Political Preferences and Financial Market Equilibrium

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We develop a model where investors have conflicting political preferences and show that this leads to polarized corporate political stances and partisan portfolio holdings. Partisan firms have lower expected stock returns than politically neutral firms. The return gap increases if corporate partisanship reduces expected cash flows and decreases with the influence of centrist investors. Value-maximizing political stances do not necessarily maximize overall welfare, and they are susceptible to influence by a politically active large investor. If the cost of such influence activity is low, requiring corporate political stance to reflect the ownership-weighted average shareholder preference can increase aggregate welfare.

Keywords: corporate political stance, political polarization, partisanship, corporate governance, non-pecuniary utility

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Corporations are increasingly engaging in socio-political issues, such as gun control, immigration, racial justice and gender equality, and they demonstrate their stances in a variety of ways. Besides donations to parties, politicians and social organizations, they promote political values through CEO activism, corporate policies, marketing strategies, and public statements at press conferences, interviews, or on social platforms.[1] While such corporate activism is not new, it has become increasingly salient due to powerful communication technologies, which not only make corporate political stances more visible and relevant but also provide firms with more effective tools to influence social and political outcomes. In the U.S., these developments have been reinforced by a landmark decision by the Supreme Court in 2010 (Citizens United v. Federal Election Commission), which gave corporations more flexibility to engage in political activities. Together with the well-documented trend of rising political polarization in business, government, and society (e.g., Fos et al. (2023)), recent studies have also found increasing partisanship in investor behavior (e.g., Pan et al. (2024)).[2]

From a corporate governance perspective, a firm's political stance can be viewed from two angles. First, a firm's social or political stance may affect the present value of future cash flows to shareholders. For example, the political stance may influence consumer decisions and therefore corporate profitability (Conway and Boxell (2023)). Through this lens, engaging in socio-political issues is consistent with traditional shareholder value maximization as long as it increases the present value of future cash flows to equityholders. Alternatively, corporate political stance may not affect corporate profitability, but it may be considered within a broader set of objectives that shareholders may have, as suggested by Hart and Zingales (2017). For example, some shareholders may value highly individual rights, and others may value highly social justice or income and/or wealth equality. A firm's political stance may

[1]For example, more than 180 CEOs of American firms co-signed a letter opposing state efforts to restrict reproductive rights in June 2019; 228 CEO co-signed a letter urging members of the U.S. Senate to pass legislation against gun violence in June 2022. See Mkrtchyan et al. (2023) for more examples of such events.

[2]Some ETFs and hedge funds are created to pursue so-called "politically responsible investing." For example, the MAGA ETF launched by Point Bridge Capital invests primarily in companies that align with the Republican political values. It tracks an index that is made up of 150 companies in the S&P 500 index whose employees and political action committees are highly supportive of Republican candidates. The hedge fund 1789 Capital, named after the year U.S. Congress passed the Bill of Rights, invests primarily in firms catering to conservative consumers and penalized by the ESG investment trend. Other examples include the American Conservative Values ETF and the Democratic Political Contributions ETF. See the recent article *How American Politics Has Infected Investing*, in *The Economist* (4/21/2024) for a discussion on this topic.

therefore create non-pecuniary payoffs for its shareholders by helping to shape a political environment that is more or less supportive of a particular set of values. In this framework, political stance can affect firm value by its effect on the well-being of a broader set of corporate stakeholders, or of citizens at large, perceived by politically sensitive investors.

Such a broader view of shareholder objectives raises important questions, especially in the context of an increasing partisan divide in political preferences. In particular, how do investors' political preferences affect their investment decisions and firm values? How do value-maximizing firms choose their political stances? How are firms' political stances, market values, expected stock returns, and ownership allocations jointly determined in equilibrium? How does the equilibrium depend on the structure of the financial market and the rules governing the choice of corporate political stance? Finally, how is firm value maximization related to welfare maximization when investors have conflicting political preferences? This paper takes a first step to analyze these questions by developing a model of financial market equilibrium with conflicting political preferences.

Our model features two types of mean-variance investors differing in both risk tolerance and political preferences. In the baseline setting, we assume that both types represent small, competitive investors. Investors perceive non-pecuniary payoffs from a firm's political stance, which can be either positive or negative, depending on the distance between the firm's political stance and the investor's own political preference. Motivated by experimental evidence presented by Bonnefon et al. (2022), which shows that investors' willingness to pay for a stock is a linear and symmetric function of corporate externalities, we assume in our main analysis that the non-pecuniary payoff functions are linear and symmetric in this distance, and are zero for politically neutral firms. The non-pecuniary payoff also depends on how strongly an investor cares about a firm's political stance, which we capture by an investor-firm specific political preference intensity parameter. In light of empirical evidence (e.g., Heeb et al. (2022), Bonnefon et al. (2022)), we assume that investors are non-consequentialists. That is, they internalize a fraction of a firm's perceived political externalities based on their holdings instead of considering the impact of their investment decisions on total externalities. To isolate the effects of investor political preferences, we assume that corporate political stances are cash flow neutral in the baseline model.

We first analyze how exogenously given corporate political stances affect stock prices and ownership allocation when both groups of investors behave competitively. We find that, consistent with the evidence of political value alignment in stock holdings documented in the literature (e.g., Hong and Kostovetsky (2012), Pan et al. (2024)), there is a political preference clientele effect: investors tilt their portfolios towards firms with political stances that are close to their own preferences.[3] The resulting deviations of ownership allocation from the optimal risk sharing allocation increase in aggregate political preference intensity and the distance between opposite political preferences, and decrease in aggregate risk aversion. The stock price premium of a politically non-neutral firm over a comparable neutral firm equals the weighted average of investors' non-pecuniary payoffs, which can be either positive or negative. The absolute value of the premium increases with the distance between the opposite political preferences.

We then show how corporate political stances arise endogenously in a competitive equilibrium where managers maximize firm values. We find that a firm's value-maximizing political stance aligns perfectly with the preference of the investor group with the higher risk tolerance-weighted political preference intensity towards the firm. Thus, corporate political stances are polarized endogenously. Firms cater to the preference of one investor group and ignore the preference of the other. Because the positive non-pecuniary payoff internalized by the catered investor group exceeds the negative payoff internalized by the remaining group and the efficiency loss in risk sharing, stock prices are higher and expected returns are lower for partisan firms (i.e., firms with a polarized political stance) than for comparable politically neutral firms. This result is consistent with the positive stock market reactions to CEO activism reported by Homroy and Gangopadhyay (2023) and Mkrtchyan et al. (2023). When cash flows are uncorrelated across firms, the competitive equilibrium with determinate value-maximizing corporate political stances always maximizes aggregate utility. This is not true in general when cash flows are correlated. This is so because a value-maximizing firm always caters to the investor group with the higher risk tolerance-weighted political preference intensity towards the firm. However, when cash flows are correlated, such an investor group

[3] Levit et al. (2024) show a similar clientele effect in a model with heterogeneous shareholder preferences and endogenous formation of shareholder base through trading.

may end up holding only hold a small fraction of the firm's outstanding shares, making the firm's choice of political stance socially suboptimal.

We consider two extensions of the baseline model. First, we allow firms' expected cash flows to depend on their political stance, which leads to a potential tension between maximizing market value of the firm and maximizing the present value of cash flows. Second, we introduce a third type of investors, namely centrist investors, who perceive disutilities when firms deviate from a neutral political position. In both extensions, we find that polarization of corporate political stances is more likely to occur if investors' political preferences are more polarized, either in the sense that the opposite political preferences are more distant from each other, or in the sense that centrist investors decline in influence. Furthermore, while both the existence of a negative cash flow effect of corporate partisanship and the rise of centrist investors reduce the fraction of firms taking polarized political stances, they have opposite effects on the average expected return gap between partisan firms and politically neutral firms. The former amplifies the gap, while the latter mitigates it.

To examine the impact of market structure, we further analyze the equilibrium where one type of investors can coordinate, thus behaving like a large strategic investor. We show that if the large shareholder is politically passive, in the sense that he takes corporate political stances as given, then, under the value-maximization rule, his influence on corporate political stances is weaker since he internalizes the price impact of his portfolio decisions. The concern about price impact lowers the sensitivity of the large investor's stock demand to a change in corporate political stance, which reduces the influence of his preference on value-maximizing firms' decisions. However, the price impact also provides a powerful tool that can be exploited by a politically active large investor to influence corporate political stances. Such an investor can strategically increase the sensitivity of his investment to a firm's choice of political stance by committing to divest when the firm's political stance does not conform with his preference and to hold a sufficiently large stake otherwise. If the cost of such influence activity is low, then the equilibrium under the value-maximization rule not only imposes significant disutilities on small investors, but also features significant lower aggregate welfare. Because the value-maximizing corporate political stance is susceptible to divestment threats from the large investor, we explore a simple alternative rule for the determination of corporate political stance, which we refer to as the preference-matching rule. Under this alternative rule, the corporate political stance is determined by the ownership-weighted average of shareholder preferences.

We conduct numerical analyses to compare different equilibria. In addition to illustrating and quantifying the economic significance of the analytical results, the numerical exercises also generate new insights. For example, they show that while the large investor's pursuit of influence on corporate political stances under the preference-matching rule significantly increases the stock price, its impact on the welfare of small investors is relatively limited. In contrast, the large investor's use of the divestment strategy to influence corporate political stances under the value-maximization rule generates large negative externalities. It reduces not only the welfare of small shareholders but also aggregate utilitarian welfare, and results in a lower stock price despite the increased ownership by the large investor. Consequently, if the large investor can engage in influence activity at low cost, the value-maximization rule can be welfare-dominated by the preference-matching rule.

Our paper has strong positive and normative implications. On the positive side, we provide an explanation for partisanship in both investor and firm behaviors, and we derive predictions on the effects of political preferences on firm value and expected stock returns. Our results suggest that firms may take a partisan stance even if it reduces expected cash flows. Under the natural assumption that investors' political preference intensities are stronger towards firms located in greater geographical proximity, our model predicts that firms located in left-leaning (right-leaning) areas are more likely to cater to and attract left-leaning (right-leaning) investors, consistent with the evidence presented by Pan et al. (2024). On the normative side, we show that letting firms reveal and pursue value-maximizing political stances can improve welfare, because doing so allows investors to align investments with political values. At the same time, our model also highlights the distorting effect of values-based investing on optimal risk sharing and the negative externalities investors with conflicting political preferences impose on each other through their influence on corporate political stance.

Our paper contributes to a growing literature on the role of political ideology and partisanship in economic activities. Using political affiliations from voter registration records for top executives of S&P 1500 firms between 2008 and 2020, Fos et al. (2023) show that executive teams in large U.S. firms are becoming increasingly partisan. Cassidy and Kempf (2022) find a large increase in the amount of partisan corporate speech from 2011 to 2022 based on tweets from S&P 500 companies. Mkrtchyan et al. (2023) show that firms are increasingly vocal on socio-political issues. Bertrand et al. (2023) find that after an institutional investor acquires a large stake in a firm, the firm's political giving mirrors more closely that of the acquiring investor. Their evidence suggests that this convergence results from managers catering to political preferences of investors, consistent with the catering behavior of managers in our model. Recent research has also documented pervasive effects of political ideology on the behaviors of both institutional and retail investors. For example, Hong and Kostovetsky (2012), Bonaparte et al. (2017), Wintoki and Xi (2020), and Pan et al. (2024) show the partisan effect in portfolio holdings; Cookson et al. (2020), Meeuwis et al. (2022), Sheng et al. (2023), and Cassidy and Vorsatz (2024) document the partisan effect in beliefs and trading around presidential elections and during the COVID pandemic; Homroy and Gangopadhyay (2023) and Mkrtchyan et al. (2023) document positive stock market reactions to CEO activism; Wang (2023) finds that partisanship affects mutual fund reactions to partisan-sensitive topics in corporate earnings calls and that such reactions do not appear to be driven by rational expectations about future returns. Furthermore, the asset pricing literature has documented significant effects of political cycles on both time series and cross-section of stock returns (Santa-Clara and Valkanov (2003), Chen et al. (2023)).[4] Despite abundant evidence for the importance of political ideology and partisanship in economic activities and financial markets, to the best of our knowledge, no previous studies have examined the effect of investor political preferences on financial market equilibrium. We show that the increasing partisanship and activism in Corporate America can be an endogenous outcome of a more politically polarized economic and social environment, and we analyze the equilibrium effects of corporate political stance on firm value and investor welfare.

Our paper is also closely related to the nascent literature on social/ESG preferences of investors. An increasing number of studies have documented that investors value both

[4] See Kempf and Tsoutsoura (2024) for a comprehensive review of the literature on partisan and ideological divisions in financial decisions of households, corporate executives, and financial intermediaries.

financial and non-financial payoffs (Riedl and Smeets (2017), Hartzmark and Sussman (2019), Barber et al. (2021), Bauer et al. (2021), Starks (2023)). Heinkel et al. (2001), Pastor et al. (2021), Pedersen et al. (2021), Berk and van Binsbergen (2021), Favilukis et al. (2023), and Dangl et al. (2023a) examine the impact of social and environmental preferences on expected returns and firm behavior. Edmans et al. (2023) and Oehmke and Opp (2024) analyze the effectiveness of alternative impact investing strategies, and Goldstein et al. (2024) investigate how ESG investing reshapes information aggregation reflected in prices. Levit et al. (2023) and Levit et al. (2023) examine shareholder trading and voting in an environment with heterogeneous preferences. Additionally, Ferreira and Nikolowa (2024) show that workers' tastes for non-pecuniary job attributes lead flexible firms to cater to workers with extreme preferences. We complement this literature by examining the effects of investor political preferences. Our paper is most closely related to that of Pastor et al. (2021), who investigate the effect of investors' non-pecuniary tastes for ESG on expected stock return in an extended mean-variance preference framework. A key difference between the political preferences in our model and the ESG preferences analyzed by Pastor et al. (2021) and others is that political preferences imply a redistribution of non-pecuniary utilities across investors: By changing the political stance, a firm increases non-pecuniary payoffs of one investor type but makes the other type worse off. In contrast, ESG preferences do not have this feature: Improving a firm's ESG performance does not reduce non-pecuniary payoffs of any investor in these models. Take firms' environmental performance as an example. Investors may differ in the degree to which they care about the environment, but they generally prefer, at least weakly, less polluting firms to more polluting ones. As a result, a reduction in greenhouse gas emissions is a Pareto improvement for all investors.[5] This distinction between the two types of preferences has important implications for their effects on firm value, firm behavior, and investor welfare. First, other things equal, improved environmental or social performance boosts firm value and lowers the cost of capital in the above literature, while a non-neutral political stance can increase, decrease, or have no effect on firm value. Second, while stronger investor preferences in ESG models push all firms to become greener and

[5] In our framework, this corresponds to a special case in which one type of investors is apolitical (i.e., their political preference intensity converges to zero), while the other type has a preference for lower emissions.

more prosocial, stronger political preferences of opposite investor groups push more firms to be more polarized. Therefore, the ESG literature and our paper address two fundamentally different trends observed in recent years: corporate social responsibility vs. polarization. Third, while pro-ESG investors can affect the welfare of non-ESG investors only through their impact on stock prices and firm cash flows, investors with conflicting political preferences can impose disutility on each other directly by affecting corporate political stance. This raises more severe concerns about conflicts of interest, especially when some investors can coordinate to create market power.

Our paper also contributes to the literature on the effect of political activities on shareholder value. Many studies have found that political connections enhance shareholder value (e.g., Fisman (2001), Faccio et al. (2006), Goldman et al. (2008), Brown and Huang (2020), Christensen et al. (2022)). One notable exception is Bertrand et al. (2018), who show that politically connected CEOs alter corporate employment decisions to help (regional) politicians in their re-election efforts but receive no detectable benefits in return. Previous research has also shown that campaign contributions to winning candidates have a positive effect on firm value (e.g., Claessens et al. (2008), Akey (2015)). Borisov et al. (2015) find that corporate lobbying increases shareholder value and that part of the value increase may come from unethical practices of rent seeking. Our study complements this strand of literature by focusing on the non-pecuniary payoffs of corporate political stances internalized by investors instead of the cash flow effects of political activities.[6]

In what follows, we present the model setup in Section I and derive the competitive equilibrium and its welfare implications in Section II. We consider extensions of the competitive equilibrium model in Section III. We allow for the presence of a large strategic investor and examine the resulting equilibria in Section IV. We compare the equilibria numerically in Section V and conclude in Section VI. All proofs are in the Appendix.

[6]Take the IPO of the Trump Media & Technology Group on March 26, 2024 as an example. Many financial analysts believe that the IPO is vastly overvalued relative to the company's fundamentals. This suggests that political stance affects not only a firm's cash flows, but also its valuation conditional on the cash flows, potentially due to non-pecuniary utilities internalized by some investors.

I. Model Setup

There are N stocks representing equity shares of N firms. The total supply of each stock is normalized to one. The payoffs of the stocks are jointly normally distributed with mean payoffs denoted by a vector μ and variance-covariance denoted by a non-degenerate matrix V. In addition, there is a riskless asset in infinitely elastic supply, whose gross return is normalized to one.

A. Extended Mean-Variance Preferences

We incorporate investors' political preferences in an extended mean-variance framework, where, in addition to financial payoffs, political considerations also enter investors' utility. In particular, investors care about firms' political stances, e.g., which political party they support, via which party they channel their lobbying activities, or how they interact with governments in different political regimes. The underlying reason may be that firms' political stances affect investors' own welfare directly, or that investors internalize some perceived effects of corporate political stances on the welfare of other stakeholders, including consumers, workers and citizens at large. For example, if an investor values living in a society that highly protects individual rights, this investor may prefer a certain corporate political stance, whereas investors who value strict environmental protection particularly highly may prefer the firm to take a different political stance. Accordingly, the preferences examined in this paper are consistent with a generalized version of those in Pastor et al. (2021) or in Pedersen et al. (2021), as we explicitly consider conflicting preferences. To isolate the pure role of investors' political preferences, we assume that firms' political stances have no effect on their cash flows in our baseline analysis.

Specifically, there are two types of investors, indexed by $j \in \{R, L\}$ and represented by a continuum of agents with a total mass of one. Type-R investors, referred to as R, have political preference $\hat{\theta}_R$ and aggregate risk tolerance τ_R, whereas type-L investors, referred to as L, have political preference $\hat{\theta}_L$ and aggregate risk tolerance τ_L. For convenience and without loss of generality, we normalize $\hat{\theta}_L$ to zero and $\hat{\theta}_R$ to one, and define $\delta > 0$ as a measure of the distance between the political preferences of the two investor types, i.e. the dispersion of their political preferences.[7] A high δ indicates a high degree of polarization.

In our baseline setting, we assume that both types of investors are atomistic and act competitively, taking both prices and corporate political stances as given. Subsequently, in an alternative setting, we allow one type of investors to coordinate and behave strategically, whereas the other type continues to behave competitively. The coordinated investor group can be interpreted as a large institutional investor, to which the individual small investors delegate their portfolio decisions. This alternative setting is similar to that of Admati et al. (1994). Without loss of generality, we assume that R is the coordinated investor group in this setting.

The utility function of investor j is:

$$U_j = (\alpha_j^0 - \alpha_j)'P + \alpha_j'\mu - \frac{1}{2\tau_j}\alpha_j'V\alpha_j + d_j, \text{ for } j \in \{R, L\}, \tag{1}$$

where P is an $N \times 1$ vector of stock prices; e is a vector of ones; α_j^0 denotes the endowed ownership shares of j, with $\alpha_R^0 + \alpha_L^0 = e$; $(\alpha_j^0 - \alpha_j)'P$ is j's investment in the risk-free asset. The last term, d_j, represents j's non-pecuniary utility arising from political preference.[8]

The political stances of all firms are denoted by an $N \times 1$ vector Θ. In analogy to investors' preferences, the elements of Θ are also normalized by δ. Firms with $\Theta_i = 0$ are perfectly aligned with the preference of L, while firms with $\Theta_i = 1$ are perfectly aligned with the preference of R. We refer to such firms partisan firms. Firms with $\Theta_i = \frac{1}{2}$ are politically neutral.

B. *Non-pecuniary Payoffs*

The experimental evidence presented by Bonnefon et al. (2022) suggests that investors' willingness to pay for a stock is a linear and symmetric function of corporate externalities. Fur-

[7] In other words, the normalized distance between the two preferences is one, but the actual distance is δ.

[8] The maximization of utility function (1) is equivalent to the maximization of expected utility of an investor with constant absolute risk aversion (CARA), i.e.,

$$E[U_j(\tilde{C}_j)] = E[-e^{-\frac{1}{\tau_j}\tilde{C}_j}],$$

where $\tilde{C}_j$ is the sum of j's physical consumption, equal to the end-of-period wealth, and the non-pecuniary consumption d_j.

thermore, Bonnefon et al. (2022) and Heeb et al. (2022) show that investors' non-pecuniary payoffs are associated with their own portfolio holdings.[9] Motivated by these findings, we assume that non-pecuniary payoffs decrease linearly with the distance between an investor's political preference and the corporate political stance in our main analysis. Specifically, for a firm with political stance Θ_i, investor j's non-pecuniary payoff is:

$$d_{j,i} = \alpha_{j,i}\Pi_{j,i}\delta(\frac{1}{2} - |\Theta_i - \hat{\theta}_j|), \quad \text{for} \quad j \in \{R, L\}, \tag{2}$$

where $\alpha_{j,i}$ represent j's ownership share in firm i, $|\Theta_i - \hat{\theta}_j|$ represents the normalized distance between firm i's political stance, Θ_i, and investor j's political preference, $\hat{\theta}_j$; $\frac{1}{2}$ represents the normalized stance of a politically neutral firm and $\Pi_{j,i} > 0$ is a parameter characterizing how strongly investor j cares about the political stance of firm i, which we refer to as j's political preference intensity towards firm i. The preference dispersion parameter δ enters the non-pecuniary payoff function because both investor political preferences and corporate political stances are normalized by δ. If $(\frac{1}{2} - |\Theta_i - \hat{\theta}_j|) > 0$, Θ_i is closer to j's political preference than is the neutral stance, leading to a positive non-pecuniary payoff perceived by j. Conversely, if $(\frac{1}{2} - |\Theta_i - \hat{\theta}_j|) < 0$, Θ_i is further away from j's preference than is the neutral stance, leading to a negative non-pecuniary payoff perceived by j. If $\Theta_i = \frac{1}{2}$, then both $d_{L,i}$ and $d_{R,i}$ are zero, which captures the idea that a politically neutral firm does not generate any non-pecuniary payoff. Note that for a given $\alpha_{j,i}$, $d_{L,i}$ peaks at $\Theta_i = 0$ while $d_{R,i}$ peaks at $\Theta_i = 1$, consistent with the idea that an investor's non-pecuniary payoff is highest when the corporate political stance perfectly coincides with his political preference. Figure 1 shows an example of $d_{L,i}$ and $d_{R,i}$ specified in Equation (2).

The political preference intensity parameter $\Pi_{j,i}$ can be viewed as an inverse measure of j's tolerance of political disagreement with respect to firm i. We allow this parameter to vary across firms for both types of investors, independent of the sizes of their stakes in the firm. This captures the idea that an investor may care about the political stances of different firms to different degrees. For example, an investor with a strong view about income distribution

[9] Such preferences are called non-consequentialist preferences as the agents care more about their own actions, i.e., holding or not holding certain stocks, instead of the impact on the aggregate outcome. See Bonnefon et al. (2022) and Dangl et al. (2023b) for more discussions of these two types of preferences.

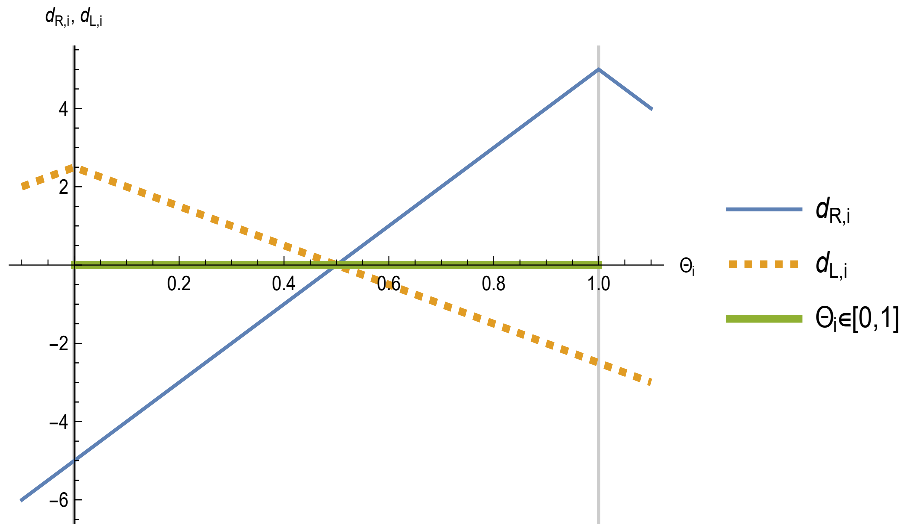

Figure 1: **Non-pecuniary payoffs as functions of corporate political stance.** This figure shows an example of non-pecuniary payoff functions $d_{R,i}$ and $d_{L,i}$ specified in Equation (2) with $\alpha_{R,i} = \alpha_{L,i} = \frac{1}{2}$, $\delta = 1$, $\Pi_{R,i} = 20$, $\Pi_{L,i} = 10$, $\hat{\theta}_R = 1$, and $\hat{\theta}_L = 0$.

and gender equality may pay close attention to the political stance of a financial firm, while an investor with a strong view about carbon emissions or labor conditions may care more about the political stance of a manufacturing firm. Also, both types of investors may pay more attention to firms more actively engaging in political activities.

In addition, the cross-sectional variation in $\Pi_{j,i}$ may also reflect the geographical proximity between firms and investors. Investors may naturally care more about the political stances of firms located close to where they live. Furthermore, they may have easier access to information about such firms. As a result, the political preference intensity toward the same firm may differ substantially across investors. For example, if firm i is located in a state mostly populated by type-L investors while firm j is located in a state mostly populated by type-R investors, it is natural to expect $\Pi_{L,i} > \Pi_{R,i}$ and $\Pi_{L,j} < \Pi_{R,j}$.

Due to the symmetry of the non-pecuniary payoffs around the preferred stances for both types of investors, value-maximizing firms will not take a political stance that is more extreme than $\Theta_i = 0$ or $\Theta_i = 1$ as long as both $\alpha_{R,i}$ and $\alpha_{L,i}$ are non-negative. This is because any corporate political stance $\Theta_i < 0$ or $\Theta_i > 1$ can be replaced by a $\Theta_i \in (0, 1)$ that increases the non-pecuniary payoffs of both types of investors at least weakly. In other words, such extreme corporate political stances are at least weakly Pareto dominated by more moderate stances. Therefore, we only consider corporate political stances bounded between 0 and 1:

$$\Theta_i \in [0,1], \quad \forall i \in \{1,2,..,N\}. \tag{3}$$

This means that $|\Theta_i - \hat{\theta}_L| = \Theta_i$ and $|\Theta_i - \hat{\theta}_R| = 1 - \Theta_i$ in Equation (2). Therefore, non-pecuniary payoffs for investors R and L in Equation (1) are written as:

$$d_R = \alpha_R'[(\delta\Pi_R \circ (\Theta - \frac{1}{2}e)], \tag{4}$$

$$d_L = \alpha_L'[(\delta\Pi_L \circ (\frac{1}{2}e - \Theta)], \tag{5}$$

where α_j, for $j \in \{R, L\}$, is an $N \times 1$ vector representing j's ownership weights across firms, $\Pi_j \geq 0$ is an $N \times 1$ vector representing j's political preference intensities across firms, $\Theta_i \in [0,1] \quad \forall i$, and $\circ$ represents the Hadamard (or element-wise) product operator.[10] Note that we do not require elements in α_R or α_L to be non-negative unless otherwise noted. In other words, short sales are allowed. If an investor shorts a stock that she associates with negative (positive) externalities, she receives a positive (negative) non-pecuniary payoff. In contrast, if an investor owns more than 100% of a firm's equity, the non-pecuniary payoff that she internalizes is larger (in absolute value) than the externalities she perceives to be generated by the firm.

In the baseline model, we assume that corporate political stances are chosen by managers motivated to maximize firm values.

II. Competitive Equilibrium

We now examine the competitive equilibrium in our baseline setting and its relation to a utilitarian first-best allocation.

[10]For two $N \times 1$ vectors Π_j and Θ, $\Pi_j \circ \Theta$ is an $N \times 1$ vector with the i-th element equal to $\Pi_{j,i}\Theta_i$. More explicitly, $\Pi_j \circ \Theta \equiv (\Pi_{j,1}\Theta_1, \Pi_{j,2}\Theta_2, .., \Pi_{j,N}\Theta_N)'$. We note that $\alpha_j'(\Pi_j \circ \Theta) = \alpha_j' diag(\Pi_j)\Theta$, where $diag(\Pi_j)$ is an $N \times N$ diagonal matrix with the diagonal entries populated by the elements of vector Π_j.

A. *Prices and Allocation as Functions of Corporate Political Stances*

We first analyze how stock prices and ownership allocation depend on corporate political stances that are given exogenously. Taking partial derivatives of the utility function of each type of investors with respect to the ownership shares leads to the following first-order conditions for α_R and α_L:

$$\alpha_R = \tau_R V^{-1}[\mu + \delta\Pi_R \circ (\Theta - \frac{1}{2}e) - P], \tag{6}$$

$$\alpha_L = \tau_L V^{-1}[\mu + \delta\Pi_L \circ (\frac{1}{2}e - \Theta) - P]. \tag{7}$$

Imposing market clearing

$$\alpha_R + \alpha_L = e, \tag{8}$$

we obtain the following proposition:

Proposition 1: *In a competitive market, the equilibrium stock prices and ownership allocation under a given set of corporate political stances are as follows:*

$$P = \mu - \frac{1}{\tau_R + \tau_L} V e + \delta(\lambda_R \Pi_R - \lambda_L \Pi_L) \circ (\Theta - \frac{1}{2}e), \tag{9}$$

where $\Theta_i \in [0, 1] \quad \forall i$.

$$\alpha_R = e - \alpha_L = \lambda_R e + \frac{\delta}{\gamma} V^{-1}[\Pi \circ (\Theta - \frac{1}{2}e)], \tag{10}$$

where λ_j *represents the share of investor* j *in aggregate risk tolerance:*

$$\lambda_j \equiv \frac{\tau_j}{\tau_R + \tau_L} \text{ for } j \in \{R, L\}, \tag{11}$$

γ *denotes aggregate risk aversion in the economy:*

$$\gamma \equiv \frac{1}{\tau_R} + \frac{1}{\tau_L} = \frac{\tau_R + \tau_L}{\tau_R \tau_L}, \tag{12}$$

and Π *is a vector of aggregate political preference intensities:*

$$\Pi \equiv \Pi_R + \Pi_L. \tag{13}$$

Note that if $\Theta = \frac{1}{2}e$ (all firms are politically neutral), if $\delta \to 0$ (common political preferences) or if $\Pi_L \to 0$ and $\Pi_R \to 0$ (no perceived externalities), we have the benchmark optimal risk sharing equilibrium, in which the stock prices are given by

$$P^{bm} = \mu - \frac{1}{\tau_R + \tau_L} V e, \tag{14}$$

and the ownership allocation is given by

$$\alpha_j^{bm} = \lambda_j e, \quad for \quad j \in \{R, L\}. \tag{15}$$

Equation (15) is the classic optimal risk sharing rule derived by Wilson (1968), which implies that each investor group's ownership weights are constant across firms and equal to the group's weight in aggregate risk tolerance.

Define the vector of price premiums relative to the optimal risk sharing equilibrium as $\Delta P \equiv P - P^{bm}$, and the vector of deviations of R's ownership shares from the optimal risk sharing weights as $\Delta\alpha_R \equiv \alpha_R - \alpha_R^{bm}$. From Equation (9), it follows that the price premium for any firm i is a weighted average of the two investor groups' non-pecuniary payoffs, where the weights are given by the ownership under optimal risk sharing:

$$\Delta P_i = \lambda_R \delta \Pi_{R,i}(\Theta_i - \frac{1}{2}) + \lambda_L \delta \Pi_{L,i}(\frac{1}{2} - \Theta_i). \tag{16}$$

Equation (16) reveals two remarkable features of the competitive equilibrium. First, a firm's stock price premium relative to its price under optimal risk sharing depends only on the ownership weights under optimal risk sharing and not on the actual ownership allocation.[11]

[11]To better understand the intuition for this result, note that from the first-order condition (6), we have

$$P = u - \frac{1}{\tau_R} V \alpha_R + \delta \Pi_R \circ (\Theta - \frac{1}{2}e), \tag{17}$$

which shows that stock prices are equal to the marginal utility of R's stock ownership. (Using the first-order

Second, the premium of any stock i is only a function of the political stance of firm i itself and is independent of political stances of any other firm. This is similar to the effect of expected cash flows: while a change in the expected cash flow of one firm can affect the demands for other stocks, the clearing condition for a competitive market ensures that the price of the firm's own stock adjusts sufficiently so that the prices of other stocks remain unchanged. The same intuition applies to the effect of non-pecuniary payoffs. Covariances between cash flows affect stock prices P only through their effect on P^{bm}.

Equation (16) shows that for firms with a neutral political stance ($\Theta_i = \frac{1}{2}$), ΔP_i is zero. This is because such firms do not generate non-pecuniary payoffs for either group. ΔP_i is also equal to 0 if $\frac{\lambda_R}{\lambda_L} = \frac{\Pi_{L,i}}{\Pi_{R,i}}$. In this case, the non-pecuniary utility of one group is fully offset by the non-pecuniary disutility of the other group. In general, the price premium can be either positive or negative.

Since $\Delta P_i = 0$ for a politically neutral firm, ΔP_i in Equation (16) can also be interpreted as the price premium of a firm with a political stance Θ_i relative to a politically neutral firm with the same cash flow profile (mean and covariance with other firms). Define the expected stock return of firm i as

$$\overline{R}_i = \frac{\mu_i}{P_i} - 1. \tag{21}$$

It follows that relative to a political neutral firm with the same cash flow profile, the expected stock return of a firm with an exogenously given non-neutral political stance can be higher or lower, depending on whether its price premium ΔP_i is negative or positive.

Importantly, Equation (10) shows that the ownership allocation depends on the aggregate political preference intensity, $\Pi \equiv \Pi_L + \Pi_R$, instead of the preference intensity of each

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condition (7), we see that they are also equal to L's marginal utility of stock ownership.) Substituting out α_R using Equation (10), we have

$$\begin{aligned} P &= = u - \frac{1}{\tau_R} V(\alpha_R^{bm} + \Delta\alpha_R) + \delta\Pi_R \circ (\Theta - \frac{1}{2}e) & (18) \\ &= u - \frac{1}{\tau_R + \tau_L} Ve - \frac{\delta}{\gamma\tau_R}[\Pi \circ (\Theta - \frac{1}{2}e)] + \delta\Pi_R \circ (\Theta - \frac{1}{2}e) & (19) \\ &= P^{bm} + \delta[\lambda_R \Pi_R \circ (\frac{1}{2}e - \Theta) + \lambda_L \Pi_L \circ (\frac{1}{2}e - \Theta)]. & (20) \end{aligned}$$

These equations show that the price premiums ΔP can be decomposed into two parts: (1) the loss in risk sharing efficiency due to the deviation of α_R from α_R^{bm} by $\Delta\alpha_R$, which leads to price discounts by $\frac{1}{\tau_R} V \Delta\alpha_R$; (2) marginal non-pecuniary utility $\delta\Pi_R \circ (\Theta - \frac{1}{2}e)$. The combination of both leads to Equation (16).

individual group, Π_L and Π_R. Because the total shares outstanding of any firm must be allocated between the two investor groups, the positive non-pecuniary payoff to one group has the same effect as the negative non-pecuniary payoff to the other group. Even if one group does not care about a company's political stance at all, the other group's political preferences cause its holding to deviate from the optimal risk sharing level. In other words, the political preference intensities of the two groups are perfect substitutes in this regard.

Proposition 1 implies several corollaries:

Corollary 1: *In a competitive market with political preferences, for any firm i, the deviation of the stock price from the price under optimal risk sharing has the following properties:*

$$Sign[\frac{\partial \Delta P_i}{\partial \Theta_i}] = Sign[\frac{\lambda_R}{\lambda_L} - \frac{\Pi_{L,i}}{\Pi_{R,i}}], \tag{22}$$

$$\frac{\partial |\Delta P_i|}{\partial \delta} > 0 \quad if \quad \frac{\lambda_R}{\lambda_L} \neq \frac{\Pi_{L,i}}{\Pi_{R,i}} \ and\ \Theta_i \neq \frac{1}{2}, \tag{23}$$

where $\Pi_i \equiv \Pi_{R,i} + \Pi_{L,i}$.

Equation (22) shows that an increase of Θ_i towards $\Theta_i = 1$ increases the stock price if and only if the risk tolerance ratio $\frac{\tau_R}{\tau_L}$ (equivalent to $\frac{\lambda_R}{\lambda_L}$) is higher than the inverse political preference intensity ratio, $\frac{\Pi_{L,i}}{\Pi_{R,i}}$, or equivalently, if and only if $\lambda_R \Pi_{R,i}$ is higher than $\lambda_L \Pi_{L,i}$. Since $\lambda_R + \lambda_L = 1$, we refer to $\lambda_R \Pi_{R,i}$ and $\lambda_L \Pi_{L,i}$ as R's and L's risk tolerance-weighted political preference intensities, respectively. The non-pecuniary payoff of an investor group depends on both its ownership share and its preference intensity. Under optimal risk sharing, the former is determined by its share in aggregate risk tolerance λ_j. If R tends to hold a large ownership share because of its high risk tolerance, and if it cares more about a firm's political stance than L does, then adjusting the firm's political stance towards R's preference will increase R's non-pecuniary payoff more than it reduces L's. This leads to a higher market clearing price.

Inequality (23) implies that the stock price difference between a politically non-neutral firm and a similar but politically neutral firm is larger when political preferences of investors are more distant from each other.

Corollary 2: *In a competitive market with political preferences, for any firm i, the deviation* *of R's ownership share from the share under optimal risk sharing has the following properties:*

$$\frac{\partial \Delta \alpha_{R,i}}{\partial \Theta_i} > 0, \quad \frac{\partial^2 \Delta \alpha_{R,i}}{\partial \Theta_i \partial \Pi_i} > 0, \frac{\partial^2 \Delta \alpha_{R,i}}{\partial \Theta_i \partial \delta} > 0, \frac{\partial^2 \Delta \alpha_{R,i}}{\partial \Theta_i \partial \gamma} < 0, \tag{24}$$

$$\frac{\partial |\Delta \alpha_{R,i}|}{\partial \delta} \geq 0, \frac{\partial |\Delta \alpha_{R,i}|}{\partial \gamma} \leq 0, \tag{25}$$

where $\Pi_i \equiv \Pi_{R,i} + \Pi_{L,i}$*. If cash flows are uncorrelated across firms, then for firms with* $\Theta_i \neq \frac{1}{2}$*, we further have*

$$\frac{\partial |\Delta \alpha_{R,i}|}{\partial \Pi_i} > 0, \frac{\partial |\Delta \alpha_{R,i}|}{\partial V_i} < 0, \tag{26}$$

where V_i *is firm i's cash flow variance.*

The first inequality in (24) suggests a clientele effect in equity ownership. As Θ_i moves towards one, it becomes more aligned with the political preference of R, and less so with that of L. Thus the ownership share of R increases while the ownership share of L declines. This is consistent with the evidence of political value alignment in stock holdings documented in the literature and the practice of "politically responsible investing" funds such as the MAGA ETF mentioned in the introduction.[12]

The positive sign of the cross derivative $\frac{\partial^2 \Delta \alpha_{R,i}}{\partial \Theta_i \partial \Pi_i}$ in (24) suggests that the strength of the clientele effect is a function of the aggregate political preference intensity instead of the preference intensity of any group alone. As discussed earlier, the preference intensities of the two investor groups are substitutes for each other. Thus the clientele effect exists as long as one group cares about the political stance of a firm. It is particularly pronounced for firms that both groups care strongly about. Thus, counterintuitively, as the preference of the dominated investor group becomes stronger, it leads to larger ownership concentration in the hands of the dominating investor group. Furthermore, the inequalities displayed in (24) show that the clientele effect increases with the degree of political polarization δ and

[12] Hong and Kostovetsky (2012) and Bonaparte et al. (2017) show, respectively, that Democratic mutual fund managers and retail investors underweight politically sensitive industries (tobacco, guns and defense, and natural resources). Mkrtchyan et al. (2023) find that firms with CEO activism, which tends to reflect a liberal stance, realize increased shareholdings from investors with a greater liberal leaning. Pan et al. (2024) show that portfolio composition of rich households increasingly differs between counties with different political preferences and provide evidence of casual effect of political preferences.

decreases with aggregate risk aversion γ. These results reflect a tension between political preferences and risk aversion. While political preferences push investors towards firms that share their preferences, risk aversion pushes them towards optimal risk sharing.

Consistent with this tension, Inequalities in (25) and (26) further show that the absolute deviations of the ownership allocation from the optimal risk sharing allocation increases with the degree of political polarization and aggregate political preference intensity and decrease in aggregate risk aversion and cash flow variance.

To gain intuition for the effects of correlations across firms' cash flows on ownership, consider the case of two firms with a 2×2 non-degenerate covariance matrix V and its inverse V^{-1}:

$$V = \begin{pmatrix} V_1 & V_{12} \\ V_{12} & V_2 \end{pmatrix}, \quad V^{-1} = \frac{1}{V_1 V_2 - V_{12}^2} \begin{pmatrix} V_2 & -V_{12} \\ -V_{12} & V_1 \end{pmatrix}.$$

In this case, the following corollary holds:

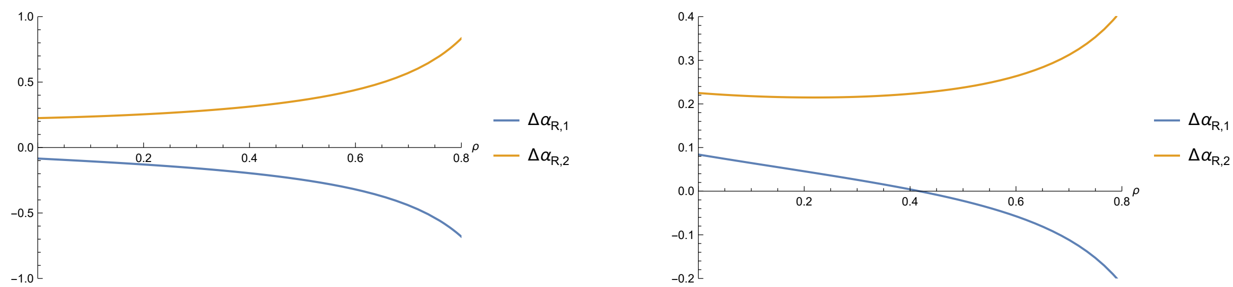
Corollary 3: *In a competitive market with two firms, R's ownership shares in firms 1 and 2 are:*

$$\alpha_{R,1} = \lambda_R + \frac{\delta \Pi_1}{\gamma(V_1 V_2 - V_{12}^2)}[V_2(\Theta_1 - \frac{1}{2}) - \frac{\Pi_2}{\Pi_1} V_{12}(\Theta_2 - \frac{1}{2})], \tag{27}$$

$$\alpha_{R,2} = \lambda_R + \frac{\delta \Pi_2}{\gamma(V_1 V_2 - V_{12}^2)}[V_1(\Theta_2 - \frac{1}{2}) - \frac{\Pi_1}{\Pi_2} V_{12}(\Theta_1 - \frac{1}{2})]. \tag{28}$$

Assume that the cash flows of the two firms are positively correlated, i.e., $V_{12} = \rho\sqrt{V_1 V_2} > 0$. Corollary 3 then implies that if the political stances of the two firms lean toward different groups of investors, the deviations of ownership allocation from optimal risk sharing are amplified in both directions. For example, if $\Theta_1 > \frac{1}{2}$ and $\Theta_2 < \frac{1}{2}$, which implies $\Delta\alpha_{R,1} > 0$ and $\Delta\alpha_{R,2} < 0$ in the absence of cash flow correlation, then a positive V_{12} makes $\Delta\alpha_{R,1}$ even more positive and $\Delta\alpha_{R,2}$ even more negative (note that $V_1 V_2 > V_{12}^2$). A positive correlation means that opposite deviations from the optimal risk sharing weights can partially hedge each other. This allows investors to pursue non-pecuniary payoffs more aggressively by further overweighting the firm with their preferred political stance and underweighting the firm with an opposing political stance.

If both firms' political stances are more aligned with the same group of investors, a



(A) $\Theta_1 = 0$, $\Theta_2 = 1$ (B) $\Theta_1 = \Theta_2 = 1$

Figure 2: **Correlation and ownership allocation.** This figure shows how cash flow correlation between two firms (ρ) affects the deviations of R's ownership shares in these two firms from the optimal risk sharing allocation. The parameter values are: τ_R=20, τ_L=30, $\Pi_{R,1}$=5, $\Pi_{L,1}$=2, $\Pi_{R,2}$=10, $\Pi_{L,2}$=5, V_1=500, V_2=400, $\delta = 1$.

positive correlation still alters ΔR_1 and ΔR_2 in opposite directions, as long as Π_1 and Π_2 differ sufficiently. For example, suppose both Θ_1 and Θ_2 are higher than $\frac{1}{2}$, which implies that both $\Delta\alpha_{R,1}$ and $\Delta\alpha_{R,2}$ are positive in the absence of cash flow correlation. If $\frac{\Pi_2}{\Pi_1}$ is sufficiently large, a positive V_{12} decreases $\Delta\alpha_{R,1}$ and increases $\Delta\alpha_{R,2}$; if $\frac{\Pi_2}{\Pi_1}$ is sufficiently small, a positive V_{12} increases $\Delta\alpha_{R,1}$ and decreases $\Delta\alpha_{R,2}$. A positive correlation makes stocks partially substitutable. Thus, if both firms' political stances lean toward the preference of R, R reduces its ownership share in the firm with a low aggregate political preference intensity in exchange for a larger share in the firm with a high aggregate political preference intensity.

Figure 2 illustrates a numerical example for these two scenarios. In Panel (A), Firm 2's political stance aligns with R's preference while Firm 1's does not. In this case, a positive cash flow correlation amplifies R's overweighting in Firm 2 and underweighting in Firm 1. In Panel (B), both firms' political stances align with R's preference. If the correlation is sufficiently low, R overweights both firms relative to the optimal risk sharing allocation; however, if the correlation is sufficiently positive, R overweights Firm 2, which is associated with a higher aggregate political preference intensity, and underweights Firm 1.

B. *Value-maximizing Corporate Political Stances*

In the subsection above, we analyze the effects of given corporate political stances on stock prices and ownership allocation. In a next step, we analyze how corporate political stances arise in equilibrium, assuming that firms choose their political stances to maximize equity values. As discussed, this objective arises if managers are incentivized to maximize share prices, for example to induce optimal effort or investment choices. Since stock prices are given by Equation (9) in a competitive market, if managers choose Θ to maximize equity values, the resulting equilibrium is characterized by the following proposition:

Proposition 2: *In a competitive equilibrium with value-maximizing firms, the political stance of any firm i is:*[13]

$$\Theta_i^* = \begin{cases} 1 & \text{if } \frac{\lambda_R}{\lambda_L} > \frac{\Pi_{L,i}}{\Pi_{R,i}}; \\ \frac{1}{2} & \text{if } \frac{\lambda_R}{\lambda_L} = \frac{\Pi_{L,i}}{\Pi_{R,i}}; \\ 0 & \text{otherwise.} \end{cases} \tag{29}$$

The stock price of a partisan firm i exceeds that of a comparable politically neutral firm by an amount equal to:

$$\Delta P_i^* = \frac{\delta}{2} |\lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i}| > 0, \tag{30}$$

which implies that its expected return is lower than that of a comparable politically neutral firm.

The equilibrium number of shares owned by R are:

$$\alpha_R^* = \lambda_R e + \frac{\delta}{\gamma} V^{-1} [\Pi \circ (\Theta^* - \frac{1}{2} e], \tag{31}$$

with Θ^* *defined in Equation* (29).

Equation (29) shows that a firm's value-maximizing political stance is determined by the relative sizes of the two investor groups' weighted political preference intensities: $\lambda_R \Pi_{R,i}$ vs. $\lambda_L \Pi_{L,i}$. The preference of the investor group with a higher weighted preference intensity is perfectly reflected in corporate political decisions, while the preference of the other group is totally ignored. This result has interesting and strong implications. It shows that, if firms choose political stances to maximize their market values, then this endogenously leads to polarized corporate political stances. Firms cater to the dominant investor group. This makes them even more attractive to this investor clientele, which induces further deviations

[13] We assume that firms stay politically neutral if the value-maximizing political stance is indeterminate.

of ownership allocation from optimal risk sharing.

Equation (30) shows that compared to a politically neutral firms with the same expected cash flow and risk profile, the stock price of a partisan firm (i.e., a firm with a polarized political stance) is higher, and the price difference is higher if the gap between $\lambda_R \Pi_{R,i}$ and $\lambda_L \Pi_{L,i}$ is larger, or if δ is bigger. As long as $\lambda_R \Pi_{R,i} \neq \lambda_L \Pi_{L,i}$, catering to one investor group leads to a utility gain that more than offsets the utility loss of the other group, leading to a higher firm value. This prediction is consistent with the evidence reported by Homroy and Gangopadhyay (2023) and Mkrtchyan et al. (2023). Both studies show that CEO activism generally results in positive stock price reactions. Furthermore, Homroy and Gangopadhyay (2023) find that abnormal returns to CEO activism are higher for companies operating in polarized environments, and Mkrtchyan et al. (2023) show that firms with greater CEO activism tend to have a higher Tobin's Q. The high IPO price of Trump Media & Technology Group provides a vivid example for the valuation effect of a polarized political stance. The lower expected return of partisan firms relative to politically neutral firms follows directly from the inverse relation between stock price and expected return.

Proposition 2 implies the following corollary:

Corollary 4: *In a competitive equilibrium with uncorrelated cash flows, for any firm i, the deviation of R's ownership share from the share under optimal risk sharing, i.e., $\Delta\alpha^*_{R,i} \equiv \alpha^*_{R,i} - \lambda_R$, has the following properties:*

$$\Delta\alpha^*_{R,i} \lesseqgtr 0 \quad \textit{if and only if} \quad \frac{\lambda_R}{\lambda_L} \lesseqgtr \frac{\Pi_{L,i}}{\Pi_{R,i}}, \tag{32}$$

$$Sign[\frac{\partial \Delta\alpha^*_{R,i}}{\partial \Pi_i}] = Sign[\frac{\partial \Delta\alpha^*_{R,i}}{\partial \delta}] = -Sign[\frac{\partial \Delta\alpha^*_{R,i}}{\partial V_i}] = Sign[\frac{\lambda_R}{\lambda_L} - \frac{\Pi_{L,i}}{\Pi_{R,i}}]. \tag{33}$$

Inequalities in (32) show that whether R's ownership share is higher or lower than the optimal risk sharing weight depends on whether it is the catered investor group. Equation (33) further shows that the deviation from the optimal risk sharing allocation is larger if the degree of political preference polarization (δ) is high, or if the aggregate risk aversion (γ) is low. Firm characteristics also play an important role. The deviation is larger for firms with a high aggregate political preference intensity (Π_i) and firms with a relatively low cash flow variance (V_i).

Under the natural assumption that investors care more about political stances of firms in greater geographical proximity, $\Pi_{L,i}$ is more likely to be be higher than $\Pi_{R,i}$ for firms located in areas mostly populated by type-L investors. Proposition 2 then predicts that firms located in politically left-leaning (right-leaning) areas are more likely to take a left (right) political stance, even in the absence of any cash-flow effects. Corollary 4 implies that such firms attract more left-leaning (righ-leaning) investors, generating a portfolio gap between the left-leaning and right-leaning areas, as documented by Pan et al. (2024).

While the polarization result in Proposition 2 is related to the linear non-pecuniary payoff functions we consider, linearity is not a necessary condition. For example, we obtain the same result in the Internet Appendix for the case where the non-pecuniary payoffs are cubic functions of the difference between the investor's political preference and the firm's political stance.

C. First-best Ownership Allocation and Corporate Political Stances

As a benchmark for welfare analysis, we now examine the first-best ownership allocation and corporate political stance distribution. We define the (utilitarian) first-best as a distribution of political stances and ownership shares that maximizes the sum of the utilities of the two types of investors. We abstract from the issue of welfare distribution among investors, because this can be solved through transfers between investors after the total "pie" is maximized.

For any given distribution of corporate political stances Θ, where $\Theta_i \in [0, 1]\, \forall i$, and any ownership vector α_R, the aggregate utility of the two types of investors can be written as:

$$\begin{aligned} U &= U_R + U_L \\ &= e'\mu - \frac{1}{2\tau_R}\alpha_R' V \alpha_R - \frac{1}{2\tau_L}(e-\alpha_R)' V (e-\alpha_R) \\ &\quad +\alpha_R'[\delta\Pi_R \circ (\Theta - \frac{1}{2}e)] + (e-\alpha_R)'[\delta\Pi_L \circ (\frac{1}{2}e - \Theta)]. \end{aligned} \tag{34}$$

Note that the price vector does not appear in the aggregate utility function. Because $\alpha_R^0 +$

$\alpha_L^0 = \alpha_R + \alpha_L = e$, changes in stock prices affect only the distribution of welfare between the two types of investors but not the aggregate.

Taking the first derivatives of U with respect to vectors α_R and Θ yields

$$\frac{\partial U}{\partial \alpha_R} = -\frac{1}{\tau_R} V \alpha_R + \frac{1}{\tau_L} V(e - \alpha_R) + \delta \Pi \circ (\Theta - \frac{1}{2}e); \tag{35}$$

$$\frac{\partial U}{\partial \Theta} = \delta(\Pi \circ \alpha_R - \Pi_L). \tag{36}$$

Note that both $\frac{\partial U}{\partial \alpha_R}$ and $\frac{\partial U}{\partial \Theta}$ are $N \times 1$ vectors. Setting $\frac{\partial U}{\partial \alpha_R}$ equal to zero, we obtain the first-order condition for the optimal choice of α_R:

$$\alpha_R = \lambda_R e + \frac{\delta}{\gamma} V^{-1}[\Pi \circ (\Theta - \frac{1}{2}e)]. \tag{37}$$

This is identical to Equation (10). Therefore, as long as the distributions of Θ in the utilitarian first-best and the competitive equilibrium are the same, the ownership allocations in these two scenarios are the same.

Because the optimal $\alpha_{R,i}$ generally depends on political stances of all firms in the economy (vector Θ), as shown in Equation (37), it is not easy to fully characterize the first-best Θ and α_R analytically in terms of exogenous variables. Nevertheless, we have the following proposition:

Proposition 3: *In the utilitarian first-best scenario of the baseline setting, all firms take a polarized political stance. If cash flows are uncorrelated across firms and* $\lambda_R \Pi_{R,i} \neq \lambda_L \Pi_{L,i} \, \forall i$, *then the utilitarian first-best corporate political stances and ownership allocation are the same as those in the competitive equilibrium. If cash flows are correlated across firms or if* $\lambda_R \Pi_{R,i} = \lambda_L \Pi_{L,i}$ *for some* i, *then the competitive equilibrium with value-maximizing corporate political stances does not always coincide with the utilitarian first best.*

Proposition 3 suggests that when firms can take a political stance without incurring any financial costs and cash flows are uncorrelated, then polized political stances also maximize aggregate utility, except for the knife-edge case in which both are indeterminate. This is because polarized corporate political stances provide investors with the best opportunities to align their portfolio holdings with political preferences. This generates a net non-pecuniary utility gain that outweighs the loss due to distortions in risk sharing. As the result, both aggregate welfare and individual stock prices are maximized.

To understand why correlations of cash flows across firms may destroy the welfare optimality of the competitive equilibrium, note that the stock price of firm i is determined by R's (or L's) marginal utility of owning the stock (see Footnote 11). In contrast, the social planner maximizes the total utility of both types of investors, accounting for surpluses associated with inframarginal units. When cash flows are uncorrelated across firms, both the value maximization and welfare maximization problems can be solved separately for each individual firm, and both require $\Theta_i = 1$ if $\frac{\lambda_R}{\lambda_L} > \frac{\Pi_{L,i}}{\Pi_{R,i}}$, and $\Theta_i = 0$ if $\frac{\lambda_R}{\lambda_L} < \frac{\Pi_{L,i}}{\Pi_{R,i}}$. Therefore, value maximization is the same as welfare maximization. When cash flows are correlated, stocks in an investor's portfolio become partially substitutable, and $\alpha_{R,i}$ is affected by all elements in Π and Θ. In particular, $\alpha_{R,i}$ can be very small even if $\frac{\lambda_R}{\lambda_L} > \frac{\Pi_{L,i}}{\Pi_{R,i}}$. If this is the case, then the aggregate utility of investors can be smaller for $\Theta_i = 1$ than for $\Theta_i = 0$, even though the value-maximizing stance is $\Theta_i = 1$. This breaks the equivalence between utilitarian welfare maximization and firm value maximization.

If $\lambda_R \Pi_{R,i} = \lambda_L \Pi_{L,i}$, the equivalence between value maximization and welfare maximization also breaks down even if cash flows are uncorrelated. In this knife-edge case, the marginal utility of ownership in firm i, which is determined by the optimal risk sharing weights, is independent of Θ_i. Thus, all values of $\Theta_i \in [0, 1]$ maximize the equity value, as shown in Proposition 2. In contrast, the total welfare depends on the actual ownership weights, and its maximization requires $\Theta_i = 0$ or $\Theta_i = 1$. Because the actual weights change optimally as Θ_i changes, deviating from neutrality can increase welfare, even though it has no effect on equity value in this case.

An important takeaway from Proposition 3 is that even with conflicting political preferences among investors, shareholder value maximization is equivalent to welfare maximization under certain conditions. The stock prices reflect both the financial benefits and non-financial benefits resulting from corporate decisions, making equity value the right corporate objective for welfare maximization. This result is not specific to the linear non-pecuniary payoff functions we consider. In the Internet Appendix, we show that it also holds in a setting where the non-pecuniary payoff functions are nonlinear. However, it is worth emphasizing that this equivalence is derived under rather strong conditions. First, the zero cash flow correlation assumption is certainly quite restrictive. Second, to derive this result, we abstract from many potential frictions. In particular, we do not consider any pecuniary costs of taking a political stance, any informational or agency issues, or any strategic behavior. Finally, it is important to note that the maximization of aggregate utility does not mean that all investors are better off. In fact, a key feature of the choice of a corporate political stance is its non-Pareto nature. A political stance favored by one investor group inevitably hurts another group. This redistribution effect is likely to be hard to undo using transfers from one group to another due to both informational and bargaining frictions, and it is more severe if one group of investors can coordinate and act strategically. In this case, the equilibrium under the value-maximization rule may not only impose substantial disutilities on uncoordinated investors but also reduce aggregate welfare, as we show in Sections IV and V.

III. Competitive Equilibrium: Extensions

In this section, we consider two extensions of the competitive equilibrium model. First, we allow firms' expected cash flows to depend on their political stances. Second, we consider the existence of centrist investors.

A. Cash Flow Effect of Corporate Political Stance

In our baseline model, we assume that firms' expected cash flows are independent from their political stances. This allows us to focus on the effect of investor political preferences. In practice, taking a non-neutral political stance may be financially costly, because firms need to take costly actions. For example, taking a specific political stance may require donations to political parties or supporting political campaigns. Furthermore, depending on the political preferences of a firm's main customers, employees, and executive team, a non-neutral political stance can either reduce or boost its expected cash flow. For example, a left-wing stance may hurt the sales of a gun producer but boost the sales of an abortion drug producer. To account for such possibilities, we now assume that firm i's expected cash flow decreases from its expected cash flow under the neutral stance, u, by an amount k_i^L if it takes a left-wing stance $\Theta_i < \frac{1}{2}$, and by an amount k_i^R if it takes a right-wing stance $\Theta_i > \frac{1}{2}$. Thus, the political stance-dependent expected cash flow is:

$$\hat{\mu}_i(\Theta_i) = \mu_i - k_i^L 1_{\Theta_i < \frac{1}{2}} - k_i^R 1_{\Theta_i > \frac{1}{2}}, \tag{38}$$

where $1_{\Theta_i < \frac{1}{2}}$ is an indicator that equals one if $\Theta_i < \frac{1}{2}$ and zero otherwise, and $1_{\Theta_i > \frac{1}{2}}$ is defined similarly. While k_i^L and k_i^R are generally positive, representing a cost for deviating from the neutral stance, we allow them to be negative as well to capture the idea that a non-neutral political stance can also be cash flow-enhancing, as discussed above.

In a competitive financial market with exogenously given corporate political stances, the market-clearing stock price vector is

$$P = \mu - k^L \circ 1_{\Theta^L} - k^R \circ 1_{\Theta^R} - \frac{1}{\tau_R + \tau_L} Ve + \delta(\lambda_R \Pi_R - \lambda_L \Pi_L) \circ (\Theta - \frac{1}{2}e), \tag{39}$$

where k^L, k^R, 1_{Θ^L}, and 1_{Θ^R} are $N \times 1$ vectors with the ith element equal to k_i^L, k_i^R, $1_{\Theta_i < \frac{1}{2}}$ and $1_{\Theta_i > \frac{1}{2}}$, respectively, and $\Theta_i \in [0, 1] \quad \forall i$. Thus, stock prices reflect the effects of corporate political stance on both cash flows and non-pecuniary payoffs.

It is easy to see that if $k_i^R + k_i^L \geq 0$, which implies that deviating from political neutrality is not cash flow-enhancing for at least one direction, firm i chooses to stay politically neutral for at least some parameter space. If $k_i^R + k_i^L < 0$, which implies that deviating from political neutrality is cash flow-enhancing for at least one direction, firm i always chooses a polarized stance. More specifically, we have the following proposition:

Proposition 4: *If $k_i^R + k_i^L \geq 0$, then in the competitive equilibrium with value-maximizing firms, political stance of any firm i is:*[14]

$$\Theta_i^* = \begin{cases} 1 & \text{if } \lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i} > \frac{2}{\delta} k_i^R, \\ \frac{1}{2} & \text{if } \lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i} \in [-\frac{2}{\delta} k_i^L, \frac{2}{\delta} k_i^R], \\ 0 & \text{if } \lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i} < -\frac{2}{\delta} k_i^L. \end{cases} \tag{40}$$

[14] We set $\Theta_i^* = \frac{1}{2}$ if a neutral and a polarized political stance lead to the same firm value.

If $k_i^R + k_i^L < 0$, then we instead have:[15]

$$\Theta_i^* = \begin{cases} 1 & \textit{if } \lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i} \geq \frac{1}{\delta}(k_i^R - k_i^L), \\ 0 & \textit{otherwise.} \end{cases} \tag{41}$$

Equation (40) shows that firm i chooses a neutral political stance if and only if $\lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i}$ falls into the interval $[-\frac{2}{\delta}k_i^L, \frac{2}{\delta}k_i^R]$. The condition on $k_i^R + k_i^L \geq 0$ guarantees that this is not an empty set. If this condition does not hold, then staying politically neutral is never optimal, and firms always choose a polarized political stance. Equation (40) also shows that as long as $\lambda_R \Pi_{R,i} \neq \lambda_L \Pi_{L,i}$, the polarization of corporate political stances always occurs if investors' political preferences are sufficiently polarized, in the sense that they are sufficiently distant from each other (i.e., δ sufficiently large).

Proposition 4 shows that the value-maximizing corporate political stance is jointly determined by the cash flow effect and the non-pecuniary payoff effect, which potentially involves a tradeoff. For example, even if deviating from the neutral stance is financially costly (i.e., $k_i^L > 0$ and $k_i^R > 0$), a firm still takes a polarized political stance if the weighted political preference intensities of the two investor groups differ sufficiently. In contrast, even if a polarized political stance is cash flow-enhancing, a firm may choose not to take such a stance if the net effect on the non-pecuniary payoff is sufficiently negative. For example, assume that $k_i^R < 0$ and $k_i^L > 0$ because the firm serves mainly right-leaning customers, if $\lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i}$ is sufficiently negative, a value-maximizing firm may still choose $\Theta_i^* = 0$ or stay politically neutral. This suggests that there may be a tension between maximizing market value and maximizing the present value of corporate cash flows when non-pecuniary payoffs affect stock prices.

No surprisingly, if the cash flow effect and the non-pecuniary effect are in the same direction due to a common political preference of a firm's ts dominant shareholder group and other stakeholders (such as executives, consumers and employees), the firm will have a strong incentive to take a stance in line with such a preference. This is consistent with the stakeholder alignment theory of CEO activism proposed by Hambrick and Wowak (2021).

[15] We set $\Theta_i^* = 1$ if $\Theta_i = 1$ and $\Theta_i = 0$ lead to the same firm value.

Proposition 4 implies the following corollary:

Corollary 5: *If deviating from political neutrality is financially costly for both directions (i.e.,* $k_i^L > 0$ *and* $k_i^R > 0$*), then in the competitive equilibrium with value-maximizing firms, stock price of a partisan firm i exceeds that of a comparable politically neutral firm by an amount equal to:*

$$\Delta P_i^* = \begin{cases} \frac{\delta}{2}(\lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i}) - k_i^R > 0 & \text{if } \Theta_i^* = 1 \\ \frac{\delta}{2}(\lambda_L \Pi_{L,i} - \lambda_R \Pi_{R,i}) - k_i^L > 0 & \text{if } \Theta_i^* = 0. \end{cases} \tag{42}$$

Furthermore, if the financial costs of partisanship increase, the faction of firms taking a polarized political stance decreases, but the average expected stock return gap between the remaining partisan firms and politically neutral firms widens.

A value-maximizing firm deviates from the neutral stance only if doing so is value-enhancing. If partisanship reduces expected cash flows, then this occurs only if the non-pecuniary payoff effect dominates the cash flow effect. If the negative cash flow effect of a polarized political stance gets stronger, only firms with a large non-pecuniary payoff effect choose to take such a stance. As a result, the average expected return gap widens between the polarized firms and comparable politically neutral firms.[16]

Since market-clearing ownership allocation does not directly depend on expected cash flows in a competitive equilibrium, R's equilibrium ownership shares are still given by Equation (31). Thus, the dependence of expected cash flows on corporate political stance only affects ownership allocation through its effect on equilibrium corporate political stances.

B. The Existence of Centrist Investors

We now consider an extension in which there exists a mass of atomistic investors who are centrist (type-C), in addition to the atomistic type-R and type-L investors. These investors have a neutral political preference $\hat{\theta}_C = \frac{1}{2}$, and they perceive non-positive externalities if firms deviate from the neutral position. Specifically, the non-pecuniary externalities internalized

[16] If deviating from the neutral stance is cash flow-enhancing, then partisan firms do not necessarily have lower expected returns than do politically neutral firms. In this case, a firm may take a polarized political stance even if the non-pecuniary payoff effect is negative, which leads a larger increase in expected cash flow than in stock price, leading to a higher expected return.

by centrist investors is:

$$d_C = -\alpha_C'(\delta\Pi_C \circ |\Theta - \frac{1}{2}e|_\circ), \tag{43}$$

where α_C is the vector of centrist investors' ownership shares; $\Pi_C > 0$ is the vector of centrist investors' political preference intensities; and $|\Theta - \frac{1}{2}e|_\circ$ is a $N \times 1$ vector with the ith term equal to the absolute value of $\Theta_i - \frac{1}{2}$. If $\Pi_C \to 0$, then C becomes essentially apolitical.

For a given corporate political stance vector Θ and a given stock price vector P, we have

$$\alpha_C = \tau_C V^{-1}[\mu - \delta\Pi_C \circ |\Theta - \frac{1}{2}e|_\circ - P], \tag{44}$$

where τ_C is centrist investors' risk tolerance. Imposing the condition $\alpha_R + \alpha_C + \alpha_L = e$, we obtain the market-clearing price vector:

$$P = \mu - \frac{1}{\tau_R + \tau_C + \tau_L} Ve + \delta(\lambda_R\Pi_R - \lambda_L\Pi_L) \circ (\Theta - \frac{1}{2}e) - \delta\lambda_C\Pi_C \circ |\Theta - \frac{1}{2}e|_\circ, \tag{45}$$

where $\Theta_i \in [0, 1] \quad \forall i$, and

$$\lambda_j \equiv \frac{\tau_j}{\tau_R + \tau_C + \tau_L}, \text{ for } j \in \{R, C, L\}. \tag{46}$$

The last term in Equation (45) represents the negative effect of disutilities internalized by centrist investors on stock prices. Like the costs associated with a deviation from the neutral position considered above, this effect creates an incentive for value-maximizing firms to stay politically neutral. The competitive equilibrium is summarized in the following proposition:

Proposition 5: *In the competitive equilibrium with centrist investors, value-maximizing political stance is:*[17]

$$\Theta_i^* = \begin{cases} 1 & \textit{if } \lambda_{R,i}\Pi_{R,i} - \lambda_{L,i}\Pi_{L,i} > \lambda_C\Pi_{C,i} \\ \frac{1}{2} & \textit{if } \lambda_R\Pi_{R,i} - \lambda_L\Pi_{L,i} \in [-\lambda_C\Pi_{C,i},\ \lambda_C\Pi_{C,i}]. \\ 0 & \textit{if } \lambda_{R,i}\Pi_{R,i} - \lambda_{L,i}\Pi_{L,i} < -\lambda_C\Pi_{C,i}. \end{cases} \tag{47}$$

[17] We assume that $\Theta_i^* = \frac{1}{2}$ if a neutral and a polarized political stance lead to the same firm value.

The price premium of a partisan firm relative to a comparable politically neutral firm is:

$$\Delta P_i^* = \begin{cases} \frac{\delta}{2}(\lambda_{R,i}\Pi_{R,i} - \lambda_{L,i}\Pi_{L,i} - \lambda_C\Pi_{C,i}) > 0 & \text{if } \Theta_i^* = 1, \\ \frac{\delta}{2}(\lambda_{L,i}\Pi_{R,i} - \lambda_{R,i}\Pi_{L,i} - \lambda_C\Pi_{C,i}) > 0 & \text{if } \Theta_i^* = 0. \end{cases} \quad (48)$$

Furthermore, as the weighted political preference intensities of centrist investors ($\lambda_C\Pi_C$) increase, both the fraction of partisan firms and the average expected return gap between partisan firms and politically neutral firms decrease.

The equilibrium ownership allocation is:

$$\alpha_R^* = \lambda_R e + \delta\tau_R V^{-1}[((1-\lambda_R)\Pi_R + \lambda_L\Pi_L) \circ (\Theta^* - \frac{1}{2}e) + \lambda_C\Pi_C \circ |\Theta^* - \frac{1}{2}e|_\circ], \quad (49)$$

$$\alpha_L^* = \lambda_L e - \delta\tau_L V^{-1}[(\lambda_R\Pi_R + (1-\lambda_L)\Pi_L) \circ (\Theta^* - \frac{1}{2}e) - \lambda_C\Pi_C \circ |\Theta^* - \frac{1}{2}e|_\circ], \quad (50)$$

$$\alpha_C^* = \lambda_C e - \delta\tau_C V^{-1}[(\lambda_R\Pi_R - \lambda_L\Pi_L) \circ (\Theta^* - \frac{1}{2}e) + (1-\lambda_C)\Pi_C \circ |\Theta^* - \frac{1}{2}e|_\circ]. \quad (51)$$

Equation (47) is qualitatively similar to (40) in that polarization of corporate political stances occurs if and only if $\lambda_R\Pi_{R,i}$ and $\lambda_L\Pi_{L,i}$ differ sufficiently. If the difference is small, or if $\lambda_C\Pi_{C,i}$ is large, firm i chooses to stay politically neutral. To the extent that the risk tolerance weight λ_C can be viewed as a proxy of wealth share controlled by centrist investors, this result suggests that firms avoid taking a polarized political stance if the wealth share of the centrist group is sufficiently large. Thus, this extension of our model shows again that polarization of corporate political stances is more likely to occur if investors' political preferences are more polarized, in the sense that the weight of centrist investors gets smaller.

Equation (48) shows that other things equal, stock prices of partisan firms are higher than those of politically neutral firms. Since the disutilities internalized by centrist investors reduce the net non-pecuniary payoff generated by a polarized political stance, a higher risk tolerance-weighted political preference intensity of centrist investors reduces both the fraction of firms taking a polarized stance and their stock price premiums relative to comparable politically neutral firms, which lowers the average expected return gap between partisan and neutral firms.

If $\Pi_C \to 0$, then the interval $[-\lambda_C\Pi_{C,i}, \lambda_C\Pi_{C,i}]$ converges to a single value of zero.

Equation (47) then becomes identical to (29) $\lambda_R \Pi_{R,i} = \lambda_L \Pi_{L,i}$ (with λ_R and λ_L redefined accordingly). Therefore, the existence of apolitical investors has no effect on firms' value-maximizing political stances. This suggests that if C is apolitical, then R and L can cause corporate political stances to be polarized even if they both represent small fractions of all investors (in terms of λ_R and λ_L). That is, a small fraction of investors can have a large effect on corporate behavior.

Since $(\lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i})(\Theta_i^* - \frac{1}{2}) > 0$ and $(1 - \lambda_C)\Pi_C |\Theta_i^* - \frac{1}{2}| > 0$ as long as $\Theta_i^* \neq \frac{1}{2}$, Equation (51) shows that if cash flows are uncorrelated across firms, $\alpha_{C,i}^* < \lambda_C$ as long as firm i is not politically neutral. Therefore, partisanship lowers the participation of centrist investors in the stock market. The reasons are twofold. First, the net non-pecuniary payoffs internalized by non-centrist investors boost stock prices, making stocks less attractive to centrist investors. Second, when $\Pi_C > 0$, polarized corporate political stances cause disutilties for centrist investors, further diminishing their incentive to invest.

IV. The Existence of a Large Investor

We now consider a setting with a strategic investor. As in the baseline model, corporate political stances are cash flow neutral but, instead of assuming both types of investors to be atomistic, we now assume that type-R investors can coordinate their actions. This effectively makes them behave like a large, strategic investor with significant price impact. Therefore, we refer to R as the large investor.

A. A Politically Passive Large Investor

As a starting point, we consider a politically passive large investor, who does not aim to influence corporate political stances proactively. In other words, he accounts for the price impact of his ownership share, but takes corporate political stances as given. We consider this case not only because, in practice, some large investors may fall into this category for institutional or regulatory reasons, but also because it is an optimal strategy for the large shareholder if the aggregate political preference intensity is sufficiently low, or if the cost of influencing corporate political stances through credible divestment/investment commitment is sufficiently high, as we show below.

The equilibrium prices and ownership allocation in this setting, which are summarized in the proposition below, depends on whether the following condition holds:

$$\lambda_R > \frac{\Pi_{L,i}}{\Pi_{R,i}}. \tag{52}$$

Proposition 6: *When corporate political stances are chosen by value-maximizing managers, and the large investor internalizes the price impact of his ownership but takes corporate political stances as given, the equilibrium political stance of any firm i is*

$$\Theta_i^* = \begin{cases} 1 & \text{if } \lambda_R > \frac{\Pi_{L,i}}{\Pi_{R,i}}; \\ \frac{1}{2} & \text{if } \lambda_R = \frac{\Pi_{L,i}}{\Pi_{R,i}}; \\ 0 & \text{otherwise,} \end{cases} \tag{53}$$

The equilibrium ownership shares of R are given by

$$\alpha_R^* = \frac{\tau_R}{2\tau_R + \tau_L}(e + \alpha_R^0) + \frac{\tau_R \tau_L \delta}{2\tau_R + \tau_L} V^{-1}[\Pi \circ (\Theta^* - \frac{1}{2}e)], \tag{54}$$

where Θ^* is defined above.The equilibrium stock prices are given by

$$P^* = \mu - \frac{\tau_R + \tau_L}{\tau_L(2\tau_R + \tau_L)} Ve + \frac{\tau_R}{\tau_L(2\tau_R + \tau_L)} V\alpha_R^0 + \frac{\delta(\tau_R \Pi_R - \tau_L \Pi_L - \tau_R \Pi_L)}{2\tau_R + \tau_L} \circ (\Theta^* - \frac{1}{2}e). \tag{55}$$

Equations (53) and (29) show that value-maximizing firms are less likely to cater to the preference of a politically passive large investor who internalizes price impact than to that of a similar group of small investors who take prices as given. In particular, if $\lambda_R < \frac{\Pi_{L,i}}{\Pi_{R,i}} < \frac{\tau_R}{\tau_L}$, the value-maximizing corporate political stance is $\Theta_i = 1$ if R represents a group of atomistic investors, but it is $\Theta_i = 0$ if R behaves strategically to account for price impact. This result arises because concerns for price impact deters the large investor from trading aggressively. As a consequence, his demand becomes less responsive to corporate political stances. Value-maximizing managers therefore give a lower weight to his political preference.

Compared to α_R^* in the competitive equilibrium given by Equation (31), α_R^* in Equation

(54) has two distinct features: First, while the former is independent of the initial endowment α_R^0, the latter increases in α_R^0. This is because the large investor internalizes the price impact of his demand. As a result, he is reluctant to take a position that is far away from his initial endowment. Second, the second term in α_R^*, which represents the distortion due to political disagreements, is diminished relative to the distortion in the competitive equilibrium (note that its denominator is $2\tau_R + \tau_L$ instead of $\tau_R + \tau_L$). Thus the large shareholder's concern for price impact reduces the influence of political preferences on ownership allocation.

Equation (55) shows that as in the competitive equilibrium, a firm's stock price in the non-competitive equilibrium is only a function of its own political stance and is not affected by political stances of other firms. However, unlike in the competitive equilibrium, stock prices of partisan firms are not necessarily higher than those of comparable politically neutral firms, because the last term in Equation (55) can be either positive or negative.

B. A Politically Active Large Investor

Clearly, a large investor may not accept a firm's political stance as fixed. Instead, it may choose to leverage his market power to actively influence these activities. We now explore a politically active large investor, who not only considers the impact on stock prices, but also strategically employs his investment strategy to influence firms' political stances chosen by a value-maximizing manager. We allow the large investor to divest, but impose a no-short-sale constraint to prevent the large investor from using short sale as a threat.[18]

We first analyze the necessary condition for investor R to be able to use his investment policy to influence a firm's political stance. The analysis in the last section suggests that the large investor cannot influence the choice of value-maximizing corporate political stances by unconditionally committing to a high ownership stake. Instead, he must increase credibly the sensitivity of his investments with respect to corporate political stances. This can be

[18] We do not allow the large shareholder to determine a firm's political stance directly by holding a majority share. Allowing this would give the large investor more power to impose disutility on small investors, especially when his endowed ownership is low. For example, a risk tolerant large investor with a political preference $\hat{\theta}_R = 1$ may find it optimal to acquire the majority share of a firm in which he has little endowment and impose $\Theta_i = 1$ afterward. This makes the firm unappealing to small investors ex ante and lowers the cost for the large investor to acquire shares. See Levit et al. (2023) for an interesting analysis in which a minority blockholder influences the composition of the shareholder base by accumulating votes and buying shares from dispersed shareholders.

achieved by a credible commitment to a divestment/investment strategy.

For a value-maximizing firm i to be willing to choose $\Theta_i = 1$, the stock price conditional on $\Theta_i = 1$ must be higher than the one conditional on $\Theta_i = 0$. Assume that cash flows are uncorrelated across firms. Equation (A.76) then implies

$$P_i(\Theta_i = 0) = \mu_i - \frac{1}{\tau_L} V_i (1 - \alpha_{R,i}(\Theta_i = 0)) + \frac{1}{2}\delta \Pi_{L,i}, \tag{56}$$

$$P_i(\Theta_i = 1) = \mu_i - \frac{1}{\tau_L} V_i (1 - \alpha_{R,i}(\Theta_i = 1)) - \frac{1}{2}\delta \Pi_{L,i}. \tag{57}$$

Therefore, $P_i(\Theta_i = 1) \geq P_i(\Theta_i = 0)$ if and only if

$$\alpha_{R,i}(\Theta_i = 1) - \alpha_{R,i}(\Theta_i = 0) \geq \tau_L \delta V_i^{-1} \Pi_{L,i} \equiv \underline{\alpha}_{R,i}. \tag{58}$$

It is easy to verify that if Inequality (52) holds, this condition is satisfied even if shareholder R passively responds to corporate political stances according to Equation (A.81). Thus no active influence action is needed in this case. Consistent with this result, Proposition 6 shows that as long as Inequality (52) holds, the value-maximizing political stance perfectly coincides with R's preference, even if he is politically passive.

We now consider the case in which Inequality (52) does not hold and analyze the large investor's choice between a politically passive investment strategy that takes corporate political stance as given and a politically active strategy that aims to influence firm i' political stance proactively. Condition (58) suggests that the large investor can induce a value-maximizing manager to adopt $\Theta_i = 1$ by increasing $\alpha_{R,i}$ for $\Theta_i = 1$, decreasing $\alpha_{R,i}$ for $\Theta_i = 0$, or both. In each of these cases, the large investor exerts his influence by increasing the sensitivity of his holdings to the firm's political stance. Since short sales are not allowed, R cannot use $\alpha_{R,i} = 0$ as a threat, but he can minimize the ownership share needed to induce $\Theta_i = 1$ by committing to $\alpha_{R,i} < 0$ for $\Theta_i = 0$. If this threat is credible, then as long as he also credibly commits to $\alpha_{R,i} \geq \underline{\alpha}_{R,i}$ for $\Theta_i = 1$, the value-maximizing firm i will cater to the political preference of R.

Equation (A.81) shows that for $\Theta_i = 1$, R's optimal ownership share is

$$\alpha_{R,i}^{High} \equiv \frac{\tau_R}{2\tau_R + \tau_L}(1 + \alpha_{R,i}^0) + \frac{\tau_R \tau_L \delta}{2(2\tau_R + \tau_L)} V_i^{-1} \Pi_i. \tag{59}$$

Therefore, if $\alpha_{R,i}^{High} > \underline{\alpha}_{R,i}$, which holds if and only if

$$\tau_R \Pi_{R,i} + \frac{2\tau_R(1 + \alpha_{R,i}^0) V_i}{\delta \tau_L} > (2\tau_L + 3\tau_R)\Pi_{L,i}, \tag{60}$$

then committing to $\alpha_{R,i}^{High}$ instead of $\underline{\alpha}_{R,i}$ for $\Theta_i = 1$ is a better choice for R.

The discussion above shows that if R chooses a politically active strategy, he would induce $\Theta_i = 1$ by committing to $\alpha_{R,i} = 0$ for $\Theta_i = 0$ and $\alpha_{R,i} = max(\underline{\alpha}_{R,i}, \alpha_{R,i}^{High})$ for $\Theta_i = 1$. Alternatively, he can passively accept $\Theta_i = 0$ and hold an ownership share accordingly to Equation (A.81), i.e.,

$$\alpha_{R,i}^{Low} \equiv \frac{\tau_R}{2\tau_R + \tau_L}(1 + \alpha_{R,i}^0) - \frac{\tau_R \tau_L \delta}{2(2\tau_R + \tau_L)} V_i^{-1} \Pi_i, \tag{61}$$

Assuming that the deadweight cost of making credible disinvestment/investment commitment is c, we have the following proposition:

Proposition 7: *Assume that cash flows are uncorrelated across firms and that the large investor can make credible divestment/investment commitment at a deadweight cost of c. If $\lambda_R < \frac{\Pi_{L,i}}{\Pi_{R,i}}$, we have the following results:*

(i) If both Inequality (60) *and* (A.89) *hold, then the large shareholder engages in influence activity through a divestment threat, and the equilibrium outcome is $\Theta_i^* = 1$, $\alpha_{R,i}^* = \alpha_{R,i}^{High}$;*

(ii) If Inequality (60) *does not hold but* (A.90) *holds, then the large shareholder also engages in influence activity through a divestment threat, and the equilibrium outcome is $\Theta_i^* = 1$, $\alpha_{R,i}^* = \underline{\alpha}_{R,i}$;*

(iii) If neither (A.89) *nor* (A.90) *holds, then the large investor does not engage in influence activity, and the equilibrium outcome is $\Theta_i^* = 0$, $\alpha_{R,i}^* = \alpha_{R,i}^{Low}$.*

If $\lambda_R > \frac{\Pi_{L,i}}{\Pi_{R,i}}$, the equilibrium corporate political stance and ownership allocation are the same as in (i), but the large investor does not engage in costly influence activity.[19]

This proposition shows that when $\lambda_R < \frac{\Pi_{L,i}}{\Pi_{R,i}}$, it is optimal for the large shareholder to use divestment threat strategically to influence corporate political stance, as long as the cost of making credible divestment/investment commitment is sufficiently low. Clearly, such behavior imposes disutilities on small shareholders. Furthermore, because the cost of the influence activity is a deadweight loss, it can also lead to lower aggregate welfare. We conduct numerical analyses in Section V to assess the relevance and magnitude of the welfare losses.

C. The Preference-Matching Rule

The analysis in the last section shows that the value-maximizing corporate political stance is susceptible to strategic influence by a large investor with significant price impact. Therefore, we now consider a simple alternative governance rule, under which small shareholders' preferences are also reflected in the firm's choice of a political stance. We refer to this alternative as the preference matching rule, which requires the corporate political stance to be the ownership-weighted average of shareholder preferences. Thus, under this governance rule, small shareholders can prevent firms from taking an extreme political stance, which would be perfectly opposed to their own political preference. Another desirable feature of this governance rule is that it prevents the large investor from influencing corporate political stances using a divestment threat. Since corporate political stance is mechanically tied to ownership shares, the large investor can only influence it though actual share ownership. The information needed for the implementation of such a rule can potentially be gathered through proxy votes.

Since the political preferences of L and R are normalized to zero and one, respectively, the normalized corporate political stances Θ under this rule are simply:

$$\Theta = \alpha_R. \tag{62}$$

[19] We assume that parameter values are properly restricted so that the values of $\alpha_{R,i}^{High}$, $\alpha_{R,i}^{Low}$, and $\underline{\alpha}_{R,i}$ are all between zero and one.

We restrict our parameter value space so that all elements of any equilibrium ownership vector α_R fall into the interval between zero and one. Therefore, under this alternative rule, we can also focus on corporate political stances that satisfy condition (3). For simplicity, we continue to assume that corporate political stances are cash flow neutral.

Since there is a one-to-one correspondence between R's ownership and corporate political stances under this rule, it is natural to assume that the large investor internalizes the effects of his ownership on both stock prices and corporate political stances. The following proposition summarizes the equilibrium corporate political stances and ownership allocation in this case:

Proposition 8: *If the large shareholder internalizes the impacts of his ownership on both stock prices and corporate political stances, then under the preference-matching rule, the equilibrium corporate political stances and ownership allocation are given by*

$$\Theta^* = \alpha_R^* = [(\frac{1}{\tau_R} + \frac{2}{\tau_L})V - 2\delta diag(\Pi)]^{-1}[\frac{1}{\tau_L}V(e + \alpha_R^0) - \frac{1}{2}\delta\Pi - \delta\Pi_L \circ \alpha_R^0], \qquad (63)$$

where $diag(\Pi)$ is diagonal matrix with the diagonal entries populated by the elements of vector Π.[20] *If cash flows are uncorrelated across firms, then for each firm i with cash flow variance V_i, we have*

$$\Theta_i^* = \alpha_{R,i}^* = \frac{\frac{1}{\tau_L}(1 + \alpha_{R,i}^0)V_i - \frac{1}{2}\delta\Pi_i - \delta\Pi_{L,i}\alpha_{R,i}^0}{(\frac{1}{\tau_R} + \frac{2}{\tau_L})V_i - 2\delta\Pi_i}. \qquad (64)$$

If we further assume $\alpha_{R,i}^0 = 0$, then

$$Sign[\frac{\partial\alpha_{R,i}^*}{\partial\Pi_i}] = Sign[\frac{\partial\alpha_{R,i}^*}{\partial\delta}] = -Sign[\frac{\partial\alpha_{R,i}^*}{\partial V_i}] = Sign[2\tau_R - \tau_L]. \qquad (65)$$

Equation (65) shows that if the large investor R has no endowed ownership share in firm i, his ownership in the firm increases in the aggregate political preference intensity and preference dispersion as long as $\tau_R < \frac{1}{2}\tau_L$. This mild condition suggests that the desire to influence corporate political stances gives the large investor a strong incentive to pursue a larger ownership stake under the preference-matching rule. Since the large investor's concern

[20] We impose the necessary parameter restrictions to ensure $\alpha_{R,i}^* \in [0, 1]$ so that $\Theta_i^* \in [0, 1]\, \forall i$.

for the positive price impact of his ownership is weaker if his endowed ownership is higher, the effect of Π_i and δ on $\alpha^*_{R,i}$ should be even more positive if $\alpha^0_{R,i} > 0$.

V. Comparison of Equilibria

We now use numerical examples to illustrate and compare the properties of the four equilibria derived in Sections II and IV under the assumption of cash flow neutrality of corporate political stance: Competitive equilibrium (CE), non-competitive equilibrium with a politically passive large investor (NE1), non-competitive equilibrium with a politically active large investor (NE2), and non-competitive equilibrium under the preference-matching rule (NE3).

A. Parameterization

We consider a firm whose cash flow is uncorrelated with the cash flows of other firms in the economy, which allows us to analyze it in isolation. We use the parameter values specified in Panel A of Table I as our baseline case. These parameter values are chosen to illustrate how our model behaves in an empirically plausible environment. Under the baseline parameterization, the expected cash flow is 100 and the variance of the cash flow is 500, corresponding to a standard deviation of 22% for the rate of return. Investor L is more risk tolerant than investor R, but R has stronger political preferences. If the corporate political stance is perfectly in line with L's preference, L perceives a non-pecuniary payoff of 2.5, while R perceives a non-pecuniary payoff of -5. While we do not have direct empirical evidence to calibrate non-pecuniary payoffs, the literature on ESG preferences supports a range of investors' willingness to pay for non-monetary preference components in accordance with the chosen values.[21] Our base-case parameterization falls within this range. The endowment of R is set at the optimal risk sharing level of 40%. The deadweight cost of using divestment/investment strategy to influence corporate political stances is assumed to be 1.5, which corresponds to 1.5% of the expected cash flow.

The baseline parameterization implies the following equilibrium outcomes. In the absence of political preferences, the competitive equilibrium yields an optimal risk sharing ownership

[21] See, for example, Barber et al (2021).

Table I: Baseline parameter values and model outcomes

We consider a firm whose cash flow is uncorrelated with the cash flows of other firms in our numerical analysis. Panel A of this table summarizes the baseline parameter values. Panel B presents the key equilibrium outcomes in the competitive equilibria with and without political preferences.

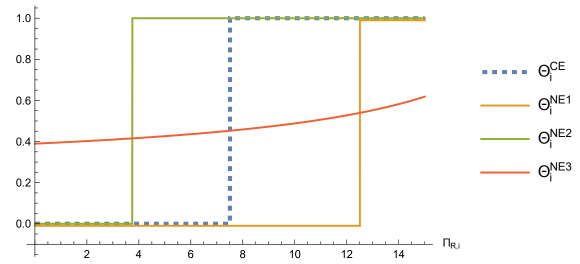
Panel A. Parameter values

Parameter	Economic meaning	Baseline value
μ_i	Expected cash flow	100
V_i	Variance of cash flow	500
τ_R	R's risk tolerance	20
τ_L	L's risk tolerance	30
δ	Political preference dispersion	1
$\Pi_{R,i}$	R's political preference intensity	10
$\Pi_{L,i}$	L's political preference intensity	5
$\alpha^0_{R,i}$	R's endowed equity share	40%
c	Deadweight cost of influence activity	1.5

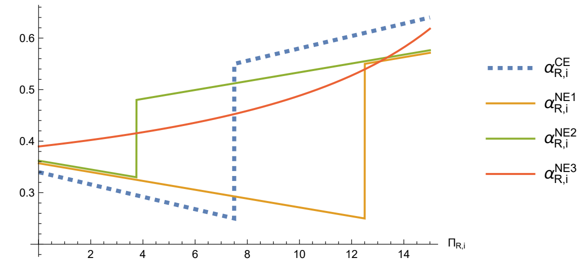
Panel B. Model implied outcomes

Outcome variable	Value
Competitive equilibrium without political preferences	
R's ownership weight (optimal risk sharing)	40%
Stock price	90
Expected stock return	11.1%
Competitive equilibrium with political preferences	
Corporate political stance (Θ_i^*)	1
R's ownership share ($\alpha^*_{R,i}$)	58%
Stock price (P_i^*)	90.5
Expected stock return	10.5%
R' non-pecuniary payoff	2.90
L's non-pecuniary payoff	-1.05

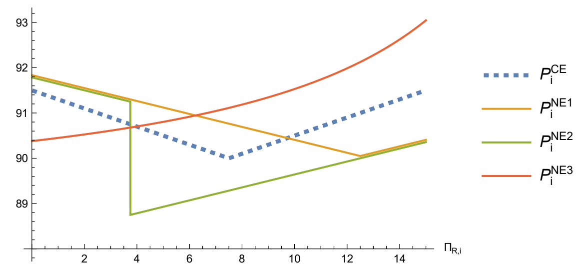
weight of 40% for R, and an equilibrium stock price of 90, implying an expected rate of return of 11%. Since $\frac{\tau_R}{\tau_L}$ (=0.67) is larger than $\frac{\Pi_{L,i}}{\Pi_{R,i}}$ (=0.50), in the competitive equilibrium with political preferences, the political stance of firm i is $\Theta_i = 1$, and R's ownership share is 58%, which is 18 percentage points higher than the optimal risk sharing weight. Despite the distorted risk sharing, the stock price is slightly higher than in the equilibrium without political preferences (90.5 vs. 90). This is because R's non-pecuniary utility exceeds the combined effect of L's disutility and the efficiency loss in risk sharing.



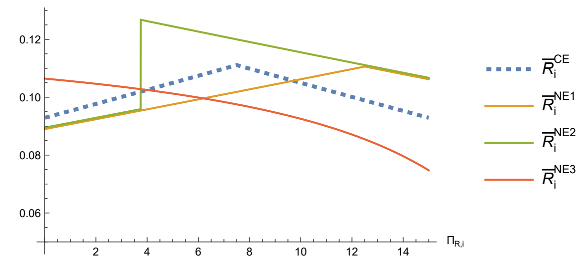
(A) Θ_i as a function of $\Pi_{R,i}$



(B) $\alpha_{R,i}$ as function of $\Pi_{R,i}$



(C) Stock price as a function of $\Pi_{R,i}$



(D) Expected return as a function of $\Pi_{R,i}$

Figure 3: **Equilibrium corporate political stance, ownership share, stock price, and expected stock return.** This figure shows the corporate political stances, R's ownership shares, stock prices, and expected stock return in four different equilibria. The superscript "CE" indicates the competitive equilibrium; "NE1" and "NE2" indicate the non-competitive equilibria with a politically passive and active large investor, respectively; and "NE3" indicates the non-competitive equilibrium under the preference-matching rule. The plotted outcome variables include corporate political stance (Panel A), R's ownership share (Panel B), stock price (Panel C), and expected stock return (Panel D). In each panel, we vary R's political preference intensity while keeping other relevant parameters at the baseline values summarized in Table I.

B. *Corporate Political Stance, Ownership Allocation, and Expected Return*

Figure 3 shows how the model outcomes vary with R's political preference intensity $\Pi_{R,i}$. The four different equilibria are indicated by the superscripts of the plotted variables. Panel (A) shows the equilibrium political stance of the firm. The three piecewise linear lines demonstrate corporate political stances under the value-maximization rule. They clearly show a catering effect. In all three equilibria, i.e., the competitive equilibrium CE, and the two non-competitive equilibria NE1 and NE2 (differing by whether the large investor is politically active), the corporate political stance is aligned with L's preference when $\Pi_{R,i}$ is low, and is aligned with R's preference when $\Pi_{R,i}$ is sufficiently high. The vertical lines indicate the points at which the switches occur. They show that the threshold value of $\Pi_{R,i}$ that triggers the switch is the lowest in NE2, second lowest in CE, and the highest in NE1. This is consistent with the analytical results presented in the previous sections. The large investor's concern for price impact lowers the sensitivity of the large investor's demand for the stock with respect to the firm's political stance, which reduces the influence of a politically passive large investor on corporate political stances compared to that of a similar group of small investors. However, a politically active large shareholder can use his investment strategy as a bargaining tool. By committing to exclude a non-complying firm from his investment portfolio, the politically active large investor can alter the firm's political stance even if his political preference intensity is low, as long as the cost of making such commitments credible is sufficiently small.

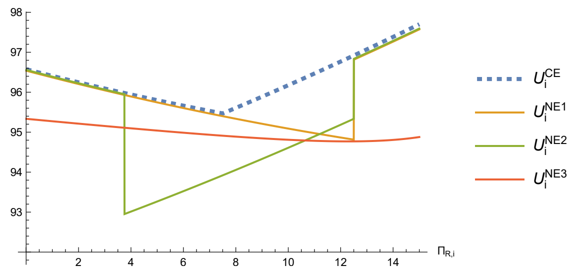
The corporate political stance behaves very differently when it is determined by the preferences-matching rule. It starts at a level close to the optimal risk sharing weight, and increases smoothly as $\Pi_{R,i}$ increase. Because R is relatively more risk averse than L in our example, his optimal risk sharing ownership weight is lower than 50%. This makes the corporate political stance more in line with the preference of L when the aggregate political preference intensity is low. As the large investor's political stance gets stronger, his incentive to use ownership to influence the corporate political stance is also stronger, which induces him to increase his equity holding. Therefore, the equilibrium corporate political stance curve is upward sloping.

Panel (B) shows R's equilibrium ownership share. In the equilibrium under the preference-matching rule, the ownership curve is identical to the equilibrium corporate political stance curves in Panel (A). In all the other three equilibria, each switching point in Panel (A) corresponds to an upward jump in R's ownership share in Panel (B). Before the jump, R's ownership share declines steadily as R's political preference becomes stronger; after the jump, it keeps increasing with R's preference intensity. As long as the increase in the preference intensity is not sufficient to induce a switch of the corporate political stance, R's non-pecuniary payoff becomes more negative as the intensity rises, which causes a reduction in his ownership. After the switch occurs, the firm's political stance coincides with R's preference. Therefore, the stock becomes more attractive as R's political preference gets stronger. Notably, R's ownership share is more extreme in CE than in NE1 or NE2. This reflects a dampening effect of the price impact concern on the large investor's deviation from his endowed ownership share. Interestingly, when R's political preference reaches a sufficiently high level, his ownership share in NE3 becomes higher than those in NE1 and NE2. This is because the marginal effect of R's ownership share on the corporate political stance remains positive in NE3, while it becomes zero after the switching point in NE1 and NE2.

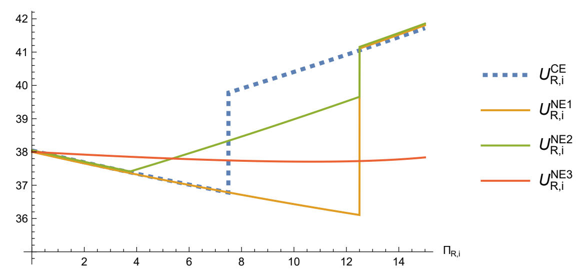
Panels (C) and (D) show how the equilibrium stock price and expected stock return move in opposite directions as R's political preference intensity increases. The dashed lines show that the stock price (expected return) in the competitive equilibrium reaches its lowest (highest) point when the value-maximizing corporate political stance is indeterminate. As can be seen, R's strategic behavior can cause the stock price to be either higher or lower than in CE. When R's political preference is mild, his concern about price impact induces him to sell fewer endowed shares than a competitive investor would, which makes the stock price higher and expected return lower in NE1 and NE2 than in CE. When R's political preference is strong, the pursuit of influence on the corporate political stance induces him to hold substantially more shares under the preference-matching rule, which makes the stock price higher and expected return lower in NE3 than in any other equilibrium. Interestingly, the stock price drops and expected return rises in NE2 when R starts to actively engage in influence activity. This drop in the share price happens for two reasons. First, the corresponding shift in the corporate political stance imposes a large negative non-pecuniary payoff on L. Second, the large increase in R's ownership is associated with a significant loss in risk sharing efficiency.

C. Welfare

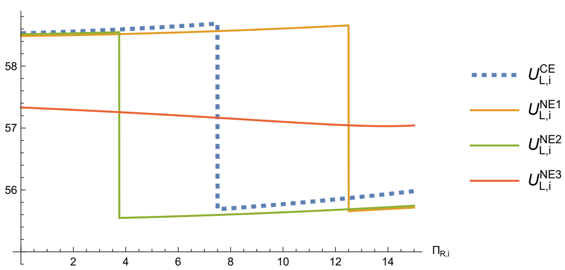
Panel (A) in Figure 4 shows how aggregate utilitarian welfare varies with R's political preference intensity. Consistent with Proposition 3, CE consistently generates the (weakly) highest aggregate welfare among all equilibria. The aggregate welfare in NE1 and NE2 is very sensitive to the action of the large investor. In particular, in NE2, when the large investor starts to engage in active influence activity, there is a large downward jump in aggregate utilitarian welfare, which reflects both the deadweight cost of the activity and the efficiency loss in risk



(A) Aggregate welfare as a function of $\Pi_{R,i}$



(B) R's welfare as a function of $\Pi_{R,i}$



(C) L's welfare as a function of $\Pi_{R,i}$

Figure 4: **Equilibrium Welfare.** This figure shows investor welfare in the four different equilibria. The superscript "CE" indicates the competitive equilibrium; "NE1" and "NE2" indicate the non-competitive equilibria with a politically passive and active large investor, respectively; and "NE3" indicates the non-competitive equilibrium under the preference-matching rule. The plotted outcome variables include aggregate utilitarian welfare of L and R (Panel A), R's welfare (Panel B); and L's welfare (Panel C). In each panel, we vary R's political preference intensity while keeping other relevant parameters at the baseline values summarized in Table I.

sharing. When R's preference intensity becomes large enough to make the active influence activity unnecessary, the aggregate utilitarian welfare jumps back. This also coincides with the switch in the corporate political stance in NE1. Because the switch in NE1 is suboptimally delayed due to the price impact concern of the politically passive large shareholder, there is a welfare increase when it occurs. In contrast, the utilitarian welfare in NE3 is relatively insensitive to the change in $\Pi_{R,i}$. The reason is quite intuitive: as the corporate political stance moves further away from the preference of one type of investors, the ownership share of this type of investors also declines. This limits the negative non-pecuniary payoff imposed on them. As a result, while the value-maximization rule leads to the highest utilitarian welfare in the competitive equilibrium, the preference-matching rule can lead to higher aggregate utilitarian welfare in the presence of a politically active large investor.

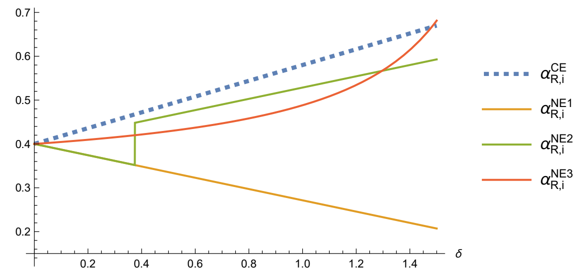
Panels (B) and (C) show the welfare of L and R separately. Notably, in the equilibria under value-maximization, L's welfare exhibits a downward jump whenever the corporate political stance switches from 0 to 1, but the corresponding change in R's welfare is very different in different equilibria. In the competitive equilibrium, which maximizes total welfare, L's welfare loss due to the switch is fully offset by R's welfare gain, leaving the aggregate utilitarian welfare unchanged. In NE1, L's welfare loss is more than offset by R's gain. The switch is "overdue" from the social planner's perspective. Therefore, it results in an increase in aggregate utilitarian welfare shown in Panel (A). However, in NE2, the downward jump in L's welfare is not associated with any change in R's welfare. As a result, it fully translates into a corresponding decline in aggregate utilitarian welfare. This is because the switching point is optimized by R. The value-matching condition for optimal switching ensures that R's welfare is continuous at the switching point. That is, the deadweight cost paid by R is fully covered by R's gain in non-pecuniary payoff resulting from the switch in the corporate political stance.

D. Effects of Preference Dispersion, Risk, and Cost of Influence Activity

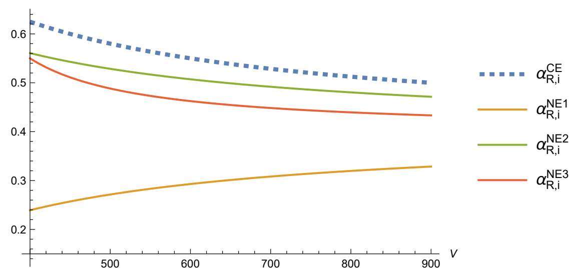
Figure 5 shows the effects of preference dispersion, risk, and deadweight cost of influence activity on R's ownership share in different equilibria. Consistent with intuition, Panel (A) shows that $\alpha_{R,i}$ is at the optimal risk sharing level in all equilibria when investors have the same political preference, i.e., when $\delta \to 0$.[22] When the political preferences become more dispersed, the absolute deviations from the optimal risk-sharing allocation become larger in all equilibria. In contrast, Panel (B) shows that in all equilibria, the absolute deviations from the optimal risk sharing allocation become smaller as cash flow variance increases, consistent with the idea that risk considerations become more dominant as the risk level increases. These results illustrate nicely the basic tension in our model: the tradeoff between risk sharing and non-pecuniary payoffs resulting from political preferences.

Panel (C) illustrates how the large investor's cost of committing to a divestment/investment

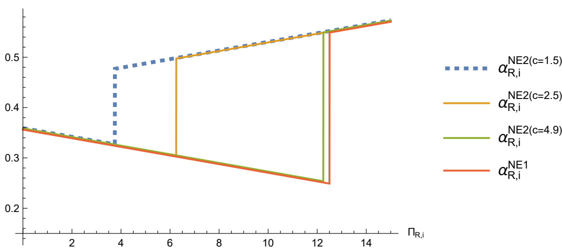
[22]For the equilibria with a large investor, this has to do with our assumption that the large investor's endowment is at the optimal risk sharing level. Otherwise the large investor's price impact concern would cause some deviations.



(A) $\alpha_{R,i}$ as a function of δ



(B) $\alpha_{R,i}$ as a function of V_i



(C) $\alpha_{R,i}$ as a function of $\Pi_{R,i}$

Figure 5: **Effects of preference dispersion, risk, and influence activity cost.** This figure shows the relations between R's equilibrium ownership share and various model parameters in different equilibria. The parameters of interest include preference dispersion (Panel A), cash flow variance (Panel B), and the deadweight cost of the large investor's influence activity (Panel C). The different equilibria are indicated by the superscripts "CE", "NE1", "NE2", and "NE3", respectively, as in Figure 3. In the first two panels, the variables of interest are on the X-axis. In Panel C, we plot $\alpha_{R,i}$ as a function of $\Pi_{R,i}$ under three different values of the deadweight cost, which correspond to 1.5% (baseline), 2.5%, and 4.9% of the expected cash flow, respectively. It also shows $\alpha_{R,i}$ in the equilibrium with a politically passive large investor ("NE1"). Parameter values not indicated in the figure are set at the baseline levels summarized in Table I.

strategy to influence corporate political stances affects equilibrium outcomes. To this end, we plot the ownership share of a politically active large investor as a function of his political preference intensity under three different levels of commitment costs, which correspond to 1.5%, 2.5% and 4.9% of the expected cash flow, respectively, along with the equilibrium share of a politically passive large shareholder. Consistent with intuition, the threshold value of $\Pi_{R,i}$ that triggers R to engage in active influence activity increases as the cost increases. When the cost is 4.9% of the expected cash flow, the threshold value in NE2 is close to that in NE1, suggesting that a high cost of active influence activity effectively turns a politically active large investor into a politically passive one.

To summarize, our analysis in this section shows that, while the value-maximizing corporate political stances can maximize aggregate welfare in the competitive market, they benefit one group of investors at the expense of another. Furthermore, they are susceptible to influence activity by politically active large investors. Such activity not only imposes disutilities on small investors, but also reduces aggregate welfare. If large investors can use divestment/investment strategy to influence corporate political stances at low cost, the value-maximization rule can be dominated by the preference-matching rule.

VI. Conclusion

Recent studies highlight the growing influence of political ideology on financial decisions of households, firms, and financial intermediaries as well as the increasing involvement of firms in socio-political issues. However, the interaction between investors' political preferences and firms' political stances has so far remained underexplored. We develop a model of financial market equilibrium where corporate political stances generate non-pecuniary payoffs to investors with conflicting political preferences. We show that investors' heterogeneous political preferences endogenously lead to polarized corporate political stances and distortions in risk sharing. In a competitive equilibrium, investors tilt their equity holdings towards firms aligned with their political views, while value-maximizing firms cater to investors with higher risk tolerance and stronger political preferences. The deviations from optimal risk sharing increase with greater political preference dispersion and intensity, but decrease with higher aggregate risk aversion. Partisan firms exhibit lower expected returns compared to politically neutral firms, with the return gap widening if corporate partisanship lowers expected cash flows and narrowing if centrist investors gain influence. Despite the suboptimal risk sharing and disutilities imposed on dissenting investors, the competitive equilibrium with determinate value-maximizing corporate political stances maximizes aggregate utility when cash flows are uncorrelated across firms and unaffected by political stances. Our results accord well with existing evidence of political value alignment in portfolio holdings and suggest that increasing polarization and partisanship in Corporate America may be an endogenous outcome of firms responding to a more politically charged social environment.

We also demonstrate that while a politically passive large investor's concern about price impact diminishes their influence on corporate political stances, a politically active large investor can strategically leverage their impact on stock prices to shape the political stances of value-maximizing firms. This strategic behavior not only imposes significant welfare losses on small investors, but also reduces aggregate welfare. If large investors can use disinvestment threat to influence corporate stance at low cost, then a governance system where a firm's political stance reflects the ownership-weighted average shareholder preference generates higher aggregate utilitarian welfare compared to a system where political stances are determined by value-maximizing managers.

Our model offers several avenues for further research. While our extended model accounts for the potential cash flow effects of partisanship, which may partially reflect the political preferences of stakeholders beyond investors—such as corporate executives, employees, and consumers—we have not explicitly modeled the behavior of these stakeholders. Future research could explore how the interaction between the political preferences of investors and other stakeholders influences financial market equilibrium, providing a more comprehensive understanding of the dynamics at play. Additionally, we consider only a single, exogenously given strategic large investor. It would be interesting to explore how one or more large investors could emerge endogenously, such as through the coordination of small investors via a mutual fund, and how the strategic interaction between multiple large investors might influence market equilibrium. Moreover, our analysis assumes that investors' political preferences are fixed. In reality, these preferences may be shaped by corporate behavior and could evolve over time. We leave these interesting extensions for future research.

Appendix: Proofs of Propositions and Corollaries

A.1. Proof of Proposition 1 and Corollaries 1 to 3

To prove Proposition 1, substitute Equations (6) and (7) into the market clearing condition, which leads to Equation (9). Substituting (9) into (6) and (7) then yields Equation (10).

To prove Corollary 1, note that taking the partial derivative of ΔP_i with respect to Θ_i

using Equation (16) yields

$$\frac{\partial \Delta P_i}{\Theta_i} = \frac{\delta}{\tau_R + \tau_L}[\tau_R \Pi_{R,i} - \tau_L \Pi_{L,i}], \tag{A.66}$$

which implies (22). Furthermore, we have

$$\frac{\partial |\Delta P_i|}{\partial \delta} = \frac{1}{\tau_R + \tau_L}|(\tau_R \Pi_R - \tau_L \Pi_L)(\Theta_i - \frac{1}{2})|, \tag{A.67}$$

which is positive as long as $\Theta_i \neq \frac{1}{2}$ and $\frac{\tau_R}{\tau_L} \neq \frac{\Pi_{L,i}}{\Pi_{R,i}}$.

To prove Corollary 2, take partial derivative of $\Delta\alpha_{R,i}$ with respect to Θ_i using Equation (10) to yield:

$$\frac{\partial \Delta \alpha_{R,i}}{\partial \Theta_i} = \frac{\delta}{\gamma}(V^{-1})_{ii}\Pi_i > 0, \tag{A.68}$$

where $\Pi_i \equiv \Pi_{R,i} + \Pi_{L,i}$, and $(V^{-1})_{ii}$ is the ith diagonal term of the inverse of the non-degenerate covariance matrix V, which must be positive. The signs of the cross derivatives in (24) follow naturally. Inequalities in (25) hold because they are about the absolute value of the deviation from the optimal risk sharing weight. δ and $\frac{1}{\gamma}$ are scaling factors in Equation (10). As long as the term they multiply is nonzero, the absolute deviation increases in δ and decreases in γ. Therefore, the partial derivatives in in (25) are non-negative. Inequalities in (26) hold because if cash flows are uncorrelated, the inverse covariance matrix V^{-1} is diagonal with $\frac{1}{V_i}$ being the i-th diagonal entry.

Corollary 3 follows from Equation (10) directly as a special case.

A.2. Proof of Proposition 2 and Corollary 4

From Equation (9), we have

$$\frac{\partial P_i}{\partial \Theta_i} = \frac{\tau_R \Pi_{R,i} - \tau_L \Pi_{L,i}}{\tau_R + \tau_L}\delta, \tag{A.69}$$

which has the same sign that $\frac{\lambda_R}{\lambda_L} - \frac{\Pi_{L,i}}{\Pi_{R,i}}$ has. Substituting Equation (29) into (16), we have $\Delta P_i^* = \frac{\delta}{2}(\lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i})$ if $\lambda_R \Pi_{R,i} \geq \lambda_L \Pi_{L,i}$ and $\Delta P_i^* = -\frac{\delta}{2}(\lambda_R \Pi_{R,i} - \lambda_L \Pi_{L,i})$ if $\lambda_R \Pi_{R,i} < \lambda_L \Pi_{L,i}$. Combining both cases yields (30). The statement regarding expected stock returns follows directly from the inverse relation between stock price and expected stock return. Equation (31) is obtained by substituting Equation (29) into (10).

To prove Corollary 4, note that when cash flows are uncorrelated, Equation (31) implies

$$\alpha^*_{R,i} = \lambda_R + \frac{\delta}{\gamma} V_i^{-1} \Pi_i (\Theta^*_i - \frac{1}{2}), \forall i, \tag{A.70}$$

where Θ^*_i is defined as in Equation (29). Results in (32) and (33) then follow.

A.3. Proof of Proposition 3

Substituting Equation (37) into (36), we have

$$\frac{\partial U}{\partial \Theta} = \delta \Pi \circ \{\lambda_R e + \frac{\delta}{\gamma} V^{-1} [\Pi \circ (\Theta - \frac{1}{2} e)]\} - \delta \Pi_L. \tag{A.71}$$

This implies:

$$\frac{\partial^2 U}{\partial \Theta_i \partial \Theta_k} = \frac{\delta^2}{\gamma} \Pi_i (V^{-1})_{i,k} \Pi_k. \tag{A.72}$$

Thus, the Hessian matrix of U can be written as:

$$H = \frac{\delta^2}{\gamma} diag(\Pi) V^{-1} diag(\Pi). \tag{A.73}$$

Because V is positive definite, so is V^{-1}. Furthermore, since all elements of Π are positive, H is positive definite as well. This implies that U is a strictly convex function. Since the domain of U, $\Theta \in [0, 1]^N$ is convex, compact and has corners, it follows that maximum value of U is obtained at one or multiple corners of the domain.[23] That is, the maximization of U requires all firms to take a political stance of 0 or 1.

If cash flows are uncorrelated across firms, V is a diagonal matrix, then we must have $\frac{\partial^2 U}{\partial \Theta_i \partial \Theta_j}$=0 for all $i \neq j$. This means that each Θ_i can be optimized independently, which essentially allows us to evaluate the aggregate utility associated with each stock separately. Since the maximized value of U must be obtained as a corner solution, i.e., at either $\Theta_i = 0$ or $\Theta_i = 1$ (or both if indifferent), we just need to compare the aggregate utility at these two

[23] The strict convexity of U means that for any two distinct points, x and y, in the domain, $U(tx+(1-t)y) > U(tx) + U((1-t)y)$ for $t \in (0, 1)$. This implies that for any non-corner point z, the convex combination of z and a corner point yields higher U. As a result, no non-corner point can maximize U.

points to determine the first-best outcomes. Denote the aggregate utility associated stock i by U_i and note that $\alpha_{R,i} = \lambda_R + \frac{\delta}{2\gamma} V_i^{-1} \Pi_i$ if $\Theta_i = 1$, $\alpha_{R,i} = \lambda_R - \frac{\delta}{2\gamma} V_i^{-1} \Pi_i$ if $\Theta_i = 0$, we can show:

$$U_i(\Theta_i = 1) - U_i(\Theta_i = 0) = \frac{\delta(\tau_R \Pi_R - \tau_L \Pi_L)}{\tau_R + \tau_L}. \tag{A.74}$$

Therefore, $U_i(\Theta_i = 1) \lesseqgtr U_i(\Theta_i = 0)$ if and only if $\frac{\lambda_R}{\lambda_L} \lesseqgtr \frac{\Pi_{L,i}}{\Pi_{R,i}}$. Together with the first-order condition (37), this implies that first-best corporate political stances and ownership allocation are the same as those in the competitive equilibrium if cash flows are uncorrelated and $\lambda_R \Pi_{R,i} \neq \lambda_L \Pi_{L,i} \, \forall i$. The equivalence breaks down if $\lambda_R \Pi_{R,i} = \lambda_L \Pi_{L,i}$ because in this case, all values of Θ_i on the interval [0,1] maximize the stock price, but only $\Theta_i = 0$ and $\Theta = 1$ maximize aggregate welfare.

To see that the competitive equilibrium is not necessarily the utilitarian first best when cash flows are correlated, consider an with two firms and the following parameter values:

$$\tau_R = 20, \quad \tau_L = 30, \quad \Pi_R = \begin{pmatrix} 2.5 \\ 8 \end{pmatrix}, \quad \Pi_L = \begin{pmatrix} 1.5 \\ 5 \end{pmatrix}, \quad V = \begin{pmatrix} 500 & 300 \\ 300 & 400 \end{pmatrix}.$$

The competitive equilibrium, according to Proposition 2, is:

$$\Theta^* = \begin{pmatrix} 1 \\ 1 \end{pmatrix}, \quad \alpha_R^* = \begin{pmatrix} 0.27 \\ 0.69 \end{pmatrix}.$$

However, this equilibrium does not maximize the sum of expected utilities because Equation (36) then implies:

$$\frac{\partial U}{\partial \Theta_1} = \delta[(2.5 + 1.5) * 0.27 - 1.5] < 0, \tag{A.75}$$

which suggests that $\Theta_1 = 1$ is not an optimal corner solution. The utilitarian first-best outcomes are instead:

$$\Theta^* = \begin{pmatrix} 0 \\ 1 \end{pmatrix}, \quad \alpha_R^* = \begin{pmatrix} 0.10 \\ 0.82 \end{pmatrix}.$$

This example shows that the equivalence between the competitive equilibrium and the first best can break down because of correlations of cash flows across firms. Intuitively, positive correlation makes the two stocks partially substitutable. As a result, R overweights Stock

2 and underweights Stock 1 to further increase non-pecuniary payoff from political value alignment. The resulting low ownership of R in Stock 1 makes it socially suboptimal for firm i to take a political stance catering to R. By contrast, the stock price of firm i is maximized at $\Theta_i = 1$ instead of $\Theta_i = 0$, because R's marginal utility is maximized when $\Theta_i = 1$. (See Footnote 11.)

A.4. *Proof of Proposition 4 and Corollary 5*

Proposition 4 follows directly from the maximization stock prices given in Equation (42). Note that the set $[-\frac{2}{\delta}k_i^L, \frac{2}{\delta}k_i^R]$ is not empty if and only if $k_i^R \geq -k_i^L$ (i.e., $k_i^R + k_i^L \geq 0$).

To prove Corollary 5, note that $k_i^L > 0$ and $k_i^R > 0$ imply $k_i^R + k_i^L > 0$. Substituting Equation (40) into (39) then yields (42). The results on the fraction of polarized firms and the average expected return gap follow naturally.

A.5. *Proof of Proposition 5*

Equation (47) follows directly from the maximization of stock price given in (45). Substituting Equation (47) into (45) yields (48). Substituting the equilibrium price vector into Equations (6), (7) and (51) yields the equilibrium ownership allocation. The results on the fraction of polarized firms and the average expected return gap follow naturally.

A.6. *Proof of Proposition 6*

When the large investor R optimizes his demands for stocks, he rationally anticipates that conditional on his ownership shares α_R, stock prices are determined by the market clearing condition $\alpha_L = e - \alpha_R$. Solving for the price vector using L's demand function, Equation (7), we have

$$P(\alpha_R, \Theta) = \mu - \frac{1}{\tau_L}V(e - \alpha_R) + \delta\Pi_L \circ (\frac{1}{2}e - \Theta), \tag{A.76}$$

where $\Theta_i \in [0,1] \quad \forall i$. This implies the following $N \times N$ Jacobian matrix of partial derivatives:

$$J_P \equiv \begin{pmatrix} \frac{\partial P_1}{\partial \alpha_{R,1}} & \frac{\partial P_2}{\partial \alpha_{R,1}} & \cdots & \frac{\partial P_N}{\partial \alpha_{R,1}} \\ \cdots & & & \\ \frac{\partial P_1}{\partial \alpha_{R,N}} & \frac{\partial P_N}{\partial \alpha_{R,N}} & \cdots & \frac{\partial P_N}{\partial \alpha_{R,N}} \end{pmatrix} = \frac{1}{\tau_L} V \tag{A.77}$$

Substituting Equation (A.76) into (1), and taking partial derivatives of R's utility, U_R, with respect to α_R, we obtain:

$$\frac{U_R}{\alpha_R} = -P + J_P(\alpha_R^0 - \alpha_R) + \mu - \frac{1}{\tau_R} V\alpha_R + \delta\Pi_R \circ (\Theta - \frac{1}{2}e), \tag{A.78}$$

which is an $N \times 1$ vector. Substituting out J_P by (A.77), we get the first-order condition for the optimal α_R:

$$P = \tfrac{1}{\tau_L} V(\alpha_R^0 - \alpha_R) + \mu - \tfrac{1}{\tau_R} V\alpha_R + \delta\Pi_R \circ (\Theta - \tfrac{1}{2}e). \tag{A.79}$$

Substituting Equation (A.76) into the first-order condition and rearranging terms, we obtain:

$$(\frac{1}{\tau_R} + \frac{2}{\tau_L})V\alpha_R = \frac{1}{\tau_L} V(e + \alpha_R^0) + \delta\Pi \circ (\Theta - \frac{1}{2}e). \tag{A.80}$$

Solving for α_R yields:

$$\alpha_R = \frac{\tau_R}{2\tau_R + \tau_L}(e + \alpha_R^0) + \frac{\tau_R \tau_L \delta}{2\tau_R + \tau_L} V^{-1}[\Pi \circ (\Theta - \frac{1}{2}e)]. \tag{A.81}$$

Note that the first term on the right-hand side of Equation (A.81) represents the allocation in the absence of non-pecuniary payoffs ($\Pi = 0$) or political disagreement ($\delta = 0$). Therefore, the second term captures the distortion caused by political disagreement.

To prove the equilibrium corporate political stances prescribed by (53), substitute (A.81) into (A.76) or (A.79) and take the partial derivative of P_i with respect to Θ_i to obtain:

$$\frac{\partial P_i}{\partial \Theta_i} = \frac{\delta \tau_R}{2\tau_R + \tau_L}(\Pi_{R,i} + \Pi_{L,i}) - \delta\Pi_{L,i}, \tag{A.82}$$

which is positive if and only if Inequality (52) holds. Therefore, the political stances prescribed in (53) maximize shareholder values. For the proof of the equilibrium allocation (54), simply substitute the equilibrium corporate political stances in Equation (53) into (A.81). Substituting (54) into (A.79), we obtain the equilibrium stock prices given in (55).

A.7. Proof of Proposition 7

The zero correlation among firms allows us to evaluate investor R's utility associated with each stock separately. For the case with $\lambda_R > \frac{\Pi_{L,i}}{\Pi_{R,i}}$, we have already shown in Proposition 6 that the equilibrium corporate political stance is $\Theta_i = 1$ even if the large investor is politically passive. If $\lambda_R < \frac{\Pi_{L,i}}{\Pi_{R,i}}$ and investor R chooses the politically passive strategy with $\alpha_{R,i} = \alpha_{R,i}^{Low}$, his utility associated with investment in firm i is:

$$U_{R,i}^{Low} = (\alpha_{R,i}^0 - \alpha_{R,i}^{Low})P_i(\alpha_{R,i}^{Low}, 0) + \alpha_{R,i}^{Low}\mu_i - \frac{1}{2\tau_R}(\alpha_{R,i}^{Low})^2 V - \frac{1}{2}\alpha_{R,i}^{Low}\Pi_{R,i}\delta, \quad \text{(A.83)}$$

where $\alpha_{R,i}^{Low}$ is given in Equation (61) and

$$P_i(\alpha_{R,i}^{Low}, 0) = \mu_i - \frac{1}{\tau_L}(1 - \alpha_{R,i}^{Low})V_i + \frac{1}{2}\delta\Pi_{L,i}. \quad \text{(A.84)}$$

Alternatively, the large investor can pay the deadweight cost c to induce $\Theta_i = 1$ by committing to $\alpha_{R,i}(\Theta_i = 0) = 0$ and $\alpha_{R,i}(\Theta_i = 1) = max(\underline{\alpha}_{R,i}, \alpha_{R,i}^{High})$. The latter equals $\alpha_{R,i}^{High}$ when Inequality (60) holds and equals $\underline{\alpha}_{R,i}$ if it does not. If he chooses this option, his utility associated with investment in firm i is defined similarly to (A.83) (with $P_i(\Theta_i = 0)$ replaced by $P_i(\Theta_i = 1)$). Denoting the utility functions under these two scenarios by $U_{R,i}^{High}$ and $U_{R,i}^{\underline{\alpha}}$, respectively, we have

$$U_{R,i}^{High} = (\alpha_{R,i}^0 - \alpha_{R,i}^{High})P_i(\alpha_{R,i}^{High}, 1) + \alpha_{R,i}^{High}\mu_i - \frac{1}{2\tau_R}(\alpha_{R,i}^{High})^2 V - \frac{1}{2}\alpha_{R,i}^{High}\Pi_{R,i}\delta - c, \quad \text{(A.85)}$$

$$U_{R,i}^{\underline{\alpha}} = (\alpha_{R,i}^0 - \underline{\alpha}_{R,i})P_i(\underline{\alpha}_{R,i}, 1) + \underline{\alpha}_{R,i}\mu_i - \frac{1}{2\tau_R}(\underline{\alpha}_{R,i})^2 V - \frac{1}{2}\underline{\alpha}_{R,i}\Pi_{R,i}\delta - c, \quad \text{(A.86)}$$

where $\alpha_{R,i}^{High}$ and $\underline{\alpha}_{R,i}$ are given by Equations (60) and (58), respectively, and

$$P_i(\alpha_{R,i}^{High}, 1) = \mu_i - \frac{1}{\tau_L}(1 - \alpha_{R,i}^{High})V_i - \frac{1}{2}\delta\Pi_{L,i}, \tag{A.87}$$

$$P_i(\underline{\alpha}_{R,i}, 1) = \mu_i - \frac{1}{\tau_L}(1 - \underline{\alpha}_{R,i})V_i - \frac{1}{2}\delta\Pi_{L,i}. \tag{A.88}$$

It is easy to verify that $U_{R,i}^{High} \geq U_{R,i}^{\underline{\alpha}}$. After some algebra, we can show $U_{R,i}^{High} > U_{R,i}^{Low}$ if and only if

$$c < \frac{\delta[\tau_R\Pi_i + \alpha_0(\tau_R\Pi_{R,i} - \tau_L\Pi_{L,i} - \tau_R\Pi_{L,i})]}{2\tau_R + \tau_L}; \tag{A.89}$$

and $U_{R,i}^{\underline{\alpha}} > U_{R,i}^{Low}$ if and only

$$c < \delta\Pi_{L,i} + \frac{\tau_R\delta\Pi_i(1 + \alpha_{R,i}^0)]}{2(2\tau_R + \tau_L)} - \frac{\tau_L\delta^2[(2\tau_L\Pi_{L,i} + \tau_R(3\Pi_{L,i} - \Pi_{R,i})]^2}{8\tau_R(2\tau_R + \tau_L)}V_i^{-1} - \frac{\tau_R(1 + \alpha_{R,i}^0)^2}{2\tau_L(2\tau_R + \tau_L)}V_i. \tag{A.90}$$

Thus, if $\lambda_R < \frac{\Pi_{L,i}}{\Pi_{R,i}}$ and both Inequalities (60) and (A.89) hold, the large shareholder engages in influence activity and chooses $\alpha_{R,i}^* = \alpha_{R,i}^{High}$; if Inequality (60) does not hold but (A.90) holds, then the large shareholder engages in influence activity and chooses $\alpha_{R,i}^* = \underline{\alpha}_{R,i}$. Since short sales are not allowed, the large investor cannot lower the minimum $\alpha_{R,i}$ needed for $\Theta_i = 1$ by choosing $\alpha_{R,i} < 0$ for $\Theta_i = 0$. Therefore, if $\lambda_R < \frac{\Pi_{L,i}}{\Pi_{R,i}}$ and neither (A.90) nor (A.89) holds, the large investor chooses the passive strategy and accepts $\Theta_i = 0$. This completes the proof of Proposition 7.

A.8. Proof of Proposition 8

Substituting (62) into (1), we obtain investors' utility functions as follows:

$$U_R = (\alpha_R^0 - \alpha_R)'P + \alpha_R'\mu - \frac{1}{2\tau_R}\alpha_R'V\alpha_R + \alpha_R'[(\delta\Pi_R \circ (\alpha_R - \frac{1}{2}e)], \tag{A.91}$$

$$U_L = (\alpha_L^0 - \alpha_L)'P + \alpha_L'\mu - \frac{1}{2\tau_L}\alpha_L'V\alpha_L + \alpha_L'[(\delta\Pi_L \circ (\frac{1}{2}e - \alpha_R)]. \tag{A.92}$$

Because the representative small investor L does not internalize the effect of her demand on stock prices or corporate political stances, her demand function is:

$$\alpha_L = \tau_L V^{-1}[\mu + \delta\Pi_L \circ (\frac{1}{2}e - \alpha_R) - P]. \tag{A.93}$$

The market clearing stock prices conditional on the large investor R's ownership shares α_R are:

$$P = \mu - \frac{1}{\tau_L}V(e - \alpha_R) + \delta\Pi_L \circ (\frac{1}{2}e - \alpha_R), \tag{A.94}$$

which implies the following $N \times N$ Jacobian matrix of the partial derivatives of P with respect to α_R:

$$J_P = \frac{1}{\tau_L}V - \delta diag(\Pi_L), \tag{A.95}$$

where $diag(\Pi_L)$ is an $N \times N$ diagonal matrix with the diagonal entries populated by the elements of vector Π_L.

Substituting Equation (A.94) into (A.91), and setting the vector of partial derivatives of U_R with respect to α_R equal to zero, we obtain the first-order condition for the optimal α_R:

$$P - J_P(\alpha_R^0 - \alpha_R) = \quad \mu - \tfrac{1}{\tau_R}V\alpha_R + 2\delta\Pi_R \circ \alpha_R - \tfrac{1}{2}\delta\Pi_R.$$

By substituting Equations (A.94) and (A.95) into the first-order condition above and rearranging terms, we obtain:

$$(\frac{1}{\tau_R} + \frac{2}{\tau_L})V\alpha_R - 2\delta\Pi \circ \alpha_R = \frac{1}{\tau_L}V(e + \alpha_R^0) - \frac{1}{2}\delta\Pi - \delta\Pi_L \circ \alpha_R^0. \tag{A.96}$$

Solving for α_R leads to Equation (63).

Equation (63) follows directly from Equation (A.96) and the preference-matching rule. Equation (64) is a special case of (63) with V being a diagonal matrix. Taking the partial derivative of $\alpha_{R,i}^*$ with respect to Π_i, δ and V_i under the condition $\alpha_{R,i}^0 = 0$ yields the results in Equation (65).

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Internet Appendix to "Political Preferences and Financial Market Equilibrium"

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To examine the sensitivity of our results to the assumption of linear non-pecuniary payoffs, we now consider an alternative specification. Instead of assuming the non-pecuniary payoff functions to be linear, we now assume them to be cubic.[24] We show that this alternative specification does not change the main results of the simple model we analyze.

Specifically, we reformulate the utility functions of R and L as follows:

$$U_R = (\alpha_R^0 - \alpha_R)'P + \alpha_R'\mu - \frac{1}{2\tau_R}\alpha_R'V\alpha_R + \alpha_R'[\delta\Pi_R \circ (\Theta - \frac{1}{2}e)^{\circ 3}], \quad (1)$$

$$U_L = (\alpha_L^0 - \alpha_L)'P + \alpha_L'\mu - \frac{1}{2\tau_L}\alpha_L'V\alpha_L + \alpha_L'[\delta\Pi_L \circ (\frac{1}{2}e - \Theta)^{\circ 3}], \quad (2)$$

where $(\Theta - \frac{1}{2}e)^{\circ 3}$ is the third Hadamard power of the vector $(\Theta - \frac{1}{2}e)$, and $\Theta_i \in [0,1] \quad \forall i$. That is, it is $(\Theta - \frac{1}{2}e)$ raised to the power of three element-wise. $(\frac{1}{2}e - \Theta)^{\circ 3}$ is defined similarly.

A. Competitive Equilibrium with Cubic Non-Pecuniary Payoff Functions

In the competitive equilibrium, both types of investors take prices as given, and we have

$$\alpha_R = \tau_R V^{-1}[\mu + \delta\Pi_R \circ (\Theta - \frac{1}{2}e)^{\circ 3} - P], \quad (3)$$

$$\alpha_L = \tau_L V^{-1}[\mu + \delta\Pi_L \circ (\frac{1}{2}e - \Theta)^{\circ 3} - P]. \quad (4)$$

[24] A quadratic function is symmetric on the two sides of the central point, which makes it unsuitable to model the positive payoff on one side and negative payoff on the other side.

Using market clearing condition (8), we obtain the equilibrium stock price vector:

$$P = \mu - \frac{1}{\tau_R + \tau_L} V e + \delta(\lambda_R \Pi_R - \lambda_L \Pi_L) \circ (\Theta - \frac{1}{2} e)^{\circ 3}. \quad (5)$$

Substituting (5) into (3) and (4) yields

$$\alpha_R = \lambda_R e + \frac{\delta}{\gamma} V^{-1} [\Pi \circ (\Theta - \frac{1}{2} e)^{\circ 3}], \quad (6)$$

$$\alpha_L = \lambda_L e - \frac{\delta}{\gamma} V^{-1} [\Pi \circ (\Theta - \frac{1}{2} e)^{\circ 3}]. \quad (7)$$

From Equation (5), it follows that the political stance that maximizes the stock price for any firm i is:

$$\Theta_i^* = \begin{cases} 1 & \text{if} \quad \frac{\lambda_R}{\lambda_L} > \frac{\Pi_{L,i}}{\Pi_{R,i}}; \\ \text{any } \Theta_i \in [0,1] & \text{if} \quad \frac{\lambda_R}{\lambda_L} = \frac{\Pi_{L,i}}{\Pi_{R,i}}; \\ 0 & \text{otherwise.} \end{cases} \quad (8)$$

This is identical to what we obtain with linear non-pecuniary payoff functions. Substituting (8) into (6) and (7), we obtain the ownership allocation in the competitive equilibrium, which are qualitatively similar to the value-maximizing allocation in the linear model.

B. First-Best Outcomes with Cubic Non-Pecuniary Payoff Functions

The aggregate utility of investors R and L is given by:

$$U = e'\mu - \frac{1}{2\tau_R} \alpha_R' V \alpha_R - \frac{1}{2\tau_L} (e - \alpha_R)' V (e - \alpha_R) + \alpha_R' [\delta(\Pi_R + \Pi_L) \circ (\Theta - \frac{1}{2} e)^{\circ 3}] + e' [\delta \Pi_L \circ (\Theta - \frac{1}{2} e)^{\circ 3}], \quad (9)$$

where $\Theta_i \in [0,1] \quad \forall i$. Taking the first derivatives of U with respect to the vectors α_R and Θ yields

$$\frac{\partial U}{\partial \alpha_R} = -\frac{1}{\tau_R} V \alpha_R + \frac{1}{\tau_L} V (e - \alpha_R) + \delta [\Pi \circ (\Theta - \frac{1}{2} e)^{\circ 3}], \quad (10)$$

$$\frac{\partial U}{\partial \Theta} = 3\delta \alpha_R' [\Pi \circ (\Theta - \frac{1}{2} e)^{\circ 2}] - 3\delta e' [\Pi_L \circ (\Theta - \frac{1}{2} e)^{\circ 2}]. \quad (11)$$

Note that both $\frac{\partial U}{\partial \alpha_R}$ and $\frac{\partial U}{\partial \Theta}$ are $N \times 1$ vectors. Setting $\frac{\partial U}{\partial \alpha_R}$ equal to zero, we obtain the first-order condition for the optimal α_R:

$$\alpha_R = \lambda_R e + \frac{\delta}{\gamma} V^{-1}[\Pi \circ (\Theta - \frac{1}{2}e)^{\circ 3}]. \tag{12}$$

This is identical to (6). Therefore, as long as the distributions of corporate political stances in the first-best solution and in the competitive equilibrium are the same, the ownership allocations in these two cases are also the same.

While we cannot prove that all firms take a polarized stance in the first-best scenario under this alternative specification, the equivalence between the first-best and the competitive equilibrium still holds when cash flows are uncorrelated and $\lambda_R \Pi_{R,i} \neq \lambda_L \Pi_{L,i}$ $\forall i$. From (11) we have

$$\frac{\partial U}{\partial \Theta_i} = 3\delta(\alpha_{R,i}\Pi_i - \Pi_{L,i})(\Theta_i - \frac{1}{2})^2, \tag{13}$$

which has the same sign as $\alpha_{R,i}\Pi_i - \Pi_{L,i}$ for $\Theta_i \neq \frac{1}{2}$. When cash flows are uncorrelated, $\frac{\partial U}{\partial \Theta_i \partial \Theta_j} = 0, \forall i \neq j$. This means that Θ_i can be optimized independently of all $\Theta_{j \neq i}$. Equation (12) then implies that $\alpha_{R,i}$ increases monotonically with Θ_i. As a result, $\alpha_{R,i}\Pi_i - \Pi_{L,i}$ increases monotonically with Θ_i. Equation (13) then implies that as Θ_i increases, $\frac{\partial U}{\partial \Theta_i}$ does not turn negative once it becomes positive. This means that as Θ_i increases from 0 to 1, the aggregate utility either increases monotonically, decreases monotonically, or first decreases and then increases. Therefore, the welfare-maximizing point must be either $\Theta_i = 0$ or $\Theta_i = 1$ (or both if indiferent). A simple comparison of these two points shows that $\Theta_i = 1$ ($\Theta_i = 0$) is socially optimal if $\lambda_R \Pi_{R,i} > \lambda_L \Pi_{L,i}$ ($\lambda_R \Pi_{R,i} < \lambda_L \Pi_{L,i}$), and that both are socially optimal if $\lambda_R \Pi_{R,i} = \lambda_L \Pi_{L,i}$. Therefore, as in the case with linear non-pecuniary payoff functions, the utilitarian first-best outcomes are the same as competitive equilibrium outcomes when cash flows are uncorrelated across firms and $\lambda_R \Pi_{R,i} \neq \lambda_L \Pi_{L,i}$ $\forall i$.