Investing in influence: Investors, portfolio firms, and political giving

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Abstract

Campaign finance laws aim to limit an individual's influence over the political process. We show that corporate ownership may be an important mechanism by which institutional investors circumvent such constraints and amplify their influence. Using data on the political giving and ownership of all 13-F investors between 1980 and 2016, we show that the probability that a firm's Political Action Committee (PAC) donates to a politician supported by an investor's PAC nearly doubles after the investor acquires a large stake, and that it increases five-fold when the investor obtains a board seat. This increase in similarity of political giving coincides with the election cycle the acquisition takes place in, and is not driven by selection into specific politically strategic acquisitions, as convergence in political behavior is observed even for exogenously determined acquisitions caused by stock index inclusions. The relationship is stronger for private funds, and those with high partisanship, suggesting the relationship is driven by investor preferences rather than strategic concerns. Finally, we show that portfolio firms' PAC expenditure experiences a relatively large shift at the acquisition date relative to past giving, whereas no such pattern is observed for institutional investors. We argue that these findings are best explained by investors influencing portfolio firm giving, suggesting that PAC giving may be another means by which influential shareholders impact corporate decision-making, in a manner that amplifies investors' political voice.

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1 Introduction

Campaign finance laws in the U.S. and elsewhere place limits on individual contributions, so as to avoid giving greater voice to those with more financial resources and to remedy the potential for political corruption. Even as campaign contributions and expenditures are seen as expression of political speech (and hence protected under the First Amendment), the law finds a compelling interest in the reduction of harm from corruption and in the protection of equal voice among voters. However, for as long as there have been contribution limits, there have been efforts to work around them. In this paper we study one heretofore unstudied mechanism through which investors, an already-influential constituency, may further amplify their political voice beyond the limits imposed by Federal Campaign Finance Law as individuals or Political Action Committees (PACs).

In the classic shareholder model of corporate governance, investors play a critical role in ensuring that managers maximize profits, as assumed in standard economic models. However, just as Milton Friedman feared that managers would serve their own interests rather than those of shareholders,[1] concentrated shareholders may use their ownership stakes to bend corporate decision-making to serve their own agenda, which less powerful shareholders may not share.

The most widely-documented type of abuse by controlling shareholders comes in the form of tunneling, in which assets or income is shifted to entities in which the controlling shareholder has a claim on cash flows.[2] However, the motivations of influential shareholders need not be so focused on direct financial benefits. Of particular interest in our setting, investors may have political preferences that lead to the support of particular candidates that may not be of direct relevance to the firm. This leads to the hypothesis that is the core motivation of our paper: that, when investors obtain a large stake in a company, the firm's political giving moves closer to that of the investor. If true, this would serve to amplify the political impact of the investor, which may gain preferential access or even influence over the targeted candidate through its larger political footprint. An established legal doctrine and political economy research supports the concern for this phenomenon.[3]

We explore this conjecture using data on 9,632 13-F institutional investors (those with at least $100 million in assets under management), that collectively manage as much as $20 trillion in assets

[1] Friedman (1970).

[2] See Johnson et al. (2000); Bertrand et al. (2002).

[3] For a discussion of the influence of economic elite versus non-elite voters in U.S. politics see Gilens and Page (2014); Bartels (2018). For experimental evidence on how campaign donations may drive access, see Kalla and Broockman (2016). For the case of PAC donations by Wall Street influencing emergency economic legislation voting during the financial crisis of 2008-09, see Mian et al. (2010). Hillman et al. (2004); Dahan et al. (2013) and de Figueiredo and Richter (2014); Bombardini and Trebbi (2020) offer literature reviews on corporate political activity and special interest politics, respectively.

during our sample period, matched to information on 61,415 firms that were in their collective portfolios at any point during the period 1980–2016. We examine the relationship between the political action committee giving by investors and by firms around the election cycle when a large stake is acquired for the first time.

As a first step, we look at the correlation between donations by investors and firms in which they eventually acquire stakes of at least 1 percent of outstanding shares. An investor-firm pair is included in the sample if the investor ever acquires a large stake in the firm during our sample period, with the analysis done at the congressional district $\times$ election cycle level. We find that the relationship between investor donations and firm donations to a given politician is much stronger after a large stake is acquired – for example, in our preferred specification we find that the probability that a firm's PAC donates to a politician supported by an investor's PAC nearly doubles after the investor acquires a stake in the firm. This pattern that survives the inclusion of a saturated set of fixed effects.

Money in politics research typically is plagued by serious identification issues due to omitted confounders driving political giving (Stratmann, 2005). In this paper, specific features of the financial economic application that we study allow us to overcome this obstacle. Specifically, in order to assess any role for selection into specific acquisition decisions, which may be driven by an omitted convergence emerging between the firm and the investor, we apply our approach to the sample of exogenously driven acquisitions determined by stock index inclusions (e.g., a firm being added for the first time to the S&P 500 or Russell 2000 Index). The pattern is observed – and is even stronger – for block purchases that result from index inclusion, suggesting that omitted drivers of acquisition decisions do not bias our estimate of higher co-movement in political giving. Based on this identification strategy, potential selection affecting our baseline parameters does not appear to be a first-order quantitative concern.

We find that this effect is more pronounced for privately held investment funds, and for investors that themselves are more partisan in their political giving. We take these findings as suggestive evidence that the convergence in investor-firm giving more plausibly results from investors' own political preferences, rather than the profitability of their overall investment portfolios.

We additionally show that the correlation in giving increases even more sharply after an investor gets a seat on the board. In a specification that captures both the board seat and acquisition effects, we find that effect of a board seat is more than three times that of an acquisition alone. These results suggest a particular mechanism through an investor may influence political giving decisions.

In the final part of the paper, we show that it is investors that change the giving behavior of firms, rather than firms' preferences influencing investors. In particular, we construct cosine similarity measures for each entity (firm or investor) between adjacent election cycles around

the acquisition. Intuitively, these persistence measures capture the extent to which the profile of political giving across congressional districts of a firm or investor experiences unusually large (or small) shifts between the two election cycles around a block purchase. If a firm adjusts its giving to investor preferences, we expect a relatively large drop in similarity for the firm around the acquisition date, with less effect on the investor's similarity in giving between dates. If the investor adjusts its giving to that of the firm, we expect the converse to be true. In our data, we show that investor cosine similarity across periods is higher in general than that of firms, including in periods around acquisitions. We further observe that around the block purchase election cycle (i.e., the "event date") firm experience a relative drop in their giving similarity, as compared to that of investors.

How should we interpret these findings from the point of view of firm governance and societal welfare? From the governance point of view, we argue that the evidence we present is best explained by investors influencing firms to give to politicians in ways that reflect investors' own interests, rather than those of the firm. These findings indicate that at least some of the giving by firms is motivated by something other than profitability, but reflect instead the individual motivations of influential stakeholders in the firm, as suggested most recently by Bonica (2016). However, we stop well short of drawing strong welfare judgments about this shift in giving behavior, in part because investors' influence may help to counteract the agency problems that result from separation of ownership and control – that is, the well-known problem of managers indulging in their own preferences in how they use shareholder dollars. For example, Rupert Murdoch famously once justified News Corp's $1 million donation to the Republican Governors' Association by saying it was, "*a result of my friendship with John Kasich.*"[4] Once we are in the world of the second-best, it is more difficult to make decisive statements about misallocation from the firm's perspective.

Turning to the broader question of societal welfare, it is of course even harder to make strong claims about benefit or harm. However, recalling our opening motivation, our stronger findings for private institutional investors suggest that investments may be another means by which already influential individuals may further amplify their political clout in a way that is difficult for the public to discern. As such, it runs counter to the spirit of campaign finance laws, which in the U.S. are premised on the notion that the voting public may be able to trace efforts at political suasion to their source (and hence hold accountable politicians caving to special interest influence at the voting booth).[5]

Other related examples of influence amplification include individuals or lobbyists operating as "bundlers" of campaign donations, a phenomenon that has received much attention in the media

[4]See "Kasich inspired News Corp.'s RGA gift," *Politico*, October 6, 2010. Accessed at https://perma.cc/8GR3-BHSF.

[5]See Buckley v. Valeo, 424 U.S. 1 (1976), a landmark decision of the U.S. Supreme Court on campaign finance.

and in legal discussion.[6] These individuals organize and collect campaign donations from other individuals or organizations, acting as hubs in networks of like-minded donors (and possibly may also induce donations – an illegal act). We know of bundling activities only because registered lobbyists need to disclose if they are acting as bundlers,[7] but in general disclosure is voluntary. For example, Hillary Clinton disclosed the names of bundlers that gave at least $100,000 during her Senate race of 2006 and Presidential bid of 2016,[8] while Donald Trump did not in 2016 or 2020.[9]

Our work sits at the intersection of research on money and influence in politics and research on the governance of public corporations. While each of these areas is a vast literature in its own right, to our knowledge, we are among the first to quantitatively identify this important point of overlap. The potential influence of large investors on the political giving of firms has long been recognized by the financial and popular press, but has tended to focus more on investors' efforts to limit managers' misuse of corporate money to fund their own favored politicians, as in the Murdoch example above. Often, discussion of specific donations tend to focus on a firm's "value orientation" rather than any direct implications for profits, singling out firms' financial support of some politicians that favor, for example, anti-LGBT legislation (Goodridge and Jantz, 2012). However, the solutions brought forth by shareholders are generally framed in a way that cedes greater oversight and control of political giving to investors themselves. This is captured by the Murdoch example above and reflected in, for example, a 2011 statement from TIAA-CREF, which argued that, "*without effective oversight, excessive or poorly managed corporate political spending may pose risks to shareholders, including the risk that corporate political spending may benefit political insiders at the expense of shareholder interests.*"[10] More recently, North Star Asset Management, a $2 billion fund, successfully pressured Intel management to subject its political

[6] See Strauss (1994); Wardle (1995); Gentithes (2011), but also see David D. Kirkpatrick "Use of Bundlers Raises New Risks for Campaigns" New York Times, Aug. 31, 2007 available at https://www.nytimes.com/2007/08/31/us/31bundlers.html and Brody Mullins "Donor Bundling Emerges As Major Ill in '08 Race" Wall Street Journal, Oct. 18, 2007 available at https://www.wsj.com/articles/SB119267248520862997.

[7] According to the FEC "*The Federal Election Campaign Act and Commission regulations require special reporting of certain contributions that are collected or bundled by lobbyists/registrants, or by political action committees (PACs) that are established or controlled by lobbyists/registrants, on behalf of authorized committees of federal candidates, political party committees, and leadership PACs*" available at https://www.fec.gov/help-candidates-and-committees/lobbyist-bundling-disclosure/. See also Briffault (2008).

[8] See Chris Frates "Prominent 'Hillraisers' give Clinton edge" Politico, May 16, 2007 available at https://www.politico.com/story/2007/05/prominent-hillraisers-give-clinton-edge-004033 and Michael Beckel "Elite Bundlers Raise More Than $113 Million for Hillary Clinton" Time Magazine, Sept. 23, 2016 available at https://publicintegrity.org/politics/elite-bundlers-raise-more-than-113-million-for-hillary-clinton/.

[9] Maggie Haberman "Trump Campaign Plans Greater Focus on 'Bundlers"' New York Times, Jan. 10, 2020 available at https://www.nytimes.com/2020/01/17/us/politics/trump-campaign-bundling.html

[10] *TIAA-CREF Policy statement on corporate governance,* Teachers Insurance and Annuity Association–College Retirement Equities Fund, 2011 (6th ed.).

giving to greater scrutiny from investors, arguing that, "*shareholders would be better served if they could weigh in on political contributions made in [Intel's] name, allowing them to assess and protect against threats to shareholder value.*"[11]

Our results suggest that the efforts of large shareholders to influence corporate political giving may not be without their own governance concerns. Whereas the popular narrative might suggest that large institutional shareholders aim to reduce political giving (Hadani, 2012) or redirect it toward more profit-motivated ends, our results suggest a more nuanced dynamic. First, large block purchases are associated with increased (rather than decreased) political giving on average – we are not aware of previous research showing this. Second, the shift in firm political giving to resemble more closely that of an investor – while not impossible to reconcile with a shift toward firm profit maximization – is most readily explained by the trading of one set of misgovernance issues for another. As such, our results contribute directly to the active debate in law and economics on corporate governance and firm political activity (see, e.g., Bebchuk and Jackson Jr. 2010; Coates and John 2010; Bebchuk and Jackson Jr. 2012).

We also see our paper contributing to a literature, active in both economics and political science, that studies the determinants of firm PAC giving. Of particular relevance for our study, prior work has looked at the link between executive and corporate giving, which suggests a connection between firm interests and managerial preferences (Bonica, 2016; Richter and Werner, 2017), and also the financial returns to PAC donations (Fowler et al., 2020; Cooper et al., 2010).

We also contribute to the literature on the role of institutional investors in firm outcomes (see, e.g., Gompers and Metrick, 2001; Gabaix et al., 2006; Aghion et al., 2013; McCahery et al., 2016; Bebchuk et al., 2017; Dyck et al., 2019; López and Vives, 2019) by documenting that institutional investors have an impact on portfolio firms' political decisions. However, relative to the literature on institutional investors and common ownership (Posner et al., 2017; Schmalz, 2018), our focus is not on potential welfare losses arising from profit maximizing anticompetitive behavior, but rather from whatever losses may be ascribed from the outsized influence of certain groups of voters, a politico-economic effect (Gilens and Page, 2014; Bartels, 2018).

The paper is organized as follows. Section 2 describes the data and the construction of the variables used in our main tests. Section 3 presents our main results on both co-movement in PAC giving and convergence in giving coming from the firm side. Section 4 concludes.

[11] See the proxy statement (accessible here) that North Star filed with the SEC. For a discussion in the business press see, for example, "Shareholders pressure Intel over PAC spending," *TechCrunch*, May 3, 2017.

2 Data

2.1 The sample

The unit of observation in most of our analysis is the investor-firm-congressional district for each election cycle between 1980 and 2016.[12]

Our sample of investors is the set of 9,632 13-F institutional investors, i.e. those investors that manage at least $100 million in assets and are thus required by the SEC to disclose their portfolio holdings at the end of each quarter (via 13-F reports). Our sample of companies includes 61,415 portfolio firms that appear at least once in one of the 13-F investors' portfolios, which can be matched to Compustat, a provider of detailed financial data on publicly-traded companies.[13] To link these investor and portfolio firms to their political donations, we name-match each organization (i.e., an investor or firm) to PACs in the Federal Election Commission (FEC) records, using a combination of fuzzy matching algorithms and manual matching. In particular, after removing the sample of Fortune 500 and S&P 500 firms for which linkages to their PACs had already been performed by Bertrand et al. (2014) and Bertrand et al. (2020), we standardize the names of the remaining organizations and PACs by removing common legal abbreviations, such as Inc. and Incorporation. We then use the Levenshtein distance function in the fuzzy matching procedure to link organizations to PACs, keeping only matches with at least a 70% likeliness score, and subsequently manually check all these fuzzy matches.[14] For the set of organizations that remain unmatched at that stage, we manually search the FEC records for any remaining relevant PACs. Having created a link from firms and investors to a set of PAC IDs, it is then straightforward to further link the firms and investors to campaign contributions to specific candidates in each two-year election cycle.

Finally, firm and investor contributions to candidates are linked to constituencies using the

[12] This is the sample used in Bertrand et al. (2020), which we use as our starting point. Given the structure of our analysis, which includes geography×time fixed effects, it would also be impossible to include senators in the same specifications or with comparable sets of controls.

[13] To correct for the missing holdings data in the post-2012 period, we follow the approach of Ben-David et al. (2020), and use their code to correct the ownership data and link the investors between the Thomson-Reuters and WRDS SEC Analytics ownership datasets. Given that some investors listed in the WRDS SEC Analytics dataset do not have corresponding Thomson-Reuters investor IDs (i.e., MGRNO), such investors receive the negative value of their corresponding CIK codes as the new Thomson-Reuters investor ID, leading to an increase in the number of distinct investor IDs compared to the original Thomson-Reuters ownership database.

[14] Two individuals, one author of this study and one research assistant, independently verified whether the matches identified by the algorithm represented true matches. More than 85% of approximately 30,000 fuzzy matches were false positives, especially matches for bank names that had common terms, such as "The First Bank of" that yielded high matching scores, but were false positives. To determine whether a given match was correct, we required that either the distinct part of the name looked identical or had almost identical names and the two firm names were listed together in an SEC file under the same company.

MIT Election Data files on the House and Senate,[15] which we further use to limit our donations data to winners (i.e., those holding office) following Bertrand et al. (2020). This process creates two datasets on political giving: one at the investor-congressional district-cycle level, and the other at the firm-congressional district-cycle level.

These two datasets are then linked together by going back to our initial Thomson-Reuters dataset on investors' portfolios, which contains (among other information) the number of shares held by the investor in the given portfolio firms, the portfolio firms' Center for Research in Security Prices (CRSP) stock prices, and the portfolio's total outstanding shares held. Note that the final dataset of firm-investor pair only includes pairs that are linked at some point by an acquisition, i.e. we do not employ pairs that are not linked. This is because it is not clear how to define an acquisition event for a non-connected investor-firm pair, but also because of computational constraints. The Cartesian product of all firms (2,667), investors (3,701), constituencies (435) and cycles (18) would produce a dataset with roughly 77 *billion* observations.

Some data are missing from Thomson-Reuters. To fill these holes, which occur in the post-2012 period, we follow the approach of Ben-David et al. (2020) for ownership in the year 2012 and later.[16] For the pre-2012 period, we manually obtain the missing holdings data directly from SEC Edgar.[17] We follow the approach of Ben-David et al. (2020) and Lewellen and Lewellen (2018) to aggregate the holdings data to the level of the fund family (e.g., we aggregate all BlackRock funds) since these funds are reported in the same parent's 13-D and 13-G files. Finally, to identify whether the given institutional investor is a passive investor (i.e., quasi-indexer), we follow Bushee (2001), using the permanent investor classification data.[18]

For passive investors, we exploit portfolio changes driven by index inclusions (e.g., first time being added to the S&P 500). Data on the exact timing of these index changes comes from CRSP, Thomson-Reuters, and ETF Global.

Finally, we use the BoardEx database to generate a variable to denote whether an investor has a seat on a portfolio firm's board during a given election cycle. Where appropriate, BoardEx provides a company affiliation for each board member, and often (but not always) includes the organization's CIK number, the ten digit identifier assigned to firms by the SEC. Given that not all CIK numbers are provided in the BoardEx dataset, we first hand-collect all missing CIK numbers of each entity that appears in the board of directors information in the BoardEx database (approximately 10,000 entities). We manually search the names of the entities with missing CIK numbers in BoardEx on SEC Edgar to identify the CIK number. Following this step, we construct a table that links the CIK numbers to each Thomson-Reuters investor ID following Christoffersen

[15] Available at https://electionlab.mit.edu/data
[16] Please see Yegen (2019) for a detailed discussion of the missing ownership data issue.
[17] Our results are robust to using the manually scraped 13-F holdings from SEC Edgar.
[18] Available at http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html

et al. (2015), and use this table to link institutional investors to each board.[19] Once we create this board-investor link, we repeat the same exercise with the portfolio firms following Engelberg et al. (2013) and Liu (2014).[20] We then construct a final dataset that includes each board member's affiliated company, and in particular whether an institutional investor has a board connection with a portfolio firm during a given election cycle.

2.2 Analysis samples, and variables used in the analysis

For most of our analysis, we focus on large (at least 1 percent) discrete acquisitions of new holdings by investors. We do so to most credibly trace out an event response to analyze convergence in investor-firm political giving. The analysis will require, for all investors and acquired firms, details on their PAC giving.

We calculate the fraction of outstanding shares of portfolio firm f held by investor i in a given quarter. Since our PAC data are at the (two-year) election cycle level, we then average this value over the 8 quarters in each cycle t. This allows us to generate the variable *Fraction shares* that gives the average fraction of f that is owned by i in cycle t.

We also define a variable to capture the importance of f in i's portfolio in cycle t . To do so, we first calculate the market value of the shares of f held by i in a given quarter, which we do using prices from CRSP and 13-F institutional holdings data from the corrected Thomson-Reuters dataset. We use the resultant market value data (shares held times price) to calculate the share of assets under management (*Fraction portfolio*), which we again average at the election cycle level.

We use *Fraction shares* in particular to generate our main research sample, which includes, for a given investor, the set of firms that were absent from the portfolio at the beginning of our sample and that, in a given quarter, acquired at least one percent of outstanding shares. We then take the Cartesian product of the set of investor-firm pairs in which a large acquisition occurs, and the set of political constituencies. This yields a large and sparse matrix of investor-firm-politician observations for each cycle (since many constituencies receive zero donations from firms and/or investors in a given cycle). We further define the indicator variable *Post* to denote all cycles that come after the large stock acquisition, and zero otherwise.

In our baseline tests, we have as dependent variable the *Log of firm's PAC,* the logarithmic transformation of one plus total PAC giving by f to politician in congressional district c in election cycle t. The right-hand-side variable of interest, *Log of investor's PAC,* is the log of one plus the total PAC giving by investor i to the politician representing c during t.[21]In ancillary analyses, to

[19]We would like to thank the authors for providing us the data that allows us to link the Thomson-Reuters investor IDs with the corresponding CIK numbers.

[20]We thank the authors of both studies for providing us the data that allows us to link the portfolio firms with the BoardEx data.

[21]In results not reported here, we also use 0.0001 rather than 1 in the logarithmic transformation. The specifi-

examine whether the firms and investors shifted their political giving toward a particular party following large stock acquisitions, we define *Fraction to Republicans* (for both firms and investors) as the ratio of total PAC giving to Republicans divided by total PAC giving to Democratic and Republican politicians in a given election cycle.

As an alternative approach to capturing the shifting patterns in PAC giving around acquisitions, we also define a set of cosine similarity measures that we track around large acquisitions. We define such measures for each firm (or investor) between adjacent cycles, which captures the extent to which PAC giving remains relatively similar across time, and also for the firm-investor pair at each point in time, which provides a cycle-by-cycle measure of convergence (or lack thereof) in PAC giving by investors and their portfolio firms.

Focusing first on cosine similarity for a single organization across time, we first construct the non-zero vectors of PAC giving, $x_{j,t}$, which capture PAC giving to all politicians during cycle t by organization j. We calculate the Euclidean dot product between the two vectors $x_{j,t}$ and $x_{j,t+1}$ to measure the similarity in PAC giving across election cycles:

$$Cos(x_{j,t}, x_{j,t+1}) = \frac{x_{j,t} \cdot x_{j,t+1}}{\|x_{j,t}\|\|x_{j,t+1}\|} = \frac{\sum_{c=1}^{n} x_{j,t,c} \times x_{j,t+1,c}}{\sqrt{\sum_{p=1}^{n} x_{j,t,c}^2} \times \sqrt{\sum_{c=1}^{n} x_{j,t+1,c}^2}}$$

where $\|x_{j,t}\|$ is defined as the Euclidean length (i.e., magnitude) of the non-zero vector $x_{j,t}$, and $x_{j,t,c}$ is PAC giving by j during cycle t to the politician representing congressional district c (which could have a value of zero), and $n = 435$ is the set of politicians in a cycle.

The cosine similarity score, $Cos(x_{j,t}, x_{j,t+1})$, takes a values between zero and one, where a value of one indicates an identical pattern of giving across cycles. Note that since the Euclidean dot product between $x_{j,t}$ and $x_{j,t+1}$ requires that both vectors are non-zero (i.e., not all observations are zero), whenever the firm or investor gives no PAC money to any politician during the given cycle t (i.e., j is a non-giver) we cannot calculate $Cos(x_{j,t}, x_{j,t+1})$ and $Cos(x_{j,t-1}, x_{j,t})$ since the denominator of the equation is zero, and hence the Euclidean dot product is undefined.

We similarly define investor-firm similarity in PAC giving, $Cos(x_{i,t}, x_{f,t})$, as follows:

$$Cos(x_{i,t}, x_{f,t}) = \frac{x_{i,t} \cdot x_{f,t}}{\|x_{i,t}\|\|x_{f,t}\|} = \frac{\sum_{c=1}^{n} x_{i,t,c} \times x_{f,t,c}}{\sqrt{\sum_{c=1}^{n} x_{i,t,c}^2} \times \sqrt{\sum_{c=1}^{n} x_{f,t,c}^2}}$$

As noted above, our similarity measure is not defined when a firm (or investor) makes no congressional PAC contributions in a cycle. This may be of particular interest for the case in which

cation of model choice does not impact our results.

a firm makes no contributions initially, and then starts doing so after the large stock acquisitions.

We will be interested in attributing any convergence in giving behavior to shifts in giving by the investor versus the firm. To do so, it will be useful to define *Cosine Difference,* $Cos(x_{ft}, x_{f,t+1}) - Cos(x_{i,t}, x_{i,t+1})$, the gap between the firm's and investor's changes in cosine similarity around the acquisition date. A negative *Cosine Difference* implies that $Cos(x_{ft}, x_{f,t+1}) < Cos(x_{i,t}, x_{i,t+1})$, indicating that the firm changes its political giving more than the investor does following the large acquisition. To add a further layer of differences (*Cosine DiD*) we may further consider whether a firm or investor shifts their giving patterns more around acquisition dates relative to the pre-acquisition benchmark, i.e., $[Cos(x_{ft}, x_{f,t+1}) - Cos(x_{f,t-1}, x_{ft})] - [Cos(x_{it}, x_{i,t+1}) - Cos(x_{i,t-1}, x_{i,t})]$. We also will look at longer two-period differences (i.e., $[Cos(x_{ft}, x_{f,t+2}) - Cos(x_{f,t-2}, x_{ft})] - [Cos(x_{it}, x_{i,t+2}) - Cos(x_{i,t-2}, x_{i,t})]$).

Finally, in a set of ancillary analyses (presented only in the appendix material), we will consider *all* holdings to examine whether a firm's PAC giving is related to the overall PAC giving of its full set of investors. This requires the weighted PAC giving of investors (to put more weight on PAC giving by investors with higher ownership stakes). To generate this weighted average PAC variable, we first identify the average ownership percentage of the each investor i in a firm f during cycle t, and multiply the ownership percentage by the PAC giving by the i to the legislator representing congressional district c, i.e., the PAC contributions by each investor to a given politician are weighted by the investor's ownership of the firm. To construct the weighted PAC contributions, at the firm-cycle-politician level, we then sum across all investors' weighted PAC giving with a stake in the firm to obtain a single (weighted) PAC contribution figure, $Weighted\ sum\ of\ investor\ giving$. To illustrate, consider the following hypothetical example. Suppose that 45 percent of Apple's outstanding shares are held by Investor 1 and 5 percent by Investor 2; the remaining 50 percent of share are not owned by a 13-F investor. For simplicity, assume these shares are held throughout the entire election cycle (i.e. portfolio never changes during the eight 13-F quarters). Then, Investor 1's (2's) contribution to the politician in congressional district c will get a 45 percent (5 percent) weight when calculating Apple's weighted investor PAC contributions to c. Suppose that Investor 1 (2) gave \$1,000 (\$2,000) to c. For this particular election cycle, Apple's weighted investor PAC contribution to c will be \$550 (i.e., \$450 + \$100), placing more weight on the investor with a higher ownership stake.

We present summary statistics and descriptions of all variables we use in our analysis in Table 1. Panel A contains summary statistics of variables used in our baseline analyses that focus on PAC giving by firm-investor pairs around large acquisitions. To obtain party-level PAC giving, we sum across PAC donations to politicians of the Republican Party and divide it by the sum of givings to Democrats and Republicans during a given cycle. In line with previous work (see, e.g., Bonica, 2016), we find that firms are relatively balanced in their giving. Half the firms in the sample give

between 43.7% and 77.6% to Republicans (this is less partisan than executives individual giving as documented by Bonica, 2016). The corresponding figures for investors are nearly identical, implying similar levels of partisanship on average. In Panel C, we present summary statistics for the variables used in the cosine similarity event plots and tests. Given that the Euclidean dot product is undefined when a given investor or firm has a zero vector of PAC giving (i.e., a non-giver), the number of observations is lower in these analyses.

3 Results

3.1 Ownership and co-movement in political giving

In this section, we explore the relationship between investors' and portfolio firms' PAC giving, and how this relationship changes around large stock acquisitions. As discussed above, the sample we employ is comprised of all investor-firm-congressional district-election cycle combinations in which the investor with no prior ownership of the firm acquires a sizable (more than 1 percent) stake during a single election cycle t.

Our favored empirical specification takes the form:

$$\begin{aligned} Log\,of\,firm's\,PAC_{i,f,t,c} = & \beta_1 Log\,investor's\;PAC_{i,f,t,c} \times \text{Post}_{i,f,t} + \beta_2 Log\,investor's\,PAC_{i,f,t,c} \\ & + \beta_3 Post_{i,f,t} + \upsilon_i + \omega_f + \gamma_c + \phi_t + \epsilon_{i,f,c,t} \end{aligned} \tag{1}$$

This specification includes fixed effects for each investor i, firm f, congressional district c, and election cycle t. The variable *Post* denotes whether election cycle t occurs after i has acquired its stake in f, and an investor-firm pair remains in the sample (with $Post = 1$) as long as the firm maintains a stake in the firm. The main coefficient of interest is β_1, the interaction of *Log investor's contributions* and *Post*, which reflects the change in the relationship between investor and firm PAC contributions following an acquisition.

We present the results in Table 2, with increasingly stringent specifications in terms of fixed effects. Our preferred specification is that of column (8), which includes firm × investor, firm × district, firm × cycle, investor × district, investor × cycle, and district × cycle fixed effects. These fixed effects address a series of plausible concerns. In particular, the firm × investor fixed effect controls for the possible tendency of large investors to acquire large firms and for both to give larger PAC contributions, a fact that is documented for example in Bombardini (2008). The firm × district fixed effect address the possibility that firms that give more to certain districts, for example because they reside in those districts, are acquired by investors that also donate more to that district. Firms × cycle and investor × cycle fixed effects account for the fact that firms that

expand during a certain period may donate more and also attract more investment and investors may donate more during times of fast growth. District × cycle fixed effects control for popularity of certain politicians that, because of their committee assignments or seniority, may attract more donation from all PACs in certain cycles. In all specifications, the point estimate on β_1 is positive (in the range of 0.01 – 0.020) and highly significant ($p < 0.001$), indicating that firm and investor PAC contributions have greater correlation following a large acquisition. [22] The magnitude of the increase in this correlation is between 90% and 375% depending on the specification.[23]

It is possible that firms may invest in companies that share their political preferences. This concern is partly alleviated by our event study approach, but even that does not account for possible time-varying political preferences or, relatedly, efforts by firms to cater to fund managers they wish to attract as investors. We thus turn to our preferred approach, which focuses on index-based purchases which cannot be interpreted as resulting from investors' (or firms') political preferences.

In Table 3, we present results based on an identical set of specifications to those of Table 2, but limit the sample of acquisitions to those resulting from new additions to stock indices, such as the S&P 500 or the Russell 2000 Index.[24] Upon inclusion of a firm in an equity index, institutional investors rebalance their portfolios, typically because a subset of them track the index. A first-time inclusion in a stock index thus acts as an exogenous shifter to institutional investor block purchases (by generating identifying variation for the parameter β_1), as index inclusion is orthogonal to the degree of political convergence over time within a specific investor-firm pair. By focusing on this sample of acquisitions, one can assess the possibility that the increased post-acquisition co-movement we observe in Table 2 may be driven by an omitted convergence of investor-firm interests that leads both to more similar PAC giving in the aftermath of the acquisition as well as the acquisition decision itself. This is a potential source of bias that we are able to rule out by focusing on this subsample.

Reassuringly from the standpoint of selection bias, the point estimates in Table 3 appear very similar to those of the full sample result in Table 2 across all eight specifications, suggesting that the acquisition causes greater co-movement, rather than some other unobserved factor correlated with the block purchase. For instance, the parameter estimate for β_1 in the restrictive column (8) of Table 2 is 0.011, with a standard error of 0.0022, while the corresponding estimate in column

[22] In Appendix Table A2, we obtain similar results when we exclude the largest 4 institutional investors (BlackRock, Vanguard, State Street, and Fidelity) from our analysis. The point estimates range between 0.010 – 0.017, suggesting that our results are not driven by a disproportionate influence from the very largest institutional investors.

[23] These are calculated by taking as $\beta_1/\beta_2 - 1$.

[24] We include all indices that are available via CRSP and ETF Global. These include approximately 1,000 indexes that are in our sample investors' portfolios. For the sake of completeness, we report the results of discrete version of Table 3 in the Appendix Table A4.

(8) of Table 3 is 0.010, with a standard error of 0.0054. These estimates fall inside the 95 percent confidence interval of each other. One is unable to reject the equality of the two coefficients at standard statistical confidence levels, ruling out a substantial role for omitted drivers of acquisitions biasing our baseline estimates.[25]

We note that, for both the full sample and also the sample of index-based acquisitions, the point estimate on the direct effect of *Log Investor's PAC,* β_2*,* is positive. This could reflect selection, with investors being more likely to invest in politically-aligned firms, though we would not expect to see this pattern for index-based acquisitions. The more natural explanation may thus be that congressional district-level turnover leads to the appearance (and disappearance) of politicians that are attractive to firms and investors generally. Consistent with this interpretation, when we include district×cycle fixed effects in the final column of each table, the point estimate on β_2 drops substantially and, particularly for the index subsample of exogenous acquisitions, it is very close to zero and insignificant. We also note, in both Tables 2 and 3, the positive direct effect of *Post*, indicating *higher* post-acquisition PAC giving by firms. This result runs counter to the narrative that institutional investors see political spending as a governance problem that they use their influence to curtail.

We next show how the relationship between investor and firm PAC giving evolves around the acquisition election cycle. To do so, we run a variant of specification (1), but instead of measuring time relative to the acquisition cycle based on *Post*, we define a set of indicator variables to denote the cycle relative to the acquisition date. Specifically, let t be the cycle when i acquires a stake in f. We then define $Cycle_{if}(t+s)$ for $s \in \{-2, -1, 0, ..., 4\}$ as a sequence of indicator variables denoting two cycles prior to the acquisition, through to 4 cycles afterward. Our augmented version of specification (1) includes the interaction of each of these cycle fixed effects with $log\, Investor\, PAC$ ($s = 0$ is the omitted category in the figure, and we include only data from periods $s = -2$ through $s = 4$).

We provide acquisition "event plots" in Figure 1 for for both the full sample as well as the subset of acquisitions based on index inclusions. (The point estimates in the event plot are based on our preferred specification with firm, investor, and district×cycle fixed effects, but the pattern

[25] One concern with our approach thus far is that it focuses the analysis on large and discrete purchases for cases in which the investor's stake is initially zero. While this "event study" approach has an intuitive appeal, it also discards a great deal of potentially relevant ownership variation. In the Appendix we provide results that look at the broader correlation between PAC giving by investors and PAC giving by their portfolio firms. We use the following specification (and variants paralleling those of Table 2):

$$Log\, of\, firm's\, PAC_{f,t,c} = \beta_1 Log\, of\, weighted\, investor's\ PAC_{f,t,c} + \omega_f + \gamma_c + \phi_t + \epsilon_{f,c,t} \quad (2)$$

Note that these analyses are at the firm-district-election cycle level. We measure investor interests based on the PAC contributions of all 13-F investors with a stake in the firm, no matter how small, weighted by the size of their average shareholdings during cycle t. We report these results in Appendix Table 5. Using this alternative approach, we again observe a strong correlation between firm and investor PAC giving.

is virtually identical for other specifications.) For the index inclusion subsample – for which the interpretation as the effect of ownership on shared giving is most straightforward – we see a clear and discrete increase in the interaction term in the post-acquisition periods. Interestingly, we observe a pre-trend for the full sample, with some convergence in giving even before the acquisition takes place. This suggests that a convergence in interests may partly drive acquisitions outside of the index sample, or even the possibility that firms cater to fund managers' preferences in order to court them as investors. It also underscores the value of our approach of focusing on the sample of index inclusions, which is not subject to the same concerns, and for which we do not see any statistically significant pre-trend in Figure 1.

To gauge the magnitude of the effect we document, for ease of exposition, we replicate the analyses from Tables 2 and Tables 3, but turn the continuous political spending variables into indicator variables denoting whether the organization (firm or investor) gave to a district's incumbent in a particular election cycle. As we noted earlier, most firms and investors only give to a small subset of members of Congress; when combined with the relatively low per-cycle cap of \$2000 – \$5600 (depending on the year), these extensive margin measures capture much of the relevant variation.

The broad patterns in Table 4 are similar to those in earlier tables, but the estimated coefficients lend themselves to easier interpretation. On average, firms only give to 3.9 percent of all congressional incumbents. The probability of giving increases by between 1 and 2.2 percentage points after a large acquisition by an investor that also gives to that politician. This represents an increase of between 25% and 56%. We find a similar effect size when we limit the sample to index-based acquisitions.

Table 5 focuses on divestments rather than acquisitions. The sample in this case includes investor-firm pairs in which the investor held its stake of at least 1 percent for at least one election cycle (the pre-period), and then the investor divested its entire holding in the given firm in a single election cycle (the post-period). Interestingly, we do *not* see the opposite pattern from those documented in Table 2. Rather, the point estimates on the interaction of post-divestment and *Log investor's PAC* are precisely estimated zeros in almost all cases. One interpretation of this asymmetry is the relative stickiness in political giving. Firms add politicians as beneficiaries of their PAC giving when an acquisition takes place, as indicated by the positive coefficient on the *Post* variable in the earlier tables. But it may be more difficult to remove this support once offered. Further reinforcing this interpretation, we observe that the direct effect of investor giving is positive and significant across all specifications, suggesting that the investor's political preferences continue to influence firm PAC giving even post-divestment. (We provide the results of the discrete versions of the PAC giving variables results of the divestment test in Appendix Table A3.)

3.1.1 Heterogeneity in the effect of ownership on the correlation in PAC giving

In Table 6 we analyze the data along several dimensions of heterogeneity that may be helpful in interpreting our main results. We first consider a split based on whether a fund is privately owned or public. The latter includes fund families such as Blackrock, Fidelity, and Vanguard, while the former are funds such as Citadel LLC, Paloma Partners, and Soros Management. Since fund managers at private investment firms tend to face less outside scrutiny, and indeed often make investments using their principals' own money, we suggest that their influence may be more likely to reflect the preferences of individual fund managers, rather than the profit motives of the fund. Private funds do tend to have more partisan giving profiles: at an extreme, Paloma Partners gives exclusively to Democrats and Citadel only to Republicans, a point we return to shortly when we focus on partisanship in giving. Columns (1) and (2) provide the results of specification (1) for private versus public investors respectively, using the saturated specification that includes firm, investor, and district×cycle fixed effects (in practice the comparisons we report here are unaffected by the choice of specification). While the coefficient of interest on the interaction of investor PAC giving and *Post* is significant at the 1 percent level for both subsamples, the point estimate is more than three times larger for private firms.

In Columns (3) – (5) we look at heterogeneity based on two measures of an investor's political involvement. First, in column (3), we limit the sample to acquisitions by politically active investors, defined as those with above-average overall PAC giving. Interestingly, we observe that the ownership effect is much more pronounced for politically active firms, as we would expect if their political interests were driving the convergence in giving patterns: the point estimate in the interaction term in column (3) is nearly twice that of its corresponding figure for the full sample.[26]Finally, in columns (4) and (5) we further distinguish among types of politically active investors, based on whether they tend to give primarily to only one party, versus a mix of Republican and Democratic giving. The intuition for this sample split is that investors and firms motivated purely by financial gain will be more apt to give to politicians from both parties, targeting, for example, key members or relevant committees, or those involved in crafting potentially important legislation. We split the sample based on whether its giving is above average skewness toward a single party (i.e., whether $|D/(D+R) - 0.5|$ is above the sample mean, where D and R are overall PAC donations to Democrats and Republicans respectively). We observe that the convergence in giving after an acquisition takes place is driven entirely by investors that favor a single party. In Table 7 we further break down the results by type of investor and find that Investment Advisors and Investment Companies, such as Soros Management and Citadel LLC,

[26]Notice that we do not report results for investors that are not politically active because, given that all their PAC giving is zero, we cannot separately estimate β_1 and β_2 because the PAC level and the interaction term are all zeros and hence perfectly collinear.

together with Bank Trusts, like JPMorgan Chase and Bank of America, drive the results we have uncovered so far.

Collectively, the results in this subsection provide suggestive evidence that the political preferences of investors, rather than the collective profits of an investor's portfolio of companies, are more plausibly responsible for the shift in PAC giving after large acquisitions.

3.1.2 The role of board membership

In approximately five percent of the acquisitions in our sample, an investor obtains a seat on the portfolio company's board. Since board membership provides a direct channel for an investor to influence corporate decision-making (Calluzzo and Kedia, 2019), we conjecture that investor-firm similarity will further increase after an investor obtains board representation. We use an indicator variable that denotes whether investor i has a seat on portfolio firm f's board, and run specifications which parallel those presented in Table 2, augmented with both the direct effect of board representation (captured by the variable *Board*) and its interaction with *Log of Investor's PAC*. These results appear in Table 8. For brevity, we focus on two specifications: those with firm, investor, district, cycle fixed effects, and also those with firm, investor, and district×cycle fixed effects; in practice, the coefficients of the interaction terms that are of primary interest are unaffected by the inclusion/exclusion of fixed effects.

In column (1) we present a specification that includes only *Board*, *Log of Investor's PAC*, and their interaction, using the less restrictive set of fixed effects. The coefficient on the interaction term is positive and estimated with precision ($p < 0.001$). Its point estimate is nearly three times that of the coefficient on the interaction that captures the change in PAC giving post-acquisition, from Table 2. In column (2) we include the interactions of *Log of Investor's PAC* with both *Board* and *Post*; the inclusion of *Post* has relatively little effect on the board interaction. Columns (3) and (4) present specifications that include district×cycle fixed effects, whereas columns (5) and (6) present specifications that include firm × investor, firm × district, firm ×cycle, investor × district, investor ×cycle, and district ×cycle fixed effects; the results are qualitatively very similar.

These results provide a plausible channel through which investors may influence firm political giving, and one which is observable to us. We see these findings as bolstering our interpretation of the acquisition results as most likely resulting from investors influencing firm decision-making, and also suggests at least one mechanism through which this may occur. (For the sake of completeness, we also report in Appendix Table A5 the results based on the discrete versions of the PAC giving variables around the establishment of board connections.)

3.1.3 Partisan specification

In our final set of specifications in this subsection, we examine whether large acquisitions lead to changes in the partisan composition of firm PAC giving. This possibility is already suggested by earlier results, which show that investors that are more exclusively Democratic or Republican donors, drive the post-acquisition convergence we observe in our data. In this subsection, , we look at whether an acquisition by an investor that gives primarily to Republican candidates is associated with a "rightward" shift in a firm's PAC giving. Inference about political ideology from donation profiles is well established in the literature on campaign giving (Bonica, 2016) and it is an important check to add to our analysis.

These analyses are similar in structure to those in the preceding sections; however, the level of observation is at the firm-investor-cycle level, since our measure of political giving is overall Republican versus Democratic donations rather than giving to specific districts. Additionally, we limit the sample to politically active investors, to focus on acquirers that plausibly have substantive political preferences or agendas.

We present these results in Table 9. Across all specifications, we find that firms and investors have more similar partisanship post-acquisition, as reflected by the positive coefficient on the interaction of *Investor's Fraction to Republicans* and *Post*. The direct effect of *Investor's Fraction to Republicans* is also highly significant, indicating a partisan matching between investors and the firms they own, possibly reflecting, for example, a match based on geography or industry (in addition to shared ideology). Note finally that in the final column, when we include election cycle fixed effects, there is no relationship between *Post* and *Firm's Fraction to Republicans*, but in the preceding columns the coefficient is positive and significant. This simply reflects a time trend in the data: in more recent election cycles, firm PAC giving has been increasingly skewed toward Republican candidates.

3.2 Convergence in giving: cosine similarity

In this section, we use the cosine similarity measures described in Section 2.2 to capture, for each acquisition, how political giving vectors across congressional districts evolve for the investor, firm, and investor-firm pair. We briefly look at the similarity in giving for investor-firm pairs to further validate the results from Section 3.1, that large acquisitions lead to more similar investor-firm PAC giving. Our main interest is in using cosine similarity measures to assess whether changes in firm and/or investor giving drives any convergence we observe .

3.2.1 Investor-firm cosine similarity

We begin with event plots of investor-firm cosine similarity for each date around the acquisition cycle. These analyses may be seen as roughly paralleling the event plots in Figure 1. The main distinction is that cosine similarity is undefined for cases in which either the firm or investor has no political giving at all, and these observations are thus not included here.

We set *Political Election Cycle* $= 0$ as the cycle in which the acquisition takes place.[27]

Note that, while the figures we provide in the main text are based on simple mean values, in each case we provide a version that conditions on investor, firm, and cycle fixed effects, and plots the analogous regression coefficients from the following specification (where *Political Election Cyclet* $= -2$ is the omitted date):

$$Cos(x_{i,t}, x_{f,t}) = \sum_{s=-1}^{4} \beta_s Political\ Election\ Cycle(s)_{i,f,t+s} + \upsilon_i + \omega_f + \phi_t + \epsilon_{i,f,t} \tag{3}$$

In Figure 2 we present results that parallel those of Figure 1, including both the full sample and also the subsample of acquisitions based on index inclusions. The graph shows a very clear increase in the giving similarity of firms and investors, starting in the acquisition period; again, the pattern is particularly clear for the index-based subsample. The event plot in Figure 2 shows the higher similarity is sustained at least to *Political Election Cycle* $= 4$. The size of the increase is large: at *Political Election Cycle* $= 0$, just as the acquisition takes place, the mean investor-firm cosine similarity is 0.10, rising to 0.14 – an increase of 40 percent – by *Political Election Cycle* $= 4$, as shown in Figure A1. The regression-based version in Figure 2 shows a very similar pattern of the coefficients.

3.2.2 Investor and firm cosine similarities across election cycles

To this point, we have remained agnostic as to whether investors change their PAC giving in response to firms' interests or the converse. In this section we aim to establish which of these effects dominate, or whether the investor-firm convergence we describe in the preceding section is driven by changes in both parties' giving.

We test for firm versus investor adjustment by looking at which of the two holds its giving more constant around acquisition dates. Intuitively, if a shift in firm behavior is driving the convergence, we should observe a sharper break from past giving than investors, and vice-versa if convergence is driven by investors; if both are responsible for convergence, we may expect no difference. We capture changes in giving via the over-time cosine similarity measure we defined earlier, $Cos(x_{j,t}, x_{j,t+1})$, which reflects the similarity in giving by organization j between election

[27] Note that acquisition quarter could occur any time within the two-year election cycle window.

cycles t and $t+1$.

In Table 10, we present a series of comparisons of firm versus investor cosine similarity measures around acquisition dates. In the first row, we provide the simplest comparison of $Cos(x_{i,t}, x_{i,t+1}) - Cos(x_{f,t}, x_{f,t+1})$ around acquisition date t. We observe that, on average, investor behavior is more consistent around acquisition dates, so that $Cos(x_{i,t}, x_{i,t+1}) > Cos(x_{f,t}, x_{f,t+1})$, indicating that acquisition period giving is more stable for investors relative to firms.

Of course, it is possible that investor PAC giving is more stable in general. We thus present the difference-in-differences in cosine similarity for the acquisition period relative to the period immediately preceding the acquisition. That is, we look at $[Cos(x_{it}, x_{i,t+1}) - Cos(x_{i,t-1}, x_{i,t})] - [Cos(x_{ft}, x_{f,t+1}) - Cos(x_{f,t-1}, x_{ft})]$. These figures appear in the second row of Table 10. This difference-in-differences estimate is 0.08 (significant at the 1 percent level), again indicating that firms predominantly drive convergence.

Based on visual inspection of the event plots in Figures in 1 and 2, the convergence in giving appears to take place over at least a couple of election cycles. We thus repeat the preceding comparisons using a two-cycle window. This longer event window reduces the sample substantially, as it requires (a) PAC giving by both parties across five election cycles; (b) firms to acquire and hold their stakes in target firms for two post-acquisition cycles. For this longer difference, the simple post-acquisition change and the the difference-in-differences estimates are quite similar (0.14 and 0.11 respectively) and again both indicate that convergence is driven by shifts in firm behavior.

4 Conclusion

This paper presents evidence of an heightened similarity in political giving between a publicly traded firm and an institutional investor after the investor completes a large block purchase of the firm's stock. Using detailed information on large acquisitions merged with Federal Election data, we show that PAC giving by the firm increases after the acquisition event and, of much greater note, that the firm directs its PAC contributions toward incumbents in congressional districts also receiving donations from the investor.

The paper addresses the potential of this effect being driven by selection into acquisitions by making use of inclusions of firms in stock indexes. For certain investors required to hold indexes, acquisitions are orthogonal to political alignment of the ensuing block purchase. Our results are confirmed using this identification strategy.

Overall, the evidence appears to support a political amplification channel, in which the institutional investor is able to multiply its political voice through the firms in its portfolio. Ultimately, this is of relevance to the political economy and finance literature as (i) this phenomenon may result

in a misuse of corporate resources, a typical concern in the corporate finance literature on governance and political behavior of firms; (ii) it is also a potentially illegal activity as "*[r]eimbursing someone for a contribution or otherwise contributing in the name of another person can result in substantial civil penalties and jail time*";[28] and most importantly (iii) it is an obvious channel through which unequal resources may contribute to an outsized political influence of certain groups of voters and to political distortions and capture. Future work should investigate parallels between our findings and research on common ownership and political influence on regulation and antitrust.

[28] *"52 U.S.C. §§ 30122 and 30109 (formerly 2 U.S.C. §§ 441f and 437g)"* according to the FEC, available https://www.fec.gov/updates/contributions-in-the-name-of-another-are-strictly-prohibited/

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Figure 1: Firm and investor PAC giving: Event study

This figure plots the coefficient estimates of the baseline regression where we regress the firm PAC giving on investor PAC giving during election cycles around the acquisitions while including firm, investor, and congressional cycle fixed effects. In particular, we plot the coefficient estimates β_t of the following regression: $Log(1 + PAC_{f,c,t}) = \sum_{t=-2}^{4} \beta_t \; Cycle_t \times Log(1 + PAC_{i,c,t}) + \alpha_i + \gamma_f + \tau_{t,c}$ where α_i, γ_f, and $\tau_{t,c}$ represent investor, firm, and cycle-district fixed effects, respectively. $Cycle_t$ represent the t-th cycle relative to the one in which the acquisition took place. For instance, $Cycle_1$ is the cycle subsequent to the one in which the acquisition took place. The same exercise is done using only the index induced acquisitions. *Political Election Cycle* $= 0$ is the omitted congressional cycle from the above regression analysis and serves as a benchmark.

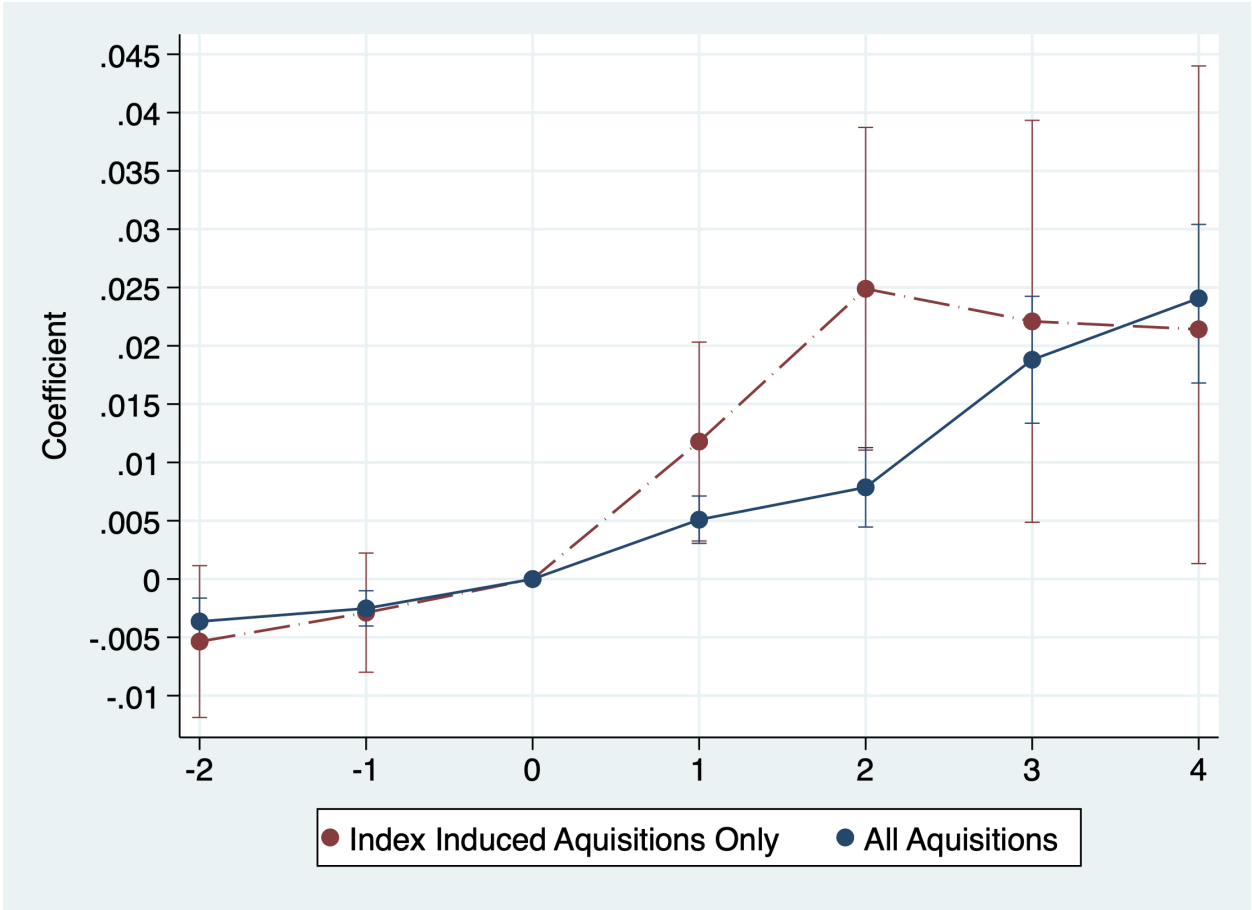

Figure 2: Cosine similarity between firm and investor PAC giving: Event study

This figure plots the coefficient estimates of the regression where we regress the cosine similarity scores between investor and firm PAC giving on election cycles around the acquisition while including firm, investor, and time fixed effects. In particular, we plot the coefficient estimates β_t of the following regression: $Cosine\ Score_{i,f} = \sum_{t=-2}^{4} \beta_t\ Cycle_t + \alpha_i + \gamma_f + \tau_t$ where α_i, γ_f, and τ_t represent investor, firm, and time fixed effects, respectively. $Cycle_t$ represent the t-th cycle relative to the one in which the acquisition took place. For instance, $Cycle_1$ is the cycle subsequent to the one in which the acquisition took place. The same exercise is done separately using only the index induced acquisitions. $Political\ Election\ Cycle = 0$ is the omitted congressional cycle from the above regression analysis and serves as a benchmark.

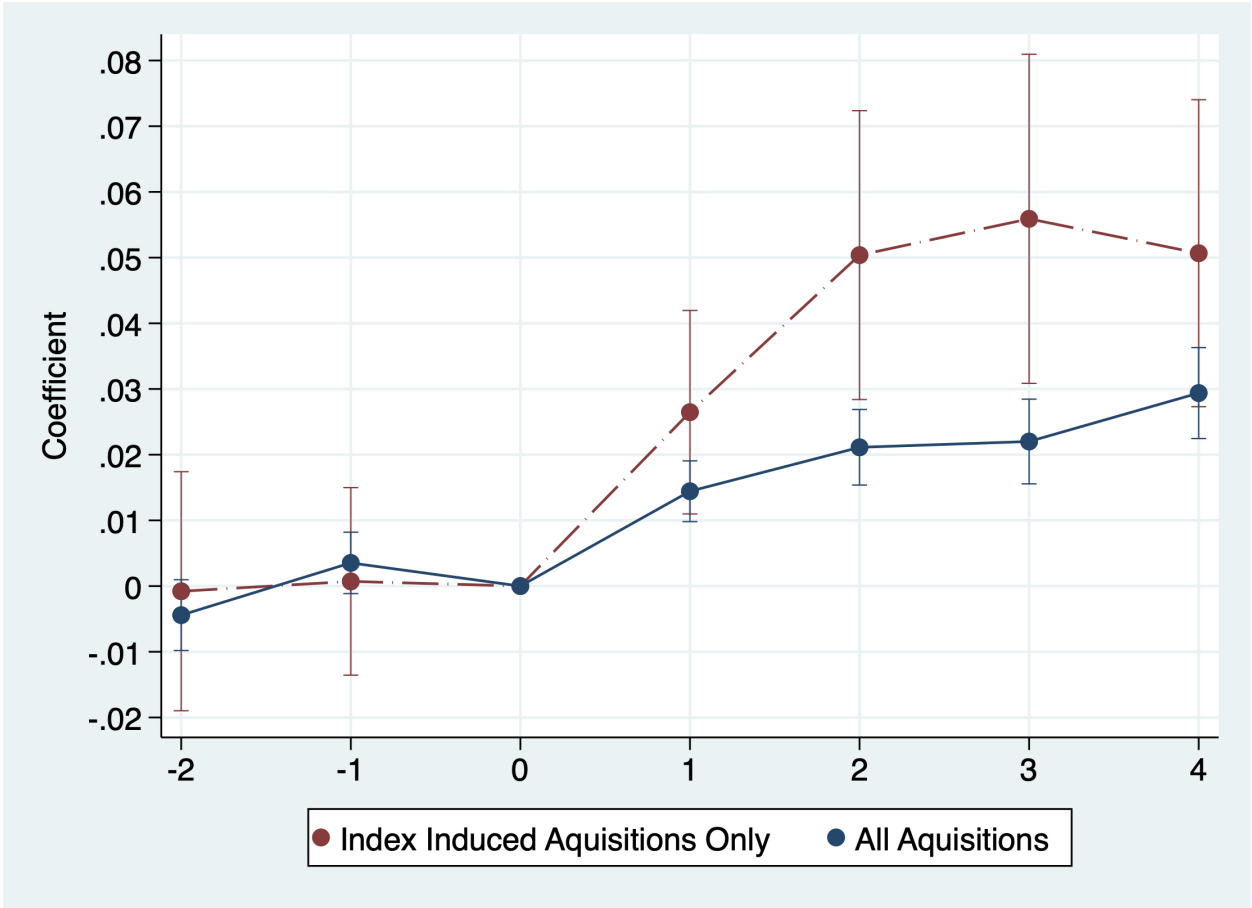

Table 1: Summary Statistics

This table provides the summary statistics. *Firm PAC Giving* is the total political giving by a firm to a particular congressional district during a given cycle. *Investor PAC Giving* is the total political giving by an investor to a particular congressional district during a given cycle. *Fraction to Republicans of firms* is the fraction of total political giving by any firm to the Republican party divided by the sum of political giving to both the Democratic and Republican parties during a given cycle, whereas *Fraction to Republicans of investors* is the fraction of total political giving by any investor to the Republican party divided by the sum of political giving to both the Democratic and Republican parties during a given cycle. We further break down the fraction to Republicans by private versus publicly traded institutional investors. *Rep. Frac. of firms acquired by private inv.* measures the fraction to Republicans of only firms that are acquired by publicly traded institutional investors, whereas for the *Rep. Frac. of firms acquired by private inv.* variable we do the equivalent for private institutional investors. Using the same approach, we also construct the fraction of giving to Republicans for public and investors with the *Fraction to Rep. of public investors* and *Fraction to Rep. of private investors* measures, respectively. $Cos[x_{f,t}, x_{f,t+1}]$ is the cosine similarity scores between the firm's PAC giving during two consecutive cycles around large stock acquisitions, whereas $Cos[x_{i,t}, x_{i,t+1}]$ is the one for investors. We construct the $Cos[x_{f,t}, x_{f,t+1}]$ and $Cos[x_{i,t}, x_{i,t+1}]$ cosine similarity scores using the equivalent approach but with two cycle differences (e.g., comparing election cycle giving in 2000 and 2004) for firms and investors, respectively.

	Q1	Median	Mean	Q3	Std. Dev.	Number of Obs.
Panel A: Summary Statistics of PAC Giving						
Investor-District-Cycle data						
Investor PAC giving	0	0	\$142	0	\$960	21,303,313
Giving of investors with PAC	0	0	\$3,093	\$2,700	\$4,474	976,179
Firm-District-Cycle data						
Firm PAC giving	0	0	\$670	0	\$916	13,633,899
Giving of firms with PAC	0	0	\$1,203	\$2,500	\$1,821	7,592,800
Panel B: Summary Statistics for Partisanship						
Firm-Cycle data						
Fraction to Republicans of firms	0.437	0.603	0.607	0.776	0.232	16,883
Rep. Frac. of firms acquired by private inv.	0.445	0.607	0.610	0.781	0.232	14,789
Rep. Frac. of firms acquired by public inv.	0.406	0.571	0.583	0.750	0.236	2,094
Investor-Cycle data						
Fraction to Republicans of investors	0.385	0.536	0.558	0.724	0.243	2,108
Fraction to Rep. of private investors	0.384	0.541	0.562	0.736	0.254	1,349
Fraction to Rep. of public investors	0.388	0.541	0.552	0.700	0.225	759

Table 1: Summary Statistics (cont.)

	Mean	Std. Dev.	Number of Obs.
Panel C: Summary Statistics for Cosine Similarity Analysis			
Investor-Firm-Cycle data			
$Cos[x_{f,t},\ x_{f,t+1}]$	0.5446	0.2158	6,084
$Cos[x_{i,t},\ x_{i,t+1}]$	0.7455	0.1866	6,084
$Cos[x_{f,t},\ x_{f,t+1}]-Cos[x_{f,t-1},\ x_{f,t}]$	-0.0021	0.2052	5,346
$Cos[x_{i,t},\ x_{i,t+1}]-Cos[x_{i,t-1},\ x_{i,t}]$	0.0780	0.1021	5,346
$Cos[x_{f,t},\ x_{f,t+2}]$	0.4093	0.1962	5,346
$Cos[x_{i,t},\ x_{i,t+2}]$	0.5487	0.1866	5,346
$Cos[x_{f,t},\ x_{f,t+2}]-Cos[x_{f,t-2},\ x_{f,t}]$	-0.0535	0.2311	864
$Cos[x_{i,t},\ x_{i,t+2}]-Cos[x_{i,t-2},\ x_{i,t}]$	0.0568	0.2392	864

Table 2: Firms' and investors' PAC contributions

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle – district level during the cycles around a large stock acquisition. The data are, therefore, at the investor – firm – congressional cycle – district level. 𝟙(Post) denotes observations that occur after the acquisition has occurred. The dependent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given firm gave to the incumbent in a given district during a given cycle, whereas the independent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given investor gave to the same politician during the same congressional cycle. The mean of the dependent variable is 0.349. Standard errors are clustered at the firm and investor levels.

Depend. Var.: **Log of firm's PAC**								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Log of investor's PAC × 𝟙**(Post)**	0.019***	0.020***	0.012***	0.016***	0.018***	0.018***	0.015***	0.010***
	(0.00158)	(0.00157)	(0.000807)	(0.00103)	(0.00145)	(0.00134)	(0.00157)	(0.000541)
Log of investor's PAC	0.010***	0.009***	0.006***	0.010***	0.012***	0.012***	0.004***	0.003***
	(0.000906)	(0.000909)	(0.000384)	(0.000782)	(0.000770)	(0.000859)	(0.00090)	(0.000537)
𝟙**(Post)**	0.020***	0.026***	0.008***	-0.009***	0.015***	0.012***	0.021***	-0.002***
	(0.00199)	(0.00221)	(0.00115)	(0.000398)	(0.00185)	(0.00206)	(0.00198)	(0.00020)
Fixed Effects								
Firm	X				X	X	X	
Investor	X		X	X			X	
Congressional Cycle	X	X	X		X			
Congressional District	X	X		X		X		
Firm × Investor		X						X
Firm × Congressional District			X					X
Firm × Congressional Cycle				X				X
Investor × Congressional District					X			X
Investor × Congressional Cycle						X		X
Congressional Cycle × District							X	X
N	402,689,395	402,689,395	402,664,359	402,689,395	402,400,554	402,689,395	402,689,395	402,376,127
R^2	0.139	0.142	0.550	0.182	0.159	0.141	0.145	0.586

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 3: Firms' and passive investors' PAC contributions – Index inclusion sample

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle – district level during the cycles around large stock acquisitions due to index inclusion by investors with a passive investment trading strategy. The data is, therefore, at the investor – firm – congressional cycle – district level. 𝟙(Post) denotes observations that occur after the divestment has occurred. The outcome variable is the logarithmic transformation of the total dollar amount of PAC contributions from a given firm to the incumbent in a given district in a given election cycle; *Log of investor's PAC* is similarly defined. The mean of the outcome variable is 0.404. Standard errors are clustered at the firm and investor levels.

Depend. Var.: **Log of firm's PAC**								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Log of investor's PAC × 𝟙(Post)	0.023***	0.023***	0.015***	0.021***	0.019***	0.022***	0.013***	0.011**
	(0.00493)	(0.00495)	(0.00275)	(0.00376)	(0.00463)	(0.00455)	(0.00494)	(0.00225)
Log of investor's PAC	0.005**	0.005**	0.006***	0.005***	0.011***	0.006***	0.001	0.0005
	(0.00212)	(0.00211)	(0.000953)	(0.00163)	(0.00184)	(0.00185)	(0.00212)	(0.00105)
𝟙(Post)	0.069***	0.073***	0.032***	-0.013***	0.065***	0.074***	0.071***	-0.003***
	(0.0109)	(0.0114)	(0.00599)	(0.00143)	(0.01070)	(0.0131)	(0.01089)	(0.00097)
Fixed Effects								
Firm	X				X	X	X	
Investor	X		X	X			X	
Congressional Cycle	X	X	X		X			
Congressional District	X	X		X		X		
Firm × Investor		X						X
Firm × Congressional District			X					X
Firm × Congressional Cycle				X				X
Investor × Congressional District					X			X
Investor × Congressional Cycle						X		X
Congressional Cycle × District							X	X
N	41,072,881	41,072,881	41,050,717	41,072,881	41,008,247	41,072,881	41,072,881	40,983,921
R^2	0.142	0.143	0.543	0.192	0.178	0.146	0.151	0.584

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 4: Firms' and investors' PAC giving – Discrete measure

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle – district level during the cycles around a large stock acquisition. The data is, therefore, at the investor – firm – congressional cycle – district level. 𝟙(Post) denotes observations that occur after the acquisition has occurred. The dependent variable is an indicator variable which denotes that PAC contributions by a firm are greater than zero; 𝟙(Investor's PAC>0) is similarly defined. The mean of the dependent variable is 0.039. Standard errors are clustered at the firm and investor levels.

Depend. Var.: 𝟙**(Firm's PAC>0)**								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
𝟙**(Investor's PAC>0)** × 𝟙**(Post)**	0.021***	0.022***	0.012***	0.019***	0.020***	0.021***	0.017***	0.010***
	(0.00168)	(0.00167)	(0.000821)	(0.00110)	(0.00152)	(0.00142)	(0.00168)	(0.00056)
𝟙**(Investor's PAC>0)**	0.011***	0.010***	0.007***	0.011***	0.013***	0.012***	0.004***	0.003***
	(0.00102)	(0.00103)	(0.000432)	(0.000897)	(0.000829)	(0.000979)	(0.00103)	(0.00070)
𝟙**(Post)**	0.002***	0.002***	0.001***	-0.0003***	0.001***	0.001***	0.002***	-0.0001***
	(0.000211)	(0.000236)	(0.000119)	(0.00001)	(0.000196)	(0.000219)	(0.000211)	(0.00001)
Fixed Effects								
Firm	X				X	X	X	
Investor	X		X	X			X	
Congressional Cycle	X	X	X		X			
Congressional District	X	X		X		X		
Firm × Investor		X						X
Firm × Congressional District			X					X
Firm × Congressional Cycle				X				X
Investor × Congressional District					X			X
Investor × Congressional Cycle						X		X
Congressional Cycle × District							X	X
N	402,689,395	402,689,395	402,664,359	402,689,395	402,400,554	402,689,395	402,689,395	402,376,127
R^2	0.141	0.143	0.548	0.182	0.160	0.143	0.147	0.580

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 5: Firms' and investors' PAC contributions − Divestments

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle − district level during the cycles around a large stock divestments. The data is, therefore, at the investor − firm − congressional cycle − district level. 𝟙(Post) denotes observations that occur after the divestment has occurred. The dependent variable is the logarithmic transformation of the total dollar amount of PAC contributions from a given firm to the incumbent in a given district in a given election cycle; *Log of investor's PAC* is similarly defined. The mean of the dependent variable is 0.316. Standard errors are clustered at the firm and investor levels.

Depend. Var.: **Log of firm's PAC**								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Log of investor's PAC × 𝟙(Post)	-0.002	-0.002	0.004***	-0.001	0.001	-0.002	-0.003	0.001*
	(0.00264)	(0.00266)	(0.00144)	(0.00183)	(0.00262)	(0.00234)	(0.00263)	(0.00104)
Log of investor's PAC	0.022***	0.022***	0.010***	0.021***	0.023***	0.024***	0.015***	0.006***
	(0.00223)	(0.00225)	(0.00104)	(0.00171)	(0.00210)	(0.00205)	(0.00224)	(0.00111)
𝟙(Post)	-0.012***	-0.005	-0.009***	0.0003	-0.013***	-0.018***	-0.011***	-0.001*
	(0.00301)	(0.00345)	(0.00176)	(0.000256)	(0.00282)	(0.00333)	(0.00300)	(0.000146)
Fixed Effects								
Firm	X				X	X	X	
Investor	X		X	X			X	
Congressional Cycle	X	X	X		X			
Congressional District	X	X		X		X		
Firm × Investor		X						X
Firm × Congressional District			X					X
Firm × Congressional Cycle				X				X
Investor × Congressional District					X			X
Investor × Congressional Cycle						X		X
Congressional Cycle × District							X	X
N	145,122,926	145,122,926	145,044,405	145,122,926	144,893,034	145,122,926	145,122,926	144,810,334
R^2	0.146	0.148	0.570	0.192	0.176	0.149	0.152	0.606

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 6: Firms' and investors' PAC contributions − Investor Types

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle − district level during the cycles around a large stock acquisition using a variety of ownership breakdowns. The data are, therefore, at the investor − firm − congressional cycle − district level. Columns 1 and 2 break down the sample by funds that are privately owned versus publicly owned, respectively. Column 3 contains only the politically active funds where a politically active fund is defined as the ones that give more than the median fund giving. Columns 4 and 5 break down the politically active sample by above versus below median skew where skew is defined as the absolute value of Republican giving share minus 0.5. 𝟙(Post) denotes observations that occur after the acquisition has occurred. The dependent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given firm gave to the incumbent in a given district during a given cycle, whereas the independent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given investor gave to the same politician during the same congressional cycle. The mean of the dependent variable of columns 1, 2, 3, 4, and 5 are 0.329, 0.427, 0.753, 0.773, and 0.692, respectively. Standard errors are clustered at the firm and investor levels.

Depend. Var.: **Log of firm's PAC**					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
	Private Funds	*Public Funds*	*Political Funds*	*More Partisan*	*Less Partisan*
Log of investor's PAC × 𝟙(Post)	0.011***	0.003***	0.013***	0.015***	0.006
	(0.00108)	(0.00065)	(0.00282)	(0.00347)	(0.00502)
Log of investor's PAC	0.003***	0.002**	-0.002	-0.007*	0.016**
	(0.00080)	(0.00067)	(0.00353)	(0.00440)	(0.00730)
𝟙(Post)	-0.002***	-0.002***	-0.146***	-0.169***	-0.062
	(0.00020)	(0.00057)	(0.0290)	(0.0358)	(0.0522)
Fixed Effects					
Firm × Investor	X	X	X	X	X
Firm × Congressional District	X	X	X	X	X
Firm × Congressional Cycle	X	X	X	X	X
Investor × Congressional District	X	X	X	X	X
Investor × Congressional Cycle	X	X	X	X	X
Congressional Cycle × District	X	X	X	X	X
N	320,971,472	81,318,607	3,781,161	2,735,692	911,962
R^2	0.579	0.605	0.717	0.723	0.753

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 7: Firms' and investors' PAC contributions – Granular Investor Types

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle – district level during the cycles around a large stock acquisition using the investor classification breakdowns of Bushee (2001). The sample only includes the politically active investors that are above median skew where skew is defined as the absolute value of Republican giving share minus 0.5 (i.e., break down of Table 6, Column 4 by investor types). Column 1, for instance, only includes the cases where the given institutional investor is an investment company. $\mathbb{1}$(Post) denotes observations that occur after the acquisition has occurred. The dependent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given firm gave to the incumbent in a given district during a given cycle, whereas the independent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given investor gave to the same politician during the same congressional cycle. *Investment Advisors Companies* only include funds of investment advisors and companies, such as hedge funds, whereas *Bank Trusts* only include bank trusts, *Insurance Companies* only include funds that belong to insurance companies, and *Corporate Pensions* and *Endowments* contain funds by corporate pensions and endowments, respectively. The mean of the dependent variable of columns 1, 2, 3, 4, and 5 are 0.872, 0.769, 0.727, 0.460, and 0.923, respectively. Standard errors are clustered at the firm and investor levels.

Depend. Var.: **Log of firm's PAC**					
	(1) *Investment Advisors & Companies*	**(2)** *Bank Trusts*	**(3)** *Insurance Companies*	**(4)** *Corporate Pensions*	**(5)** *Endowments*
Log of investor's PAC $\times$ $\mathbb{1}$**(Post)**	0.021***	0.020***	0.010	0.076	0.033
	(0.00914)	(0.00786)	(0.0115)	(0.0460)	(0.183)
Log of investor's PAC	0.002	-0.009	-0.026**	-0.014	0.041
	(0.0115)	(0.00895)	(0.0116)	(0.0274)	(0.224)
$\mathbb{1}$**(Post)**	-0.199**	-0.240***	-0.094	-0.893**	-0.334
	(0.0964)	(0.0828)	(0.113)	(0.415)	(2.010)
Fixed Effects					
Firm $\times$ Investor	X	X	X	X	X
Firm $\times$ Congressional District	X	X	X	X	X
Firm $\times$ Congressional Cycle	X	X	X	X	X
Investor $\times$ Congressional District	X	X	X	X	X
Investor $\times$ Congressional Cycle	X	X	X	X	X
Congressional Cycle $\times$ District	X	X	X	X	X
N	685,039	1,073,693	541,596	139,810	23,361
R^2	0.750	0.734	0.745	0.774	0.816

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 8: Firms' and investors' PAC contributions − Board of directors connection

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle − district level during cycles around an establishment of a board of directors connection. The data are, therefore, at the investor − firm − congressional cycle − district level. 𝟙(Board) denotes observations that occur after the board connection is established (an employee working for the given institutional investor has a seat on the board). The dependent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given firm gave to the incumbent in a given district during a given cycle, whereas the independent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given investor gave to the same politician during the same congressional cycle. The mean of the dependent variable is 0.349. Standard errors are clustered at the firm and investor levels.

Depend. Var.: **Log of firm's PAC**						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Log of investor's PAC × 𝟙(Board)	0.051***	0.052***	0.052***	0.052***	0.019***	0.20***
	(0.0122)	(0.0120)	(0.0121)	(0.0120)	(0.00625)	(0.00622)
Log of investor's PAC × 𝟙(Post)		0.019***		0.015***		0.010***
		(0.00158)		(0.00157)		(0.00054)
Log of investor's PAC	0.016***	0.008***	0.008***	0.003***	0.005***	0.003***
	(0.000805)	(0.000831)	(0.000799)	(0.000831)	(0.000483)	(0.000438)
𝟙(Board)	-0.019	-0.020*	-0.019	-0.021*		
	(0.0121)	(0.0121)	(0.0121)	(0.0121)		
𝟙(Post)		0.020***		0.021***		-0.003***
		(0.00198)		(0.00198)		(0.000202)
Fixed Effects						
Firm	X	X	X	X		
Investor	X	X	X	X		
Congressional Cycle	X	X				
Congressional District	X	X				
Congressional Cycle × District			X	X	X	X
Firm × Investor					X	X
Firm × Congressional District					X	X
Firm × Congressional Cycle					X	X
Investor × Congressional District					X	X
Investor × Congressional Cycle					X	X
N	402,689,395	402,689,395	402,689,395	402,689,395	402,376,127	402,376,127
R^2	0.139	0.139	0.146	0.146	0.586	0.586

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 9: Firms' and investors' fraction of PAC contributions to Republicans

This table presents whether the fraction of total PAC contributions given to Republicans at the congressional cycle level by newly acquired portfolio firms changes around large stock acquisitions. The dependent variable is defined as the fraction of overall PAC contributions given to Republicans by the portfolio firm (i.e., total Republican giving divided by total giving to Republicans and Democrats) during the given congressional cycle; *Investor's Fraction to Republicans* is similarly defined. The mean of the outcome variable is 0.422. Standard errors are clustered at the firm and investor levels.

Dependent Variable: **Firm's Fraction to Republicans**				
	(1)	**(2)**	**(3)**	**(4)**
Investor's Fraction to Republicans × 𝟙**(Post)**	0.129***	0.100***	0.109***	0.102***
	(0.0108)	(0.0116)	(0.0104)	(0.0105)
Investor's Fraction to Republicans	0.337***	0.292***	0.298***	0.179***
	(0.00616)	(0.00729)	(0.00690)	(0.00675)
𝟙**(Post)**	0.046***	0.060***	0.032***	-0.025***
	(0.00479)	(0.00502)	(0.00467)	(0.00499)
Fixed Effects				
Firm	X		X	X
Investor		X	X	X
Congressional Cycle				X
N	105,382	105,413	105,367	105,367
R^2	0.335	0.145	0.373	0.393

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table 10: Persistence of firm and investor giving patterns around acquisitions – Cosine similarity analysis

This table shows provides the difference in means of the cosine similarity scores between cycles *t* and *t+1* for firms and for investors. In particular, this test examines whether there is a difference in the cosine similarity scores between the firm's PAC giving during two consecutive cycles around an acquisition (i.e., $Cos[x_{f,t}, x_{f,t+1}]$) and the cosine similarity scores between the investor's PAC giving during two consecutive cycles (i.e., $Cos[x_{i,t}, x_{i,t+1}]$]). The j term in the $Cos[x_{j,t}, x_{j,t+1}]$ expression, therefore, is either equal to f or i. It is also important to note that the firm adapts more than the investor if, on average, $Cos[x_{i,t}, x_{i,t+1}] > Cos[x_{f,t}, x_{f,t+1}]$. As well, the term *Difference in means* is defined as the difference between the means of the given two cosine similarity scores of the firm and the investor (e.g., $Cos[x_{j,t}, x_{j,t+1}] - Cos[x_{j,t-1}, x_{j,t}]$). Rows three and four use an alternative definition of cosine similarity. Rather than comparing the two adjacent cycles, the last two rows compare giving similarity across two-cycle periods. Standard errors are provided in parentheses.

	Investors	Firms	Difference in means	*P*-value of Difference	*N*
$Cos[x_{j,t}, x_{j,t+1}]$	0.7455	0.5446	0.2008***	0.000	6,084
	(0.00239)	(0.00276)	(0.00360)		
$Cos[x_{j,t}, x_{j,t+1}] - Cos[x_{j,t-1}, x_{j,t}]$	0.07804	−0.0022	0.0802***	0.000	5,346
	(0.00139)	(0.00281)	(0.00314)		
$Cos[x_{j,t}, x_{j,t+2}]$	0.5487	0.4093	0.1394***	0.000	5,346
	(0.00189)	(0.00267)	(0.00321)		
$Cos[x_{j,t}, x_{j,t+2}] - Cos[x_{j,t-2}, x_{j,t}]$	0.0568	−0.0535	0.1104***	0.000	864
	(0.00814)	(0.00786)	(0.01115)		

Figure A1: Cosine similarity between firm and investor PAC giving: Event study

This figure plots the cosine similarity scores of the indexer (investor) and firm PAC giving around large stock acquisitions due to index inclusion (all acquisitions). In particular, we plot the average of each cycle's cosine similarity score, $Cos(x_{it}, x_{ft})$, between the PAC giving of the indexer (investor) and the PAC giving of the firm during the cycles around large stock acquisitions by indexers resulting from index inclusion (all acquisitions).

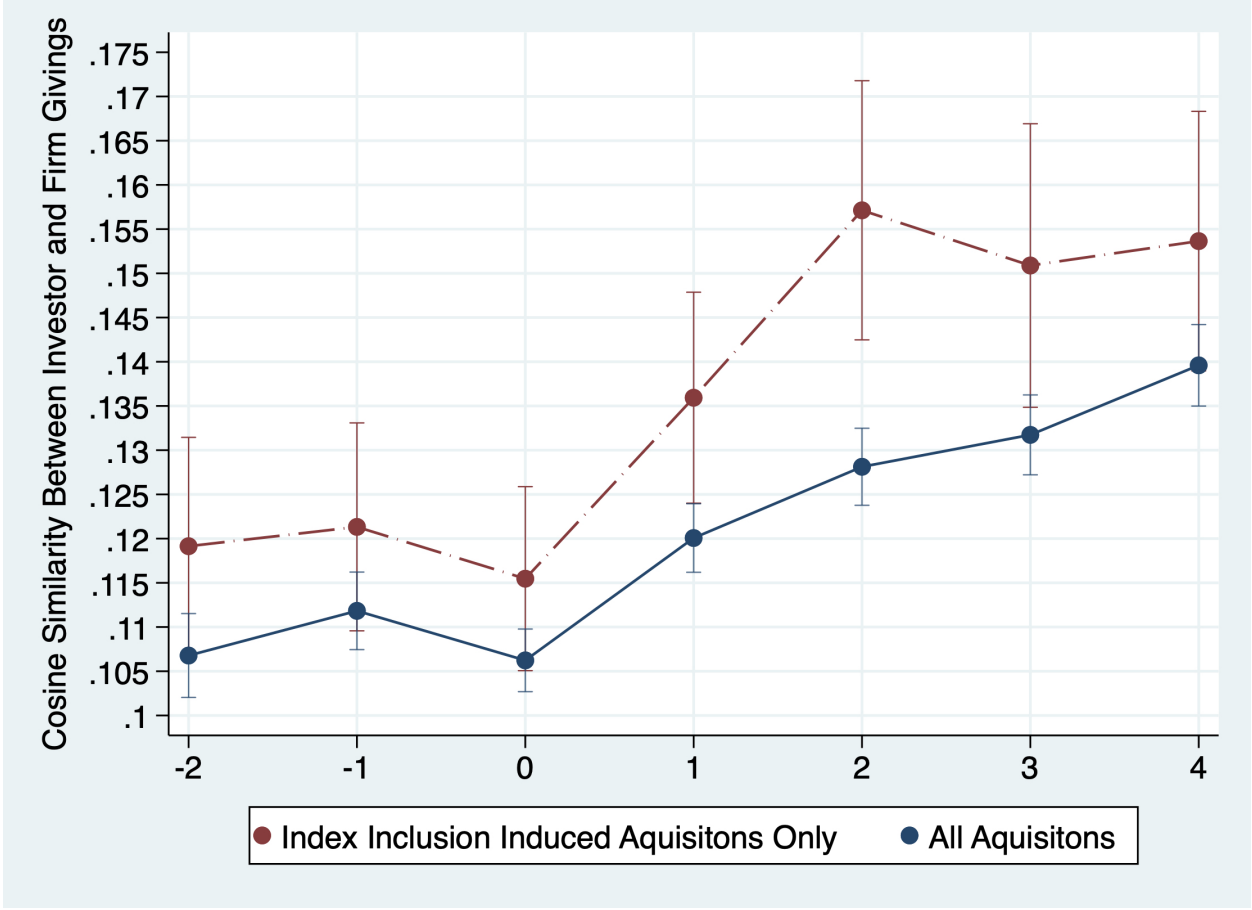

Table A1: Summary Statistics

This table shows provides the summary statistics. Most of the definitions of the variables are provided in the description of Table 1. *Cosine Difference*$_{t,t+1}$ is defined as $Cos[x_{i,t}, x_{i,t+1}] - Cos[x_{f,t}, x_{f,t+1}]$ where a positive *Cosine Difference*$_{t,t+1}$ implies that $Cos[x_{f,t}, x_{f,t+1}] < Cos[x_{i,t}, x_{i,t+1}]$, suggesting that the firm adapts more than the investor does (*Cosine Difference*$_{t,t+2}$ is similarly defined, but uses a two-cycle difference). *Log of weighted sum of investor PAC* is the logarithmic transformation of one plus the weighted sum of the political giving by all investors that have shares in the given firm and may have given money to the same congressional candidate during the given cycle. *Fraction of shares held by no givers* is a particular firm's fraction of outstanding shares held by investors without a PAC.

	Mean	Std. Dev.	Number of Observations
Panel A: Summary Statistics for Investor-Firm-District Analysis			
Investor-Firm-District-Cycle data			
Log of investor's PAC giving	0.109	1.091	402,689,395
Log of firm's PAC giving	0.349	1.748	402,689,395
Log of giving by private investors	0.042	0.651	321,276,149
Log of giving by firms acquired by private investors	0.329	1.699	321,276,149
Log of giving by public investors	0.378	2.030	81,413,246
Log of giving by firms acquired by public investors	0.427	1.927	81,413,246
Panel B: Summary Statistics for Cosine Similarity Analysis			
Investor-Firm-Cycle data			
Cosine Difference$_{t,t+1}$	0.2008	0.2809	6,084
Relative Cosine Difference$_{t,t+1}$	0.0801	0.2297	5,346
Panel C: Summary Statistics of Partisanship			
Investor-Firm-Cycle data			
Public Investor's Fraction to Republicans	0.523	0.123	190,064
Firms Acquired by Public Investors Fraction to Rep.	0.554	0.173	190,064
Private Investor's Fraction to Republicans	0.548	0.044	749,799
Firms Acquired by Private Investors Fraction to Rep.	0.551	0.172	749,799
Panel D: Summary Statistics for Weighted Investor Analysis			
Firm-District-Cycle data			
Log of weighted sum of investor PAC	0.272	0.951	284,309,876
Fraction of shares held by no givers	0.226	2.090	284,309,876

Table A2: Firms' and investors' PAC contributions − Excluding the largest 4 institutional investors

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle − district level during the cycles around a large stock acquisition by excluding the largest 4 institutional investors (i.e., BlackRock, Vanguard, State Street, and Fidelity). The data are, therefore, at the investor − firm − congressional cycle − district level. 𝟙(Post) denotes observations that occur after the acquisition has occurred. The dependent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given firm gave to the incumbent in a given district during a given cycle, whereas the independent variable is the logarithmic transformation of the total dollar amount of PAC contributions the given investor gave to the same congressional district during the same congressional cycle. Standard errors are clustered at the firm and investor levels.

D.V.: **Log of firm's contributions**								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Log of investor's PAC × 𝟙(Post)	0.016***	0.017***	0.010***	0.013***	0.016***	0.015***	0.013***	0.010***
	(0.00159)	(0.00158)	(0.00080)	(0.00097)	(0.00146)	(0.00132)	(0.00159)	(0.00052)
Log of investor's contributions	0.009***	0.009***	0.006***	0.010***	0.011***	0.011***	0.004***	0.004***
	(0.000926)	(0.000929)	(0.000389)	(0.00080)	(0.000778)	(0.000878)	(0.000927)	(0.00055)
𝟙(Post)	0.019***	0.025***	0.007***	-0.010***	0.014***	0.010***	0.019***	-0.002***
	(0.00199)	(0.00221)	(0.00116)	(0.000396)	(0.00184)	(0.00206)	(0.00198)	(0.000204)
Fixed Effects								
Firm	X				X	X	X	
Investor	X		X	X			X	
Congressional Cycle	X	X	X		X			
Congressional District	X	X		X		X		
Firm × Investor		X						X
Firm × Congressional District			X					X
Firm × Congressional Cycle				X				X
Investor × Congressional District					X			X
Investor × Congressional Cycle						X		X
Congressional Cycle × District							X	X
N	388,448,633	388,448,633	388,424,542	388,448,633	388,159,792	388,448,633	388,448,633	388,136,073
R^2	0.136	0.139	0.549	0.179	0.157	0.138	0.142	0.584

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table A3: Firms' and investors' PAC contributions − Divestments and discrete measure

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle − district level during the cycles around a large stock divestments. The data is, therefore, at the investor − firm − congressional cycle − district level. 𝟙(Post) denotes observations that occur after the divestments has occurred. The dependent variable is an indicator variable which denotes that PAC contributions to a given incumbent by a firm are greater than zero; 𝟙(Investor's PAC>0) is similarly defined. The mean of the dependent variable is 0.043. Standard errors are clustered at the firm and investor levels.

Depend. Var.: 𝟙**(Firm's PAC>0)**								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
𝟙**(Investor's PAC>0)** × 𝟙**(Post)**	-0.004	-0.004	0.002*	-0.002	-0.001	-0.005*	-0.005*	0.001
	(0.00256)	(0.00257)	(0.00141)	(0.00177)	(0.00252)	(0.00228)	(0.00256)	(0.00108)
𝟙**(Investor's PAC>0)**	0.022***	0.022***	0.009***	0.020***	0.022***	0.023***	0.015***	0.006***
	(0.00216)	(0.00217)	(0.00105)	(0.00161)	(0.00203)	(0.00195)	(0.00217)	(0.00114)
𝟙**(Post)**	-0.002***	-0.001	-0.001***	0.001*	-0.002***	-0.003***	-0.002***	0.001
	(0.00040)	(0.00046)	(0.00024)	(0.00003)	(0.00038)	(0.00045)	(0.00040)	(0.00002)
Fixed Effects								
Firm	X				X	X	X	
Investor	X		X	X			X	
Congressional Cycle	X	X	X		X			
Congressional District	X	X		X		X		
Firm × Investor		X						X
Firm × Congressional District			X					X
Firm × Congressional Cycle				X				X
Investor × Congressional District					X			X
Investor × Congressional Cycle						X		X
Congressional Cycle × District							X	X
N	145,122,926	145,122,926	145,044,405	145,122,926	144,893,034	145,122,926	145,122,926	144,810,334
R^2	0.137	0.139	0.549	0.182	0.167	0.141	0.143	0.583

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table A4: Firms' and passive investors' PAC contributions − Index inclusion sample and discrete measure

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle − district level during the cycles around a large stock acquisition due to index inclusion by investors with a passive investment trading strategy. The data is, therefore, at the investor − firm − congressional cycle − district level. 𝟙(Post) denotes observations that occur after the acquisition has occurred. The dependent variable is an indicator variable which denotes that PAC contributions by a firm are greater than zero; 𝟙(Investor's PAC>0) is similarly defined. The mean of the dependent variable is 0.042. Standard errors are clustered at the firm and investor levels.

Depend. Var.: 𝟙**(Firm's PAC>0)**								
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
𝟙**(Investor's PAC>0)** × 𝟙**(Post)**	0.026***	0.026***	0.016***	0.024***	0.021***	0.025***	0.014**	0.010**
	(0.00552)	(0.00555)	(0.00301)	(0.00404)	(0.00501)	(0.00493)	(0.00554)	(0.00236)
𝟙**(Investor's PAC>0)**	0.004*	0.004*	0.006***	0.004**	0.011***	0.005**	-0.003	-0.001
	(0.00230)	(0.00230)	(0.000971)	(0.00175)	(0.00183)	(0.00196)	(0.00231)	(0.00107)
𝟙**(Post)**	0.007***	0.007***	0.004***	-0.000***	0.006***	0.007***	0.007***	-0.001*
	(0.00111)	(0.00116)	(0.000588)	(0.00006)	(0.00108)	(0.00132)	(0.00111)	(0.00003)
Fixed Effects								
Firm	X				X	X	X	
Investor	X		X	X			X	
Congressional Cycle	X	X	X		X			
Congressional District	X	X		X		X		
Firm × Investor		X						X
Firm × Congressional District			X					X
Firm × Congressional Cycle				X				X
Investor × Congressional District					X			X
Investor × Congressional Cycle						X		X
Congressional Cycle × District							X	X
N	41,072,881	41,072,881	41,050,717	41,072,881	41,008,247	41,072,881	41,072,881	40,983,921
R^2	0.144	0.145	0.539	0.192	0.180	0.149	0.152	0.575

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table A5: Firms' PAC contributions and weighted investor PAC contributions

This table presents the association between the PAC contributions by firms and the weighted sum of their investors' PAC contributions at the congressional cycle − congressional candidate level. The data is, therefore, at the firm − congressional cycle − congressional candidate level. The outcome variable, which has a mean of 0.01, is the total dollar amount of PAC contributions the given investor gave to the given congressional candidate during the given congressional cycle. *Log of weighted sum of investor PAC* is defined in a similar way, whereas *Log of fraction of shares held by no givers* is the fraction of outstanding shares held by investors that make no PAC contributions.

Depend. Variable: **Log of firm's PAC**						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Log of weighted sum of investor PAC	0.0299***	0.0299***	0.0259***	0.0252***	0.0229***	0.0234***
	(0.0015)	(0.0015)	(0.00129)	(0.0014)	(0.0013)	(0.0013)
Log of fraction of shares held by no givers		-0.0001	-0.0002	-0.0002	-0.0002	
		(0.00004)	(0.00013)	(0.00012)	(0.00017)	
Fixed Effects						
Firm			X	X		
Congressional Cycle			X	X	X	
Congressional Candidate				X		
Firm × Congressional Candidate					X	X
Firm × Congressional Cycle						X
Clustering						
Firm	X	X				
Firm, Candidate			X	X	X	X
N	284,309,876	284,309,876	284,309,876	284,309,876	270,161,251	270,161,251
R^2	0.01	0.01	0.07	0.08	0.28	0.31

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.

Table A6: Firms' and investors' PAC contributions − Board of directors connection and discrete measure

This table presents the association between the PAC contributions by firms and their investors' PAC contributions at the congressional cycle − district level during cycles around an establishment of a board of directors connection. The data are, therefore, at the investor − firm − congressional cycle − district level. 𝟙(Board) denotes observations that occur after the board connection is established (an employee working for the given institutional investor has a seat on the board). The dependent variable takes the value of one if the total dollar amount of PAC contributions the given firm gave to the incumbent in a given district during a given cycle is greater than zero, whereas the independent variable equivalent for the investor givings. The mean of the dependent variable is 0.039.

Depend. Var.: 𝟙**(Firm's PAC>0)**				
	(1)	**(2)**	**(3)**	**(4)**
𝟙**(Investor's PAC**> 0) × 𝟙**(Board)**	0.066***	0.065***	0.067***	0.067***
	(0.0172)	(0.0170)	(0.0171)	(0.0169)
𝟙**(Investor's PAC**> 0) × 𝟙**(Post)**		0.026***		0.017***
		(0.00200)		(0.00187)
𝟙**(Investor's PAC>0)**	0.016***	0.024***	0.008***	0.003***
	(0.00099)	(0.00132)	(0.00089)	(0.00095)
𝟙**(Board)**	-0.001	-0.002	-0.002	-0.002*
	(0.00111)	(0.00111)	(0.00111)	(0.00110)
𝟙**(Post)**	0.020***	0.002***	0.021***	0.002***
	(0.00660)	(0.00069)	(0.00659)	(0.00069)
Fixed Effects				
Firm	X	X	X	X
Investor	X	X	X	X
Congressional Cycle	X	X		
Congressional District	X	X		
Congressional Cycle × District			X	X
N	402,689,395	402,689,395	402,689,395	402,689,395
R^2	0.141	0.142	0.144	0.146

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. *Standard Errors* are in parentheses.