policies account for a marginal amount of the midterm effect. After controlling for both key policies, the three-quarters midterm election dummy coefficient has changed marginally (from 0.0315 to 0.0304). Moreover, the results reported for the post-presidential-election period, also in the case of a two-level regression, indicate the lack of a statistically significant effect.

The preceding analysis provides ample evidence that the midterm election equity market return pattern is a stand-alone effect. Our next step is to examine the performance of trading strategies based on the described effect. Such analysis of simple strategies may highlight the strength of the reported midterm election effect. Exhibit 7 summarizes the performance of the following trading strategies:

- **S1**: Long in S&P 500 Total Return Index during Q4, Q1, and Q2 of the midterm elections and long in three-month T-bills during the other quarters
- **S2**: Long in S&P 500 Total Return Index during Q4, Q1, and Q2 of the U.S. presidential election and long in three-month T-bills during the other quarters
- **S3**: Long in S&P 500 Total Return Index during all Q4, Q1, and Q2 and long in three-month T-bills during all third quarters
- **S4**: Long in S&P 500 Total Return Index; de facto buy-and-hold strategy in U.S. main index

In terms of risk and return, strategy **S1**, defined by the midterm election effect, dominates the other strategies. It offers an average quarterly return in excess of 5% and the lowest quarterly volatility, with a more than 2% higher quarterly return than the **S4** buy-and-hold strategy in the U.S. main index. The test of the null hypothesis
**EXHIBIT 7**
Performance of Trading Strategies around U.S. Elections

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>5th Pctl.</th>
<th>95th Pctl.</th>
<th>T-Stats</th>
</tr>
</thead>
<tbody>
<tr>
<td>S4</td>
<td>5.10%</td>
<td>4.69%</td>
<td>4.18%</td>
<td>0.01%</td>
<td>13.26%</td>
<td>3.30***</td>
</tr>
<tr>
<td>S2</td>
<td>4.02%</td>
<td>4.31%</td>
<td>4.22%</td>
<td>-1.51%</td>
<td>10.26%</td>
<td>0.59</td>
</tr>
<tr>
<td>S3</td>
<td>3.78%</td>
<td>4.20%</td>
<td>6.69%</td>
<td>-7.45%</td>
<td>14.52%</td>
<td>1.92*</td>
</tr>
<tr>
<td>S4</td>
<td>2.91%</td>
<td>3.65%</td>
<td>7.82%</td>
<td>-11.01%</td>
<td>14.88%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: The exhibit presents the performance of four trading strategies for the period between 1954 Q3 and 2017 Q2. The following strategies are considered: S1—long in S&P 500 Total Return Index during Q4, Q1, and Q2 of the midterm election and a long position in three-month bills during the other quarters; S2—long in S&P 500 Total Return Index during Q4, Q1, and Q2 of the U.S. presidential election and a long position in three-month bills during the other quarters; S3—long in S&P 500 Total Return Index during Q4, Q1, and Q2 and a long position in three-month bills during all third quarters; S4—long in S&P 500 Total Return Index. The last column presents results of testing the null hypothesis that the given trading strategy delivers the same performance as the S4 strategy.

The potential cause of the midterm election effect is a reduction of political uncertainty in the past balloting periods. In the case of presidential elections, the uncertainty remains at an elevated level even after the selection of the commander-in-chief (head of state).

**ACKNOWLEDGMENTS**

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**REFERENCES**


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