Does Campaign Finance imply Political Factors?

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Does Campaign Finance Imply Political Favors?

The Case of the 1998 Brazilian Elections

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Abstract: This paper provides empirical evidence that campaign contributions are strongly associated with market expectations of future firm-specific political favors, including preferential access to external financing. Using a novel dataset, we find that firms in Brazil providing contributions in the 1998 campaign to (elected) federal deputies experienced higher stock returns following the election, even after controlling for industry-specific effects and firm-specific controls. This suggests that federal deputies were expected to shape policy to benefit these firms in particular. Consistent with such political favors, we find that these firms relative to a control group substantially increased their financial leverage in the four years following election, suggesting that contributions gained firms preferential access to finance.

Introduction

This paper studies the political influence that firms gain by contributing to election campaigns of legislative candidates. It addresses an important, long-standing political economy question: do higher campaign contributions imply more future *firm-specific* political favors or are contributions provided according to a political ideology? We find supporting empirical evidence for the hypothesis of firm-specific political favors by exploiting a novel dataset based on candidate-level contribution data from the 1998 Brazilian elections in which President Fernando Henrique Cardoso (1995-2002) was re-elected as president.

Brazil is notorious for the odious relationships between politicians and firms. At the same time, Brazil is an ideal test case to assess the impact of a campaign finance system on the link between politicians and firms in emerging countries, since it is one of the few countries that registers campaign contributions on the candidate-level. In addition, in the Brazilian system campaign contributions are an effective means to influence politicians, although there are certainly other ways to influence politicians. The reason is that Brazilian law dictates individual justification of campaign expenditures of each candidate. Hence, it is more difficult for a politician to spend unofficial money on campaigning, making it a less effective tool for firms to increase the candidate's probability of winning office.

Furthermore, Brazilian financial markets are relatively well-developed and information is rapidly absorbed, allowing for event-type studies. Indeed, Ramalho (2003) finds that negative news about the impeachment of President Collor de Mello in 1992 had a negative impact on the stock returns of firms who were connected to the president,

whereas competitors of these firms enjoyed positive returns. Ramalho also finds no long-term effects of the impeachment, suggesting it is hard to eradicate corruption in Brazil.

Using several proxies based on campaign contributions of the strength of political connections between firms and federal deputies, we are able to explain the cross-sectional variation of stock market responses at the time of the announcement of the election results. This finding suggests that the stock market expects deputies to shape policy according to the benefits of their campaign donors. Since we control for industry-specific effects, we can reject the hypothesis that firms provided contributions according to their priori political ideology since this would have led to industry rather than firm-specific results.

As additional evidence of the existence of firm-specific political favors, we study whether there exists a relationship between campaign contributions and future access to finance. Political favors to firms in emerging countries like Brazil can come in many forms. They can include government contracts for the supply of goods, preferential treatment regarding taxation and import or export issues, or preferential access to financing. Preferential access to financing is particularly attractive to firms in Brazil given the high level of interest rates and the limited market-based financing. Since a significant share of commercial bank assets is government owned (including the two largest commercial banks in the country) and given that almost all long-term credit to firms is extended by government-owned national and regional development banks, political influence obtained through campaign contributions can potentially easily translate in preferential access to financing. We find that the financial leverage of firms that made financial contributions to (elected) federal deputies increased substantially in the four years following the election that these deputies were in office.

Our paper straddles two, related strands of literature. First, our findings complement the literature that studies the relationships between campaign contributions and policy outcomes (e.g., Snyder (1990), Grossman and Helpman (1996), and Coate (2004)). This literature has found it difficult to disentangle the matching of ideological voting dispositions of politicians with preferences of firms (e.g., left wing firms provide contributions to left wing politicians) from the incentives of politicians to provide contributors with specific political favors. Combined with simultaneity bias (Durden and Silberman (1976) and Grenzke (1989)), this has made it hard to empirically establish whether contributions simply do not have a substantial influence on political decision making as politicians act according to their ideology (Chappell (1982)) or whether contributions are used to forge "cozy" alliances between politicians and specific (groups of) contributors (as in Stratmann (1995) and Kroszner and Stratmann (1998)). The literature has resorted to the event study methodology to try to overcome these problems. In an event study, Jayachandran (2004) documents that political contributions—soft money donations to Republicans and Democrats—matter for the value of U.S. firms. In May 2001, Senator Jim Jeffords suddenly left the Republican Party, and hence shifted control of the Senate towards the Democrats. Jayachandran shows that firms who made soft money donations to the Republicans (Democrats) lost (gained) market capitalization proportionately to the amount of their contributions. Roberts (1990) conducts an event regarding the impact of Senator Henry Jackson's unexpected death in 1983 on firms connected to him and firms connected to his successor in the Armed Services Committee. Roberts finds that share prices of firms affiliated with Jackson declined whereas prices surged of firms who were connected to his successor. Ansolabehere et al. (2004), on the

4

other hand, exploit variation in campaign finance law and do not find that soft money contributions affect firm value substantially in the United States.

Second, our paper is related to the literature that describes the influence of special interests on economic outcomes, without reference to campaign contributions. There seems to be consensus in the literature that political connections running from firms to the general institutional environment matter for economic outcomes. Acemoglu (2005) shows in a theoretical model how in a society where political power is in the hands of a few producers, economic growth is initially higher than in a society where political power is more diffused, but later loses its economic comparative advantage and declines. Firms have strong incentive to forge alliances with politicians. Rajan and Zingales (2003) hypothesize that incumbents have incentives to oppose financial development via political channels because it breeds competition, hence eroding their rents. He, Morck, and Yeung (2000) find that political rent-seeking by large established firms, especially in countries with fewer creditor rights, explains the relative stability in the list of top firms. This stability is associated with slower economic growth in a Schumpeterian sense.

There is much evidence in the literature that political connections matter for firm value. Faccio (2005) shows that firm value increases when large shareholders or officers enter politics. In an event study on the value of ties between firms and politicians in Indonesia, Fisman (2001) concludes that a considerable portion of the value of firms comes from political connections. He shows that the stock value of politically connected firms in Suharto's Indonesia declined more when adverse rumors circulated about the health of the president. Johnson and Mitton (2003) provide empirical evidence that the imposition of the September 1998 Malaysian capital controls during the Asian financial crises benefited primarily firms with strong connections to Prime Minister Mahathir.

5

Kwahja and Mian (2004) study a loan-level dataset from Pakistan and find that that politically connected firms – firms with a director participating in an election- borrow twice as much and have 50% higher default rates. Interestingly, these favors to firms occur exclusively for loans at government banks. They show that this is unlikely to be motivated by the desire of the government to increase social welfare.

In this paper, we study campaign contributions and stock market reactions of listed firms following the announcement of election results. Like others, we focus on an emerging market, Brazil, where the value of political connections is likely to be larger than in developed countries such as the United States. Specifically, we focus on the results of the 1998 elections of candidates for the positions of president (1 position), governor (27 positions), senator (27 positions), and federal deputy (513 positions). (In the empirical section, we focus on federal deputies, but we carried out the analyses for all positions). We build a novel dataset of campaign contributions and construct several measures as a proxy for the strength of connections between firms and politicians. The 1998 election was close for many deputies and the announcement of election results resolved much uncertainty in the stock market about the political landscape. If the market expects that contributions lead to beneficial connections to firms because of future political favors, firm value and therefore its stock price should increase at the announcement date of the candidate being elected. If the election led to the appointment of candidates with a certain political ideology, then we would expect to find more general valuation changes for whole industries. More specifically, *if* individual firms have strong connections *and* have a significant positive effect on stock returns around the election announcement *relative to their competitors*, we conclude that the market expects firm-specific political favors. Vice-versa, the firms that did not see their connected candidate

get elected—or industries that may not see their ideological favorite candidate get elected—may suffer valuation losses.

We test our main and several sub-hypotheses. First, we hypothesize that politically active firms (i.e., large absolute campaign contributors) are perceived as more likely to receive future firm-specific political favors which should have a positive effect on a firm's value. Specifically, our TOTAL hypothesis is as follows: *Using the absolute amount of contributions to federal deputies as a proxy for political connections, better connected firms have significantly higher returns*. However, it obviously matters whether a candidate to whom the firm contributes wins or loses the election. Therefore, our second hypothesis is that we expect a positive effect on the value of the firm when the candidate wins. Specifically, our WINNERS hypothesis is as follows: *Using several proxies for political connections to winning federal deputies, better connected firms to winners have significantly higher returns*. Naturally, our third hypothesis is that contributing to losing candidates should have a negative impact on returns. Specifically, our LOSERS hypothesis is as follows: *Using several proxies for political connections to losing federal deputies, better connected firms to losers have significantly lower returns*.

We collect campaign data and constructed a novel dataset to allow us to test these three specific hypotheses. We find, after controlling for industry-specific effects, that the data strongly and robustly support the TOTAL, WINNERS, and LOSERS hypotheses. Our results indicate that for every 100,000 BRL (about US$ 86,000) donated to federal deputy candidates, the CAR of a firm increases by approximately 2-3%. This is both statistically and economically significant. Going from the 25th tot the 75th percentile of our several proxies of political connections to deputies, implies an increase in the CAR between 6.5-30%. In addition, we calculated the abnormal buy-and-hold returns over the

7

event window. We find that going from the 25th tot the 75th percentile of contributions to winning deputies is associated with an increase of the buy-and-hold-returns of about 18%, after controlling for market capitalization at the start of the event window. Furthermore, we find that TOTAL, WINNERS are also supported for the governor, and senator levels. We do not find robust results for these and the president levels, however, possibly because of the limited number of observations or because there is less uncertainty about the election outcomes: there are only 1 and 27 candidates to be appointed for the president and governor and senator levels, respectively.

To argue that contributions imply higher returns and not vice versa, we have to address the problem of causality. Perhaps firms who exceeded market expectations around the elections were able to contribute more? Although we cannot unequivocally falsify this interpretation, it does not seem to be very likely. Donors are never significantly different from non-donors regarding firm characteristics such as their Return on assets, Current ratio, Liabilities, Book to price, and Income. In fact, on the 7% confidence level, profit of donors is *lower* than that of non-donors.

Second, we address the channel through which contributions have an effect by studying what happens to the financial situations of firms that provide contributions to candidates that get elected in the four years following the elections. Here we specifically hypothesize that: *Connected firms get preferential access to finance and increase their leverage relative to their peer firms*. We indeed find that the financial leverage of connected firms increased substantially in the four years following the election that brought these deputies into office. Interpreting increases in firm financial leverage as an indication of increased firm access to finance, these results suggest that contributing firms gained preferential access to finance. Do we have to address selection bias issues here?

The remainder of the paper is structured as follows. Section I describes the context of the 1998 elections. Section II lays out the methodology used and Section III describes the data. Section IV provides a discussion of the results and the robustness checks. Section V concludes.

I. The Context of the 1998 Elections in Brazil

This section gives a brief overview of the Brazilian election system, describes the political situation surrounding the 1998 elections, reviews the Brazilian campaign finance law, and discusses the interaction between firms and politicians in Brazil.

Brazil has a bicameral National Congress (*Congresso Nacional*) consisting of the Federal Senate (81 seats) and the Chamber of Deputies (513 seats).[1] Brazil has 27 federal units, comprised of 26 states and one Federal District. Each unit elects its own Governor. The president is directly elected by a simple majority vote for a four-year term. The 1988 Constitution introduced the two-round rule for president and governor candidates: if no candidate receives 50% + 1 of the votes in the first round, a runoff is held between the two candidates with the most votes. The Senate includes three Senators from each federal unit. Senators are elected via majority voting in staggered elections. In 1994 two-thirds of the Senate (54 seats) was up for election; in 1998 one-third of the Senate (27 seats) was up for election. Senators serve eight-year terms. All members of the Chamber of Deputies are elected for a four-year term via a party-list proportional system according to D'Hondt largest averages formula. In proportional representation elections, state-level parties compose federal deputy candidate lists. Voters have the option of making a party vote.

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[1] This section is largely based on information provided by the International Foundation for Election Systems (2005) and IUJPER (2005).

However, in practice, these campaigns are very individualized in Brazil, so the number of party votes is small.

The constitutional revision of May 1994 reduced the presidential term from five to four years. This amendment ensured the alignment of the terms of the president, federal deputies, senators and state governors. The national elections lag two years behind the municipal elections.

The last national election before the 1998 election was held in 1994. Presidential candidate Fernando Henrique Cardoso (Brazilian Social Democratic Party, PSDB) received 52.97% of the votes and defeated Luiz Inácio (Lula) da Silva (Worker's Party, PT), his closest competitor with 26.39% of the votes. Due to a constitutional amendment, the October 1998 election was the first in which the current president was allowed to run for re-election. Cardoso took advantage of this possibility and won the presidential election of 1998 with 53.06% of the vote in the first round. Again, his close runner up was Lula da Silva with 31.71% of the vote. The October 1998 election was the first time in which the majority of Brazil's voters used computerized electronic voting machines.

Before 1993, it was prohibited for business and individuals to contribute to candidates directly. However, since then Brazilian law permits contributions to candidates for all offices directly. Individuals can donate up to ten percent of their gross annual income and companies can donate a maximum amount of two percent of gross annual income. These relatively high limits together with accounting manipulations possibilities imply contributions are virtually unconstrained. Triggered by campaign finance scandals, Congress passed a law (Law no. 8713) in 1993, which requires candidates to submit an overview of *all* their campaign contributions—a *prestação de contas*—and its sources on the donor level to the regional electoral courts. The regional

10

courts pass the data on to the *Tribunal Superior Eleitoral* (TSE), the Superior Electoral Court who oversees the elections. Non-compliance with these laws can result in, amongst others, fines or removal of candidacy/appointment. These laws are not purely symbolical: several state courts have actually enforced them (Veja, 1998).

Brazilian election campaigns are expensive given the country's level of development. This is largely explained by the fact that the democratization in the 1980s increased intra- and interparty competition substantially. The number of parties increased from 2 in 1982 to 8 in 1998 and the number of candidates per seat increased from 3.2 to 6.6 (TSE 1999). In addition, Brazilian parties are well-known for their low internal coherence and bad organization. Therefore, individual candidates have to spend a lot of money to distinguish themselves and cannot solely rely on party reputation and organizational infrastructure for their campaigns. Indeed, Samuels (2001) shows that large campaigns expenditures are associated with more votes. Furthermore, candidates themselves are responsible for registering their campaign funding, which is not channeled via the party to which the candidate is affiliated. These factors are the most important determinants for the highly individualistic nature of campaigns.

Since money leads to votes and elections are expensive, candidates have strong demand for campaign contributions. In principle, firms are willing to make these contributions because elected officials control the distribution of, for example, export subsidies, banking recapitalization, financial sector regulations and the allocation of "pork-barrel" funds. Indeed politicians want to establish themselves as competent providers of rents and "pork barrel" to voters as well as firms that thrive on government contracts to collect campaign contributions (Samuels, 2002).

But how do Brazilian political candidates credibly commit to provide future benefits to campaign donors? Obviously, politicians have strong ex-post incentives to renege on promises since it is impossible for the contributor to write and enforce a contract based on campaign finance.[2] However, repeated interactions seem to result in a sustainable campaign funding equilibrium in Brazil (Samuels, 2002). Politicians establish long-term relationships with potential campaign financiers in order to develop reputation. Many politicians also have long lasting political careers. Although the turnover of the Chamber of Deputies with each election is 50%, typically politicians spend a few terms in Congress and then continue in state or local levels of government. Furthermore, most campaign contributions come from a small number of firms, facilitating tight personal relationship of politicians with financiers. This relatively closed campaign finance market makes familiarity between contributors and politicians more likely and provides for an effective sanctioning mechanism, and thus credible commitments (Samuels, 2001).

II.   Methodology

This section discusses the construction of our measures of the strength of political connections that campaign finance buys. In addition, it elaborates on the econometric methodology with which we explain the variation in cumulative abnormal stock returns and the degree of access to finance with these measures of political influence. Some listed

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[2] In the United States, Kroszner and Stratmann (1998) argue that to overcome this commitment problem, legislators have an incentive to create specialized standing committees that enable repeated interaction between special interest and committee members. Standing committees give rise to a reputational equilibrium where special interests give high contributions to committee members who carry out favors for them. They show that members of the House Banking Committee were able to attract significantly higher contributions from financial interests than other legislators. Furthermore, they document that uncertainty about a committee member gradually resolves resulting in the fact that the sources of his contributions become more concentrated over time. In addition, when membership is likely to be terminated, for example because of age, the concentration and level of contributions decline.

firms did not make any official contributions to candidates. Hence we use these firms as a control group.

1. Measures of Campaign Finance as a Proxy for a Firm's Political Influence

As we argue, the aim of campaign finance is to buy direct or indirect political influence. However, to define a functional form of how campaign contributions translate in political influence is non-trivial. Therefore, using contribution data, we construct three different, simple and intuitive measures of the strength of political connections donors buy with donations. In the construction of these proxies we assumed that if a listed firm did not appear in the official contribution data, then it did not donate in any way to political candidates, and hence becomes part of the control group.

Our first group of explanatory variables contains four absolute measures, which are simply the absolute amounts a firm donates to candidates for four different positions: federal deputy (DTOT), president (PTOT), governor (GTOT), and senator (STOT). Arguably, a donor will benefit more if he contributed to winning than to losing candidates. Hence, we next split each of our first four measures into the amount provided to winners and the amount provided to losers, denoting for deputy candidates DAMOUNT1 for winners and DAMOUNT0 for losers, etc.

Our second group contains eight measures based on the relative contributions among donors. In this group, we take into account the fact that donors compete with each other to gain the political influence of a specific candidate. To gain the political influence of a popular candidate requires less money than of a relatively unknown candidate. Therefore, the absolute amount of contributions may not translate into proportional political influence. Hence we assume here that a donor buys a 'piece' of the political

candidate in question, where that piece is the ratio of the amount the donor contributed to the total sum of contributions received by the candidate. Again, the definition is straightforward. For example, to construct the proxy of winning deputy candidates for firm i, $DFRAC1_i$, we calculate $DFRAC1_i = \sum_{j=1}^{n_{d,w}} \dfrac{CONTRIBUTION_{i,j}}{TOTAL_j}$, where $CONTRIBUTION_{i,j}$ denotes the contribution from firm i to candidate j, $TOTAL_j$ is the total amount of contributions candidate j received, and $n_{d,w}$ is the number of winning deputy candidates. Note that with this second set of proxies we implicitly assume homogeneity of the political influence on all candidates.

Our third group of measures extends the second group and contains eight measures based on relative amounts among donors <u>and</u> candidates. In addition to acknowledging the effect of competition among donors, we take into account heterogeneity of the political influence of candidates. That is, politicians compete amongst themselves to define, lobby, and decide over issues on the political agenda, and politicians differ among each other. For example, incumbents are perhaps better able to exert political influence than newcomers are, and as a consequence attract more contributions. Therefore, we assume that the total amount of contributions for a candidate as a fraction of the total contributions to all candidates in a state is a proxy for the candidate's overall political influence in that state. We correspondingly construct the new proxy of winning deputy candidates for firm i, $DFRACTOT1_i$, as

$$DFRACTOT1_i = \sum_{j=1}^{n_{d,w}} DFRAC1_i \frac{TOTAL_j}{TOTAL\ IN\ STATE_j} \qquad \text{or}$$

$$DFRACTOT1_i = \sum_{j=1}^{n_{d,w}} \frac{CONTRIBUTION_{i,j}}{TOTAL\ IN\ STATE_j}, \text{ where } TOTAL\ IN\ STATE_j \text{ is the total amount}$$

all deputy candidates in the state of candidate *j* received. For presidential candidates, we use *TOTAL*, the total amount of contributions to presidential candidates, instead of *TOTAL IN STATE$_j$*.

2. Calculating Cumulative Abnormal Stock Returns of Donors and the Control Group

We use a standard event study approach to construct cumulative abnormal returns (MacKinlay, 1997). In doing so, we define the estimation window in the period (τ_0, τ_1), the event window in the period (τ_1, τ_2) and the event itself at $\tau = 0$, where $\tau_0 < \tau_1 < 0 < \tau_2$. On 9 October 1998, the election results became publicly known (Reuters, 1998). Next we calculate daily stock returns for 159 listed companies in the Brazilian stock market in the estimation and event windows using $R_{i,t} = \ln(\dfrac{P_{i,t}}{P_{i,t-1}})$, where $P_{i,t}$ is the stock price index of company *i* at time *t*. To calculate the abnormal returns we estimate the following market model in the estimation window:

$$R_{i,t} = \alpha_0 + \beta_0 R_{B,t} + \varepsilon_{i,t}, \text{ where } E[\varepsilon_{i,t}] = 0 \text{ and } Var[\varepsilon_{i,t}] = \sigma_i^{\,2} \qquad , \qquad (1)$$

where $R_{B,t}$ is the return São Paolo stock exchange index (BOVESPA) at time *t*. In the event window, the abnormal return for company *i* is defined as:

$$AR_{i,t} = R_{i,t} - \hat{R}_{i,t}, \qquad (2)$$

where $\hat{R}_{i,t}$ is the predicted return according to Equation (1). The cumulative abnormal return for company *i* is given by:

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i,t}. \qquad (3)$$

Second, we develop the basis regression model used in this paper:

15

$$CAR_i = \alpha + \mathrm{B} \ \text{Campaign Contribution Items}_i + \Gamma \ \text{Industry Dummies}_i + \mu_{i,t} \ , \tag{4}$$

where Campaign Contribution Items$_i$ is a vector containing the three group of political influence measures as defined in the previous subsection, e.g., DTOT, PFRAC0, and SFRACTOT1.

The TOTAL hypothesis predicts that the coefficients in vector B for the amount of campaign contributions to federal deputies are positive and statistically and economically significant. According to the WINNERS hypothesis, these coefficients should also be positive and significant for political connection measures for winning deputy candidates. Following the LOSER hypothesis, coefficients regarding political connections with losing deputy candidates have a negative sign.

III.   Data

This section describes the sources and the construction of the contributions dataset we used. It is based on firm-level campaign contribution data, Brazilian stock market data, and the outcomes of the 1998 election.

1. Data Sources

At the heart of this paper is the data collected by the Brazilian national election court, the *Tribunal Superior Eleitoral* (TSE) (Tribunal Superior Eleitoral, 2005). The dataset contains detailed information about donors and recipients. More specifically, for each candidate we know his/her name, the state, candidate number, party, and position (federal deputy, senator, governor or president). Furthermore, we know the name of the donor, the size of the contribution and the type (individual (*pessoa fisica*), corporate, political party

or unknown). Each entry corresponds with a single contribution. Contributions are given in Brazilian BRL, which had an average 1998 US dollar exchange rate of $0.86. There are 5,675, 26,199, 5,992, and 1,360 entries in the dataset on the presidential, federal deputy, governor, and senator level, respectively. Most donations are from individuals. There are 378, 4,053, 1,101, and 307 entries of contributions from listed and non-listed companies on the presidential, federal deputy, governor, and senator level, respectively.

The campaign contribution data was not made available to financial markets in its current form nor was it made publicly available via newspapers, etc. *before* the elections, suggesting an event study cannot be conducted. However, there are at least two reasons to reconciliate this paradox with our approach. First, word of mouth is the most important channel to financial markets in Brazil[3]. The pool of campaign contributors is relatively stable and small compared to the US and hence can be easily tracked by analysts. Second, even if actual contribution information was not available at all, it surely will be positively correlated with the perceived strength of the connection between a firm and politicians based on information of past contributions and other information on connections.

Data on whether deputy candidates lost or won were taken from the TSE. There were 513 deputy candidates to be appointed. Data on whether governor, senator and president candidates lost or won are from Instituto Universitário de Pesquisas do Rio de Janeiro (IUPERJ), a Brazilian academic social sciences research institute (IUPERJ, 2005). In 1998, there were 27 candidates—one for each district—to be chosen for both the senate and governor positions.

Unfortunately, we do not have access to balance sheet information of all corporate campaign donors to assess the effect of campaign finance. Therefore, we restrict

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[3] This is also suggested by David Samuels, a renowned expert on Brazilian politics.

ourselves to easily accessible information on traded, public firms. For the relevant period, we collect market data from Thomson's Financial Datastream for the actively traded stocks of the 159 listed firms. We also collected accounting data from Worldscope for these firms: total assets, current liabilities, gross profit margin, current ratio, basic net income, the book to price ratio, and financial leverage ratios. A big obstacle in compiling the final dataset was formed by regular typos or inconsistencies in donor names of the campaign contribution dataset. Therefore, the process of matching and merging the campaign contribution data with stock data was done by hand.[4] The final dataset contains 292 entries for all listed firms. Table I contains an overview of all variables used in the analysis.

2. Descriptive Statistics

This subsection provides descriptive statistics of cumulative abnormal returns and contributions on the industry level and of contributions on each position level.

A. Variables

Table II presents pairwise correlations between the measures of political influence: the absolute amount given to winners and losers for each position. We find that the amounts given to winners and losers for all positions are positively correlated. This is intuitive. First, assuming that election results are not fully predictable (for which we will show some evidence), amounts to winners and losers should be highly correlated. Second, the result implies firms diversify their contributions over positions.

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[4] For example, Companhia Siderurgica Nacional occurs in 12 different ways in the deputy contribution data. These include, Campanha Siderurgica Nacional, Companhia Siderurgica Nacional, Companhia Siderurgica Nacional, Cia Siderúrgica Nacional – CSN, or just CSN.

Table III provides descriptive statistics for accounting data and some political influence measures (for definitions, see the Methodology section). Panel A shows that there are no significant differences at the 5% level in the mean of accounting variables between campaign donors and non-donors. In fact, the strongest result is that profits of donor firms are lower than profits of non-donors at the 5% level. This finding suggests that there is no obvious selection bias problem, where better performing firms have higher returns ad higher contributions. However, as can be seen from Panel B, there is substantial variation in campaign contributions. Furthermore, the first two columns show that there are quite a few missing values.

In terms of political influence in the Chamber of Deputies, there are a few firms who stand out in size and spread of contributions. These include Ipiranga, Banco Itau, Siderurgica Nacional and Gerdau, well-known Brazilian blue-chips. Using DFRAC1, Gerdau contributed to the equivalent of 160 deputies. However, when we correct for inter-state competition among candidates, Banco Itau has most political influence: an equivalent of 18 deputies (DFRACCAN1). All in all, the four largest contributors bought influence over 3.23 deputies on average, and account in total for about 33 deputies. The other proxies also confirm that a few firms bought disproportional influence.[5]

There were 57 contributors to deputy candidates. 48 of them contributed winners and 38 to losers. 29 contributed to both winners and losers. There were 13 contributors to senator

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[5] The largest fraction PFRACTOT1 - about 10%- of the president was bought by Pronor. Other firms that bought a sum of fractions that exceeded 0.05 include Copesul, Bradesco, and Banco Itau. This implies these four companies bought about 0.31 of president influence. The largest fraction of governor influence GFRACTTOT1 was bought by Coteminas (0.34). Other firms that bought a sum of fractions that exceeded 0.14 include Companhia Brasileira de Distribucao, Gradiente, and Klabin. Together the four companies account for about 0.91 governors. The largest sum of fractions, SFRACTTOT1, was bought by Banco Itau: 3.9 senators. Other firms that bought a sum of fractions that exceeded 0.95 include Gerdau, Ipiranga, and, Votorantin Celulose e Papel. Together the four companies bought a sum of fractions of about 0.91 governors. In conclusion, Banco Itau and Gerdau have bought the largest overall political influence according to our measures.

candidates. 13 of them contributed winners and 3 to losers. 3 contributed to both winners and losers. There were 30 contributors to governor candidates. 18 of them contributed winners and 19 to losers. 7 contributed to both winners and losers. There were 22 contributors to presidential candidates. 22 of them contributed winners and 6 to losers. 6 contributed to both winners and losers.

B. Cumulative Abnormal Returns and Contributions on the Industry-Level

For the basic analysis, we choose the estimation window for the cumulative abnormal returns to be 100 trading days and the event window to be 41 trading days, i.e. (τ_0, τ_1, τ_2)=(-120, -20, 20). We distinguish the following sectors as defined by Datastream: Basic Industries, Cyclical Consumer, Financials, General Industrials, Information Technology, Non-cyclical Consumer, Non-cyclical Services, Resources, and Utilities. Descriptive statistics can be found in Table IV. Panel A provides descriptive statistics for the cumulative abnormal returns on the industry level. The overall average CAR was 1.47%, which is not statistically different from zero. This can be explained by a relatively large standard error of 4%, which indicates a large variation in the CARs. Interestingly, only basic industries and cyclical services have a significant average negative performance, while for other industries the average CARs are not statistically different from zero. Panel B contains descriptive statistics for listed campaign donors on the industry level. The highest number of firms which provided contributions for all positions came from Basic Industries, followed by firms from Financials. There were few contributors for all positions from the Information Technology, Cyclical Services and Non-Cyclical Services sectors.

C. Campaign Contributions on the Position Level

In the campaign contribution data, we distinguish four different positions: Federal Deputy, President, Governor, and Senator. From these data we identify donors who are listed on the Brazilian stock exchange. Table V presents the descriptive statistics. From Table V we see that 889, 3, 47, and 48 of the federal deputy, president, governor, and senator candidates, respectively, received campaign contributions. There were 60, 23, 30, and 13 listed donors, respectively. As a group, the listed firms in our sample are by far the largest contributors for all positions, and were responsible for 15.9%, 32.4%, 10.6%, and 24.9% of total contributions, respectively. Listed firms on average spent most on president candidates (610,497 BRL) and fewest on deputy candidates (172,874 BRL). Deputy candidates received most donations (5,580) and the highest total amount of contributions (65,315,860 BRL). Senate candidates received fewest contributions (376) and the lowest total amount (11,552,263 BRL). On average, presidential candidates received most (14,458,248 BRL) and deputy candidates fewest (73,471 BRL).

Panel C shows that for all positions winners received substantially larger amounts of contributions than losers; all p-values for t-tests of equality of means are significant at the 6% level. Strikingly, the incumbent presidential candidate was able to raise 41,656,385BRL as opposed to just an average of 859,179BRL for his competitors. These findings suggest that campaign donors targeted fairly well predict winners for all positions. However, losers still received substantial amounts, suggesting there was enough uncertainty to elicit a stock market response after the announcement of results if the market indeed expected firm-specific political favors as a result of contributions.

IV.   **Empirical Results**

In this section we empirically assess whether the market expected firm-specific future political favors and whether contributions were associated with (preferential) access to finance.

A. Campaign Contributions and Stock Returns

Table VI presents OLS regressions that provide support for the TOTAL hypothesis that the market expects political firm-specific future favors for firms who actively contributed to political candidates. We use absolute amounts of contributions (DTOT, GTOT, etc.) as explanatory variables. The dependent variable is the CAR, expressed in percentage points. All standard errors of the OLS regressions are corrected for heteroskedasticity using the Huber-White estimator of variance. Unless stated otherwise, industry-specific effects and a constant are included in each regression. Column (1) shows a significant coefficient on the 1%-level for the absolute amount of total contributions (in 100,000BRL) made by a firm. In other words, a contribution of 100,000BRL is associated with an increase in the CAR of 1.96%. The economic effect of the result is substantial. Going from the 25th to the 75th percentile of contributions, a variation of approximately 1 million BRL, implies an increase in the CAR of about 20%. Column (2) shows that contributing to governors paid off even more: for every 100,000BRL of contributions, a firm could expect an increase in the CAR of 3.1%. The result is significant at the 5%-level. Contributing to senators also had a significant impact on the CAR: every increase of 100,000BRL in contributions was associated with a 2.5% increase in CAR (column (3)). Contributions to presidential candidates also had a positive impact on the CAR, but was only significant at the 10.2%-level (column (4)). This is probably due to the fact that it was relatively clear that Cardoso was going to be re-

elected. Regressions with industry-clusters controlling for size, assets, and market capitalization were conducted, which reduced the sample size to 69 observations. The results for deputies, senators, and governors stay significant on the 5%-level (maximum p-value of 0.013).

Next, we refine the analysis by using total contributions to winning and losing candidates for each position. This allows us to test the WINNER and LOSER hypotheses. The results are presented in Table VII. Column (1) clearly shows a positive coefficient of contributions to winning candidates (2.66). The coefficient is significant at the 1%-level and larger in magnitude than the coefficient obtained for all deputies in column (1) of Table V. Going from the 25th to the 75th percentile of contributions, a variation of approximately 700,000 BRL, this implies an increase in the CAR of about 19%. In Columns (2) and (4) we see marginally significant results for governor and senator contributions.

In Columns (5) to (8) we control for the contributions to losers. Due to the limited number of observations, the non-deputy regressions are likely to suffer from multicollinearity problems when we include both the winner and loser variables (as suggested by the large coefficients in column (8)). However, the regression for federal deputies does not display this problem, probably because we have a reasonably large number of degrees of freedom in these regressions, and the coefficients on the winner and loser variables have the expected sign (column (5)). Regressions with industry-clusters controlling for size, assets, and market capitalization were conducted, which reduced the sample size to 69 observations. The results for deputies and senators stay significant on the 1%-level (See also Table 10, Column (1)). In what follows, we therefore only report

23

the deputies and senators regression results for which we have a reasonably large number of observations.

Next, we further refine the analysis by taking into account possible competition amongst donors to establish a connection with a politician. Hence we take the sum of the relative amounts that a firm gave to winning and losing candidates (for example, for deputies, these measures are DFRAC1 and DFRAC0) as a proxy for the strength of political connections. For example, if a firm provided 20% of campaign funds to winning candidate A and 30% of winning candidate B, then DFRAC1=50. The results are presented in Table VIII. Column (1) shows a significant and positive coefficient (0.002). The interpretation is that when a firm finances 100% of the campaign of a deputy, his CAR increases with 0.2%. Going from the 25th to the 75th percentile of contributions, a distance of approximately 6,000 (expressed in percentage points), this implies an increase in the CAR of about 12%. We also find a significant positive effect when we repeat the analysis for senators (0.06) in column (2). When we control for the fraction extended to losers in column (3), the effect of contributing to winning deputy candidates increases slightly to 0.3%. Again, this result is substantial given that there are 513 seats in the Chamber.

As an additional extension, besides taking into account the competition between donors to get a "piece" of a candidate, we take into account the differences between politicians as they are perceived by donors: candidates who receive more contributions are probably more important for firms going forward. Therefore for each firm we sum the contributions as a percentage point of total contributions in a state (for example, these measures for deputies are DFRACTOT0 and DFRACTOT1). For example, if a firm provided 100,000 BRL of campaign funds to winning candidate A and 200,000 BRL of

winning candidate B in state S, and total contributions in state S were 3,000,000 BRL, DFRACTOT1=10. The results are presented in columns (5) to (8) of Table VIII. In column (5), we control for contributions to winning deputy candidates, and in column (7) we also control for contributions to losing deputy candidates. In both specifications, we find a positive coefficient on the winning deputy variable of about 0.02 that is significant at the 1%-level. Going from the 25th to the 75th percentile of contributions, a distance of approximately 323 (expressed in percentage points), this result implies an increase in the CAR of about 6.5%. Columns (2) and (4) also provide strong support for our WINNERS hypothesis for the senator level.

As a robustness check of the impact of contributions to deputies, we control for connections to candidates on other political levels. The results are displayed in Table IX. This table shows significant coefficients of several measures of political connections to deputies, controlling for connections with winning president, governor and senator candidates. The coefficients for political connections to deputies are similar to our previous results. Column (1) shows results using the absolute contributions to winners. Column (2) shows results using the per firm sum of the percentage points of the relative contributions to a candidate as a fraction of total contributions to the candidate. Column (3) presents results using the per firm sum of the percentage points of contributions to winning candidates as a fraction of total contributions in the state of the candidate.

The hypothesis that contributions to winning deputies matters, also withstand some additional robustness checks which are presented in Table X. In Column (1) we run a regression using industry clusters. Our results are unaltered. In Column (2) we control for other firm characteristics, including total assets, profit, and market capitalization of the firm at the start of the event window. In Column (3) we adjusted the event window to

contain the period of 20 days before up to 5 days after the announcement of the election results. In Column (4), we re-run our main specification on the sub-sample of firms who contributed to deputies. In Column (5) we use the abnormal buy-and-hold returns as the dependent variable. These returns are defined as

$$BHR_i(\tau_1, \tau_2) = \prod_{\tau=\tau_1}^{\tau_2} (1 + AR_{i,t}) \tag{5}$$

The results indicate that going from the 25th to the 75th percentile of contributions to winners, a distance of approximately 700,000 BRL, implies an increase in the BHR of about 18%. In column (6) we use the abnormal buy-and-hold returns as the dependent variable and control for other firm characteristics. We find that CAR and BHR are negatively related to the initial market capitalization of firms, suggesting that larger firms (as measured by market capitalization) exhibit smaller excess returns on average. Importantly for our purposes, our main result is unaffected. We find in all specifications that contributions to winning deputies are positively associated with excess stock returns.

B. Preferential Access to Finance as a Political Favor

Now that we have established that campaign contributions are associated with higher stock returns, suggesting that the market expects political favors for contributing firms, we would like to investigate in more detail what such favors could be. Political favors can come in many forms, but what are the specific channels in Brazil? Given the predominance of state owned banks in Brazil[6] and the unattractive interest rate

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[6] According to LLS (2002), the share of the assets of the top 10 banks in Brazil controlled by the government at the 20 percent level was 57 percent in 1995 (a bank is considered controlled by the government stake in the bank is larger than 20 percent and the state is the largest shareholder).

environment for borrowers,[7] preferential access to finance is a likely candidate for how political favors get provided. While we do not have data on the loan contracts of each firm in our sample, we do know the amount of short-term and long-term debt outstanding at the time of the election and the following years. We obtain this data from Worldscope. Because corporate bond markets are not well developed in Brazil, most debt liabilities of firms are bank loans. A substantial increase in total debt outstanding and leverage, ceteris paribus, could thus be indicative of preferential access to finance.

Our specific hypothesis is that the financial leverage of firms that made financial contributions to (elected) federal deputies increased more than control firms during the four years following the election that these deputies were in office. To test this hypothesis, we use data from Worldscope to create the following financial leverage variable: LEVERAGE CHANGE defined as the change in the ratio of total debt to total assets over the period 1998-2001. We calculate the change in leverage over the period 1998-2001 because these are the four years following the 1998 election that elected representatives were in office and were able to extend political favors. We are also interested whether the effect differs between short and long-term debt. Because of the shorter maturity of short-term debt, short-term debt is more likely than long-term debt to be renegotiated during the four-year term that the elected deputies are in office. This implies that the effect should be more pronounced for short-term leverage. We therefore create two additional variables: ST LEVERAGE CHANGE is the change in the ratio of short-term debt (plus current portion of long-term debt) to total assets over the period 1998-2001, and LT LEVERAGE CHANGE is the change in the ratio of long-term debt to total assets over the period 1998-2001.

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[7] Brazilian interest rate spreads are among the highest in the world, averaging around 58 percent in 1998, with lending rates averaging around 86 percent in 1998, according to the WDI database of the World Bank.

Table XI shows the results when we regress LEVERAGE CHANGE on the absolute amounts of campaign contributions, controlling for industry-specific effects. By using the difference between financial leverage in 2001 and leverage in 1998 as dependent variable, we are essentially estimating a leverage equation in first differences, thereby controlling for any fixed firm effects that could explain differences in financial leverage at the firm level. Because of missing data on leverage from Worldscope, our sample of firms reduces to 89. Consistent with our hypothesis, we find that the financial leverage of firms that made financial contributions to (elected) federal deputies increased during the four years following the election that these deputies were in office. The effect holds not only for federal deputies, but also for the other candidates. The economic effects are substantial. Regression 1 in Table XI suggests that a one standard deviation increase in the total absolute amounts (in 100,000 BRL) firms contributed to federal deputy candidates (2.19) would result in an increase in the change in financial leverage over the period 1998-2001 of 0.085, which is substantial given the mean increase in financial leverage over this period of 0.026. The effect is even larger when we consider changes in short-term financial leverage (regression 5). We do not find an effect of contributions on changes in long-term financial leverage. This is consistent with the notion that it is more likely that short-term rather than long-term debt contracts are renegotiated during the relatively short four-year term that the elected deputies are in office. We obtain similar results when considering only the effect of contributions to winning candidates (see Table XII).

Although we do not provide any direct evidence of preferential lending, these results are consistent with contributing firms gaining preferential access to finance. To definitely conclude that firms experience a net benefit, we would need to assess whether

28

the benefit of increased access to finance exceeds the cost paid by firms for political favors. For this we would need more detailed information on the credit contracts of firms, including the loan size, interest rate, maturity, and collateral value. Still, the fact that the financial contributions made are small compared to the outstanding debt contracts – the average total financial contribution of listed firms to all candidates is only 1.2 million BRL (see Table V, panel A), while the average outstanding debt position of the firms in our sample is close to 2 billion BRL – suggests that the net benefit of increased access to finance is likely to exceed the costs that firms incur by financing the campaigns of connected politicians. While finance may not be the only channel through which firms benefit from political favors, our results support the notion that it is one of the channels through which contributing firms benefit from political favors, as evidenced by the increase in the stock returns of such firms.

V.   Conclusions

This paper addresses the question whether campaign contributions made by firms are associated with future firm-specific favors. We provide empirical support for the existence of such a link based on data from the 1998 elections in Brazil. We find robust evidence that higher campaign contributions to federal deputy candidates are associated with higher stock returns around the announcement of the election results, after controlling for industry-specific effects, firm-specific controls, and contributions to candidates at other levels (including governor, senator, and president candidacies). The economic effects are substantial. Our results imply that going from the 25th tot the 75th percentile of our proxies of political connections implies an increase in the CAR of about 20%, depending on the specification, and of about 18% in the abnormal buy-and-hold

returns. Specifically, contributing to candidates that are elected has a large positive impact on stock returns. Giving to losing deputy candidates seems to have an adverse effect on stock returns. We find weaker support that contributions on the governor and senator levels mattered. This may be due to the fact that there were fewer candidates to be elected than for the deputy level.

Our paper is the first to establish a link between campaign finance and political favors at the firm-level using candidate-level campaign data. As additional evidence of the existence of political favors, we study whether there is a relationship between campaign contributions and future access to finance. We find that the financial leverage of firms that made financial contributions to (elected) federal deputies increased substantially during the four years following the election that these deputies were in office. Interpreting increases in firm financial leverage as an indication of increased firm access to finance, these results suggest that contributing firms gained preferential access to finance. More generally, our findings provide new evidence of the value of political connections in emerging markets like Brazil. They suggest that the operation of corporations in these environments, including their financing, critically depends on relationships with politicians.

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Table I

Definition and Source of Variables

This table describes all the variables we use. The first column gives the name of the variable. The second column describes the variable and provides the source from which it was collected.

Variable	Description
DTOT	The sum of the absolute amounts a firm gave to all federal deputy candidates. Sources: TSE (2005), own calculations.
GTOT	The sum of the absolute amounts a firm gave to all governor candidates. Sources: TSE (2005), own calculations.
PTOT	The sum of the absolute amounts a firm gave to all president candidates. Sources: TSE (2005), own calculations.
STOT	The sum of the absolute amounts a firm gave to all senator candidates. Sources: TSE (2005), own calculations.
XAMOUNTY	This reflects four variables. The sum of absolute amounts a firm contributed to candidates for position X with a value of dummy win=Y $\in$ {0,1}, where Y=1 refers to winners and losers otherwise. X $\in$ {federal deputy, governor, senator, president}. Sources: TSE (2005), IUJPER (2005); own calculations.
XFRACY	This reflects four variables. The sum of the amounts as a fraction of total contributions by a firm contributed to candidates for position X with a value of dummy win=Y $\in$ {0,1}, where Y=1 refers to winners and losers otherwise. X $\in$ {federal deputy, governor, senator, president}. Sources: TSE (2005), IUJPER (2005); own calculations.
XFRACTOTY	This reflects four variables. The sum of the amounts as a fraction of total contributions taking into account inter-candidate competition by a firm contributed to candidates for position X with a value of dummy win=Y $\in$ {0,1}, where Y=1 refers to winners and losers otherwise. X $\in$ {federal deputy, governor, senator, president}. The inter-candidate competition is for all positions on the state-level, except for the president position. Sources: TSE (2005), IUJPER (2005), own calculations.
Market cap. start	Market capitalization 20 days before the election. Source: Datastream
Assets	Total assets in 1998. Source: Worldscope
ROA	Return on assets in 1998. Source: Worldscope
Profit	Gross profit margin in 1998. Source: Worldscope
Current ratio	Current ratio in 1998. Source: Worldscope
Income	Basic net income in 1998. Source: Worldscope
Liabilities	Current liabilities in 1998. Source: Worldscope
Book-to-Price	Book to price ratio in 1998. Source: Worldscope
Leverage	Total debt to total assets in 1998. Source: Worldscope
Leverage change	Change in Leverage ratio over the period 1998-2001. Source: Worldscope
ST Leverage	Short-term debt (plus current portion of long-term debt) to total assets in 1998. Source: Worldscope
ST Leverage change	Change in ST Leverage ratio over the period 1998-2001. Source: Worldscope
LT Leverage	Long-term debt to total assets in 1998. Source: Worldscope
LT Leverage change	Change in ST Leverage ratio over the period 1998-2001. Source: Worldscope

Table II

Correlations between the Absolute Measures of Political Influence for Listed Firms

This table reports correlations between the absolute measures of political influence; the total amount per firm to winners and losers per position (p-values between brackets).

	DA0	DA1	GA0	GA1	PA0	PA1	SA0	SA1
DAMOUNT0	1.00							
DAMOUNT1	0.72	1.00						
	(0.00)							
GAMOUNT0	0.53	0.69	1.00					
	(0.00)	(0.00)						
GAMOUNT1	0.63	0.64	0.50	1.00				
	(0.00)	(0.00)	(0.00)					
PAMOUNT0	0.35	0.62	0.34	0.70	1.00			
	(0.00)	(0.00)	(0.00)	(0.00)				
PAMOUNT1	0.81	0.72	0.42	0.70	0.67	1.00		
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)			
SAMOUNT0	0.30	0.16	0.27	0.24	-0.01	0.11	1.00	
	(0.00)	(0.05)	(0.00)	(0.00)	(0.88)	(0.16)		
SAMOUNT1	(0.69	0.75	0.68	0.73	0.62	0.74	0.33	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	

Table III

Descriptive Statistics of Listed Firms on the Industry Level

This table reports summary statistics of 292 listed Brazilian firms on the industry-level. Amounts in panel A are in thousands of 1998 Brazilian BRL (1BRL ≈ 0.86$). Amounts in panel B are in 1998 Brazilian BRL (1BRL ≈ 0.86$). The measures are restricted to winning candidates (hence the indicator "1"). Panel A contains for each firms-specific variable the number of observations, its arithmetic mean, its standard deviation and its minimum and maximum values. The final column contains the p-values of a two-sided t-test for difference in means between donors and non-donors. Panel B presents for the several measures of political influence of firms the number of observations, its arithmetic mean, its standard deviation and its minimum and maximum values. The first set of measures reflects the total amounts to candidates of the four positions: federal deputy, governor, president, and senator. The second set of measures is calculated by summing the fractions of total contributions of a firm to a candidate per position. The third set of measures is calculated by summing the contributions of a firm to a candidate as a fraction of total contributions per state to candidates from competing for a similar position. The final column in panel B denotes the sum of FRACTOT1 for each position of the four companies with the largest XFRACTOT1.

Panel A:

	Observations		Mean		Standard Deviation		Difference in means between donors and non-donors
Variable	Total	Donors only	Total	Donors only	Total	Donors only	
Assets	131	45	6,594,898.00	6,548,932.00	1.74e+07	1.60e+07	0.98
Return on assets	99	30	5.23	8.16	16.32	7.76	0.24
Profit	99	33	28.79	24.86	15.43	7.45	0.07
Current ratio	114	40	1.36	1.63	1.41	0.97	0.13
Liabilities	114	40	762,853.10	627,603.30	1,562,397.00	1,366,399.00	0.50
Book to price	75	27	1.90	0.50	8.88	1.30	0.31
Income	100	32	190,404.40	91,492.13	472,484.60	205,628.90	0.15
Leverage	93	32	0.277	0.288	0.160	0.141	0.62

Panel B:

Variable	Observations	Mean	Std. Dev.	Min	Max	Sum of largest four
Absolute amounts						
DAMOUNT1	292	26,839.41	134,800.7	0	1,300,000	
GAMOUNT1	292	10,448.84	55,469.57	0	600,000	
PAMOUNT1	292	46,007.32	239,288.7	0	2,600,000	
SAMOUNT1	292	9,680.27	63,790.1	0	600,000	
Relative per candidate						
DFRAC1	292	2.17	1.40	0	160.93	
GFRAC1	292	0.01	0.04	0	0.44	
PFRAC1	292	0.00	0.01	0	0.10	
SFRAC1	292	0.04	0.31	0	3.92	
Relative per total						
DFRACTOT1	292	0.14	1.19	0	18.00	33.3
GFRACTOT1	292	0.01	0.03	0	0.34	0.91
PFRACTOT1	292	0.00	0.01	0	0.10	0.31
SFRACTOT1	292	0.04	0.29	0	3.9	8.87

Table IV

Descriptive Statistics of Campaign Contributions of Listed Firms on the Industry Level

This table reports summary statistics of listed Brazilian firms on the industry-level. Amounts are in 1998 Brazilian BRL (1BRL $\approx$ 0,86$). Panel A pertains to the cumulative abnormal returns per industry. It displays the number of observations, its arithmetic mean, its standard deviation and its minimum and maximum values. The final column contains the p-values of a two-sided one sample t-test to test the deviation from zero. Panel B presents the number of listed donors and the average amount per listed donor on the industry-level to federal deputy, president, governor, and senator candidates.

Panel A:

Industry	Observations	Mean	Std. Dev.	Min	Max	P-value t-test
Basic industries	40	-0.12	0.33	-0.86	0.87	0.03
Cyclical consumer	20	0.04	0.38	-0.60	1.00	0.67
Financials	26	-0.04	0.42	-1.53	0.75	0.66
General industrials	20	0.01	0.33	-0.41	1.10	0.85
Information technology	1	0.08	-	0.08	0.08	-
Non-cyclical consumer	10	0.22	1.22	-0.63	3.58	0.58
Non-cyclical services	5	-0.28	0.19	-0.47	-0.02	0.03
Resources	6	0.06	0.14	-0.09	0.31	0.31
Utilities	22	0.21	0.59	-0.49	2.29	0.10
Unknown	1	0.03	-	0.03	0.03	-
All	160	0.01	0.51	-1.53	3.58	0.72

Panel B:

Industry	Federal Deputy		President		Governor		Senator	
	# Donors	Amount	# Donors	Amount	# Donors	Amount	# Donors	Amount
Basic industries	19	308,807	13	535,610	12	202,824	7	274,393
Cyclical consumer	11	48,005	2	265,000	5	167,489	1	60,000
Cyclical services	1	1,500	0	-	1	43,290	0	-
Financials	8	309,438	5	889,700	5	294,000	3	273,333
General industrials	11	106,160	1	1500000	4	82,500	1	30,000
Information technology	1	20,000	0	-	0	-	1	50,000
Non-cyclical consumer	5	20,956	0	-	2	319,500	0	-
Non-cyclical services	1	115,000	1	450,000	1	505,000	0	-
Resources	3	30,833	1	150,000	0	-	0	-

Table V

Descriptive Statistics of All Corporate Campaign Contributions on the Position Level

This table reports summary statistics of campaign contributions by listed and non-listed firms to candidates who officially received contributions and ran for the position of federal deputy, president, governor, or senator. Amounts are in 1998 Brazilian BRL (1BRL ≈ 0,86$). Panel A contrasts total number of donations, the average size of a donation for *all* firms with the number of donations, the number of donors, the average size of a donation and the average total amount for *listed* firms. Panel B presents the number of candidates, the total amount they received, the average total amount per candidate, the amount received from listed firms, and the average number of donations per candidate. Panel C contrasts the number of candidates and the average total amount they received for winners and losers. The final column contains the p-values of a two-sided two sample t-test, assuming equal variances.

Panel A:

	All firms			Listed firms		
	# donations	Avg. size donation	# donations (% of total)	# donors	Avg. size donation	Avg. amount per firm
Federal Deputy	5,580	11,705	423 (7.6%)	60	24,521	172,874
President	378	114,748	44 (11.6%)	23	319,123	610,497
Governor	1,313	44,777	82 (6.3%)	30	76,325	208,621
Senate	376	30,724	36 (9.6%)	13	80,021	221,597

Panel B:

	# Candidates	Total received	Avg. amount per candidate	Received from listed (% of total)	Avg. # donations per candidate
Federal Deputy	889	65,315,860	73,471	10,372,432 (15.9%)	6.28
President	3	43,374,744	14,458,248	14,041,429 (32.4%)	126
Governor	47	58,791,612	1,250,885	6,258,630 (10.6%)	27.9
Senate	48	11,552,263	240,672	2,880,755 (24.9%)	7.8

Panel C:

	Winners		Losers		P-value t-test for difference in means
	# candidates	Avg. amount	# candidates	Avg. amount	
Federal Deputy	385	118,014	501	39,463	0.00
President	1	41,656,385	2	859,179	-
Governor	15	1,973,383	32	912,214	0.06
Senate	20	448,989	28	91,874	0.00

Table VI

Average Impact of Absolute Size of the Sum of Campaign Contributions on Cumulative Abnormal Returns

This table reports OLS regressions. The dependent variable is the cumulative abnormal return (in %), calculated with an event window covering the 20 days before and 20 days after the election. The independent variables are the total absolute amounts (in 100,000BRL) firms contributed to candidates. A constant and industry-specific effects are included in the regressions, but these are not reported. The results for deputies, governors, and senators are robust to industry-cluster regressions, controlling for market capitalization, profitability, and assets but are not reported, since it reduces the size of the sample to 69 observations. *, **. *** indicate significance at 10%, 5%, and 1% level, respectively. Heteroskedasticity robust standard errors are reported in parentheses.

	Cumulative abnormal returns for listed Brazilian firms			
	(1)	(2)	(3)	(4)
Total to deputies cand.	1.958			
	(2.93)***			
Total to governor cand.		3.077		
		(2.25)**		
Total to senator cand.			2.496	
			(1.78)*	
Total to president cand.				0.868
				(1.64)
Industry-specific effects?	Y	Y	Y	Y
Observations	159	159	159	159
R-squared	0.07	0.07	0.07	0.06

Table VII

Average Impact of Absolute Size of Campaign Contributions to Winners and Losers on Cumulative Abnormal Returns

This table reports OLS regressions. The dependent variable is the cumulative abnormal return (in %), calculated with an event window covering the 20 days before and 20 days after the election. The independent variables are the absolute amounts (in 100,000BRL) firms contributed to candidates who turned out to be winners and to losers. A constant and industry-specific effects are included in the regressions, but these are not reported. The results for deputies and senators are robust to industry-cluster regressions controlling for market capitalization, profitability and assets but are not reported, since it reduces the size of the sample to 69 observations. *, **. *** indicate significance at 10%, 5%, and 1% level, respectively. Heteroskedasticity robust standard errors are reported in parentheses.

	Cumulative abnormal returns for listed Brazilian firms							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sum dep. winners	2.659 (3.32)***				4.057 (3.03)***			
Sum. dep. losers					-6.734 (1.72)*			
Sum gov. winners		3.908 (1.67)*				0.692 (0.19)		
Sum. gov. losers						4.787 (1.38)		
Sum pres. winner			0.900 (1.53)				0.628 (0.70)	
Sum pres losers							5.127 (0.67)	
Sum sen. winners				2.721 (1.97)*				4.703 (2.65)***
Sum. sen losers								-192.363 (3.71)***
Industry-specific effects?	Y	Y	Y	Y	Y	Y	Y	Y
Observations	159	159	159	159	159	159	159	159
R-squared	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.07

Table VIII

Average Impact of Campaign Contributions to Winners and Losers as a Fraction of Total Contributions on Cumulative Abnormal Returns

This table reports OLS regressions. The dependent variable is the cumulative abnormal return (in %), calculated with an event window covering the 20 days before and 20 days after the election. In regressions (1) to (4), the independent variables are the sum of percentage points of campaign contributions to winners and losers as a fraction of total contributions per candidate. In regressions (5) to (8), the independent variables are the sums of percentage points of campaign contributions to winners and losers as a fraction of total contributions to all candidates in a state (with the exception of president candidates). A constant and industry-specific effects are included in the regressions, but these are not reported. *, **. *** indicate significance at 10%, 5%, and 1% level, respectively. Heteroskedasticity robust standard errors are reported in parentheses.

	Campaign Contributions as a Fraction of Total Contributions				Campaign Contributions as a Fraction of Total Contributions to All Candidates			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Sum frac. dep. winners	0.002 (2.28)**		0.003 (2.19)**		0.021 (3.28)***		0.021 (2.89)***	
Sum. frac. dep. losers			-0.004 (1.22)				0.011 (0.07)	
Sum frac. sen. winners		0.057 (2.68)***		0.088 (3.37)***		0.062 (2.88)***		0.097 (2.75)***
Sum.frac sen. losers				-2.766 (5.50)***				-7.559 (1.48)
Industry-specific effects?	Y	Y	Y	Y	Y	Y	Y	Y
Observations	159	159	159	159	159	159	159	159
R-squared	0.07	0.06	0.07	0.07	0.07	0.07	0.07	0.07

Table IX

Average Impact of Contributions to Deputies using Several Measures Controlling for Contributions to Other Winning Candidates for Other Positions on Cumulative Abnormal Returns

This table reports OLS regressions. The dependent variable is the cumulative abnormal return (in %), calculated with an event window covering the 20 days before and 20 days after the election. The independent variables are the sums of percentage points of campaign contributions to winners and losers as a fraction of total contributions to all candidates in a state (with the exception of president candidates). A constant and industry-specific effects are included in the regressions, but these are not reported. *, **. *** indicate significance at 10%, 5%, and 1% level, respectively. Heteroskedasticity robust standard errors are reported in parentheses.

	Cumulative abnormal returns						
	(1)			(2)			(3)
Sum dep. winners	3.660		Sum frac. dep. Winners	0.002		State frac. dep. winners	0.035
	(2.37)**			(2.10)**			(1.88)*
Sum gov. winners	0.995		Sum frac. gov. winners	-0.428		State frac. gov. winners	-0.616
	(0.22)			(1.32)			(1.23)
Sum pres. winner	-0.024		Sum frac. pres. winner	1.381		Total frac. pres. winner	1.451
	(0.02)			(1.12)			(1.13)
Sum sen. winners	-3.466		Sum frac. sen. winners	-		State frac. sen. winners	-0.077
	(0.80)						(0.96)
Industry-specific effects?	Y			Y		Y	Y
Observations	159	159	159	159	159	159	159
R-squared	0.07	0.07	0.07	0.07	0.07	0.07	0.07

Table X

Average Impact of Contributions to Deputies using Alternative Measures of Excess Returns and Controlling for Other Firm-Level Characteristics

This table reports OLS regressions. The dependent variable is the cumulative abnormal return and the buy-and-hold return (in %), respectively, calculated with an event window covering the 20 days before and 20 days after the election. The independent variables are the total absolute amounts (in 100,000BRL) firms contributed to candidates, the value of assets and liabilities and the market capitalization at the start of the event window. In Column (1), we cluster observations at the industry level. In Column (2) we control for other firm characteristics, including total assets, profit, and market capitalization of the firm at the start of the event window. In Column (2) we adapted the event window starting 20 trading days before up to 5 days after the announcement election results. In column (4), we re-run our main specification on the sub-sample of firms who contributed to deputies. Columns (5) and (6) pertain to regressions regarding abnormal buy-and-hold returns. A constant and industry-specific effects are included in the regressions, but these are not reported. *, **. *** indicate significance at 10%, 5%, and 1% level, respectively. Heteroskedasticity robust standard errors are reported in parentheses.

	Cumulative abnormal returns				Abnormal buy-and-hold returns	
	(1)	(2)	(3) Event window (-20,5)	(4) Sub-sample without control group	(5)	(6)
Sum dep. winners	2.659	1.656	1.158	4.503	2.618	1.343
	(3.25)**	(3.73)***	(2.79)**	(2.56)**	(2.21)**	(2.31)*
Assets		0.000				0.000
		(0.52)				(0.64)
Profit		0.180				-0.000
		(1.17)				(1.02)
Market cap. start		-0.000			-0.000	-0.000
		(3.92)***			(1.20)	(2.74)**
Industry-specific effects?	Y	Y	Y	Y	Y	Y
Industry clusters?	Y	Y	Y	N	N	Y
Observations	159	69	158	39	159	69
R-squared	0.07	0.15	0.06	0.21	0.08	0.15

Table XI

Average Impact of Absolute Size of the Sum of Campaign Contributions on Financial Leverage

This table reports OLS regressions. The dependent variable is the change in financial leverage over the period 1998-2001. In regressions 1-4, financial leverage is calculated as the ratio of total debt to total assets. Total debt is the sum of short term debt and long term debt. Short term debt represents that portion of debt payable within one year including current portion of long term debt. Long term debt represents all interest bearing financial obligations, excluding amounts due within one year. In regression 5, financial leverage is calculated as the ratio of short term debt to total assets. In regression 6, financial leverage is calculated as the ratio of long term debt to total assets. The independent variables are the total absolute amounts (in 100,000BRL) firms contributed to candidates. A constant and industry-specific effects are included in the regressions, but these are not reported. *, **. *** indicate significance at 10%, 5%, and 1% level, respectively. Heteroskedasticity robust standard errors are reported in parentheses.

	Change in financial leverage over the period 1998-2001				Change in short-term financial leverage over the period 1998-2001	Change in long-term term financial leverage over the period 1998-2001
	(1)	(2)	(3)	(4)	(5)	(6)
Total to deputies cand.	0.039 (0.015)***				0.072 (0.016)***	-0.008 (0.024)
Total to governor cand.		0.065 (0.026)**				
Total to senator cand.			0.089 (0.032)***			
Total to president cand.				0.025** (0.010)		
Industry-specific effects?	Y	Y	Y	Y	Y	Y
Observations	89	89	89	89	89	89
R-squared	0.22	0.22	0.22	0.22	0.12	0.23

Table XII

Average Impact of Absolute Size of Campaign Contributions to Winners on Financial Leverage

This table reports OLS regressions. The dependent variable is the change in financial leverage over the period 1998-2001. In regressions 1, financial leverage is calculated as the ratio of total debt to total assets. Total debt is the sum of short term debt and long term debt. Short term debt represents that portion of debt payable within one year including current portion of long term debt. Long term debt represents all interest bearing financial obligations, excluding amounts due within one year. In regression 2, financial leverage is calculated as the ratio of short term debt to total assets. In regression 3, financial leverage is calculated as the ratio of long term debt to total assets. The independent variables are the absolute amounts (in 100,000BRL) firms contributed to Federal Deputy candidates who turned out to be winners. A constant and industry-specific effects are included in the regressions, but these are not reported. *, **. *** indicate significance at 10%, 5%, and 1% level, respectively. Heteroskedasticity robust standard errors are reported in parentheses.

	Change in financial leverage over the period 1998-2001	Change in short-term financial leverage over the period 1998-2001	Change in long-term term financial leverage over the period 1998-2001
	(1)	(2)	(3)
Sum dep. winners	0.045	0.084	-0.007
	(0.019)**	(0.021)***	(0.027)
Industry-specific effects?	Y	Y	Y
Observations	89	89	89
R-squared	0.22	0.12	0.23