

Political donations and corporate outcomes

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Abstract

Purpose – This study aims to examine the relationship between political donations and three corporate outcomes: cash holdings, leverage and investment efficiency. Rooted in the concept of agency costs, the study suggests that political donations negatively impact cash holdings and investment efficiency while positively affecting leverage. This is due to the undemocratic exchanges and political influence they exert on government policies. Conversely, resource dependency theory proposes that political donations positively influence cash holdings and investment efficiency but negatively impact leverage.

Design/methodology/approach – The study used publicly available data on political donations from the Australian Electoral Commission. The sample selection includes the top 300 firms listed on the Australian Stock Exchange from 2006 to 2022, resulting in 3,404 firm-year observations. The authors used multivariate ordinary least squares regression to test the relationship, and to address selection bias and endogeneity concerns, the authors used the Heckman selection, entropy balancing and two-stage least squares tests.

Findings – The study reveals a negative correlation between political donations and cash holdings, while identifying a positive correlation with leverage. In addition, there is a negative relationship between political donations and investment efficiency. These findings highlight agency concerns regarding political donations in Australia. The results remain robust after additional tests and the correction of endogeneity issues.

Originality/value – The authors add to the extant literature on political donations by examining the impact on various corporate outcomes that translate to financial decision-making made by the firms.

Keywords Political donations, Cash holding, Leverage, Investment efficiency, Agency theory, Resource dependency theory

Paper type Research paper

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1. Introduction

In the contemporary global economy, enterprises must use nonmarket strategies to sustain their competitiveness (Habib *et al.*, 2018). One compelling nonmarket approach involves the capacity to influence policymaking through political connections, yielding diverse advantages involving financial, social and other dimensions (Mellahi *et al.*, 2016) [1]. Moreover, Leuz and Oberholzer-Gee (2006) and Faccio (2006) contend that politically affiliated businesses enjoy benefits, particularly preferential treatment accorded by financial institutions.

In this paper, we take a slightly more contemporary approach to political connections by examining political donations in Australia. Unlike previous studies (Abdul Wahab *et al.*, 2025; Faccio, 2006; Gul *et al.*, 2024) that identify political connections through relationships between firms' board of directors, employees or investors and government officials or political parties, we measure political connections based on the political donations firms make to Australian political parties. Political donations can offer a more objective measure of political connections, as they avoid the subjectivity of linking politically connected firms based on prior or current political relationships (Hill *et al.*, 2014). Political donations provide another benefit, as they are often associated with undemocratic processes that influence government decision-making in favor of certain interests (Aggarwal *et al.*, 2012; Fisher, 1994). Furthermore, the donations data could capture the degree or strength of such connections (Hill *et al.*, 2014). This opens up the opportunity to use the political donations data made available by the Australian Electoral Commission (AEC) [2].

The seminal work by Faccio (2006) indicates that only two Australian firms are deemed to be politically connected. A more recent study by Gray *et al.* (2016) finds that, in 2007, 120 Australian listed firms had directors with varying degrees of political connections. Recent anecdotal evidence documented by Johnson and Livingstone (2021) and Russell *et al.* (2023) suggests a link between political fund contributors and policies that could benefit them [3].

Studies on the impact of political donations in the Australian capital market are somewhat limited. Muttakin *et al.* (2022) examine the impact of political donations on corporate social responsibility and find a negative relationship. Gul *et al.* (2024) extend the study by investigating the relationship between political donations and audit fees. They find a negative relationship, supporting the strategic investment or resource dependency view. Given the current interest in research across multiple disciplines, we offer an extension to the literature [4]. Our study aims to address the impact of political donations on corporate policies. Specifically, we want to investigate the relationships among political donations, cash holdings, leverage and investment efficiency. The choices of these variables reflect the impact of political donations on various corporate strategies and decisions (Abdul Wahab *et al.*, 2025; Belghitar *et al.*, 2019).

Research on political donations within interdisciplinary studies presents two competing perspectives. According to Fisher (1994), Gordon *et al.* (2007) and Aggarwal *et al.* (2012), political donations may enable corporations to engage in the political process, potentially increasing agency costs within the firm. Conversely, they propose that donations can be viewed as corporate investments aimed at influencing regulatory decisions, a concept often associated with resource dependency theory (Boubakri *et al.*, 2012). Edwards (2016) notes that the Australian government's disclosure requirements for political donations compel politicians and their donors to consider public perceptions of their financial relationships, forcing them to evaluate whether their actions would 'pass the pub test' and understand the broader implications.

The agency cost conjecture (Aggarwal *et al.*, 2012; Gordon *et al.*, 2007) suggests that the political donations could create an improper and undemocratic impact on the political process and this could result in lower cash holdings since the politicians could channel the

cash for personal use and do not maintain an optimal level of cash (Belghitar *et al.*, 2019; Boubakri *et al.*, 2013; Hill *et al.*, 2014; Panta *et al.*, 2025), higher leverage due to preferential treatment (Bliss and Gul, 2012; Chahal and Ahmad, 2025; Khwaja and Mian, 2005) and lower investment efficiency due to extracting private benefits and this could lead to overinvestments (Harianto *et al.*, 2025).

The alternate view, based on resource dependency theory (Aggarwal *et al.*, 2012; Gordon *et al.*, 2007), suggests that political donations could serve as indirect connections to the politicians or ruling parties and provide them with contracts, grants and access to information (Batta *et al.*, 2014; Fisman and Gatti, 2002). Hence, we could expect that donating firms have higher levels of cash (Boubakri *et al.*, 2013), lower leverage and better investment efficiency. This positive impact of corporate decisions is coupled with the prudent behavior expected of donating firms under disclosure law (Edwards, 2016). Based on 3,404 firm-year observations from 2006 to 2022, we find a negative relationship between political donations and cash holdings, positive impacts on leverage and a negative relationship with investment efficiency. Results mainly support the notion that political donations raise agency issues. Our findings remain robust even when accounting for different debt classifications and alternative definitions of cash holdings. To account for possible endogeneity or reverse causality, we use the instrumental variable approach via two-stage least squares (2SLS) and find that the earlier findings on political donations and leverage may be driven by reverse causality.

As an alternative test for reverse causality, we incorporated an exogenous shock into a difference-in-differences (*DiD*) model by including the 2019 donation ban imposed by a foreign entity. The *DiD* results, however, do not provide sufficient inference to determine whether reverse causality exists. Our results remain qualitatively similar when we perform self-selection tests and covariate analysis via entropy balancing.

We contribute to the extant literature in several ways. First, we add the ever-growing literature on political donations in Australia. Our study's findings are similar to those of Muttakin *et al.* (2022), as we find that political donations raise agency concerns. Unlike Muttakin *et al.* (2022), our choice of variables provides a better understanding of the direct impact on corporate decision-making. We add to the extant literature by suggesting that political donations constitute an agency issue, as they lower cash holdings, increase leverage and decrease investment efficiency. Furthermore, our study supports the findings of Belghitar *et al.* (2019), which examines the impact of political connections on corporate financial decision-making. Our study also addresses the concern raised by Edwards (2016) regarding the impact of disclosure on political donations in Australia. The findings provide insight into the impact of political donations on various corporate outcomes directly related to firms' risk management.

The remainder of this paper is structured as follows. Section 2 provides a background on political donations in Australia. Section 3 discusses the rationale behind the hypotheses developed for this study. Section 4 presents the research methodology, while Section 5 discusses the main and additional results. Endogeneity tests are presented and discussed in Section 6. Section 7 concludes.

2. Political donations in Australia

In Australia's stock market, firms and political parties are required to maintain transparency by disclosing all political donations they make or receive. This accessibility to information provides a unique opportunity to explore a distinct aspect of political connections. Due to their prominence as a funding mechanism for Australian political parties, political donations have recently become the focus of policy discussions (Tham and Young, 2006). Political donations tend to be substantial in Australia and other developed economies like the USA

and the UK (Muttakin *et al.*, 2022). Australian firms can donate to political parties (Australasian Centre for Corporate Responsibility [ACCR], 2016).

In contrast to the US direct corporate donations to politicians and political parties are prohibited by law. Donations to political campaigns by corporations are prohibited in the USA unless made through designated Political Action Committees (Prabhat, 2012). In Australia, businesses that donate to political campaigns are not required to report those contributions publicly in official documents. Firms that donate money to political campaigns in Australia must only report donations that exceed a certain limit to the AEC by the 17th of November each year (Australian Electoral Commission [AEC], 2022). On the first business day of every February, the AEC posts annual disclosures on its website detailing the amounts donated, contributors, entities linked with donors and political parties that received those donations. If a corporation fails to submit its return disclosing relevant information on political donations by the due date, the AEC will levy a fine of AUD 1,000 (Prabhat, 2012).

Moreover, political donations from businesses in Australia are not subject to shareholder approval. In contrast, firms in the UK are required to declare political donations in their annual reports (Chatterjee and Sahoo, 2014). They must obtain shareholder approval before donating (Torres-Spelliscy and Fogel, 2011). Finally, in Australia, firms can donate unlimited amounts to political parties, unlike in the USA, where restrictions exist (Prabhat, 2012). According to Australia's policy, firms can spend unlimited amounts on political donations.

Ramsay *et al.* (2001) note that the Australian Democrats have advocated for more stringent regulations, calling for shareholder approval when publicly traded firms donate and for greater transparency regarding corporate donations to political parties. Senator Murray, a Democrat, argues that political contributions have influenced elections and government operations since their inception [5]. When commercial interests play a role in determining political power, businesses may seek to advance their agendas by supporting political interests that promise significant commercial benefits (Ramsay *et al.*, 2001).

While donation data is now accessible to the public on the AEC website, Tello *et al.* (2019) recommend that corporate reports disclose political donations. Aside from addressing transparency gaps, this reporting could help align the interests of shareholders with those of management and the firm. Conversely, some shareholders call for regulations prohibiting Australian Stock Exchange (ASX)-listed firms from making political contributions, arguing that it does not create shareholder value (Grieve, 2022).

3. Hypotheses development

3.1 Political donations and cash holdings

The first hypothesis examines the complex relationship between political connections and corporate cash holdings, exploring both positive and negative impacts of political affiliations on a firm's liquidity strategies. On one hand, some argue that political ties streamline access to finance, thereby reducing the need for cash reserves. Conversely, others suggest these connections exacerbate governance challenges, leading firms to increase their cash holdings.

Politically connected firms often face governance issues that may require them to hold more cash. Boubakri *et al.* (2013) suggest these firms could serve as cash reserves to facilitate political agendas. Similarly, the agency theory proposed by Panta *et al.* (2025) suggests that political connections may increase agency costs, prompting managers to hoard cash for personal projects. Moreover, Boubakri *et al.* (2012) and Chaney *et al.* (2011) argue that political affiliations enable firms to secure favorable funding terms, which results in inflated cash reserves. Kim and Zhang (2016) highlight that political connections may facilitate tax evasion, allowing firms to maintain higher cash levels.

Conversely, political connections can enhance access to finance, reducing the necessity for large cash reserves. Hill *et al.* (2014) note that political lobbying improves financial accessibility, leading to increased income certainty and a reduced need for cash. Faccio (2006) and Claessens *et al.* (2008) demonstrate that political ties provide access to government contracts and regulatory benefits, offering alternative liquidity pathways. Furthermore, Panta *et al.* (2025) discuss the resource dependency perspective, suggesting that political connections alleviate financial constraints and decrease the need for excess cash. Kusnadi (2019) emphasizes that market types and corruption levels influence the value of cash holdings, with varying effects depending on the robustness of investor protection.

The relationship between political connections and cash holdings is intricate, driven by these varied dynamics. While political ties can lead to greater cash reserves through governance issues and tax strategies, they might also facilitate access to financial opportunities, thereby reducing the need for liquid assets. Considering these competing arguments, we predict a nondirectional relationship between political donations and cash holdings, as presented below:

H1. There is a relationship between firms' political donations and cash holdings.

3.2 Political donations and leverage

Claessens *et al.* (2008), Chaney *et al.* (2011) and Boubakri *et al.* (2013) suggest that a firm's political associations can facilitate the negotiation of more favorable funding terms. This advantage is largely due to the perceived assurance and credibility these connections provide to lenders, potentially easing access to debt financing. The implicit or explicit government support tied to such affiliations can mitigate lenders' perceptions of default risk, thus enabling more advantageous borrowing conditions. Consequently, when firms make political donations, they effectively tap into these benefits, securing enhanced financing terms compared to nonconnected counterparts. As a result, firms engaging in political donations often maintain higher leverage.

In addition, Faccio (2006) asserts that firms with political ties are positioned advantageously to secure government contracts and favorable treatment from government agencies. Political donations can unlock opportunities for profitable government projects and subsidies, contributing to a steady income stream. This financial stability can make firms more comfortable with assuming higher debt levels, given their capacity to service these obligations. Furthermore, political donations may grant firms access to invaluable insights into market trends and policy shifts, aiding informed financial decisions.

Studies such as Khwaja and Mian (2005), Belghitar *et al.* (2019) and Chahal and Ahmad (2025) explore the relationship between political connections and debt in countries like Pakistan and India. They highlight how institutional frameworks in these regions enhance access to finance via government banks. Evidence of loan provisions from government-owned banks suggests potential collusion between these banks and donating firms. Chahal and Ahmad (2025) questioned the ethical implications of government banks' involvement in such financial dynamics, indicating a strong correlation between political donations and increased leverage.

Moreover, Kim and Zhang (2016) argue that political connections can provide firms with early insights into upcoming policy changes and economic shifts, aiding in effective financial management. Such knowledge enables firms to make well-informed decisions regarding leverage and potential challenges. Based on these arguments, the study predicts a nondirectional relationship between political donations and leverage:

H2. There is a relationship between firms' political donations and leverage.

3.3 Political donations and investment efficiency

The agency theory perspective suggests that managers might exploit these ties to extract private benefits, potentially leading to overinvestment in inefficient projects to satisfy influential shareholders, thereby increasing investment inefficiency (Graham *et al.*, 2006). Such practices can exacerbate agency conflicts, especially in environments with high ownership concentration and weak shareholder protection (Claessens *et al.*, 2000). Regulatory capture and rent-seeking behaviors might also arise, in which firms leverage political ties to manipulate regulations to their benefit (Fisman and Gatti, 2002). Harianto *et al.* (2025) examine the impact of political connections on investment inefficiency in Indonesian firms, using machine learning algorithms to analyze the data. It finds that the presence of former politicians on boards can significantly reduce investment inefficiencies, highlighting the potential of the dual board structure to improve corporate governance.

Political donations can catalyze firms to achieve greater investment efficiency than their counterparts. First, firms with political affiliations gain access to valuable information from government officials, equipping them with insights into future changes and regulations (Kim and Zhang, 2016). This foresight empowers them to make well-informed investment decisions. Furthermore, political donations can open doors to government projects, resulting in higher firm performance than peers (Goldman *et al.*, 2013). This access to government initiatives can drive revenue growth and enhance overall business prospects.

In addition, firms that maintain consistent political connections often enjoy favorable treatment from the government (Fisman and Gatti, 2002). This positive rapport can lead to smoother approval processes, faster project implementation and a conducive business environment, ultimately improving investment efficiency. In essence, political donations can play a pivotal role in enhancing firms' investment efficiency, setting them apart from their counterparts regarding access to information, government projects and favorable relations with government authorities. Political connections can significantly impact investment efficiency through both positive and negative channels. On the positive side, firms with politically connected board members may experience reduced investment inefficiency due to strategic advantages (González-Bailon *et al.*, 2013). These connections offer insights into government policy processes, enhance access to valuable networks and improve regulatory compliance (Bona-Sánchez *et al.*, 2014). By integrating former politicians with relevant expertise into boards, firms can focus on strategic planning and align with government long-term objectives, fostering efficient resource allocation and investment decisions (Shen and Lin, 2016).

In conclusion, while political connections can offer strategic resources and influence that enhance investment efficiency, they can also lead to inefficiency when used for personal gain or to exploit regulatory systems. The net effect depends on the balance between these competing influences and the broader governance and regulatory context in which firms operate (Biddle *et al.*, 2009). We propose the following hypothesis:

H3. There is a relationship between firms' political donations and investment efficiency.

4. Research design

4.1 Sample selections

The study sample consists of the top 300 Australian firms by market capitalization for each year for 16 years from 2006 to 2022. Table 1 tabulates our sample selection process. Data availability constraints determine the study period (2006–2022), as Morningstar data, our primary source of financial metrics, is available only from 2004 onwards. We exclude the initial years (2004–2005) to allow for necessary variable calculations, including lagged

Table 1. Sample selection

Sample – selection	Firm-year observations
Top 300 firms for each year 2006–2022	5,100
Less, observations for financial, utilities and real estate trust	1,434
Less, missing data	262
Final observations	3,404
Number of unique firms in the sample	597

variables and rolling averages, while also accounting for missing observations during Morningstar's early coverage period. This approach ensures sufficient data density and quality for reliable statistical analysis. All variables are defined in Table 2.

We commenced our study with a data set comprising 5,100 firm-year observations. We adhered to previous research methodologies and omitted 1,434 firm-year observations corresponding to firms with financial utility and equity real estate investment trusts. These exclusions were necessary to prevent confounding our analysis, given the distinct regulatory obligations governing these entities. Next, we removed 262 firm-year observations due to inadequate financial data, leaving a final sample of 3,404 firm-year observations. The number of unique firm observations is 597⁶.

The study hand-collected political donations from the Australian Election Commission (AEC) website (<https://www.aec.gov.au>). Then, the study retains the firms whose information is available in the following database: Morningstar DatAnalysis Premium (financial data) and Connect4 (corporate governance data).

4.2 Model specifications

The study applies the following regression analysis to test H1:

$$\text{Cash Holdings} = \alpha_0 + \alpha_1 \text{Political donations} + \alpha' X_i + \varepsilon_i \quad (1)$$

We used the following regression equation to test H2:

$$\text{Leverage} = \alpha_0 + \alpha_2 \text{Political donations} + \alpha' X_i + \varepsilon_i \quad (2)$$

To assess H3, we used the following regression equation:

$$\text{Investment Efficiency} = \alpha_0 + \alpha_3 \text{Political donations} + \alpha' X_i + \varepsilon_i \quad (3)$$

Cash holdings, *Leverage* and *Investment Efficiency* are the dependent variables. *Political Donations* is the natural log of donation value represented as *LDon* and a dummy variable for donations, *DOND*, which equals one if the firm made donations and zero otherwise. *X* represents the vector of determinants that govern the respective dependent variables, and ε_i is a normally distributed residual term.

4.3 Dependent variables

The research uses three dependent variables to assess the impact of political donations on corporate outcomes: cash holdings, leverage and investment efficiency.

4.3.1 Cash holdings. Similar to prior research for measuring cash holding (*CA_HO*), which is calculated as the sum of cash and short-term investments, scaled by the book value of

Table 2. Operational definition of variables

Variables name	Definition and measurement
<i>Panel A: Independent variables</i>	
LDON	The natural log of donations value
DOND	The dummy variable for donations equals One if the firm paid donations; otherwise, it is zero
LDON_ALP	The natural log of donations value paid by firms to the Australian labor party
LDON_LNP	The natural log of donations value paid by firms to the Australian liberal and national parties
LDON_Other	The natural log of donations value paid for other political parties in Australia
<i>Panel B: Dependent variables</i>	
CA_HO	Measured as cash plus short-term investments divided into book value of assets
CA_BA	Measured as cash balance divided by the book value of assets
LEV	The ratio of short and long-term debt scaled by the book value of total assets
MLEV	Calculated as ratio of (short-term debt + long-term debt)/(short-term debt + long-term debt + market value of equity)
STD	The ratio of short-term debt to total asset
LTD	The ratio of long-term debt to total assets
INVEFF	Measured as the absolute value of the difference between actual and expected investment
UN_INV	Measured as the negative values of actual investment – expected investment
OV_INV	Measured as the positive values of actual investment – expected investment
<i>Panel C: Control variables</i>	
DUAL	The dummy variable equals One if the CEO serves as the chairman of the board; otherwise, it is zero
BIGN	The dummy variable equals One if the firm auditor is One of the big Four; otherwise, it is zero
BOD	Number of directors on the board
DIVD	The dummy variable is equal to One if the dividend is paid; otherwise, it is zero
MTB	Market value to book value
FEMALE	The ratio of female directors on the board
BIND	The ratio of independent directors on the board
AGE	Measured as the natural logarithm value of the number of years between the fiscal year and the listing year
SIZE	Measured as a log of market capitalization
NDTS	Nondebt tax shields measured an annual depreciation expense to total assets
LIQUID	Current assets to current liabilities
RISK	Measured as the standard deviation of return on assets
CAFLR	The ratio of net operating cash flow to total assets
ROA	Return on assets, measured as [Net Income + Interest Expense*(1-Corporate Tax Rate)]/[Total Assets - Outside Equity Interests]

assets, as consistently used in previous studies ([Atif et al., 2020](#); [Bates et al., 2009](#); [Liu et al., 2015](#); [Nikolov and Whited, 2014](#)).

In addition, the study applies an additional measure for cash holding (*CA_BA*), which is calculated as the total cash, scaled by the book value of assets, following previous studies ([Bao et al., 2012](#); [Subramaniam et al., 2011](#)). [Cardella et al. \(2015\)](#) argue that managers place greater emphasis on maintaining liquidity in firms that face challenges in forecasting their short-term liquidity requirements and have weaker governance structures. [Brown \(2014\)](#) contends that managers make short-term investments as a planned strategy, indicating that these investments serve a purpose beyond merely storing

surplus cash. The alternative measure suggests a more conservative approach to the level of cash holdings due to the exclusion of short-term investments.

4.3.2 Leverage. In the spirit of extant literature, we opted for book and market values of leverage (Chang *et al.*, 2014; Gaud *et al.*, 2005; Nadarajah *et al.*, 2018). First, we calculate book leverage (*BLEV*) as the ratio of total debt to book value, using a model from the accounting literature in an Australian context (Cassar and Holmes, 2003; Nadarajah *et al.*, 2018). Second, we define market leverage (*MLEV*) as the ratio of short-term and long-term debt to the market value of assets, where the market value is calculated as the sum of total debt and the market value of equity. The market leverage measurement approach has been widely applied in accounting and finance literature (Chang *et al.*, 2014; Fan *et al.*, 2012; Jiraporn *et al.*, 2012; Liao *et al.*, 2015; Nadarajah *et al.*, 2018). In addition, other debt metrics include the ratio of short-term debt to total assets (*STD*) and long-term debt to total assets (*LTD*).

4.3.3 Investment efficiency. A firm's investment efficiency (*INVEFF*) is measured as the difference between actual and expected investment (Eisdorfer *et al.*, 2013). Following previous studies, we measure actual investment as gross capital expenditure divided by the book value of total assets (Kaplan and Zingales, 1997; Korkeamäki and Moore, 2004; McNichols and Stubben, 2008). We calculate a firm's anticipated investment based on the industry's median investment for a specific year. We then subtract the *INVEFF* by taking the absolute value of the difference between the actual and industry median and then multiplying by -1 . Finally, we calculate the overinvestments (*OV_INV*) and underinvestments (*UN_INV*) for additional analysis.

4.4 Independent variables

In line with previous research on political donations, our study adopts two key measures: the (*DOND*) and (*LDON*) variables, which reflect the financial donations made to political parties in Australia. Specifically, the (*DOND*) variable assigns a value of 1 to firms that have made contributions and 0 otherwise, allowing us to distinguish between contributors and noncontributors. In addition, to account for the significance of donations, we use the logarithm of the donation amount (*LDON*), a common practice in studies examining the impact of political donations (Aggarwal *et al.*, 2012; Muttakin *et al.*, 2022). This approach allows us to assess both the binary presence of donations and the size of these donations in our analysis of the relationship between political donations and corporate outcomes.

4.5 Control variables

Our study controls for several variables shown to affect firms' cash holdings, leverage and investment decisions. CEO duality (*DUAL*) is a dummy variable equal to one if the CEO also chairs the board. Duality weakens oversight, leading to faster cash dissipation (Dittmar and Mahrt-Smith, 2007), CEO-driven leverage choices (Korkeamäki *et al.*, 2017) and poorer investment decisions (Aktas *et al.*, 2019).

We also control for auditor quality (*BIGN*), equal to one if the firm uses a Big Four auditor. Big Four auditors enhance reporting credibility, reduce earnings management (Choi *et al.*, 2010), improve capital market access (Francis *et al.*, 2005) and constrain inefficient investment (Bushman and Smith, 2001).

Board structure variables include the proportion of female directors (*FEMALE*), independent directors (*BIND*) and board size (*BOD*). Female directors strengthen monitoring and are linked to lower leverage (Adams and Ferreira, 2009; Poletti-Hughes and Briano-Turrent, 2019), while larger boards may suffer from weaker oversight (Coles *et al.*, 2008).

Dividend policy (*DIVID*) is included since dividend-paying firms hold less cash (Opler *et al.*, 1999), adjust leverage for flexibility (DeAngelo and DeAngelo, 2006) and face tighter financing constraints consistent with pecking order theory (Myers and Majluf, 1984). We also control for growth opportunities using the market-to-book (*MTB*) ratio (Smith and Watts, 1992).

Firm characteristics include age (*AGE*) and size (*SIZE*), as older and larger firms have better financing access, lower cash needs, higher leverage capacity and more efficient investment (Biddle *et al.*, 2009; Opler *et al.*, 1999; Rajan and Zingales, 1995). We also include nondebt tax shields (*NDTS*), measured by depreciation over assets, as substitutes for debt tax shields (DeAngelo and Masulis, 1980) and liquidity (*LIQUID*), measured as current assets over current liabilities (Opler *et al.*, 1999).

Risk measures include operational risk (*RISK*), the standard deviation of ROA and cash flow volatility (*CAFLR*). Higher volatility increases precautionary cash (Bates *et al.*, 2009), reduces leverage (Titman and Wessels, 1988) and lowers investment efficiency (Biddle *et al.*, 2009). Profitability (*ROA*) is also controlled for, as profitable firms rely less on external capital (Myers and Majluf, 1984). All regressions include industry and year fixed effects.

5. Results

5.1 Descriptive statistics

Table 3 presents the descriptive statistics. Panel A of Table 3 tabulates the descriptive for the independent variables. The natural logarithm of donations (*LDO*) displays pronounced heterogeneity, as evidenced by its average of 1.041, which equals AUD 9,653.62, and a standard deviation of 3.247, which represents the amount of AUD 43,818.82. The binary donations dummy variable (*DOND*) substantiates that approximately 9.4% of sample firms partake in donations [7].

Panel B presents the descriptive for the dependent variables. The (*CA_HO*) variable, representing the cash holding ratio, highlights firms' insight into liquidity management through cash and short-term investments, registering an average of 0.139. Similarly, the (*CA_BA*) variable, signifying the cash balance ratio, exhibits moderate cash reserves concerning total assets, with an average value of 0.128.

The (*LEV*) variable highlights a prudent debt management approach, with an average of 0.215. The (*MLEV*) variable, portraying the market-leverage ratio, demonstrates diverse debt structures relative to market valuation, with a mean of 0.171. Examining the constituents, short-term debt (*STD*) occupies a minor proportion of assets, with an average of 0.036, while long-term debt (*LTD*) encompasses a substantial share, averaging 0.179. Transitioning to investment efficiency (*INVEFF*), firms exhibit commendable capital expenditure practices, with a mean of -0.049 and a standard deviation of 0.061.

The subsequent set of variables encapsulates governance attributes and board-related characteristics. CEO-chairman duality (*DUAL*) emerges infrequently, with an average prevalence of 0.053. Notably, a substantial proportion of firms engaged Big four auditors (*BIGN*), with an average occurrence rate of 0.892. Moving to board dynamics, the board size variable (*BOD*) averages of 8.144 directors. In addition, dividend payments, as represented by the (*DIVID*) variable, are relatively common, with a mean of 0.781. The *MTB* ratio mean of 6.997. The logarithm of market capitalization (*SIZE*) signifies substantial diversity in firms' market sizes, with a mean of 21.411.

Gender diversity, gauged by the (*FEMALE*) variable, records an average ratio of 0.144 (or 14.4%) for female directors, reflecting moderate gender inclusivity. The (*BIND*) variable, measuring the ratio of independent directors, exhibits a mean of 0.535, signifying considerable board diversity. The average age of the firms in the data set is approximately

Table 3. Descriptive statistics (2006–2022, $n = 3,404$)

Variables	Mean	SD	p25	Median	p75
<i>Panel A: Independent variables</i>					
<i>LDON</i>	1.041	3.247	0.000	0.000	0.000
<i>DOND</i>	0.094	0.292	0.000	0.000	0.000
<i>Panel B: Dependent variables</i>					
<i>CA_HO</i>	0.139	0.161	0.036	0.078	0.179
<i>CA_BA</i>	0.128	0.152	0.032	0.071	0.164
<i>LEV</i>	0.215	0.166	0.075	0.213	0.317
<i>MLEV</i>	0.171	0.156	0.036	0.145	0.259
<i>STD</i>	0.036	0.068	0.000	0.012	0.044
<i>LTD</i>	0.179	0.155	0.037	0.173	0.275
<i>INVEFF</i>	-0.049	0.061	-0.059	-0.028	-0.014
<i>OV_INV</i>	0.070	0.082	0.016	0.041	0.090
<i>UN_INV</i>	-0.028	0.021	-0.038	-0.023	-0.012
<i>Panel C: Control variables</i>					
<i>DUAL</i>	0.053	0.225	0.000	0.000	0.000
<i>BIGN</i>	0.892	0.310	1.000	1.000	1.000
<i>BOD</i>	8.144	2.383	6.000	8.000	9.000
<i>DIVD</i>	0.781	0.414	1.000	1.000	1.000
<i>MTB</i>	6.997	56.585	1.391	2.343	4.264
<i>FEMALE</i>	0.144	0.132	0.000	0.125	0.250
<i>BIND</i>	0.535	0.191	0.400	0.571	0.677
<i>AGE</i>	2.513	0.999	1.946	2.639	3.178
<i>SIZE</i>	21.411	1.222	20.507	21.206	22.151
<i>NDTS</i>	-0.030	0.051	-0.040	-0.024	-0.011
<i>LIQUID</i>	2.919	6.500	1.091	1.563	2.456
<i>RISK</i>	0.040	0.060	0.011	0.027	0.040
<i>CAFLR</i>	0.096	0.121	0.047	0.090	0.143
<i>ROA</i>	0.066	0.099	0.037	0.069	0.108

Note(s): Please refer to [Table 2](#) for the operational definitions

2.513, as indicated by the (*AGE*) variable. This value represents the natural logarithm of the years between each firm's fiscal year and the listing year. It suggests that, on average, the firms in the data set have been operating for around 12 years since their listing.

Asset liquidity (*LIQUID*) emerges prominently, with current assets often surpassing current liabilities, signifying an average of 2.919. Financial risk (*RISK*) exhibits dispersion among firms, averaging 0.040. The (*CAFLR*) variable, indicative of the net operating cash flow ratio to total assets, highlights robust cash flow management, averaging 0.096. Finally, profitability indicators, as embodied by (*ROA*), indicate varying degrees of financial performance, with averages of 0.066.

5.2 Univariate analyses

[Table 4](#) presents the univariate statistics for two groups of firms: those with donations ($n = 320$) and those without donations ($n = 3,084$). We find that firms that make donations record significantly lower levels of cash holdings (*CA_HO* and *CA_BA*), higher leverage (both book and market) and long-term debt (*LTD*). However, we could not find any difference in the level of investment efficiency between these two samples. The findings provide some initial support that firms making donations raise agency concerns, as

Table 4. Differences in mean and median between firms with and without donations (2006–2022, $n = 3,404$)

Variables	Without donations = 3,084		With donations = 320		t-test	Mann–Whitney
	Mean	Median	Mean	Median	<i>p</i> -value	<i>p</i> -value
<i>Panel A: Dependent variables</i>						
CA_HO	0.144	0.082	0.090	0.050	<i>0.000</i>	<i>0.000</i>
CA_BA	0.132	0.074	0.087	0.046	<i>0.000</i>	<i>0.000</i>
LEV	0.210	0.210	0.256	0.251	<i>0.000</i>	<i>0.000</i>
MLVE	0.166	0.137	0.219	0.207	<i>0.000</i>	<i>0.000</i>
STD	0.036	0.011	0.031	0.016	<i>0.173</i>	<i>0.048</i>
LTD	0.174	0.167	0.226	0.216	<i>0.000</i>	<i>0.000</i>
INVEFF	−0.049	−0.028	−0.048	−0.028	0.947	0.791
OV_INV	0.070	0.042	0.066	0.037	0.496	0.325
UN_INV	−0.028	0.042	−0.029	−0.024	0.585	0.283
<i>Panel B: Control variables</i>						
DUAL	0.053	0.000	0.063	0.000	<i>(0.045)</i>	
BIGN	0.891	1.000	0.909	1.000	<i>(0.305)</i>	
BOD	8.031	8.000	9.238	9.000	<i>0.000</i>	<i>0.000</i>
DIVD	0.770	1.000	0.888	1.000	<i>(0.000)</i>	
MTB	7.372	2.405	3.382	1.864	0.230	<i>0.000</i>
FEMALE	0.142	0.125	0.157	0.143	<i>0.068</i>	<i>0.065</i>
BIND	0.532	0.571	0.567	0.600	<i>0.002</i>	<i>0.004</i>
AGE	2.478	2.565	2.847	2.944	<i>0.000</i>	<i>0.000</i>
SIZE	21.342	21.148	22.075	22.169	<i>0.000</i>	<i>0.000</i>
LIQUID	3.043	1.613	1.731	1.266	<i>0.000</i>	<i>0.000</i>
RISK	0.041	0.028	0.032	0.021	<i>0.010</i>	<i>0.001</i>
CAFLR	0.096	0.090	0.098	0.092	0.777	0.919
ROA	0.063	0.069	0.065	0.065	0.783	0.087

Note(s): Please refer to [Table 2](#) for operational definitions. Significant *p*-values are italics. χ^2 are in parentheses

highlighted earlier by [Aggarwal et al. \(2012\)](#) and [Gordon et al. \(2007\)](#) argument on undemocratic exchange for policy changes.

Panel B of [Table 4](#) presents the differences for the control variables. We find firms making donations recorded significantly higher *DUAL* and higher *BOD*, issued more dividends (*DIV*), were diverse (*FEMALE*) and were older (*AGE*). However, these firms are less liquid (*LIQUID*) and less risky (*RISK*). Nevertheless, the univariate analyses provide insight into the differences between firms making political donations and those that do not.

The Pearson correlations find a negative (positive) relationship between political donations and cash holdings (leverage) [8]. The correlation table shows no significant association between political donations and investment efficiency. The correlations table provides some coefficients above the 0.70 level, but these are measures for different constructs.

5.3 Multivariate

5.3.1 *Political donations and cash holdings.* [Table 5](#) tabulates the regressions for the *H1*, investigating the relationship between political donations and the levels of cash holdings. Column 1 of [Table 5](#) presents the results for the indicator variable, *LDO*. The coefficient for *LDO* is negative and significant ($\beta = -0.002$, $t = -3.30$, $p < 0.01$). The negative coefficient suggests that firms that made donations record significantly lower cash holdings, and this

Table 5. Political donations and cash holdings (2006–2022, $n = 3,404$)

Variables	Expected Direction	(1) CA_HO	(2) CA_HO
<i>LDon</i>	?	-0.002*** (-3.30)	
<i>DOND</i>	?		-0.019*** (-3.44)
<i>DUAL</i>	?	0.011 (0.87)	0.011 (0.88)
<i>BIGN</i>	?	-0.059*** (-5.32)	-0.059*** (-5.33)
<i>BOD</i>	?	-0.008*** (-6.68)	-0.008*** (-6.68)
<i>DIVD</i>	-	-0.079*** (-9.56)	-0.079*** (-9.56)
<i>MTB</i>	+	-0.000 (-0.57)	-0.000 (-0.57)
<i>FEMALE</i>	?	-0.042 (-1.37)	-0.042 (-1.36)
<i>BIND</i>	?	-0.055*** (-3.52)	-0.055*** (-3.52)
<i>AGE</i>	?	0.001 (0.27)	0.001 (0.27)
<i>SIZE</i>	+	0.006*** (2.94)	0.006*** (2.95)
<i>NDTS</i>	?	0.209*** (5.62)	0.209*** (5.62)
<i>LIQUID</i>	?	0.008*** (4.63)	0.008*** (4.63)
<i>RISK</i>	?	0.308*** (3.74)	0.308*** (3.74)
<i>CAFLR</i>	-	0.175*** (4.07)	0.175*** (4.07)
<i>ROA</i>	?	-0.197*** (-3.65)	-0.197*** (-3.65)
Constant		0.140*** (3.22)	0.140*** (3.22)
Observations		3,404	3,404
Adj R ²		0.352	0.352
Year		Yes	Yes
Industry		Yes	Yes

Note(s): Please refer to [Table 2](#) for operational definitions. Robust t -statistics in parentheses. *** $p < 0.01$

translates to an almost 5% (-4.67%) lower cash holdings for donating firms, relative to firms that did not donate [9]. The continuous variable of donation (*DOND*), tabulated in Column 2 of [Table 5](#), also indicates a negative and significant impact on the level of cash holdings ($\beta = -0.019$, $t = -3.44$, $p < 0.01$).

The results support the overarching context of agency concerns from political donations ([Aggarwal et al., 2012](#)). [Faccio \(2006\)](#) suggests that the negative relationship supports the impact of political connections (using donations). Similarly, [Gordon et al. \(2007\)](#) also supported the mooted undemocratic exchange argument. Firms making political donations seek to strengthen social responsibility and identify themselves as connected to the government or the political parties they donate to.

As for the control variables, we find negative and significant coefficients for *BIGN*, *BOD*, *DIV*, *BIND*, *CALFR* and *ROA*. We find positive and significant *SIZE*, *NDTS*, *LIQUID* and *RISK* coefficients [10].

[Table 6](#) presents an ordinary least squares (OLS) regression analysis for additional measures of cash holding *CA_BA*. We find a negative and significant relationship between *LDon* and *CA_BA* ($\beta = -0.001$, $t = -2.15$, $p < 0.05$). Likewise, we find a negative and significant correlation between *DOND* and *CA_BA* ($\beta = -0.012$, $t = -2.25$, $p < 0.05$). The control variables remain qualitative, similar to those in [Table 5](#). Results shown in [Table 6](#) ensure the robustness of the cash measures in the analyses.

5.3.2 Political donations and leverage. [Table 7](#) presents the results of the OLS regression analysis, examining the relationships between *LDon* and *DOND* and measures of leverage. Columns 1 and 2 of [Table 7](#) tabulate the results when we regressed against *LEV*. The table

Table 6. Political donations and cash balances (2006–2022, $n = 3,404$)

Variables	Expected Direction	(1) CA_BA	(2) CA_BA
<i>LDON</i>	?	-0.001** (-2.15)	
<i>DOND</i>	?		-0.012** (-2.25)
<i>DUAL</i>	?	0.021* (1.69)	0.021* (1.70)
<i>BIGN</i>	?	-0.057*** (-5.30)	-0.057*** (-5.30)
<i>BOD</i>	?	-0.006*** (-5.60)	-0.006*** (-5.60)
<i>DIVD</i>	-	-0.070*** (-8.98)	-0.070*** (-8.98)
<i>MTB</i>	+	-0.000 (-0.49)	-0.000 (-0.49)
<i>FEMALE</i>	?	-0.037 (-1.27)	-0.037 (-1.27)
<i>BIND</i>	?	-0.045*** (-2.99)	-0.045*** (-2.99)
<i>AGE</i>	?	0.002 (0.60)	0.002 (0.60)
<i>SIZE</i>	+	0.003 (1.46)	0.003 (1.46)
<i>NDTS</i>	?	0.194*** (5.62)	0.194*** (5.62)
<i>LIQIUD</i>	?	0.007*** (4.83)	0.007*** (4.83)
<i>RISK</i>	?	0.330*** (4.05)	0.330*** (4.05)
<i>CAFLR</i>	-	0.175*** (4.16)	0.175*** (4.16)
<i>ROA</i>	?	-0.149*** (-2.83)	-0.149*** (-2.83)
<i>Constant</i>		0.153*** (3.72)	0.153*** (3.72)
<i>Observations</i>		3,404	3,404
<i>Adj-R²</i>		0.325	0.325
<i>Year</i>		Yes	Yes
<i>Industry</i>		Yes	Yes

Note(s): Please refer to Table 2 for operational definitions. Robust t-statistics in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

shows in Columns 1 and 2 that the coefficient for *LDON* is positive and significant ($\beta = 0.002$, $t = 2.06$, $p < 0.05$), while the coefficient for *DOND* is also positive and significant ($\beta = 0.017$, $t = 2.08$, $p < 0.05$). The coefficients for these variables are positively and significantly related to leverage (*LEV*) at the 5% level.

Results suggest that firms making donations have a higher level of leverage, relative to those firms that did not. The results also supported the notion that such donations would increase agency concerns and alleviate risk for the firms. Such political activities (donations) likely increase risky behaviour by incurring higher levels of debt and expectations of government assistance in the event of failure (Faccio, 2006). Political links can enhance lenders' trust and reduce default risk perceptions, enabling firms that donate to political parties to secure more favorable financing terms. Second, the study finds a significant positive relationship between political donations and leverage. These findings support the argument that politically connected firms may benefit from their political connections by appearing less risky to lenders, which motivates firms to increase leverage. Also, firms might benefit from political connections to secure more government contracts, which could enhance their operational level and leverage to expand.

Moreover, Table 7 presents the results from OLS regression analysis that examines the relationships between *LDON*, *DOND* and their association with *MLEV*. The table shows that both *LDON* and *DOND* exhibit positive and statistically significant relationships with *MLEV*. In Columns 3 and 4, the coefficients for *LDON* and *DOND* are 0.003 ($t = 4.08$, $p < 0.01$) 0.031 ($t = 4.08$, $p < 0.01$), respectively. This suggests that higher levels of donations are associated with increased market leverage.

Table 7. Political donations and leverage (2006–2022, $n = 3,404$)

Variables	Expected Direction	(1) LEV	(2) LEV	(3) MLEV	(4) MLEV
<i>LDON</i>	?	0.002** (2.06)		0.003*** (4.08)	
<i>DOND</i>	?		0.017** (2.08)		0.031*** (4.08)
<i>DUAL</i>	?	-0.040*** (-4.32)	-0.040*** (-4.32)	-0.016* (-1.83)	-0.016* (-1.84)
<i>BIGN</i>	?	0.030*** (3.16)	0.030*** (3.17)	0.044*** (5.34)	0.044*** (5.34)
<i>BOD</i>	?	0.005*** (4.38)	0.005*** (4.38)	0.014*** (10.68)	0.014*** (10.69)
<i>DIVD</i>	?	0.008 (0.81)	0.008 (0.81)	0.055*** (6.72)	0.055*** (6.72)
<i>MTB</i>	+	0.000*** (9.51)	0.000*** (9.51)	-0.000 (-0.17)	-0.000 (-0.18)
<i>FEMALE</i>	?	0.033 (1.29)	0.033 (1.28)	0.013 (0.53)	0.012 (0.52)
<i>BIND</i>	?	0.028* (1.73)	0.028* (1.73)	0.101*** (6.61)	0.101*** (6.61)
<i>AGE</i>	+	-0.008*** (-2.66)	-0.008*** (-2.66)	-0.008*** (-3.30)	-0.008*** (-3.29)
<i>SIZE</i>	+	0.017*** (6.70)	0.017*** (6.72)	-0.021*** (-8.55)	-0.021*** (-8.54)
<i>NDTS</i>	-	-0.190 (-1.26)	-0.190 (-1.26)	-0.145* (-1.82)	-0.145* (-1.82)
<i>LIQUID</i>	-	-0.004*** (-4.32)	-0.004*** (-4.32)	-0.003*** (-4.08)	-0.003*** (-4.07)
<i>RISK</i>	-	-0.130 (-1.19)	-0.130 (-1.20)	-0.284*** (-6.28)	-0.284*** (-6.28)
<i>CAFLR</i>	?	-0.098*** (-2.62)	-0.098*** (-2.62)	-0.125*** (-4.26)	-0.125*** (-4.25)
<i>ROA</i>	?	-0.078 (-1.41)	-0.078 (-1.41)	-0.199*** (-5.18)	-0.199*** (-5.19)
<i>Constant</i>		-0.125** (-2.48)	-0.126** (-2.49)	0.451*** (9.57)	0.450*** (9.55)
<i>Observations</i>		3,404	3,404	3,404	3,404
<i>Adj-R²</i>		0.231	0.231	0.292	0.292
<i>Year</i>		Yes	Yes	Yes	Yes
<i>Industry</i>		Yes	Yes	Yes	Yes

Note(s): Please refer to [Table 2](#) for operational definitions. Robust t-statistics in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

Our untabulated result presents an OLS regression analysis for additional measures of debt *STD* and *LTD*. We find that *LDON* and *DOND* are negatively significantly correlated with *STD*, respectively. They suggest that donations decrease when there is higher short-term debt. In addition, *LDON* and *DOND* have a significant positive relationship with *LTD*, indicating that donations increase as long-term debt rises. These results are reported in [Appendix 2](#).

5.3.3 Political donations and investment efficiency. [Table 8](#) presents the results of an OLS regression analysis investigating the relationships between *LDON*, *DOND* and *INVEFF*. Column 1 of [Table 8](#) indicates that the coefficient for *LDON* is negative and significant ($\beta = -0.001$, $t = -1.83$, $p < 0.10$). Column 2 of [Table 3](#) shows similar results for *DOND*. Overall, the result suggests that higher donations will weaken investment efficiency. Political donations, often linked to political connections, can reduce investment efficiency by fostering regulatory advantages and reducing competition, which leads to complacency and a short-term focus. This shift in priorities diverts resources from long-term, efficiency-enhancing investments as firms prioritize immediate benefits from government ties. Our extended analysis (see [Appendix 3](#)) on overinvestment (*ON_INV*) and underinvestment (*UN_INV*) finds that donations positively impact overinvestment.

5.3.4 Additional analysis: political parties. We extend the analysis by examining the donations firms make to various political parties. Primarily, this test allows for differential impacts on various corporate outcomes across firms that donated to different political parties. We operationalized donations to three main groups: the Australian Labor Party (*LDON_ALP*), the Liberal and National Party (*LDON_LNP*) and others (*LDON_Other*),

Table 8. Political donation and investment efficiency (2006–2022, $n = 3,404$)

Variables	Expected Direction	(1) <i>INVEFF</i>	(2) <i>INVEFF</i>
<i>LDO</i>	?	-0.001* (-1.83)	
<i>DOND</i>	?		-0.006* (-1.71)
<i>DUAL</i>	?	-0.009 (-1.60)	-0.009 (-1.60)
<i>BIGN</i>	?	0.005 (1.38)	0.005 (1.38)
<i>BOD</i>	?	0.001*** (2.60)	0.001*** (2.59)
<i>DIVD</i>	?	0.040*** (11.01)	0.040*** (11.00)
<i>MTB</i>	+	0.000** (2.01)	0.000** (2.02)
<i>FEMALE</i>	?	0.008 (0.90)	0.008 (0.90)
<i>BIND</i>	?	0.008 (1.25)	0.008 (1.25)
<i>AGE</i>	-	0.001 (0.87)	0.001 (0.86)
<i>SIZE</i>	-	0.002*** (2.84)	0.002*** (2.82)
<i>NDS</i>	?	0.021 (1.29)	0.021 (1.29)
<i>LIQUID</i>	?	0.001*** (2.82)	0.001*** (2.82)
<i>RISK</i>	?	0.037** (2.23)	0.037** (2.23)
<i>CAFLR</i>	-	-0.083*** (-4.40)	-0.083*** (-4.41)
<i>ROA</i>	?	0.066*** (3.07)	0.066*** (3.08)
<i>Constant</i>		-0.148*** (-8.45)	-0.148*** (-8.44)
<i>Observations</i>		3,404	3,404
<i>Adj-R²</i>		0.231	0.231
<i>Year</i>		Yes	Yes
<i>Industry</i>		Yes	Yes

Note(s): Please refer to Table 2 for operational definitions. Robust t-statistics in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

which consist of smaller parties. Russell *et al.* (2023) differentiate the political parties based on ideologies [11]. Differences in ideology could lead to different corporate outcomes.

Table 9 reports that politically connected firms exhibit different financial behaviors depending on their donations to the Australian Labor Party (ALP) or the Liberal and National Party (LNP). ALP-aligned firms tend to hold higher cash reserves and prefer conservative investments due to policy uncertainty. In contrast, LNP-aligned firms have lower cash holdings, greater leverage and improved investment efficiency due to a favorable regulatory environment. Both party alignments reduce cash needs by providing alternative support. However, only LNP-linked firms show lower investment efficiency, indicating possible overinvestment. Political ties in Australia influence liquidity and investment more than capital structure.

5.3.5 *Global financial crisis and COVID-19.* To address the concern that extraordinary market conditions may influence our results, we reestimated our models after excluding the years of the Global Financial Crisis (GFC) in 2008 and the COVID-19 pandemic in 2020. Both events significantly disrupted global capital markets, corporate financing and investment activity, raising the possibility that the observed relationships between political donations and firms' financial policies could be crisis-driven rather than reflective of broader patterns. By removing these years, we aim to isolate the effect of political donations from the distortions caused by these systemic shocks.

The removal of the years resulted in 3,019 firm-year observations. We find the untabulated coefficients for *LDO* are negatively and significantly associated with cash holdings ($\beta = -0.001$, $t = -2.59$, $p < 0.05$) and investment efficiency ($\beta = -0.001$, $t = -1.76$, $p < 0.10$),

Table 9. Political parties analysis (2006–2022, $n = 3,404$)

Variables	(1) CA_HO	(2) CA_HO	(3) CA_HO	(4) LEV	(5) LEV	(6) LEV	(7) INVEFF	(8) INVEFF	(9) INVEFF
L _{DON} _ALP	-0.002* (-1.78)			0.001 (1.20)	0.001 (1.62)	0.001 (0.41)	-0.000 (-0.95)	-0.001** (-2.00)	-0.003*** (-2.84)
L _{DON} _LNP		-0.001* (-1.79)							
L _{DON} _Other	Yes	Yes	-0.003 (-0.92)	Yes	Yes	Yes	Yes	Yes	Yes
Control variables	3,404	3,404	3,404	3,404	3,404	3,404	3,404	3,404	3,404
Observations	0.351	0.351	0.351	0.230	0.230	0.230	0.230	0.231	0.232
Adj-R ²	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note(s): Please refer to Table 2 for operational definitions. L_{DON}_ALP is the natural log transformation of political donations made to Australian Labor Party, L_{DON}_LNP presents donations made to Liberal National Party. L_{DON}_Other is donations made to smaller parties. Robust t-statistics in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

respectively. We find the coefficient for *LDO*n is positively and significantly associated with leverage ($\beta = 0.002, t = 2.20, p < 0.05$).

The results remain consistent when the GFC and COVID-19 years are excluded, indicating that the documented relationships between political donations and cash holdings, leverage and investment efficiency are not driven by these crisis periods. This robustness check suggests that the influence of political donations on corporate financial policies persists across both stable and turbulent economic environments. Consequently, our findings can be interpreted as reflecting more general firm-level dynamics rather than being contingent on crisis-specific conditions, thereby enhancing the validity and generalizability of our conclusions [12].

6. Endogeneity

6.1 Two-stage least squares

A key empirical challenge in examining the relationship between political donations and corporate financial policies is reverse causality. While we hypothesize that donations influence firms' financial outcomes – specifically cash holdings, leverage and investment efficiency – the reverse channel is also plausible. For instance, firms with larger cash reserves may be more capable of donating, highly leveraged firms may have stronger incentives to seek political connections, and firms with inefficient investment practices may strategically donate to secure favorable treatment. Such simultaneity creates an endogeneity problem, as OLS estimates may conflate the effect of donations on financial outcomes with the effect of financial outcomes on donations.

We opted for the 2SLS approach by applying an instrumental variable technique. In the first stage model [equation (4)], we adopt an instrumental variable represented by the average donations (*AveLDO*n) amount for all other firms within the same industry. This method has been applied in political donation studies by Correia (2014) and Muttakin *et al.* (2022). The first stage of analysis is represented below:

$$Donations = \alpha_0 + \alpha_1 AveLDO_n + \alpha' X_i + \epsilon_i \quad (4)$$

where *Donations* refers to the log of donation value, *AveLDO*n represents the average donations for all other firms in the same industry and *X* represents all control variables used in the main analysis.

Table 10 presents the 2SLS results with instrumental variables. Column 1 of Table 10 finds that the instrumented political donation coefficient is negative and significant ($\beta = -0.025, t = -2.18, p < 0.05$) relationship with cash holdings [13]. We find similar results for Column 3 of Table 10, and the coefficient for the instrumented political donation is negative and significant ($\beta = -0.011, t = -2.11, p < 0.05$), indicating a relationship with investment efficiency. However, we find no results for Column 2 of Table 10. The insignificant findings for Column 2 suggest that the results could be driven by reverse causality.

6.2 Exogenous shock – difference-in-differences

To further investigate whether the results are driven by reverse causality, we opted for a *DiD* approach. The basic *DiD* model is as follows:

$$Dependent\ Variables_{it} = \beta_0 Intercept_{it} + \beta_1 TREAT_{it} + \beta_2 POST_{it} + \beta_3 TREAT_POST_{it} + \alpha' X_i + \epsilon_i \quad (5)$$

Table 10. Two-stage least square (2SLS)

Variables	First stage <i>LDON</i>	(1) <i>CA_HO</i>	(2) <i>LEV</i>	(3) <i>INVEFF</i>
<i>DON_HAT</i>	1.028*** (2.61)	-0.025** (-2.18)	0.019 (1.54)	-0.010** (-2.11)
<i>DUAL</i>	0.440 (1.60)	0.021* (1.82)	-0.048*** (-3.75)	-0.005 (-1.08)
<i>BIGN</i>	-0.303* (-1.75)	-0.066*** (-7.96)	0.036*** (3.90)	0.002 (0.75)
<i>BORS</i>	0.092*** (3.33)	-0.005*** (-3.39)	0.004** (2.09)	0.002*** (3.20)
<i>DIVD</i>	0.283* (1.88)	-0.073*** (-9.12)	0.003 (0.32)	0.043*** (13.27)
<i>MTB</i>	-0.002*** (-3.51)	-0.000 (-1.42)	0.000*** (8.48)	-0.000 (-0.38)
<i>FEMALE</i>	0.099 (0.19)	-0.040 (-1.59)	0.031 (1.14)	0.009 (0.90)
<i>BIND</i>	0.035 (0.11)	-0.054*** (-3.79)	0.027* (1.71)	0.008 (1.40)
<i>AGE</i>	0.223*** (4.26)	0.006* (1.72)	-0.012*** (-3.12)	0.003** (2.10)
<i>SIZE</i>	0.417*** (6.29)	0.016*** (3.13)	0.010* (1.74)	0.006*** (3.00)
<i>NDTS</i>	0.221 (0.44)	0.214*** (4.55)	-0.194*** (-3.74)	0.023 (1.24)
<i>LIQUID</i>	-0.017** (-2.28)	0.007*** (17.34)	-0.004*** (-8.19)	0.000** (2.02)
<i>RISK</i>	-0.531 (-0.82)	0.296*** (7.20)	-0.120*** (-2.65)	0.032* (1.96)
<i>CAFLR</i>	0.361 (0.71)	0.184*** (6.61)	-0.104*** (-3.39)	-0.080*** (-7.11)
<i>ROA</i>	-2.340*** (-3.55)	-0.252*** (-5.71)	-0.036 (-0.75)	0.044** (2.48)
Constant	-17.199*** (-4.84)	-0.041 (-0.40)	0.013 (0.11)	-0.219*** (-5.29)
<i>Observations</i>	3,404	3,404	3,404	3,404
<i>Adj-R²</i>	0.072	0.351	0.230	0.230
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes

Note(s): Please refer to [Table 2](#) for operational definition. t-statistics in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

The dependent variables are cash holdings (*CA_HO*), leverage (*LEV*) and investment efficiency (*INVEFF*). *TREAT* indicates the treatment group (firms that made donations), and *POST* denotes the period after donations were made. *TREAT_POST* is the DiD estimator, producing the interaction between *TREAT* and *POST*.

To test whether the result is driven by reverse causality, we imposed an exogenous shock to the DiD model. We have chosen 2019 as the year the Australian Government announced the implementation of a ban on foreign actors seeking to influence Australian elections [14]. We run [equation \(5\)](#) on two separate samples: pre- and post-2019. The untabulated DiD results did not provide any support for whether the results are driven by reverse causality [15].

6.3 Self-selection (Heckman) test

The Heckman two-stage regression technique accounts for the firm's selection into political donations based on performance and other financial characteristics. Sample selection bias occurs when the selection of observations for analysis is not random and is influenced by unobservable factors. Large firms among the top 300 may have more resources available for donations. Therefore, our analysis of donations might be biased toward firms with greater financial capabilities, potentially leading to an overestimation of the level or impact of donations.

This model comprises two distinct stages. During the first stage of analysis, a probit model was used to determine the firm's probability of paying political donations. For consistency, we used the same instrument used for the 2SLS – the average donation amount for all other firms in the same industry (*AveLDON*).

As reported in [Table 11](#), the Heckman selection test inverse mills ratio yields insignificant results consistent with the study models, suggesting that our models do not suffer from selection bias. The results remain qualitatively similar to those presented and discussed earlier.

6.4 Covariate imbalance analysis – entropy balancing [\[16\]](#)

In this analysis, entropy balancing was used to enhance the robustness of the results by ensuring that firms that made political donations and those that did not were well-balanced on key control variables before estimating the effects of political donations. This reweighting technique effectively minimizes preexisting differences between the two groups, allowing for a more reliable assessment of the impact of political donations on firm outcomes.

As shown in Panel A of [Table 12](#), the descriptive statistics indicate a significant difference in the means of the treatment and control variables before entropy balancing. However, the results become identical after performing entropy balancing. We then rerun the baseline regression and find the results are qualitatively similar, as presented in Panel B of [Table 12](#). The entropy balancing results align with the main findings, confirming the robustness of the analysis. The weighted regressions yield consistent outcomes, indicating that the observed effects are not influenced by imbalances between the treatment and control groups, thereby strengthening the validity of the results.

7. Conclusion

In conclusion, our study contributes to the existing literature on political donations by examining their impact on corporate outcomes in the Australian context. Unlike previous studies, which often adopt a binary approach to examining political connections, our research examines the more objective nature of political donations. This approach allows us to capture a broader spectrum of corporate political engagement, highlighting how financial contributions to political entities can influence corporate decision-making. By analyzing 3,404 firm-year observations from 2006 to 2022, our findings indicate a negative relationship between political donations and cash holdings, suggesting that firms engaging in political contributions may prioritize other financial strategies over maintaining liquidity. Furthermore, we observe a positive impact on leverage, suggesting that politically connected firms may leverage their influence to secure more favorable financing terms. In addition, the negative relationship with investment efficiency raises concerns about the potential for political donations to encourage rent-seeking behaviors or inefficient resource allocation.

These findings are consistent with agency theory, which posits that political donations are often driven by corporate managers' self-interest rather than the firm's strategic interests ([Belghitar et al., 2019](#); [Hill et al., 2014](#)). This perspective suggests that, rather than serving as strategic investments intended to enhance corporate performance, managers may use political donations to secure personal benefits, protect their positions or influence policy that may not align with shareholder interests ([Muttakin et al., 2022](#)). Our research, therefore, sheds light on the dual nature of political donations. While they can be seen as a form of investment in political capital, they also carry the risk of exacerbating agency problems within firms. This understanding is crucial for comprehensively evaluating the role of political donations in corporate governance and financial management.

Our study advances the academic discourse on the intersection of corporate finance and political economy and has practical implications for various stakeholders. For policymakers, our findings highlight the importance of transparency and regulation of political contributions to mitigate potential agency problems and ensure that such donations serve broader societal interests rather than narrow corporate or managerial interests. For corporate managers and investors, understanding the potential impacts of political donations on

Table 11. Self-selection test (Heckman)

Variables	First stage LIDON	(1) CA_HO	(2) CA_HO	(3) LEV	(4) LEV	(5) INVEFF	(6) INVEFF
<i>Average donations</i>	0.581*** (2.84)	-0.002*** (-3.28)		0.002** (2.06)	0.017** (2.07)	-0.001* (-1.85)	
LIDON							
DOND							-0.006* (-1.73)
DUAL							-0.009 (-1.61)
BIGN	-0.272** (-2.39)	0.011 (0.89)	-0.019*** (-3.42)	-0.040*** (-4.32)	-0.040*** (-4.32)	-0.009 (-1.61)	-0.005 (1.35)
BOD	0.047*** (3.25)	-0.058*** (-5.30)	-0.059*** (-5.31)	0.030*** (3.16)	0.030*** (3.16)	0.005 (1.35)	0.001*** (2.60)
DIVID	0.203* (1.75)	-0.008*** (-6.68)	-0.008*** (-6.68)	0.005*** (4.38)	0.005*** (4.38)	0.001*** (2.61)	0.040*** (11.00)
MTB	-0.005 (-0.89)	-0.079*** (-9.56)	-0.079*** (-9.56)	0.008 (0.81)	0.008 (0.81)	0.040*** (11.00)	0.000** (1.98)
FEMALE	0.163 (0.47)	-0.000 (-0.57)	-0.000 (-0.57)	0.000*** (9.51)	0.000*** (9.51)	0.000** (1.96)	0.008 (0.89)
BIND	0.013 (0.07)	-0.042 (-1.36)	-0.042 (-1.35)	0.033 (1.29)	0.033 (1.28)	0.008 (0.88)	0.008 (1.27)
AGE	0.146*** (4.20)	-0.055*** (-3.53)	-0.055*** (-3.53)	0.028* (1.73)	0.028* (1.73)	0.001 (0.86)	0.001 (0.85)
SIZE	0.188*** (5.93)	0.001 (0.27)	0.001 (0.27)	-0.008*** (-2.66)	-0.008*** (-2.66)	0.001 (0.86)	0.002*** (2.85)
NDTS	1.712 (1.38)	0.006*** (2.93)	0.006*** (2.93)	0.017*** (6.71)	0.017*** (6.72)	0.002*** (2.87)	0.021 (1.27)
LIQUID	-0.042 (-1.60)	0.210*** (5.62)	0.210*** (5.62)	-0.190 (-1.26)	-0.191 (-1.26)	0.001*** (2.81)	0.037** (2.25)
RISK	-0.495 (-0.67)	0.008*** (4.63)	0.008*** (4.63)	-0.004*** (-4.32)	-0.004*** (-4.32)	0.037** (2.24)	-0.083*** (-4.40)
CAFLR	0.125 (0.38)	0.308*** (3.74)	0.308*** (3.74)	-0.129 (-1.19)	-0.129 (-1.19)	0.066*** (3.07)	0.484 (0.81)
ROA	-1.503*** (-3.42)	0.175*** (4.06)	0.175*** (4.06)	-0.098*** (-2.62)	-0.098*** (-2.62)	-0.457 (-1.06)	3.404
IMR		-0.197*** (-3.65)	-0.197*** (-3.65)	-0.078 (-1.41)	-0.078 (-1.41)	0.484 (0.81)	0.231
Constant		0.894 (0.89)	0.894 (0.88)	-0.237 (-0.26)	-0.237 (-0.26)	3.404	Yes
Observations		-1.097 (-0.78)	-1.096 (-0.78)	0.202 (0.16)	0.202 (0.16)	3.404	Yes
Adj-R ²		3.404	3.404	0.231	0.231	3.404	Yes
Year		0.352	0.352	Yes	Yes	Yes	Yes
Industry		Yes	Yes	Yes	Yes	Yes	Yes

Note(s): Please refer to Table 2 for operational definitions. Robust *t*-statistics in parentheses. ****p* < 0.01; ***p* < 0.05; **p* < 0.1

Table 12. Entropy balancing (2006–2022, $n = 3,404$)

Variables	Before entropy balancing			After entropy balancing		
	Treatment	Control	Variance	Treatment	Control	Variance
<i>Panel A: Sample descriptive before and after entropy balancing</i>						
DUAL	0.063	0.059	0.050	0.063	0.059	0.059
BIGN	0.909	0.083	0.097	0.909	0.083	0.082
BOD	9.238	5.737	5.537	9.238	5.737	7.873
DIVID	0.888	0.100	0.177	0.888	0.100	0.100
MTB	3.382	144.700	3,518.000	3.382	144.700	21.790
FEMALE	0.157	0.018	0.017	0.157	0.018	0.016
BIND	0.567	0.031	0.037	0.567	0.031	0.038
AGE	2.847	0.728	1.013	2.847	0.728	0.928
SIZE	22.070	1.748	1.417	22.070	1.748	2.239
NDTS	-0.031	0.000	0.003	-0.031	0.000	0.001
LIQUID	1.731	10.320	45.400	1.731	10.320	2.169
RISK	0.032	0.001	0.004	0.032	0.001	0.002
CAFLR	0.098	0.006	0.016	0.098	0.006	0.009
ROA	0.065	0.004	0.010	0.065	0.004	0.007
<i>Panel B: Regression results</i>						
	1	2	3			
DOND	CA_HO	LEV	INVEFF			
All controls	-0.014*** (-2.93)	0.014* (-1.69)	-0.007** (-2.16)			
Industry	Yes	Yes	Yes			
Year	Yes	Yes	Yes			
Adj-R ²	0.332	0.147	0.239			

Note(s): Please refer to Table 2 for operational definitions. Robust t-statistics in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

financial metrics such as cash holdings, leverage and investment efficiency can inform more strategic decision-making and governance practices. Ultimately, our research highlights the complex interplay between business and politics, emphasizing the need for ongoing scrutiny and regulation to safeguard the integrity of both the corporate sector and the democratic process.

However, several limitations of this study should be noted. First, the data on political donations is derived solely from the AEC, which may not capture all forms of political engagement or indirect contributions, potentially leading to underreporting. In addition, our analysis is constrained to public firms, excluding private entities and their potentially significant political contributions. The scope of our study also does not account for other nonmarket strategies that firms may use, such as lobbying or personal connections, which could influence corporate outcomes.

Furthermore, Australia's unique political and regulatory environment may limit the generalizability of our findings to other contexts with different levels of transparency, regulation and cultural attitudes toward political donations. Despite these limitations, our study provides valuable insights into the role of political donations in shaping corporate behavior and underscores the need for further research in this area. Our findings have significant implications for policymakers, corporate managers and stakeholders, highlighting the importance of greater transparency and regulation of political contributions to safeguard shareholders' and the broader public's interests.

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Notes

- [1.] A nonmarket approach is a concerted effort, outside of normal market conditions, to boost the firm's bottom line (Baron, 1995).
- [2.] Please refer to: <https://transparency.aec.gov.au/>
- [3.] Research highlights the significance and impact of political donations on policy decisions in Australia. Johnson and Livingstone (2021) analyze the link between donations from the gambling industry and policy decisions, identifying a temporal relationship. Similarly, Russell *et al.* (2023) examine donations from the food industry in Queensland, finding that nearly 68 percent of contributions were directed to the Liberal National Party. They suggest this might be due to the party's preference for minimal government intervention. In addition, Anderson *et al.* (2018) explore the effects of changes in political finance laws in New South Wales, discovering that these reforms enhance transparency.
- [4.] For a comprehensive review on corporate political activities, please refer to Brown *et al.* (2022) and Katic and Hillman (2023).
- [5.] Senator Andrew Murray an Australian Democrats member of the Australian Senate from 1996 to 2008.

- [6.] For the purpose of comparison, Gul *et al.* (2024) study uses the top 500 nonfinancial firms (based on market capitalization) listed on ASX during the period 2000 to 2016. The final data for Gul *et al.* (2024) is 4,747 firm-year observations. Unlike Gul *et al.* (2024), we do not have access to SIRCA database. Muttakin *et al.* (2022) uses a sample of top 150 Australian firms over a period of eight years from 2007 to 2015, which resulted in 728 firm-year observations.
- [7.] The mean (median) value of the donations is AUD 103,000.00 (AUD 65,230.00) if we exclude the nondonating firms.
- [8.] Please refer to [Appendix 1](#) for the correlation table.
- [9.] The economic significance is calculated by the coefficient times the standard deviation of *LDON*, scaled by the mean of cash holdings.
- [10.] The Variance Inflation Factor ranges from 1.08 to 2.51.
- [11.] Liberal and National Party carries a liberal ideology which emphasis on minimal state involvement and neoliberal ideology which promotes free market economics. Australian Labor Party promotes the context of social democracy in which aims to humanize capitalism by striving for a balance between market economy and state intervention ([Russell et al., 2023](#)).
- [12.] The untabulated results can be requested from the corresponding author.
- [13.] To address concerns about potential reverse causality particularly whether cash holdings influence political donations. We report the full first-stage 2SLS results in [Table 10](#). The first stage shows a strong and positive association between the instrument and political donations, confirming instrument relevance. Combined with the second-stage results, which continue to show a negative relationship between donations and cash holdings, the evidence supports the interpretation that donations affect cash policies rather than the reverse. While reverse causality cannot be fully ruled out, the consistency between OLS and 2SLS results suggests our findings are robust.
- [14.] Please refer to the Commonwealth Electoral Act 1918 – SECT 302F which mentioned that it is an offence if the donor is identified as a foreign donor.
- [15.] Please refer to [Appendix 4](#) for the abridged *DiD* regressions results.
- [16.] Entropy balancing is often preferred over propensity score matching because it directly reweights the sample to achieve exact balance on covariate moments without discarding observations, leading to more efficient and less biased estimates.
- [17.] Curtin University.
- [18.] Prince Sattam Bin Abdulaziz University.

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Table A1. Correlations (2006–2022, $n = 3,404$)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1-LDON	1											
2-DOND	0.995*	1										
3-CA_HO	-0.095*	-0.095*	1									
4-CA_BA	-0.085*	-0.085*	0.941*	1								
5-LEV	0.079*	0.078*	-0.398*	-0.382*	1							
6-MLEV	0.098*	0.098*	-0.395*	-0.378*	0.718*	1						
7-STD	-0.024	-0.025	-0.101*	-0.106*	0.360*	0.283*	1					
8-LTD	0.095*	0.095*	-0.383*	-0.363*	0.914*	0.646*	-0.050*	1				
9-INVEFF	0.004	0.003	-0.092*	-0.093*	0.093*	0.132*	0.022	0.089*	1			
10-OV_INV	-0.024	-0.02	0.111*	0.118*	-0.083*	-0.130*	-0.01	-0.085*	-0.997*	1		
11-UN_INV	-0.013	-0.01	-0.050*	-0.027	0.173*	0.089*	0.053*	0.159*	1.000*	1.000*	1	
12-DUAL	0.008	0.01	0.103*	0.114*	-0.117*	-0.103*	-0.012	-0.120*	-0.087*	0.103*	0.007	1
13-BIGN	0.023	0.02	-0.239*	-0.231*	0.157*	0.163*	-0.028	0.181*	0.113*	-0.119*	0.081*	-0.148*
14-BOD	0.158*	0.154*	-0.232*	-0.218*	0.203*	0.260*	0.058*	0.192*	0.119*	-0.195*	-0.078*	-0.137*
15-DIVID	0.135*	0.082*	-0.363*	-0.340*	0.170*	0.204*	0.022	0.173*	0.331*	-0.403*	0.188*	-0.101*
16-MTB	-0.021	-0.02	0.016	0.016	0.129*	-0.028	0.013	0.132*	-0.006	-0.003	-0.056*	-0.008
17-FEMALE	0.034*	0.031	-0.147*	-0.144*	0.116*	0.081*	-0.093*	0.165*	0.192*	-0.228*	0.044	-0.146*
18-BIND	0.058*	0.056*	-0.180*	-0.169*	0.111*	0.146*	-0.086*	0.156*	0.146*	-0.198*	0.047*	-0.040*
19-AGE	0.114*	0.109*	-0.063*	-0.051*	-0.027	-0.029	0.045*	0.049*	0.03	-0.071*	-0.095*	-0.006
20-SIZE	0.181*	0.175*	-0.173*	-0.172*	0.196*	0.023	-0.031	0.223*	0.170*	-0.248*	-0.087*	-0.025
21-LIQUID	-0.058*	-0.057*	0.406*	0.393*	-0.226*	-0.202*	-0.130*	-0.185*	-0.073*	0.073*	-0.204*	0.087*
22-RISK	-0.045*	-0.044*	0.207*	0.217*	-0.128*	-0.181*	0.114*	-0.187*	-0.084*	0.099*	-0.135*	0.028
23-CAFLR	0.004	0.005	-0.076*	-0.051*	-0.032	-0.121*	0.045*	-0.014	0.002	-0.058*	0.157*	0.002
24-ROA	-0.001	0.001	-0.173*	-0.148*	-0.021	-0.059*	-0.133*	0.036*	0.090*	-0.143*	0.099*	0.012

Note(s): Please refer to [Table 2](#) for operational definitions. * $p < 0.10$

(continued)

Table A1. Continued

Variables	13	14	15	16	17	18	19	20	21	22	23	24
1-LDON												
2-DOND												
3-CA_HO												
4-CA_BA												
5-LEV												
6-MLEV												
7-STD												
8-LTD												
9-INVEFF												
10-OY_INV												
11-UN_INV												
12-DUAL	1											
13-BIGN	0.185*	1										
14-BOD	0.157*	0.183*	1									
15-DIVD	-0.038*	0.004	-0.043*	1								
16-MTB	0.170*	0.115*	0.203*	0.011	1							
17-FEMALE	0.183*	0.135*	0.242*	0.034*	0.450*	1						
18-BIND	0.034*	0.174*	0.111*	0.034*	0.099*	0.198*	1					
19-AGE	0.198*	0.430*	0.282*	0.071*	0.354*	0.375*	0.269*	1				
20-SIZE	-0.132*	-0.144*	-0.278*	-0.005	-0.117*	-0.119*	-0.018	-0.129*	1			
21-LIQUID	-0.065*	-0.094*	-0.169*	0.021	-0.117*	-0.148*	-0.032	-0.124*	0.099*	1		
22-RISK	0.069*	0.013	0.322*	-0.005	0.069*	0.108*	0.067*	0.146*	-0.152*	0.138*	1	
23-CAFLR	0.079*	0.004	0.377*	-0.03	0.061*	0.101*	0.052*	0.145*	-0.123*	0.137*	0.694*	1
24-ROA												

Table A2. Political donations and short and long-term debts (2006–2022, $n = 3,404$)

Variables	(1) STD	(2) STD	(3) LTD	(4) LTD
<i>LDON</i>	-0.001*** (-3.07)		0.002*** (3.26)	
<i>DOND</i>		-0.009*** (-3.08)		0.026*** (3.26)
<i>DUAL</i>	-0.001 (-0.30)	-0.001 (-0.29)	-0.039*** (-4.75)	-0.039*** (-4.75)
<i>BIGN</i>	-0.008 (-1.58)	-0.008 (-1.59)	0.038*** (4.68)	0.038*** (4.69)
<i>BOD</i>	0.002*** (2.97)	0.002*** (2.97)	0.004*** (3.18)	0.004*** (3.19)
<i>DIVD</i>	0.005 (1.53)	0.005 (1.52)	0.003 (0.28)	0.003 (0.28)
<i>MTB</i>	0.000 (0.66)	0.000 (0.67)	0.000*** (9.64)	0.000*** (9.64)
<i>FEMALE</i>	-0.049*** (-4.30)	-0.049*** (-4.30)	0.083*** (3.42)	0.082*** (3.41)
<i>BIND</i>	-0.015* (-1.78)	-0.015* (-1.78)	0.043*** (2.90)	0.043*** (2.90)
<i>AGE</i>	0.007*** (4.78)	0.007*** (4.78)	-0.015*** (-5.49)	-0.015*** (-5.49)
<i>SIZE</i>	-0.001 (-0.99)	-0.001 (-1.01)	0.018*** (7.50)	0.018*** (7.52)
<i>NDTS</i>	0.025 (0.85)	0.025 (0.85)	-0.216 (-1.52)	-0.216 (-1.52)
<i>LIQUID</i>	-0.002*** (-3.69)	-0.002*** (-3.69)	-0.003*** (-4.58)	-0.003*** (-4.58)
<i>RISK</i>	0.167* (1.78)	0.167* (1.78)	-0.296*** (-6.50)	-0.297*** (-6.50)
<i>CAFLR</i>	0.015 (0.68)	0.015 (0.68)	-0.113*** (-3.51)	-0.113*** (-3.51)
<i>ROA</i>	-0.094** (-2.24)	-0.094** (-2.24)	0.016 (0.38)	0.015 (0.37)
<i>Constant</i>	0.063*** (3.05)	0.063*** (3.06)	-0.188*** (-4.00)	-0.189*** (-4.02)
<i>Observations</i>	3,404	3,404	3,404	3,404
<i>Adj-R²</i>	0.097	0.097	0.235	0.235
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes

Note(s): Please refer to [Table 2](#) for operational definitions. Robust t-statistics in parentheses *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

Table A3. Under and over-investment (2006–2022, $n = 3,404$)

Variables	(1) OV_INV	(2) OV_INV	(3) UN_INV	(4) UN_INV
<i>LDON</i>	0.001* (1.79)		0.000 (1.37)	
<i>DOND</i>		0.011* (1.80)		0.002 (1.43)
<i>DUAL</i>	0.009 (0.98)	0.009 (0.98)	-0.002 (-0.98)	-0.002 (-0.99)
<i>BIGN</i>	-0.007 (-1.07)	-0.007 (-1.06)	0.001 (0.71)	0.001 (0.72)
<i>BOD</i>	-0.003*** (-3.37)	-0.003*** (-3.38)	-0.000** (-2.13)	-0.000** (-2.13)
<i>DIVD</i>	-0.060*** (-9.77)	-0.060*** (-9.77)	0.002 (1.29)	0.002 (1.29)
<i>MTB</i>	-0.000 (-0.37)	-0.000 (-0.36)	-0.000*** (-2.95)	-0.000*** (-2.96)
<i>FEMALE</i>	-0.017 (-0.93)	-0.017 (-0.94)	-0.004 (-1.24)	-0.004 (-1.24)
<i>BIND</i>	-0.018 (-1.54)	-0.018 (-1.53)	0.004 (1.49)	0.004 (1.49)
<i>AGE</i>	-0.000 (-0.07)	-0.000 (-0.07)	0.001 (1.46)	0.001 (1.46)
<i>SIZE</i>	-0.002 (-1.22)	-0.002 (-1.23)	0.000 (0.54)	0.000 (0.54)
<i>NDTS</i>	-0.011 (-0.14)	-0.011 (-0.15)	-0.015 (-1.39)	-0.015 (-1.39)
<i>LIQUID</i>	-0.001*** (-2.76)	-0.001*** (-2.76)	-0.000*** (-4.42)	-0.000*** (-4.42)
<i>RISK</i>	-0.073** (-2.41)	-0.073** (-2.41)	-0.016*** (-2.76)	-0.016*** (-2.76)
<i>CAFLR</i>	0.094*** (2.89)	0.094*** (2.89)	0.035*** (5.00)	0.035*** (5.01)
<i>ROA</i>	-0.114*** (-2.99)	-0.114*** (-2.99)	-0.017** (-2.15)	-0.017** (-2.16)
<i>Constant</i>	0.205*** (6.49)	0.205*** (6.49)	-0.030*** (-3.43)	-0.030*** (-3.44)
<i>Observations</i>	1,721	1,721	1,679	1,679
<i>Adj-R²</i>	0.268	0.268	0.477	0.477
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes

Note(s): Please refer to [Table 2](#) for operational definitions. Robust t-statistics in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Appendix 4

Table A4. Exogenous shock – difference-in-differences

Variables	Pre-2019	Post-2019	Pre-2019	Post-2019	Pre-2019	Post-2019
	(1)	(2)	(3)	(4)	(5)	(6)
	<i>CA_HO</i>	<i>CA_HO</i>	<i>LEV</i>	<i>LEV</i>	<i>INVEFF</i>	<i>INVEFF</i>
<i>TREAT_POST</i>	-0.013 (-0.98)	0.012 (0.97)	-0.001 (-0.05)	-0.039 (-1.39)	0.006 (1.21)	-0.002 (-0.43)
<i>Constant</i>	0.461*** (3.36)	-0.170 (-0.72)	-0.049 (-0.28)	0.544** (2.08)	-0.165*** (-2.75)	-0.282** (-2.54)
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations</i>	2,230	1,023	2,230	1,023	2,230	1,023
<i>Adj-R²</i>	0.774	0.866	0.739	0.836	0.574	0.663
<i>Year</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm</i>	Yes	Yes	Yes	Yes	Yes	Yes

Note(s): Robust t-statistics in parentheses *** $p < 0.01$, ** $p < 0.05$

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