Corporate campaign contributions and abnormal stock returns after presidential elections

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Abstract Contributions by investor-owned companies play major roles in financing the campaigns of candidates for elective office in the United States. We look at the presidential level and analyze contributions by companies before an election and their stock market performance following US presidential elections from 1992 to 2004. We find that companies experienced abnormal positive post-election returns with (i) a higher percentage of contributions given to the eventual winner and (ii) with a higher total contribution given. Hypothetical portfolios of the 30 largest corporate contributors formed according to (i) the percentage of contributions given to the winner in a presidential election and (ii) the total contribution (divided by market capitalization) would have earned significant abnormal returns in the two years after an election. While all results hold for Bill Clinton and George W. Bush, they are stronger by a magnitude of two to three under W. Bush.

1 Introduction

Politics and business are intertwined in many ways—via campaign contributions, lobbying, public funding of projects, public procurement, and many other factors, politicians and business owners exert considerable influence on one another. In this paper we focus on

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campaign contributions by corporations before a presidential election and the stock market performance of contributing corporations afterwards. Differing from most earlier studies, we look at presidential elections as, by setting the national agenda, proposing an annual budget, and defining public policies and myriad other programs, conferring on the President of the United States and his administration affect the economy in many ways; presidential elections are natural "targets" for rent-seeking activities (Tullock 1967; Krueger 1974; Lott 2000). From a rent-seeking perspective companies can have an incentive to spend money for presidential candidates and as presidential hopefuls need to raise large sums, campaign contributions by companies and business associations are usually a welcome source of funds (Ansolabehere et al. 2003). After the 2010 Supreme Court ruling in *Citizens United against FEC* (case 08-205, 558 U.S. 50 (2010)), which grants companies the same free speech rights (and thus spending in the political process) as those accorded to individuals, corporate campaign contributions are likely to become even more important in the future.

In the first of two research questions we analyze the effects of campaign contributions from the company's perspective. Specifically, we explore whether the total contributions of a company and the distribution of contributions to the winner and loser of an election were correlated with abnormal returns to its stocks. Both variables are examined using data from the presidential elections over the four cycles 1992–2004. We find that (i) the log of total contributions given to the winner in a presidential election and (ii) the log of a company's total contribution (divided by market capitalization) were both positively and significantly related to its stock market performance in the two years after an election. While both effects were visible under Clinton, the amplitude was two to three times larger under Bush.

In our second research question we analyze whether an investor could have earned economically and statistically significant abnormal returns if he had picked stocks according to contribution data. We find that hypothetical portfolios of the 30 largest contributors according to (i) the percentage of contributions given to the winner in a presidential election and (ii) total contribution (divided by market capitalization) would have yielded significant abnormal returns. An investor selecting a portfolio according to (i) would have earned significant abnormal returns of up to 6.6% per year when the CAPM is applied during the first year after an election. Investing in a portfolio formed according to (ii) would have yielded abnormal annual returns of up to 15.5% for the same observation period.

We want to stress that our results should not be seen as a moral judgment. We cannot distinguish whether the stock prices of firms supporting the winner of an election rise because firms contribute to politicians whose intrinsic views match the firms' interest or whether donations affect a president's policies. A government need not be corrupt for companies supporting it to perform well; e.g., the known Republican attitudes towards tort law, environmental protection, and national defense are quite different from the Democrats' attitude to these issues and thus the outcome of a presidential election may influence many companies' profits without the government explicitly fulfilling any demands of big contributors. It is likely that, before the election, companies make contributions to the candidate they expect to implement policies that favor them.

The paper is organized as follows: Sect. 2 briefly reviews relevant literature, Sect. 3 provides a description of the data set. The econometric model is presented in Sect. 4 and the results follow in Sect. 5. Section 6 discusses the results and concludes.

2 Literature

There are three strands of literature relevant for our study: the literature on rent-seeking, initiated by Tullock (1967) and Krueger (1974), studies of political business cycles, and studies of campaign contributions.

Presidential elections are clearly of interest for rent-seekers, as the president and the executive branch he leads have strong and direct control over budget spending and political priorities-setting that in turn allow interest groups to extract rents[1]—be it, e.g., agricultural or industrial sectors seeking protection from foreign competition, the defense industry that profits from armament programs and wars, or special interest groups that seek privileges for their members. The ongoing and intense debate whether politicians actually are influenced by their contributors, or whether contributors support only those candidates which are known to favor their interests cannot be answered by our data.[2] We are, however, able to identify whether contributors were able to extract rents once the candidate they supported had won, and we can quantify these rents by calculating the abnormal returns of the asset of a contributing company. We agree with Lott (2000), who argues that the growth in campaign contributions can be attributed to rent seeking, and when larger rents are available interest groups will spend more to reap them. This is also supported by the literature identifying the industries that actually form PACs and contribute to election campaigns: especially those industries where the government is an important customer, heavily regulated industries, and concentrated industries (where the benefits of rents are also concentrated; see Pittman 1988; Zardkoohi 1988; Grier and Munger 1994; Hart 2001).

On the macroeconomic level, studies of political business cycles pioneered by Nordhaus (1975) and Rogoff (1990) usually aim to measure (i) whether a strong macroeconomic development favors the incumbent, and (ii) whether the election of a candidate influences the stock market. There is broad consensus on the first question—a healthy economy undoubtedly increases the chances of reelection for an incumbent candidate or party. On the second question data past 1927 show that the US-stock market performed better under Democratic presidents, than under Republicans (e.g., Santa-Clara and Valkanov 2003). However, Nofsinger (2007) shows that over a longer horizon (since 1828) there is no statistically significant difference in stock returns between presidencies of the two parties.

Instead of looking at the overall economy we explore whether stock prices of contributing companies perform differently after a presidential election. Schwert (1981) was the first to recommend the use of stock prices as a means of quantifying the impact of policy changes. Jayachandran (2006) examines stock prices after Senator Jeffords left the Republican party in May 2001, thereby tipping control of the US Senate to the Democrats. Looking at soft money contributions in the previous election cycle she finds that for each $250.000 given to the Republicans a company lost 0.8% of its market capitalization. She concludes that "*shifts in political power have a large effect on the market value of firms*" (Jayachandran 2006: 398). We take up this point and investigate the events in US politics that offer the

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[1]Contributions are of course also given to provide information to voters, but this need not be the only reason (see, e.g., Austen-Smith 1987; Mueller and Stratmann 1994; Prat 2002; Coate 2004).

[2]Mueller (2003) and Stratmann (2005) for literature overviews and, e.g., Bronars and Lott (1997), Lott (2000), Ansolabehere et al. (2003), and Coate (2004) for evidence that money flows to candidates known to favor an interest group's opinions. Stratmann (2002) and Coate (2004) argue that candidates can be influenced by contributors, an outcome that is supported in theoretical models by Grossman and Helpman (1994, 1996). However, all of this literature concentrates on congressional votes rather than on policymaking at the presidential level.

clearest and most important "*shifts in political power*"—the presidential elections. We focus on contributions by listed corporations only, as the effect of changes in political power should be visible in the stock prices. While Cooper et al. (2008) report that the switch of congressional control had no significant influence on the stock returns of companies classified as leaning towards one of the two parties, we focus on presidential elections. Looking at only one election—the presidential election in 2000—Knight (2006) and Goldman et al. (2009) find that listed companies aligned with the Republicans performed better than Democratic-leaning companies after the election of George W. Bush. Hibbs (1987), Fair (1988), Erikson (1989), and Alesina and Roubini (1992) also focus on presidential rather than congressional election outcomes. While these studies focus on the economy in general, Herron et al. (1999) move towards the micro level by analyzing 74 different industry sectors. They find that 15 of these sectors were impacted significantly by the outcome to of the 1992 presidential election. Similarly, Roberts (1990) finds that the performance of a portfolio of defense companies correlated positively with the likelihood of Ronald Reagan becoming president in 1980. We continue this trend towards the micro level by looking at individual companies.

3 Data

We look at the four presidential elections from 1992 to 2004.[3] We collect contribution data for the two years before an election and explore effects on the stock returns in the two post-election years.[4] Therefore we use campaign contribution data from 1990–1992, 1994–1996, 1998–2000, and 2002–2004. Stock market data are collected for 1992–1994, 1996–1998, 2000–2002 and 2004–2006.

3.1 Campaign contribution data

Figure 1 presents the development of total campaign contributions for the presidential elections since 1992. We see that total contributions increased by 18% to 43% from one election to the next and that the Republicans always raised more money than the Democrats. Ansolabehere et al. (2003) find that overall contributions as a share of GDP have remained fairly stable since 1912. Our data confirm this for the period 1990–2004, as overall contributions grew by a nominal annual rate of 5.4%, compared to 5.0% for the U.S. economy. However, corporate contributions grew much faster than overall contributions: combined donations by the Top-100 listed corporate contributors in each election cycle increased from $53.5 million in the 1990–1992 election period to more than $128 million in the years 2002–2004—an annualized growth of 7.5%.[5]

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[3]We have to limit our study to this period, as until 1991 parties did not have to report "soft money" contributions, so it was literally untraceable (Nelson 2000). As we need to assign contributions specifically to companies, for our analysis elections before 1991 cannot be included in our analysis.

[4]We chose a two-year time horizon for stock returns, as after the mid-term elections the observation window for the next contribution period starts and non-overlapping windows are highly desirable for the statistical analysis. Total contributions include third-party candidates as well. However, the median contribution to third parties equals 0.08% of total contributions and thus have virtually no influence on our results.

[5]Lott (2000) attributes strong growth in contributions to large rents. Maniadis (2009) argues that such contributions, especially by corporations, are important to ensure that politicians do not renege on their promises to support a business-friendly environment.

Fig. 1 Development of total campaign contributions for the two years before a presidential election in the period 1992–2004. Source: Center for Responsive Government
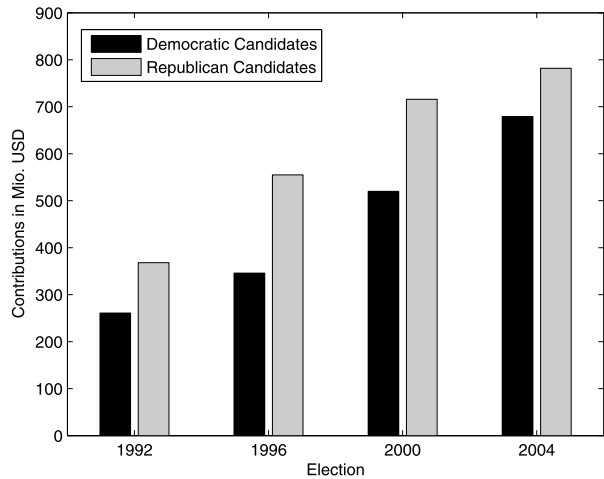
The largest corporate contribution per election cycle in our sample increased even more—from $1.89 million to $6.74 million—an annualized growth of 11.2%.[6] This growth rate even dwarf the S&P500's increase of 8.8% per year in the same period.[7]

For each presidential election we take 100 companies contributing the most to the two parties combined.[8]

3.2 Stock market data

To measure the effect of political events on the value of a company we have to focus on the post-election shift in company value. We do not need to develop new measures or proxies for that, as the stock price on an efficient market already is a measure of company value. If the stock market is at least semi-strong form efficient, it aggregates traders' opinions about the value of a company and therefore reflects all publicly available information about it (Hayek 1945; Fama 1970, 1991).

Daily stock prices (adjusted for dividends and splits) and market capitalization were collected from Thomson Datastream for the period November 6th 1992 to November 7th 2006. Time series on the CRSP-performance-index and on the Fama/French-factors (Fama and French 1993), including the Carhart (1997) momentum factor, were taken from Kenneth French's data library.[9]

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[6] Here the issue of contribution limits becomes relevant, as, e.g., in an empirical study Stratmann and Aparicio-Castillo (2006) find that the margin of victory for the winning candidate declined in races where there was a spending limit. However, Daniel and Lott (1997) and Lott (2006) argue in the opposite direction.

[7] All growth rates are nominal. Sources: Bureau of Economic Analysis, Thomson Datastream, and Federal Election Commission for GDP, S&P 500, and campaign contribution data, respectively.

[8] Other studies sometimes take each company that contributed, no matter how much (up to 1,200 companies), rather than focusing on the largest contributors. However, we think this might distort results, as only really large contributions should have an influence. By taking all contributions, some papers assign the same weight to each contribution, no matter whether it was $1,000 or $5 million (Aggarwal et al. 2007).

[9] http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

4 Research questions and method

4.1 Research question 1: Company perspective—did the proportion given to the winner and the total contribution have predictive power?

With the first research question we concentrate on patterns in contributions to test for abnormal returns. To estimate the relationship between company i's campaign contributions during the election campaign period and its stock price after the election, we lag our contribution-related variables by one election cycle. For example, we relate company i's campaign contribution from the day after the mid-term election in November 1998 until the day before the presidential election in November 2000 to company i's performance from the day after the election in November 2000 until the day before the mid-term election in November 2002. In the subsequent analysis we examine companies along two dimensions:

- the relative preference for one candidate over the other measured by PERCDIFF and
- the overall contribution relative to market capitalization measured by CTOT.

With PERCDIFF we measure company i's relative preference of one candidate over the other, irrespective of the total amount contributed. $\text{PERCDIFF}_{i,j}$ is the difference in the percentage of company i's contribution given to the winner ($\frac{\text{CGOV}}{\text{TOTAL}}$) and the percentage given to the losing candidate ($\frac{\text{COPP}}{\text{TOTAL}}$) in election cycle j,

$$\text{PERCDIFF}_{i,j} = \frac{\text{CGOV}_{i,j}}{\text{TOTAL}_{i,j}} - \frac{\text{COPP}_{i,j}}{\text{TOTAL}_{i,j}}. \tag{1}$$

$\text{CGOV}_{i,j}$ and $\text{COPP}_{i,j}$ define company i's contribution to the winning and losing candidate in election j and $\text{TOTAL}_{i,j}$ stands for the total contribution given by company i.[10]

While PERCDIFF measures the commitment to one of the two candidates, our second variable CTOT picks up the overall political involvement of a company. This variable is important to account for companies like Citigroup or AT&T, which were among the largest contributors in each election, but split their contributions equally among the two candidates. In such cases, PERCDIFF is close to zero. We interpret this as a "diversification" to ensure that contributions have access to the government irrespective of the election outcome. This explanation is supported by Ansolabehere et al. (2003), p. 126 who state that "*campaign contributions are one way to improve the chances of getting to see the legislator about matters of concern to the group*."

To compute $\text{CTOT}_{i,j}$ we divide each company i's contribution by its market capitalization and take the log of this number. A contribution of \$5 million signals very high political involvement when given by a small company with market capitalization below \$1 billion, while it is "peanuts" for Microsoft with a market capitalization of more than \$200 billion. As campaign contributions of companies are increasing over time, we apply the following transformation to arrive at the final form of $\text{CTOT}_{i,j}$ which is:

$$\text{CTOT}_{i,j} = \log \frac{\frac{\text{TOTAL}_{i,j}}{\text{TOTAL}_j}}{\frac{\text{MCAP}_{i,j}}{\text{MCAP}_j}}. \tag{2}$$

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[10] We classify "government" and "opposition" as the party holding the presidency and the other party respectively, i.e., the Democrats under Clinton formed the government from 1992–2000 and the Republicans under George W. Bush did so during 2000–2008, the last two years of which are beyond the end of our sample.

We divide each contribution by the average contribution in the corresponding election cycle. The same is done for market capitalization, as this variable also increased several-fold during our sample period.

As we have several observations over time for most companies, we apply a panel regression model with PERCDIFF and CTOT as independent variables. To generate the appropriate data set we first set up an OLS-estimation for the stock return of company i using (i) the CAPM (Capital Asset Pricing Model) developed by Sharpe (1964) and Lintner (1965), and (ii) Carhart's (1997) four-factor model according to (3) and (4), respectively. Fama and French (1993) show that not only the market return, but also that two other factors (company size (SMB) and book-to-market ratio (HML)) have explanatory power. Carhart (1997) extends their model to a four-factor model by adding a momentum factor (MOM):

$$RTRF_{i,t} = \alpha + \beta_1 RMRF_{i,t} + \beta_{AR_1} RTRF_{i,t-1} + \epsilon_{i,t}, \tag{3}$$

$$RTRF_{i,t} = \alpha + \beta_1 RMRF_{i,t} + \beta_2 SMB_{i,t} + \beta_3 HML_{i,t} + \beta_4 MOM_{i,t}$$
$$+ \beta_{AR_1} RTRF_{i,t-1} + \epsilon_{i,t}. \tag{4}$$

$RTRF_{i,t}$ indicates the difference between company i's daily log-returns ($RT_{i,t}$) and the daily risk-free interest rate (RF_t), which is approximated by the monthly T-bill return. $RMRF_{i,t}$ defines the daily excess log-return of a value-weighted performance index composed of all AMEX, NYSE and NASDAQ stocks (CRSP-Index) relative to RF_t. $SMB_{i,t}$ is the difference in returns between a portfolio of small stocks and a portfolio of large stocks. $HML_{i,t}$ measures the difference in returns between a portfolio consisting of stocks with high book-to-market ratios and a portfolio of stocks with low book-to-market ratios. With $MOM_{i,t}$ we include the momentum anomaly first reported by Jegadeesh and Titman (1993). $MOM_{i,t}$ measures the difference of a portfolio consisting of past high-return stocks and a portfolio of past low-return stocks.[11] Finally, we account for first-order autocorrelation by adding an AR(1)-term (Edmans et al. 2007).

Let $\hat{\epsilon}_{i,t}$ denote a time series of daily residuals from (4) for stock i. We then calculate the two-year return during election cycle j by summing up all residuals ($\hat{\epsilon}_{i,t}$) to T_j:

$$y_{i,j} = \sum_{t=1}^{T_j} \hat{\epsilon}_{i,t}. \tag{5}$$

T_j defines the number of trading days within election cycle j. To look at the development of abnormal stock returns over time after Election Day, we also calculate returns for both the first six and twelve months after the election. Therefore, we additionally set T_j to 126 and 252 trading days, respectively. Earlier studies of this subject often focus on a very short time horizon, i.e., one day to one week. Goldman et al. (2009), for example, find that companies with boards that are connected to the Republicans significantly outperformed the market over the period of one to seven days after Election Day 2000, when Bush was elected president. We chose to look at the longer horizons of 6, 12, and 24 months, as, e.g., Aggarwal et al. (2007) argue that if donating to winners does represent an investment, positive effects should be persistent. Again, we apply the same lag structure regarding contributions and returns as in all other analysis in this paper.

Finally, we set up the following panel regression:

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[11]For a detailed description of all factors, see Fama and French (1993) and the website of Kenneth French: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html. Note that the factors include all AMEX, NYSE and NASDAQ stocks.

$$y_{i,j} = \alpha + \beta_1 \text{PERCDIFF}_{i,j-1} + \beta_2 \text{CTOT}_{i,j-1} + \epsilon_{i,j}. \tag{6}$$

Note that we do not correct for cross-section fixed effects, since this would eliminate the very idiosyncratic growth rates of individual stocks we want to measure. We do not correct for period fixed effects either, as they are not significant. Instead, we use the White cross-section method to control for cross-section correlation and heteroscedasticity.

4.1.1 Robustness checks

To test the reliability of our model, we run three robustness checks each for the CAPM and the four-factor model with alternate definitions of our dependent and independent variables. First, to account for unsystematic risk we enter normalized returns ($\text{NRT}_{i,j}$) as the dependent variable by dividing the six-month, one-year, and two-year returns from (5) by their corresponding standard deviations ($\hat{\sigma}_{i,j}$),

$$\text{NRT}_{i,j} = \frac{y_{i,j}}{\hat{\sigma}_{i,j}}. \tag{7}$$

To arrive at $\hat{\sigma}_{i,j}$ we multiply the average daily standard deviation of stock i's residuals by the square root of the number of trading days of interest T_j (126, 252, and approximately 500 respectively) in cycle j.

In the second robustness check we examine the reliability of the independent variable CTOT by regressing it against the unbenchmarked log of the total contribution $\log(\text{CONT})$.[12]

In the final robustness check we investigate the movement in stock prices of companies mostly contributing to the winning or losing candidate with two alternative independent variables. As contributions to the winner and loser increased severalfold over elections, we apply the following transformation:

$$\text{CONT\_WINNER}_{i,j} = \frac{\text{CGOV}_{i,j}}{\overline{\text{CGOV}_j}}, \tag{8}$$

$$\text{CONT\_LOSER}_{i,j} = \frac{\text{COPP}_{i,j}}{\overline{\text{COPP}_j}}. \tag{9}$$

In particular, to compute $\text{CONT\_WINNER}_{i,j}$ we divide company i's contribution to the election winner ($\text{CGOV}_{i,j}$) by the average contribution to the winner ($\overline{\text{CGOV}_j}$) among all companies in cycle j. The same is done for contributions to the losing candidate, which is measured by $\text{CONT\_LOSER}_{i,j}$. Hence, with this robustness check we test whether our main specification in Sect. 4.1 masks the effects of contributing to the losing candidate. If both variables in (6) show positive coefficients, one could argue that large contributions, most of which go to the loser, yield abnormal returns for company i as well.[13] With this specification we take up this argument and analyze whether there is a positive relationship between contributing to the winner and abnormal returns and whether the opposite holds for contributions to the losing candidate. All other model parameters, such as the dependent variable and the coefficient covariance method, remain identical to the main model presented in Sect. 4.1.

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[12]$\text{CONT}_{i,j}$ is calculated as the log of the total contribution of a company divided by its market capitalization on Election Day.

[13]We thank one anonymous referee for pointing us to the idea of this test.

4.2 Research question 2: Investor perspective—could abnormal returns be generated by
     picking stocks according to contribution data?

While in research question 1 we focus on the company perspective, in research question 2
we explore whether an investor could have earned abnormal returns by selecting portfolios
according to the two variables CTOT and PERCDIFF.

The empirical literature offers numerous examples where statistically significant abnor-
mal returns are reported to justify an "anomaly", but once transaction costs are taken into
account the significance often disappears.[14] If an investor wanted to trade based on our re-
sults, only two transactions were necessary every two years for any stock i—thus transaction
costs play only a marginal role.

We form six value-weighted portfolios according to our two measures PERCDIFF and
CTOT for each election cycle:[15]

- PERCDIFF30: Top 30 ranked stocks according to the variable PERCDIFF.
- PERCDIFF31_70: stocks ranked from 31 to 70 according to PERCDIFF.
- PERCDIFF71_100: stocks ranked from 71 to 100 according to PERCDIFF.

Three additional value-weighted portfolios are computed in the same way for CTOT,
namely CTOT30, CTOT31_70, CTOT71_100.

Our last portfolio is composed of the Top-100 contributors during each election cycle
(PF_Top100) to see whether all companies under investigation earn abnormal returns as a
group. If they represent an unbiased sample of the market, their owners should not experi-
ence abnormal returns.

For research question 2 we use the CAPM and the four-factor model for performance
measurement again:

$$\text{RTRF}^{\text{PF}}_{j,t} = \alpha + \beta_1 \text{RMRF}_{j,t} + \epsilon_{j,t}, \tag{10}$$

$$\text{RTRF}^{\text{PF}}_{j,t} = \alpha + \beta_1 \text{RMRF}_{j,t} + \beta_2 \text{SMB}_{j,t} + \beta_3 \text{HML}_{j,t} + \beta_4 \text{MOM}_{j,t} + \epsilon_{j,t}. \tag{11}$$

To accommodate midterm elections, we measure the return only up to two years follow-
ing Election Day. Therefore, we cannot run a simple OLS-regression, as our time series is
not continuous. Instead, we apply a panel regression for each portfolio with the four elec-
tions as cross-sections (j) and with 24 observations (months) over time (t). We correct with
the White period coefficient covariance method to account for arbitrary serial correlation
and time-varying variances in the residuals.

We consciously chose the most rigorous and demanding methodology—the calendar-
time portfolio approach with value-weights among the stocks—so any results we find can
be considered highly reliable (see Fama 1998; Mitchell and Stafford 2000).

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[14]Some examples where effects are reported include Lakonishok and Smidt (1988), Ariel (1990), Kohli and
Kohers (1992), Kim and Park (1994). Malkiel (2003) and Marquering et al. (2006) claim that after controlling
for transaction costs almost all of these "anomalies" fail to deliver positive abnormal returns.

[15]The same lag structure regarding contributions and returns is used as in the previous calculations. Note
that a stock may be included in up to two of the six portfolios for a given election. For example, a company
making a large total contribution and giving most to the Democrats before a Clinton victory could be included
in the CTOT30 and PERCDIFF30 portfolios for that election.

5 Results

5.1 Main result 1: The proportion given to the winner and the total contribution had predictive power

In Sect. 4.1 we hypothesize that the two independent variables measuring (i) the commitment of a company to a candidate (PERCDIFF) and (ii) the log of the total contribution relative to company size (CTOT) should have a significant positive influence on its stock market performance.

As can be seen in Table 1, PERCDIFF is positive for all observation periods for the aggregate data set. With the CAPM it is significant for the six- and 12-month horizons, while with the four-factor model it is significant on the 24-month horizon. As an illustration: A company which contributed only to the winning candidate on average outperformed a company that contributed equally to both candidates by 5.5 (4.0) percentage points in the first year after an election using the CAPM (four-factor model).

Looking at the Clinton and Bush presidencies separately we find highly significant coefficients for Bush with the CAPM on all horizons, and positive but only partly significant coefficients for Clinton. Under Clinton a company contributing only to him outperformed a company giving equally to both candidates by 6.8 (8.2) percentage points in the first year after an election with the CAPM (four-factor model). Under Bush the difference even reached 12.3 (4.4) percentage points in the twelve months after an election.

For CTOT we find even more significantly positive coefficients in the aggregate data for all observation periods. To illustrate our results we compare two hypothetical companies with average market capitalization but with different total contributions. Whereas company A gives four times the average contribution, company B contributes only the average donated by the Top-100 listed corporations. Company A would have outperformed company B by, on average, 12.9 (9.0) percentage points in the first year after the election when the CAPM (four-factor model) is applied. The results for Clinton and Bush are quite consistent with positive coefficients on all observations, with 10 of the 12 coefficients being significant on the 1%- or 5%-level. Especially the results for Bush are economically highly significant, as company A outperforms company B by 17.1 (11.4) percentage points in the first twelve months following Election Day when the CAPM (four-factor model) is used. Looking at the two-year horizon the difference in returns reaches 30.3 (23.4) percentage points.[16] Rent-seeking under Bush may have been more effective than under Clinton for two reasons: First, his party also held control of the House of Representatives for the first six of his eight years in office and of the Senate for four years, allowing him to push through some controversial decisions relying solely on the votes of Republicans. Clinton, by contrast, had to negotiate compromises—while by nature never fully satisfying any side—with a Republican-controlled House and Senate after the mid-term elections 1994. The second reason may be the wars in Afghanistan and Iraq, and more broadly the "war on terror", that increased government spending, especially on defense.[17] Higher government spending, especially discretionary decisions, e.g., which weapons to buy, give political decision makers

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[16]We also ran an OLS-regression for each election cycle separately and found similar results.

[17]Under Clinton defense spending as a percentage of GDP fell from 4.78% in 1992 to 3.00% in 2000. Under Bush it increased to 4.28% of GDP in 2008. In nominal terms defense spending under Clinton remained almost unchanged slightly below $300 billion, while it more than doubled to $616 billion under Bush. Source: Office of Management and Budget, Executive Office of the President; the data was extracted from the Google public data explorer.

Table 1 Panel regression measuring the effect of PERCDIFF and CTOT on abnormal returns (top panel: CAPM residuals, bottom panel: four-factor model residuals) for 6, 12, and 24 months for the aggregate data (first three columns), the Clinton-years (columns 4–6), and the Bush-years (columns 7–9). *p*-values for a double-sided test are given in parenthesis

Factor	Aggregate			Clinton			Bush		
	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon
CAPM									
α	0.019	−0.003	−0.041**	0.029***	0.025**	−0.006	−0.009	−0.049	−0.108***
	(0.197)	(0.847)	(0.047)	(0.000)	(0.017)	(0.337)	(0.765)	(0.227)	(0.000)
PERCDIFF	0.064**	0.055*	0.006	0.055	0.068	0.009	0.116***	0.123**	0.101***
	(0.033)	(0.081)	(0.799)	(0.231)	(0.320)	(0.851)	(0.000)	(0.020)	(0.000)
CTOT	0.029***	0.043***	0.057**	0.019***	0.026**	0.005	0.037**	0.057***	0.101***
	(0.002)	(0.000)	(0.044)	(0.000)	(0.033)	(0.860)	(0.014)	(0.000)	(0.000)
R^2	0.068	0.058	0.034	0.042	0.033	0.000	0.094	0.099	0.103
Four-factor model									
α	−0.016	−0.025*	−0.072***	−0.008***	0.003	−0.049	−0.013	−0.044	−0.101***
	(0.142)	(0.076)	(0.000)	(0.000)	(0.621)	(0.152)	(0.675)	(0.283)	(0.000)
PERCDIFF	0.044	0.040	0.009*	0.065	0.082	0.015	0.026	0.044	0.031
	(0.176)	(0.294)	(0.091)	(0.243)	(0.301)	(0.771)	(0.631)	(0.560)	(0.475)
CTOT	0.021***	0.030***	0.050***	0.022***	0.020	0.017	0.019***	0.038***	0.078***
	(0.000)	(0.000)	(0.004)	(0.000)	(0.137)	(0.114)	(0.000)	(0.000)	(0.000)
R^2	0.038	0.030	0.027	0.060	0.031	0.004	0.021	0.039	0.061
n	400	400	400	200	200	200	200	200	200

*, ** and *** represent the 10%, 5% and the 1% significance levels

more scope to "reward" supporters—especially as the defense industry strongly supported Bush during his election campaign.

We conclude that CTOT was the more decisive factor in generating abnormal returns from 1992 to 2006. Furthermore, as can be seen from PERCDIFF, companies that strongly supported the winner of the election outperformed companies supporting the losing candidate. Both factors were economically and statistically more significant during the Bush presidency.

5.1.1 Robustness checks

As can be seen from Tables 2 (CAPM) and 3 (four-factor model), our results are robust to changes in the dependent as well as the independent variables. In our first robustness check we replace abnormal returns by the normalized returns ($NRT_{i,j}$) as shown in (7). The significant results we find are very similar to what we find in our original analysis for the aggregate data set and for both the Clinton and Bush subsamples.

In the second robustness check we change the independent variable CTOT, leaving all other things unchanged. Specifically, log(CONT) is not transformed, i.e., this number is not benchmarked on the respective average contribution per election cycle. In the aggregate and in both subsamples our main results hold in all respects.

In the third robustness check (see Table 4 for details) one can see that the coefficients of contributing to the winner (CONT_WINNER) are clearly positive and mostly significant on an aggregate level. In contrast, the coefficients of CONT_LOSER are all negative, some significantly. These results provide further evidence that companies' stock market performances after the elections were better the more a company donated to the election winner. In contrast, the more a company donated to the election's loser, the worse its post-election stock market performance. Our main specification in this article does not mask the possible effects of contributing to the loser. A large total donation which is mainly given to the losing candidate does not yield abnormal positive returns. Again, these main results hold in both subsamples of Clinton and Bush in all respects.

5.2 Main result 2: Picking stocks according to contribution data generated abnormal returns for investors

As outlined in Sect. 4.2 we now focus on the investor perspective and examine the performance of portfolios formed according to contribution data.

5.2.1 Performance of a portfolio of all 100 companies

Before we outline the results of the sub-portfolios we examine our whole data sample and calculate whether the returns to the largest 100 contributors as a group differs from the market return. In Table 5 we apply the CAPM and the four-factor-model of (10) and (11) to examine whether the monthly abnormal returns (alphas) differ significantly from zero.

Applying the CAPM (column 1) we find no significant results for the aggregate sample. The same holds when we look at the Clinton and Bush presidencies separately (columns 3 and 5 respectively). Thus, the return to the 100 largest contributors as a group is not different from the market return.

When we apply the four-factor-model we also find no significant results (columns 2, 4, and 6). The coefficients for SMB and HML indicate that our sample includes mainly large cap stocks with high book-to-market ratios. This confirms the observation of Cooper et al. (2008), that mostly large companies contribute to political campaigns.

Table 2 Robustness checks I and II for research question 1 based on the CAPM residuals. *p*-values for a double-sided test are given in parenthesis

Factor	Aggregate			Clinton			Bush		
	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon
Robustness Check I (CAPM): Normalized returns (NRT$_{i,j}$) as dependent variable									
α	0.118	−0.017	−0.069	0.186***	0.112***	−0.025***	−0.034	−0.223	−0.218
	(0.157)	(0.880)	(0.395)	(0.000)	(0.007)	(0.000)	(0.867)	(0.414)	(0.219)
PERCDIFF	0.340***	0.212**	0.083	0.325*	0.281	−0.028	0.610***	0.530**	0.339***
	(0.003)	(0.041)	(0.308)	(0.080)	(0.146)	(0.760)	(0.001)	(0.030)	(0.002)
CTOT	0.115***	0.149***	0.137**	0.066	0.089*	0.019	0.156***	0.197***	0.236***
	(0.002)	(0.000)	(0.033)	(0.172)	(0.058)	(0.798)	(0.000)	(0.000)	(0.000)
R^2	0.065	0.067	0.045	0.039	0.042	0.001	0.098	0.123	0.133
Robustness Check II (CAPM): Non-transformed independent variable CONT									
α	−0.058***	−0.133***	−0.217**	−0.039***	−0.073**	−0.026	−0.088***	−0.184***	−0.383***
	(0.003)	(0.001)	(0.028)	(0.010)	(0.038)	(0.776)	(0.000)	(0.000)	(0.000)
PERCDIFF	0.079**	0.078**	0.037	0.054	0.066	−0.010	0.118***	0.123**	0.098***
	(0.027)	(0.037)	(0.332)	(0.238)	(0.330)	(0.838)	(0.000)	(0.021)	(0.000)
log(CONT)	0.024***	0.040***	0.053**	0.018***	0.026**	0.005	0.029*	0.049***	0.097***
	(0.000)	(0.000)	(0.041)	(0.000)	(0.027)	(0.838)	(0.055)	(0.000)	(0.000)
R^2	0.059	0.055	0.033	0.041	0.033	0.000	0.073	0.081	0.097
n	400	400	400	200	200	200	200	200	200

*, ** and *** represent the 10%, 5% and the 1% significance levels

Table 3 Robustness checks I and II for research question 1 based on the four-factor model residuals. p-values for a double-sided test are given in parenthesis

Factor	Aggregate			Clinton			Bush		
	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon
Robustness Check I (four-factor model): Normalized returns ($NRT_{i,j}$) as dependent variable									
α	−0.099	−0.111	−0.173*	−0.049**	0.019	−0.146*	−0.123	−0.241	−0.248
	(0.235)	(0.304)	(0.077)	(0.030)	(0.428)	(0.084)	(0.585)	(0.386)	(0.278)
PERCDIFF	0.280**	0.191	0.108	0.366	0.333	0.052	0.267	0.317	0.216
	(0.045)	(0.117)	(0.178)	(0.120)	(0.160)	(0.575)	(0.322)	(0.253)	(0.118)
CTOT	0.094***	0.109**	0.127***	0.084**	0.056	0.050	0.101***	0.150***	0.193***
	(0.000)	(0.005)	(0.002)	(0.029)	(0.235)	(0.114)	(0.000)	(0.000)	(0.000)
R^2	0.047	0.040	0.042	0.054	0.037	0.007	0.035	0.067	0.089
Robustness Check II (four-factor model): Untransformed independent variable CONT									
α	−0.073***	−0.118***	−0.224***	−0.089***	−0.069	−0.123***	−0.054**	−0.136***	−0.309***
	(0.001)	(0.003)	(0.000)	(0.000)	(0.105)	(0.000)	(0.020)	(0.001)	(0.000)
PERCDIFF	0.054*	0.057	0.036***	0.064	0.081	0.013	0.027	0.044	0.029
	(0.098)	(0.166)	(0.007)	(0.251)	(0.304)	(0.802)	(0.625)	(0.561)	(0.506)
log(CONT)	0.017***	0.028***	0.046***	0.021	0.019	0.019*	0.015***	0.033***	0.074***
	(0.000)	(0.000)	(0.003)	(0.000)	(0.132)	(0.061)	(0.000)	(0.000)	(0.000)
R^2	0.033	0.029	0.025	0.057	0.030	0.005	0.014	0.031	0.055
n	400	400	400	200	200	200	200	200	200

*, **, and *** represent the 10%, 5% and the 1% significance levels

Table 4 Robustness checks III: Panel regression measuring the effect of CONT_WINNER and CONT_LOSER on abnormal returns (top panel: CAPM residuals, bottom panel: four-factor model residuals) for 6, 12, and 24 months for the aggregate data (first three columns), the Clinton-years (columns 4–6), and the Bush-years (columns 7–9). p-values for a double-sided test are given in parenthesis

Factor	Aggregate			Clinton			Bush		
	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon	6 mon	12 mon	24 mon
Robustness Check III (CAPM): Alternative independent variables									
α	0.036**	0.018*	−0.028	0.010	0.004***	−0.024	0.059***	0.033***	−0.045
	(0.017)	(0.061)	(0.261)	(0.158)	(0.002)	(0.216)	(0.001)	(0.000)	(0.380)
CONT_WINNER	0.030***	0.044*	0.049**	0.032***	0.051	0.035*	0.022	0.028	0.075
	(0.001)	(0.085)	(0.033)	(0.007)	(0.169)	(0.078)	(0.237)	(0.335)	(0.189)
CONT_LOSER	−0.028***	−0.038**	−0.028*	−0.017	−0.033	−0.013	−0.030***	−0.036***	−0.042***
	(0.001)	(0.025)	(0.084)	(0.396)	(0.302)	(0.678)	(0.000)	(0.000)	(0.000)
R^2	0.015	0.015	0.006	0.019	0.023	0.005	0.015	0.011	0.008
Robustness Check III (four-factor model): Alternative independent variables									
α	−0.017	−0.028*	−0.074***	−0.031***	−0.036***	−0.062**	0.010*	−0.006	−0.088*
	(0.175)	(0.095)	(0.004)	(0.000)	(0.001)	(0.028)	(0.088)	(0.761)	(0.064)
CONT_WINNER	0.030*	0.048	0.050**	0.046**	0.067	0.042*	0.000	0.012	0.069
	(0.071)	(0.150)	(0.027)	(0.021)	(0.150)	(0.058)	(0.993)	(0.645)	(0.196)
CONT_LOSER	−0.016	−0.027	−0.018	−0.028	−0.038	−0.024	−0.003	−0.012	−0.021**
	(0.276)	(0.242)	(0.245)	(0.235)	(0.307)	(0.239)	(0.806)	(0.427)	(0.013)
R^2	0.011	0.014	0.006	0.040	0.039	0.007	0.000	0.001	0.007
n	400	400	400	200	200	200	200	200	200

*, ** and *** represent the 10%, 5% and the 1% significance levels

Table 5 Panel regression measuring monthly abnormal returns (alphas, in percent) of the CAPM and the four-factor model for a portfolio of the 100 largest corporate contributors in each election cycle since 1992. p-values for a double-sided test are given in parenthesis

Factor	Aggregate		Clinton		Bush	
	CAPM	4-Factor Model	CAPM	4-Factor Model	CAPM	4-Factor Model
α	0.012	0.058	0.023	−0.180	−0.099	0.133
	(0.920)	(0.716)	(0.890)	(0.172)	(0.324)	(0.494)
RMRF	89.56***	92.36***	96.51***	99.61***	83.48***	82.28***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SMB		−30.80***		−27.43***		−31.31***
		(0.000)		(0.000)		(0.000)
HML		2.20		3.13**		2.41
		(0.335)		(0.034)		(0.120)
MOM		−5.48		6.50*		−12.48***
		(0.241)		(0.096)		(0.000)
R^2	89.4	94.1	91.2	95.0	87.9	94.9
n	96	96	96	96	96	96

*, ** and *** represent the 10%, 5% and the 1% significance levels

We thus conclude that the returns to major contributors as a group were not distinguishable from the market—no matter whether we use the CAPM or whether size, book-to-market ratio, and momentum are accounted for with the four-factor model. This is in line with the efficient market hypothesis (EMH) and indicates that our sample is not biased.

5.2.2 Performance of sub-portfolios

In what we consider one of the key analyses of the paper we measure the performance of portfolios formed according to the two variables PERCDIFF and CTOT. Figure 2 illustrates the results. In the top panels we sort our companies according to the variable PERCDIFF in each election cycle and calculate a value-weighted portfolio for the corresponding Top 30 stocks (solid line; PERCDIFF30; the 30 clearest supporters of a candidate) and a value-weighted portfolio for the corresponding stocks with ranks 71 to 100 (dotted line; PERCDIFF71_100—the 30 companies leaning most towards his opponent). The figures present the cumulative abnormal returns to these portfolios compared to the CRSP-Index over the two years after an election. In the bottom panels we sort according to the variable CTOT in each election cycle. Again, the figures present the cumulative abnormal returns compared to the CRSP-Index of the CTOT30- and CTOT71_100-portfolios.

The two left panels, presenting the results for Clinton, look fairly similar. In both figures the PERCDIFF30- and CTOT30-portfolios accumulate positive abnormal returns, while the PERCDIFF71_100- and CTOT71_100-portfolios accumulate negative abnormal returns in the 20 months after the election, for a net difference of up to 20 percentage points. Therefore, large contributors, especially the strongest supporters of Clinton, performed very well after his election victories.

The results for Bush are presented in the right panels. We see immediately that the differences in returns between the portfolios are larger than they are for Clinton. Comparing the two panels we find that the development is quite similar in the first year after the election,
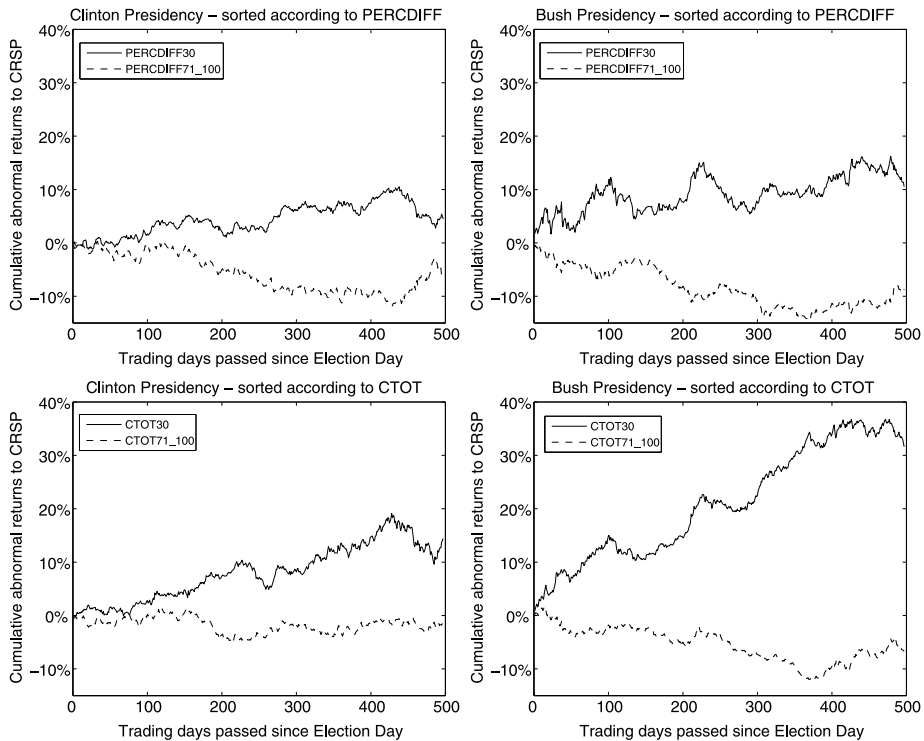
Fig. 2 Cumulative abnormal returns of value-weighted portfolios composed of 30 stocks each compared to the CRSP-performance index. *Top panels*: Portfolio formation according to PERCDIFF with PERCDIFF30 (PERCDIFF71_100) containing the stocks ranked from 1 to 30 (71 to 100) in an election cycle. *Bottom panels*: Portfolio formation according to CTOT. The *left panels* show the development of cumulative abnormal returns over time during the Clinton presidency, while the *right panels* present the same data for the Bush presidency

where the largest contributors according to both measures outperform the smallest contributors by up to 25%. In the second year the two figures differ somewhat: while the difference between the PERCDIFF30- and PERCDIFF71_100-portfolios remains quite stable at roughly 20 to 25 percentage points, the difference between the CTOT30- and CTOT71_100-portfolios grows over the whole observation period to more than 45 percentage points. This corroborates the comparatively greater predictive power of CTOT during the Bush years that was already evident in the panel regressions reported above.

Especially in the top panels the two lines for the CTOT30- and CTOT71_100-portfolios move in opposite directions most of the time. Looking for an economic interpretation, this suggests that in cases of direct competition, e.g., for contracts, contributors to the winner have an edge over contributors to the eventual loser of an election. For example, when Boeing and Lockheed are competing for a large contract to supply new airplanes to the army, the success of one company is necessarily the loss of the other.

The story told in the bottom panels, contrasting the performance of the largest donors to those who contributed comparatively little, is a bit different. Here the largest contributors do very well, especially under Bush, while those who gave comparatively little (CTOT71_100) earn returns equal to the market (under Clinton) or slightly below it (under Bush). This suggests, that those who gave a lot gained, e.g., access to politicians to present their views

(supposedly one of the main reasons for donating), while those who gave little did not have such access and performed just as everybody else in the market did (or a bit worse under Bush).

Turning from the graphical to the econometric analysis, Table 6 presents results for the first 24 (top three panels), 12 (panels 4 to 6) and six (last three panels) months after each election. The first two columns show the alphas of the PERCDIFF30 and PERCDIFF71_100-portfolios, i.e., the companies with the highest 30 values for PERCDIFF and with the lowest 30 values, respectively.[18] The first line of each panel shows the monthly CAPM-alpha, the second line the respective p-value, the third line the monthly alpha according to the four-factor model, and the fourth line the respective p-value. The right two columns present the same data for portfolios formed according to CTOT.

Looking first at the CAPM-alphas one can see that in the first column of Table 6 all nine monthly CAPM-alphas of the PERCDIFF30 portfolios are positive (five of them significant) with values up to 0.76% per month. This means that abnormal annual returns of up to 9.4% could have been earned when investing in the 30 companies with the largest share of contributions to the winning candidate. Also in line with our prediction, eight out of the nine PERCDIFF71_100 portfolios show negative CAPM-alphas of between -0.58% and -0.15% per month. Three are significant on the 1% level, stressing the economic and statistical relevance of the results. When we turn to the alphas of the PERCDIFF-portfolios according to the four-factor model most significances disappear, as this model already accounts for size, book-to-market ratio, and momentum.

In the right two columns, the results of CTOT, which deliver much more significant results on our first research question, are reported. We find very consistent and clear results for the CAPM: all CTOT30-alphas for the aggregate and the separate data samples are positive and significant on the 1% level with alphas between 0.26% and 1.46% per month. This translates into abnormal returns of up to 19.0% per year. Also in line with our predictions the alphas of all CTOT71_100-portfolios are negative, with five of the nine values are significant on the 1%- or 5%-level.

The results are somewhat weaker when the four-factor model is applied. We still find seven of nine alphas of the CTOT30-portfolios to be positive, five of them significant, most of them on the 1%-level. However, here we also have one significant negative alpha for the 12-month horizon under Clinton.

Taking a look at both presidencies separately we find that under Clinton six out of twelve and under Bush eight out of twelve CTOT30- and CTOT71_100-portfolios are significant on the 1%-level with the predicted sign (CAPM and four-factor model alphas).

We conclude that forming portfolios according to PERCDIFF and especially according to CTOT allowed investors to earn significant abnormal returns, while those who invested in a portfolio of the companies with the lowest values of PERCDIFF and CTOT suffered negative abnormal returns.

6 Conclusion and discussion

By setting the national agenda, proposing an annual budget, and defining policies on defense, trade, environment and defining public policies and myriad other programs, the President of the Unites States and his administration affect business life in many ways. This

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[18]We do not show the PERCDIFF31_70- and CTOT31_70-portfolios in this table, as they are of minor interest and are hardly ever significant, which is in line with our expectations.

Table 6 Monthly abnormal returns (alphas, in %) of value-weighted portfolios formed according to PERCDIFF (left two columns) and CTOT (right two columns). p-values for a double-sided test are given in parenthesis. R^2 shows values between 75% and 95%

	PERCDIFF30	PERCDIFF71_100	CTOT30	CTOT71_100
Observation period: 24 months from Election Day—Aggregate data				
CAPM alpha	0.298***	−0.310***	0.973***	−0.159
	(0.006)	(0.000)	(0.000)	(0.329)
four-factor alpha	−0.131	0.095	0.517**	0.041
	(0.510)	(0.413)	(0.025)	(0.808)
		Clinton		
CAPM alpha	0.096***	−0.148	0.256***	−0.043
	(0.002)	(0.345)	(0.000)	(0.868)
four-factor alpha	−0.210	−0.212***	0.070	−0.204***
	(0.277)	(0.002)	(0.628)	(0.000)
		Bush		
CAPM alpha	0.070	−0.280	1.225***	−0.364***
	(0.645)	(0.317)	(0.000)	(0.000)
four-factor alpha	−0.173	0.249	0.746***	0.086
	(0.465)	(0.126)	(0.000)	(0.679)
Observation period: 12 months from Election Day—Aggregate data				
CAPM alpha	0.535***	−0.623**	1.209***	−0.313**
	(0.005)	(0.000)	(0.000)	(0.048)
four-factor alpha	0.239	0.004	0.740**	0.276
	(0.637)	(0.974)	(0.021)	(0.296)
		Clinton		
CAPM alpha	0.000	−0.399*	0.310***	−0.444***
	(1.000)	(0.087)	(0.000)	(0.004)
four-factor alpha	0.110	−0.179	−0.364***	0.154
	(0.838)	(0.277)	(0.000)	(0.495)
		Bush		
CAPM alpha	0.136	−0.581	1.396***	−0.559***
	(0.537)	(0.217)	(0.000)	(0.001)
four-factor alpha	0.087	−0.177	1.124***	−0.051
	(0.895)	(0.124)	(0.000)	(0.831)

makes presidential election campaigns natural areas of rent-seeking behavior by companies. We explored whether the pre-election campaign contribution of public listed companies were related to their stock market performances after the elections. We found that companies that had supported the elected president during his campaign, been generous in their contributions to him, or both, enjoyed positive and significant abnormal returns. This suggests that there were rents to be extracted.

Specifically we found that both (i) the percentage of contributions given to the winner in a presidential election and (ii) the log of the total contribution (divided by market capitaliza-

Table 6 (*Continued*)

	PERCDIFF30	PERCDIFF71_100	CTOT30	CTOT71_100
Observation period: 6 months from Election Day—Aggregate data				
CAPM alpha	0.755*	−0.250	1.238***	−0.154
	(0.000)	(0.454)	(0.000)	(0.569)
four-factor alpha	−0.544	1.036	0.180	0.389
	(0.432)	(0.124)	(0.627)	(0.434)
		Clinton		
CAPM alpha	0.322	0.353	0.780***	−0.135
	(0.444)	(0.515)	(0.000)	(0.793)
four-factor alpha	−0.098	1.236*	0.709***	0.254
	(0.945)	(0.062)	(0.010)	(0.493)
		Bush		
CAPM alpha	0.396***	−0.445	1.464***	−0.505***
	(0.006)	(0.459)	(0.001)	(0.000)
four-factor alpha	−1.448**	0.321	−0.292	−0.463
	(0.024)	(0.439)	(0.361)	(0.258)

*, ** and *** represent the 10%, 5% and the 1% significance levels

tion) significantly increased a company's abnormal stock market return in the two years after an election in the period 1992–2006. Of the two factors, the second led to larger differences.

For example, a company contributing only to the eventual winner of a presidential election would have outperformed a company splitting its contribution equally across both candidates by 5.5 percentage points in the first year after the election when the CAPM is applied and by 4.0 percentage points using Carhart's (1997) four-factor model. On the other hand, by comparing two companies with equal market capitalization but different total contributions we found the larger total contributor (giving four times the average) to outperform the smaller total contributor (giving the average) by 12.9 (9.0) percentage points when using the CAPM (four-factor model) in the twelve months after Election Day. Both variables had a stronger effect under Bush. We reason that two factors help to explain why most effects found were stronger under Bush than under Clinton: the first one is that Bush mostly had a Republican Congress to deal with, while Clinton faced an opposition-dominated House and Senate for six of his eight years in office. The second reason was probably the "war on terror", mostly fought in Afghanistan and Iraq. This war increased government spending, especially on defense. This spending rewarded campaign donors from the defense industry, which had not been expected before the election.

We then formed hypothetical portfolios of the 30 largest contributors according to (i) the percentage of contributions given to the winner in a presidential election and (ii) the log of the total contribution (divided by market capitalization) and analyzed whether abnormal returns would have been earned. For instance, an investor selecting a portfolio according to (i) would have earned significant abnormal returns of up to 6.6% annually during the first year after an election. Investing in a portfolio formed according to (ii) would have yielded abnormal annual returns of up to 15.5% for the same observation period.

Do the results contradict the efficient market hypothesis (EMH)? Not necessarily. When we compared the findings from the CAPM with the four-factor model, most coefficients

were smaller in the latter model. However, even when we control for four factors, some variations in the returns can still be explained by the political variables presented in this paper. Abnormal returns accumulated over months or even two years after Election Day, indicating that the market underestimated the effect of government decisions on the stock market value of companies. Campaign contributions are a proxy, but not a perfect one, for access to politicians or the ability to extract rents from the political process. Ongoing lobbying activities, for which spending is some 10 times larger than for the election campaign, can alter access and chances for successful rent-seeking. Thus, it may be that the market is underestimating the importance of access (analyst reports rarely talk about political access), or ongoing lobbying activities may lead to further abnormal returns.

To conclude, we want to stress that our results do not necessarily mean that politicians deliver policies that companies "bought" with their contributions. Rather, the general policies implemented by an administration may suit a firm—e.g., President Bush's decisions not to sign the Kyoto-protocol, to allow drilling in some of Alaska's environmentally sensitive areas, and to go to war in Iraq have all helped oil companies. However, they were not necessarily designed to help them, but rather reflected Bush's convictions and attitudes. At the same time it would be foolish to assume that access to politicians should not have any influence on company performance.

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