

Private Profits and Public Business

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A common justification for shareholder primacy is that shareholders' financial interests give them an incentive to pursue projects that increase social welfare. This alignment of interests occurs because shareholders hold a residual claim on firm value: Because they receive only what remains after the firm has met its contractual and regulatory obligations, shareholders have a unique incentive to pursue innovative projects, increase profits, and keep costs down. According to the conventional view, third parties protect their interests through external mechanisms such as regulations and contracts negotiated against the backdrop of competitive markets.

This Article builds on the relational contracting literature to identify a class of situations in which some of these assumptions break down. In many industries, including electric utilities, defense contracting, financial services, and pharmaceuticals, the government sets firm profits, establishes demand for a good or service, or protects counterparties from the negative consequences of excessive risk-taking. Whether justified or not, these interventions can put firms in a position to hold up the government. For example, if an intervention ensures that only the regulated firm can provide an essential service, the government may be unable to credibly threaten to resolve the firm and may therefore be unable to force the firm to accept lower earnings. (Of course, similar bargaining dynamics arise without a prior government intervention when the government feels compelled to bail out firms that provide systemically important goods and services.) As a result, the firm can demand additional revenues to cover unexpected costs or pass the costs of regulatory noncompliance onto customers. That, in turn, weakens shareholders' financial incentives to pursue socially beneficial projects. The implication is that outside stakeholders, particularly the government, should participate more directly in corporate governance in these industries. Potential interventions include heightened merger review; a say in

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personnel decisions such as hiring, firing, and executive compensation; expanded fiduciary duties; and perhaps wider board representation.

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Introduction

The view that corporations should be run for the financial benefit of shareholders presupposes that shareholders’ financial interests align with broader societal interests.¹ This approach to corporate governance is known as shareholder primacy, and it is based on two related assumptions. The first is that shareholders hold the residual claim on the firm’s assets.² Residual claimants are entitled to whatever value is left after the firm has met its legal and contractual obligations to creditors, suppliers, and employees. If a firm

1. *See, e.g.*, FRANK H. EASTERBROOK & DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 37–39 (1991) (describing “harmony of interest between profit maximization and other objectives,” which can be enhanced by regulations, taxes, and subsidies that cause “venturers’ wealth” to correlate with social wealth); REINIER KRAAKMAN, JOHN ARMOUR, PAUL DAVIES, LUCA ENRIQUES, HENRY HANSMANN, GERARD HERTIG, KLAUS HOPT, HIDEKI KANDA, MARIANA PARGENDLER, WOLF-GEORG RINGE & EDWARD ROCK, *THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH* 23 (3d ed. 2017) (interpreting the shareholder primacy approach to governance as a claim that “focusing principally on the maximization of shareholder returns is, in general, the best means by which corporate law can serve the broader goal of advancing overall social welfare”). The body text describes the argument that shareholder primacy is appropriate because shareholders are the “residual claimant” on the enterprise, and thus internalize the consequences when the enterprise creates or destroys value. KRAAKMAN ET AL., *supra*, at 23 & n.88. Other arguments are addressed *infra*, in subparts I(A) and III(B). Several arguments, such as the idea that shareholders are uniquely vulnerable to expropriation or uniquely unable to protect themselves through explicit contracts, are ultimately based in part on the residual claimant concept. *See* Oliver Williamson, *Corporate Governance*, 93 *YALE L.J.* 1197, 1210, 1228 (1984) (arguing that the board of directors operates to safeguard stockholders’ interests because they have diffuse economic interests readily-enforceable contractual rights). Other arguments, such as the potential that managers will shirk if they answer to several different interests and the potential for intractable disagreements among competing interests, present genuine tradeoffs, though those tradeoffs are likely to vary across industries and contexts.

2. *See, e.g.*, EASTERBROOK & FISCHER, *supra* note 1, at 67–68 (describing how the stockholder’s residual claim incentivizes the proper exercise of discretion); Williamson, *supra* note 1, at 1210 (explaining how stockholders’ last claim in event of liquidation creates “a unique relation to the firm”); *In re Trados Inc. S’holder Litig.*, 73 A.3d 17, 40–41 (Del. Ch. 2013). Explaining the duty of the board of directors, the *Trados* court asserted:

[T]he standard of conduct for directors requires that they strive in good faith and on an informed basis to maximize the value of the corporation for the benefit of its residual claimants, the ultimate beneficiaries of the firm’s value In light of this obligation, “it is the duty of directors to pursue the best interests of the corporation and its common stockholders”

In re Trados, 73 A.3d at 40–41 (quoting *LC Cap. Master Fund, Ltd. v. James*, 990 A.2d 435, 452 (Del. Ch. 2010)).

develops a useful product, shareholder profits increase. If an investment does not work out, shareholders are the first to incur a loss. Shareholders therefore have a financial interest in pursuing projects that will efficiently meet people's demand for goods and services.

The second assumption is that market and regulatory mechanisms are capable of causing the firm's revenues and costs to reflect the interests of non-shareholder constituents.³ Stakeholders who do not own shares have numerous ways to express their preferences. Consumers select products that appeal to them. Employees pick jobs based on pay, flexibility, or location. The government can tax or ban harmful activities. These market, contractual, and regulatory interventions create financial incentives for shareholders and managers to account for non-shareholder interests such as protecting the environment and worker welfare.

This Article explores a class of situations in which one or both of these assumptions break down. In many critical industries, including electricity, defense contracting, financial services, and the development of pharmaceuticals, the government stipulates the demand for a good or service (electricity, defense, and pharmaceuticals), limits shareholder and managerial discretion to pursue profitable activities (electricity and financial services), or guarantees some of the firm's contractual obligations (financial services and perhaps electricity). In these markets, the government discerns (or attempts to discern) the socially optimal outcome and creates incentives for investors to manufacture or develop a product. These mechanisms can include setting firm profits, guaranteeing returns, reimbursing costs, limiting competition, purchasing a dominant portion of the firm's output at stated prices, or bailing out a firm whose liquidation would impose excessive societal costs.⁴

When this kind of intervention is pervasive, or when a firm's failure will have devastating economic consequences, shareholder-focused firms often

3. See, e.g., EASTERBROOK & FISCHER, *supra* note 1, at 37 (observing that monetary penalties align wealth-maximizing incentives with societal interests); Lucian A. Bebchuk & Roberto Tallarita, *The Illusory Promise of Stakeholder Governance*, 106 CORNELL L. REV. 91, 174–75 (2020) (arguing that stakeholder interests are better served through public policy instead of corporate governance); cf. Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U. PA. L. REV. 1209, 1211 (2006) (describing situations in which “the lender is able to exercise de facto control rights—such as replacing the CEO of a company—that shareholders of a public company simply do not have”); Dorothy S. Lund & Elizabeth Pollman, *The Corporate Governance Machine*, 121 COLUM. L. REV. 2563, 2565 (2021) (describing “a complex governance system in the United States composed of law, institutions, and culture that orients corporate decisionmaking toward shareholders”).

4. See MORGAN RICKS, GANESH SITARAMAN, SHELLEY WELTON & LEV MENAND, NETWORKS, PLATFORMS & UTILITIES: LAW & POLICY 24–31 (2022) (listing the tools in the government's “regulatory toolkit” to incentivize and regulate networks, platforms, and utilities); ALFRED E. KAHN, *THE ECONOMICS OF REGULATION* 3 (1988) (introducing the “four principal components” of government regulation that distinguish the public utility sector).

have the ability and incentive to hold up the government. First, the underlying policy rationale driving the government's intervention may create opportunities for exploitation by profit-seeking managers. If a bank failure would cause enormous economic and social harm, the bank's managers can engage in risky behavior knowing that it will be bailed out. Second, the intervention itself may facilitate opportunism. If the government must purchase a good from a contractor, and only one firm can sell due to limits on competition, the government is vulnerable if the firm demands price or quality concessions. Third, the scope of the government's intervention might oblige it to assume responsibility for protecting the financial health of firms in the space. The government simply has no choice but to ensure that firms do not exit systemically important businesses. Although orderly liquidation mechanisms have an important place in these industries, government officials often feel compelled to bail out such firms rather than let them file for bankruptcy.

In these situations, the government has only limited ability to protect its interests or those of non-shareholder constituents through contract and regulation. The government's first challenge is that *ex ante* interventions are difficult to implement and administer and are vulnerable to exploitation. It is challenging, if not impossible, for the government to anticipate every contingency in advance, particularly in areas where innovation is valuable. The clearest example of this is public utility regulation, where regulators protect firms from competition, cap returns, and authorize a return on investments.⁵ As we have previously argued, these types of interventions transform shareholders from residual claimants into fixed claimants.⁶ The government can try to encourage innovation by setting a price that rewards utilities for pursuing welfare-enhancing investments. But even a knowledgeable and well-resourced regulator cannot predict every future contingency. Once the government establishes an incentive structure, shareholders do not receive additional profits for welfare-enhancing investments that were not incorporated into the rate schedule. Shareholder-focused managers are therefore unlikely to pursue innovations whose benefits become apparent after the regulator has reviewed the firm's costs and authorized its revenues.

The second challenge is that the government's threats and promises often lose credibility after a project is underway or a threat has materialized.

5. See KAHN, *supra* note 4, at 25–32, 54–57 (critiquing current government practices in utility-rate regulation); cf. Nicholas Parrillo, “The Government at the Mercy of Its Contractors”: How the New Deal Lawyers Reshaped the Common Law to Challenge the Defense Industry in World War II, 57 HASTINGS L.J. 93, 118 (2005) (describing the government's resort to cost-plus contracts with defense suppliers).

6. Aneil Kovvali & Joshua C. Macey, *The Corporate Governance of Public Utilities*, 40 YALE J. ON REGUL. 569, 572, 590 (2023).

Although the governance implications of this phenomenon are well-studied in the relational contracting literature, these insights have been applied primarily to private markets and not to situations in which the government is an intermediary or counterparty. When parties enter into an arrangement that will create a bilateral monopoly, they become vulnerable to exploitation. To use one famous example, once General Motors designed its cars around parts from suppliers like Fisher Body or Delphi, it had made relationship-specific investments that made it more difficult for General Motors to switch suppliers. As a result, those suppliers were in a position to demand new concessions from General Motors.⁷

This is a familiar observation in private markets: Challenges with long-term contracting often facilitate holdup and therefore require governance solutions.⁸ General Motors acquired Fisher Body and bought factories from Delphi, then managed those assets directly for its own benefit. Without this governance solution, the suppliers' managers would have been able to exploit information asymmetries and dependency to take advantage of General Motors.

Yet these observations have not been fully extended to government-dominated markets in the corporate governance literature or in public policy.⁹

7. Benjamin Klein, Robert Crawford, and Armen Alchian appear to have been the first to discuss the General Motors and Fisher Body situation. Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297, 308–10 (1978); see also OLIVER HART, FIRMS, CONTRACTS, AND FINANCIAL STRUCTURE 29–33 (1995) (developing this point using the example of General Motors and Fisher Body); OLIVER E. WILLIAMSON, MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS 34–35 (1975) [hereinafter WILLIAMSON, MARKETS AND HIERARCHIES] (describing how the “first-mover advantage” can make it difficult or impossible to transition away from an initial supplier); OLIVER E. WILLIAMSON, THE MECHANISMS OF CORPORATE GOVERNANCE 3–5 (1996) [hereinafter WILLIAMSON, THE MECHANISMS OF GOVERNANCE] (introducing an analytical framework of corporate governance driven by microeconomics and transaction costs). In private industry, the theory does seem to match practice. See, e.g., STEVEN RATTNER, OVERHAUL: AN INSIDER’S ACCOUNT OF THE OBAMA ADMINISTRATION’S EMERGENCY RESCUE OF THE AUTO INDUSTRY 263 (2010) (describing how General Motors acquired factories from Delphi to get “access to the critical parts that had allowed Delphi essentially to extort billions of dollars of financing from GM over the years”).

8. E.g., WILLIAMSON, MARKETS AND HIERARCHIES, *supra* note 7, at 35–37; HART, *supra* note 7, at 29–33.

9. A few works have glimpsed aspects of the story. In the economics literature, scholars have made similar claims when discussing the relative merits of public and private ownership. See Oliver Hart, Andrei Shleifer & Robert W. Vishny, *The Proper Scope of Government: Theory and an Application to Prisons*, 112 Q.J. ECON. 1127, 1128–30 (1997) (introducing a model that weighs the efficacy of the government or private sector providing services); David E. M. Sappington & Joseph E. Stiglitz, *Privatization, Information, and Incentives*, 6 J. POL’Y ANALYSIS & MGMT. 567, 568, 574–75 (1987) (outlining a model and assumptions for when government should provide direct services). In the legal literature, some scholars have noted that shareholders may have imperfect incentives in particular contexts, particularly in the financial sector. See, e.g., Kovvali & Macey, *supra* note 6, at 588 (asserting that arguments for shareholder primacy are less convincing in the

Once the government embarks on a technologically innovative defense project, it may be difficult to switch to another contractor. As a result, the contractor may be able to demand additional revenue to cover cost overruns. This is a recurring theme of electricity regulation and defense contracting, where regulators often authorize revenue increases when a project turns out to be more expensive than anticipated.¹⁰ One scholarly response to these challenges is that the government should enter into more complete contracts

context of rate-regulated utilities); Yaniv Heled, Liza Vertinsky & Cass Brewer, *Why Healthcare Companies Should Be(come) Benefit Corporations*, 60 B.C. L. REV. 73, 76–78 (2019) (noting problems with shareholder incentives for healthcare companies); Mark J. Roe, *Structural Corporate Degradation Due to Too-Big-to-Fail Finance*, 162 U. PA. L. REV. 1419, 1422 (2014) [hereinafter Roe, *Too-Big-to-Fail*] (noting problems with shareholder primacy in too-big-to-fail finance firms); Da Lin & Lev Menand, *The Banker Removal Power*, 108 VA. L. REV. 1, 4, 7–8 (2022) (noting federal regulators’ statutory power to remove bank officials and finding that power appropriate given the corporate governance challenges at banks); Lev Menand & Morgan Ricks, *Federal Corporate Law and the Business of Banking*, 88 U. CHI. L. REV. 1361, 1362–64 (2021) (describing and justifying the unique body of corporate law that applies to federally chartered banks); Saule T. Omarova, *Bank Governance and Systemic Stability: The “Golden Share” Approach*, 68 ALA. L. REV. 1029, 1032–33 (2017) (suggesting that the government should be empowered to assert governance rights at systemically important financial institutions that reach certain triggers); Andrew Verstein, *The Corporate Governance of National Security*, 95 WASH. U. L. REV. 775, 780–81 (2018) (describing and critiquing corporate governance interventions at foreign-owned, -controlled, or -influenced defense contractors); Yair J. Listokin & Inho Andrew Mun, *Rethinking Corporate Law During a Financial Crisis*, 8 HARV. BUS. L. REV. 349, 354 (2018) (suggesting that corporate law rules regarding takeovers should be altered in the context of government-supported bank takeovers designed to forestall a financial crisis); John Armour & Jeffrey N. Gordon, *Systemic Harms and Shareholder Value*, 6 J. LEGAL ANALYSIS 35, 62 (2014) (suggesting that officers and directors of systemically important financial institutions should be subject to specialized liability rules); Jonathan R. Macey & Maureen O’Hara, *The Corporate Governance of Banks*, FED. RESRV. BANK N.Y. ECON. POL’Y REV., Apr. 2003, at 91, 92 (arguing that bank officers and directors should be held to “a heightened duty to ensure the safety and soundness of these enterprises”); ROBERT CHARLES CLARK, CORPORATE LAW § 16.2.5, at 695 (1986) (“[P]rofit-maximizing private corporations that contract to provide public services will be tempted to cut corners and to neglect noneconomic values and policies. . . . These tendencies could be controlled by explicit rules, but . . . the rule making that would ultimately be needed would be extremely cumbersome and costly to enforce.”). Professor Mark J. Roe has also shown that the shareholder primacy norm has less justification in markets characterized by monopoly or oligarchy. Mark J. Roe, *Corporate Purpose and Corporate Competition*, 99 WASH. U. L. REV. 223, 225 (2021) [hereinafter Roe, *Corporate Purpose*]; Mark J. Roe, *The Shareholder Wealth Maximization Norm and Industrial Organization*, 149 U. PA. L. REV. 2063, 2066 (2001) [hereinafter Roe, *Shareholder Wealth*]. A separate public law and economics literature has examined related problems, largely in the context of government outsourcing and privatization. See, e.g., Shelley Welton, *Public Energy*, 92 N.Y.U. L. REV. 267, 282–85 (2017) (discussing various scholarly perspectives on government outsourcing and arguing that some “inherently governmental” functions should not be contracted); Steven J. Kelman, *Achieving Contracting Goals and Recognizing Public Law Concerns: A Contracting Management Perspective*, in GOVERNMENT BY CONTRACT: OUTSOURCING AND AMERICAN DEMOCRACY 153, 156 (Jody Freeman & Martha Minow eds., 2009) (“However, under certain circumstances contracting creates transaction costs outweighing its production-cost benefits.”).

10. See, e.g., Joaquin Sapien, *The Inside Story of How the Navy Spent Billions on the “Little Crappy Ship,”* PROPUBLICA (Sept. 7, 2023, 6:00 AM), <https://www.propublica.org/article/how-navy-spent-billions-littoral-combat-ship> [<https://perma.cc/H2JY-8EAW>] (investigating defense spending on a problematic project).

and enact more effective external regulations.¹¹ But when it is impossible to anticipate difficulties that arise after initiating the contract, the government may not be able to rely on contract or regulation to protect its interests. This problem is especially salient when an entity becomes the government's only plausible supplier, since it may not be possible to force the firm to liquidate or switch to a new contractor.¹² In these situations, the government may be inclined to allow the firm to increase revenues to ensure that a naval destroyer is built, avoid electric service disruptions, or stave off a financial crisis.¹³ The firm consequently becomes a monopolist in its dealings with the government and is therefore in a position to demand additional revenues to cover unplanned costs.

Because external mechanisms such as contract and regulation fail to protect societal interests in these spaces, it may be appropriate for regulators and other stakeholders to protect their interests by participating directly in corporate governance decisions.¹⁴ The resulting system would take a context-specific approach: corporate governances that vary to fit the nature of the intervention rather than a one-size-fits-all corporate governance arrangement.¹⁵

11. See, e.g., Welton, *supra* note 9, at 274 (“[E]nergy law scholars have [previously] confined themselves to questions of how to improve the public-private partnership, rather than rethinking it.”); Lev Menand, *Why Supervise Banks? The Foundations of the American Monetary Settlement*, 74 VAND. L. REV. 951, 960, 1003 (2021) (describing Congress’s persistent refusal to nationalize banking, despite repeated financial crises).

12. See Oliver E. Williamson, *The Theory of the Firm as Governance Structure: From Choice to Contract*, J. ECON. PERSPS., Summer 2002, at 171, 176, 187 (explaining the difficulty in applying traditional market-oriented approaches to transactions constrained by a small number of suppliers). As discussed below, many of the industries analyzed in this Article are characterized by cost overruns that the government appears unable to control.

13. Arguably the opposite is true as well, and the government is also in a position to hold up the contractor. See WERNER TROESKEN, *WHY REGULATE UTILITIES?* 13–14 (1996) (discussing tactics employed by local governments to regulate utility providers, such as by granting rights to lay and repair mains in exchange for lower electricity rates).

14. Another potential solution—which we set aside in this Article but hope to return to in future work—is to impose accountability mechanisms that would impose costs on government agencies or officials for giving in to the holdup problem. For present purposes, we simply note that such a solution would not be straightforward. Assuming it could be implemented, the merits of such a solution would be ambiguous and context specific. It would encourage caution both in regulating *ex ante* and in giving in to firms *ex post* but could prevent policymakers from undertaking worthwhile interventions. Cf. Anthony J. Casey & Eric A. Posner, *A Framework for Bailout Regulation*, 91 NOTRE DAME L. REV. 479, 535 (2015) (“The more onerous the penalties imposed after the fact, the more hesitant a government actor will be to implement a bailout program. Personal liability for government actors, for example, would be too extreme.”). It could also have unusual effects in certain contexts—an agency negotiating a contract with a supplier might be inclined to be more generous in the initial deal to avoid having to recut it as a result of later developments. We thank Dan Awrey for drawing our attention to this point.

15. There are other arguments for varying corporate governance arrangements depending on context. See, e.g., HENRY HANSMANN, *THE OWNERSHIP OF ENTERPRISE* 287 (Harvard Univ. Press

At a conceptual level, these insights open up a new space for policy interventions. The academic literature typically assumes a sharp distinction between private firms and public ownership and suggests that where contract and regulation cannot induce profit-seeking firms to discharge a public function, the only alternative is to assign the function to an arm of the government. This Article's analysis reveals that there need not be a simple binary between public control and private ownership, and that there are a variety of intermediate solutions that would empower the government to influence corporate decisionmaking without taking complete control of private firms.

Policymakers could use numerous reforms to push firms in this direction. For example, when shareholder interests align with society's, the market for corporate control disciplines managers toward efficient conduct by removing managers who fail to deliver shareholder returns. But mergers in spaces like defense contracting may generate shareholder value while destroying social value; a smaller number of firms will be in a stronger position to negotiate with the government because competition will be limited, supervision of larger and more complex companies will be more difficult, and the government will lack the informational benefits that come from receiving multiple bids.¹⁶ This suggests that policymakers should take a more robust approach to competition issues in government-dominated

2000) (1996) (describing how different patterns of ownership and control may be optimal in different contexts); Mariana Pargendler, *Corporate Law in the Global South: Heterodox Stakeholderism*, 47 SEATTLE U. L. REV. 535, 539–40 (2024) (describing variation in corporate law across the Global South and suggesting that it may reflect an efficient adaptation to varying economic, legal, and institutional environments); Dorothy S. Lund, *Toward a Dynamic View of Corporate Purpose*, MINN. L. REV. (forthcoming 2024) (manuscript at 38), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4665040 [<https://perma.cc/3THA-WNCR>] (noting that optimal corporate purpose is likely to vary depending on economic conditions and regulatory strength); Aneil Kovvali, *Countercyclical Corporate Governance*, 101 N.C. L. REV. 141, 144 (2022) (finding that optimal arrangements may depend on macroeconomic context); Zohar Goshen & Doron Levit, *Agents of Inequality: Common Ownership and the Decline of the American Worker*, 72 DUKE L.J. 1, 68–69 (2022) (concluding that different governance arrangements may produce the best macroeconomic results); Dorothy S. Lund, *In Search of Good Corporate Governance*, 131 YALE L.J.F. 854, 856 (2022) (suggesting that there may be “good reasons” for differences in governance arrangements across firms); Elizabeth Pollman, *Startup Governance*, 168 U. PA. L. REV. 155, 218 (2019) (suggesting that startups present distinctive governance challenges, in part because “common shareholders do not represent the firm value or an undifferentiated residual as imagined”); Yakov Amihud, Markus Schmid & Steven Davidoff Solomon, *Settling the Staggered Board Debate*, 166 U. PA. L. REV. 1475, 1480 (2018) (“In some firms the staggered board may be value-enhancing, in others value-destroying.”); Curtis J. Milhaupt & Mariana Pargendler, *Governance Challenges of Listed State-Owned Enterprises Around the World: National Experiences and a Framework for Reform*, 50 CORNELL INT’L L.J. 473, 532 (2017) (“[T]here appears to be no single formula for achieving a high quality regulatory structure for [state-owned enterprise] governance.”).

16. This is not to deny that there are economies of scale in some government-dominated industries. It seems likely that some amount of consolidation is beneficial in parts of the electricity industry, where economies of scale might allow firms to build transmission lines at a lower cost.

markets. They should account not only for the effect a merger has on consumer welfare but also look at whether the merger will leave the government more vulnerable to holdup by producers of essential goods and services. Similar logic might suggest extending fiduciary duties to protect non-shareholders, expanding board representation, and giving non-shareholders some authority to determine executive compensation and weigh in on whether to hire or fire high-level managers.¹⁷

Of course, the fact that a central justification for shareholder primacy does not apply to these industries hardly means that every aspect of corporate law and governance should be revised to focus on non-shareholder constituents. All the reforms we discuss entail real trade-offs, many of which cannot be answered in this Article. For example, the threat that a government agency will fire a company executive or reduce executive compensation may make it more difficult for firms to attract and retain talent. Similarly, increasing firms' vulnerabilities to *ex post* and ad hoc interventions could, perversely, heighten firms' incentives to try to capture regulators. The government may also lack the expertise or capacity for intensive engagement at these firms, and reforms could lead to intractable disputes or exacerbate the principal-agent problem and entrench managerialism.

But note that these points are orthogonal to our central thesis. Our argument is not that the government is competent; it is that even a well-resourced and capable bureaucracy is vulnerable to holdup when it relies on a single essential supplier, and that in such circumstances, governance interventions can complement traditional contract and regulatory interventions.

Still, because of the difficulties in navigating the trade-offs that arise when trying to extend our insights into the real world, this Article presents a menu of potential governance reforms, recognizing that all these proposals involve unavoidable trade-offs that may vary in different contexts. The point is not that any reform provides a panacea, or even that it is viable in any particular case, but rather that the government often has an incentive to intervene in ways that disrupt the assumptions that underlie shareholder primacy, which in turn provides support for taking a context-specific approach to corporate governance.

In another sense, however, our analysis has direct implications for defense, energy, and financial markets. In these industries, regulators often

17. Others have offered similar proposals in some of the industries we study, albeit for different reasons. *See, e.g.*, Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers' Pay*, 98 GEO. L.J. 247, 249, 253 (2010) (arguing that executive compensation for banking executives creates incentives for excessive risk-taking); Armour & Gordon, *supra* note 9, at 39 (arguing for stricter liability rules for directors and officers of financial institutions); Jonathan Macey & Maureen O'Hara, *Bank Corporate Governance: A Proposal for the Post-Crisis World*, FED. RSRV. BANK N.Y. ECON. POL'Y REV., Aug. 2016, at 85, 86 (same).

have legal authority to intervene in ways that are ordinarily thought to implicate core corporate governance issues. For example, the Department of Defense, the Federal Reserve, and the Federal Energy Regulatory Commission (FERC) have authority to review mergers, weigh in on executive compensation, and, in certain circumstances, fire executives or ban them from the industry.¹⁸ Regulators have shied away from using these authorities.¹⁹ Our analysis explains why they make sense and suggests regulators should consider using them more frequently.²⁰

The Article proceeds as follows. Part I describes features of conventional markets and their implications for optimal corporate governance arrangements. Part II provides case studies identifying salient features of the utilities industry, the defense industry, the financial services industry, and the pharmaceutical industry. Part III turns to the corporate governance implications of the unique features of government-dominated markets, showing that government interventions in these industries substantially undermine the rationale for shareholder primacy and that shareholder primacy can cause problems in these contexts. Part IV identifies a range of policy interventions that can help address the problems.

I. The Standard Framework

This Part explains the standard approach to corporate governance and government intervention. Subpart I(A) outlines the key arguments for shareholder primacy, which assume that firms operate in an environment that creates good incentives for shareholders to prefer socially optimal conduct. Subpart I(B) describes government interventions that either address or break these assumptions.

18. See, e.g., Lin & Menand, *supra* note 9, at 3 (highlighting the Federal Reserve's removal power); Scott Hempling, *Inconsistent with the Public Interest: FERC's Three Decades of Deference to Electricity Consolidation*, 39 ENERGY L.J. 233, 237 (2018) (highlighting FERC's merger review power); U.S. GOV'T ACCOUNTABILITY OFF., GAO-24-106129, DEFENSE INDUSTRIAL BASE: DOD NEEDS BETTER INSIGHT INTO RISKS FROM MERGERS AND ACQUISITIONS 8–9 (2023), <https://www.gao.gov/assets/gao-24-106129.pdf> [<https://perma.cc/7G45-DN46>] (highlighting Department of Defense's merger-review power).

19. See Lin & Menand, *supra* note 9, at 34–38 (discussing the history of removals by the Federal Reserve).

20. We also recognize that, although we describe what seems like a closed set of firms, the reality is that many firms may sometimes be able to hold up the government, and that even government-dominated industries may occasionally face competitive pressures. In our view, that only reinforces our point that optimal governance is context-specific, and that our observations have implications for a large segment of the economy.

A. *The Case for Shareholder Primacy*

Corporations affect and are affected by numerous stakeholders.²¹ They raise money by borrowing from creditors and selling equity stakes to shareholders, invest in facilities and purchase materials from suppliers, hire workers, and sell products and services to customers. They then use the proceeds to pay taxes, pay suppliers and workers, pay debts to creditors, and deliver any remaining “residual” proceeds to shareholders. Most of these relationships are mediated by contracts with a finite duration. For example, a supplier may deliver set goods at a set time for a set price. But the terms of those contracts inevitably run out at some point; the managers of the corporation will have some residual authority to make decisions that are not dictated by contract.

Shareholder primacy suggests that corporate law and governance should ensure that this residual authority is exercised by shareholders. Shareholder primacy theorists offer a few justifications for their position. *First*, because shareholders are last in line to be paid, they are thought to internalize the marginal benefits and costs of corporate decisions.²² When a firm is not financially distressed, suppliers, workers, and creditors are paid what they are contractually owed. If the corporation’s value goes up or down by one dollar, financially stable firms will still be able to meet their contractual obligations. As a result, creditors and suppliers are indifferent to marginal fluctuations in value. Shareholders thus have a unique incentive to maximize the value of the enterprise.²³ Corporate law typically assumes that the parties to the “corporate contract” want to maximize the total value of the enterprise. Once the total value of the enterprise is maximized, suppliers and workers

21. *E.g.*, Jill E. Fisch, *Measuring Efficiency in Corporate Law: The Role of Shareholder Primacy*, 31 J. CORP. L. 637, 643–44 (2006).

22. *Id.* at 658; EASTERBROOK & FISCHER, *supra* note 1, at 36–39. Formally, the conception of shareholders as recipients of remaining value only has legal force when the firm is in liquidation. *See* LYNN STOUT, *THE SHAREHOLDER VALUE MYTH* 39 (2012) (describing the bankruptcy origins of the residual claimants theory). Even in bankruptcy, creditors often share in losses alongside shareholders. *Id.*; Lynn M. Lopucki, *The Myth of the Residual Owner: An Empirical Study*, 82 WASH. U. L.Q. 1341, 1344 (2004). And outside of bankruptcy, the extent to which shareholders capture gains or internalize losses will depend on the balance of power between shareholders and other corporate constituencies. Aneil Kovvali & Leo E. Strine, Jr., *The Win-Win That Wasn't: Managing to the Stock Market's Negative Effects on American Workers and Other Corporate Stakeholders*, 1 U. CHI. BUS. L. REV. 307, 309 (2022). Shareholders claim benefits because they wield residual authority over the firm and can sometimes use their power to place losses on other constituencies.

23. This claim has received serious criticism. *See, e.g.*, Lynn A. Stout, *Bad and Not-So-Bad Arguments for Shareholder Primacy*, 75 S. CAL. L. REV. 1189, 1193–95 (2002) (arguing that shareholders are not the sole residual claimants of firms); GRANT M. HAYDEN & MATTHEW T. BODIE, *RESTRUCTURING THE CORPORATION* 96–102 (2020) (contending that Easterbrook and Fischel’s argument in favor of this claim is “incomplete and overstated”); Dorothy S. Lund, *Public Primacy in Corporate Law*, 47 SEATTLE U. L. REV. 365, 368 (2024) (arguing that “the public also bears residual risk,” and “the public also has a substantial residual interest in the firm’s profits”).

can claim their share by making appropriate price and wage demands. Because shareholders are uniquely incentivized to maximize the value of the enterprise, corporate law assumes that all stakeholders would agree to focus on shareholder returns.²⁴

Although this argument is generally framed in terms of the value of the enterprise, it ties in neatly with a claim about social wealth. If markets are competitive, market participants are rational, and regulations are effective, prices and fines will align shareholders' incentives with the social goal of generating the maximum amount of wealth for society as a whole.²⁵ Supply and labor markets will set prices and wages so that the marginal costs faced by the corporation create the right incentive to use supplies and worker time efficiently.²⁶ Product markets will set prices so that the marginal benefits faced by the corporation create the right incentive to supply the efficient amount of quality goods.²⁷ Because shareholders are directly affected by these price signals, maximizing shareholder wealth will maximize societal wealth.

Second, shareholders are thought to face the greatest difficulties in protecting their interests through contract and market mechanisms.²⁸ Because they are relatively insulated from fluctuations in the enterprise's value, other groups can protect themselves relatively easily. If the relevant markets are competitive, workers do not need to concern themselves with the management of an enterprise because they can always quit and join another

24. See Eugene F. Fama, *Market Forces Already Address ESG Issues and the Issues Raised by Stakeholder Capitalism*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Oct. 9, 2020), <https://corpgov.law.harvard.edu/2020/10/09/market-forces-already-address-esg-issues-and-the-issues-raised-by-stakeholder-capitalism/> [<https://perma.cc/43DK-P2KC>] (“For most firms, the winning contract structure involves fixed promised payoffs for most stakeholders, with residual risk largely borne by shareholders, who as a result have most of the decision rights.”); Williamson, *supra* note 1, at 1228 (“Providing stockholders with an ability to monitor the affairs of the firm and to replace the management in a crisis will arguably facilitate obtaining equity financing on superior terms. For this reason, the board of directors should be regarded principally as a governance instrument of the shareholders.”).

25. See ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, *MICROECONOMIC THEORY* 549–58 (1995) (describing the fundamental theorems of welfare economics).

26. *But see* Kovvali, *supra* note 15, at 145–46 (noting that these conditions may break down in contexts like recessions).

27. *But see* Roe, *Corporate Purpose*, *supra* note 9, at 226 (noting that these conditions break down in markets lacking competition).

28. See, e.g., Williamson, *supra* note 1, at 1210 (arguing shareholders lack the “bilateral safeguards” other stakeholders have in a company); Jonathan R. Macey, *An Economic Analysis of the Various Rationales for Making Shareholders the Exclusive Beneficiaries of Corporate Fiduciary Duties*, 21 STETSON L. REV. 23, 25 (1991) (“[Shareholders are] the group that faces the most severe set of contracting problems with respect to defining the nature and extent of the obligations owed to them by officers and directors.”). *But see* Fisch, *supra* note 21, at 659 (“[T]he assumption that stakeholders are protected by contract . . . proves problematic to the extent that stakeholder contracts are deficient.”).

firm.²⁹ Similarly, customers who are unhappy with a company's prices or performance can generally switch to one of the company's competitors. Competition thus protects non-shareholders who have an interest in the firm.

Admittedly, not all stakeholders can exit. Like shareholders, creditors are generally somewhat locked in and unable to withdraw their capital. But creditors are only owed a contractually determined amount and do not share in the upside if the firm does exceptionally well. As a result, creditors generally do not need managers to take the best course of action, only a good enough course of action that preserves enough value to meet debt obligations. Creditors can accomplish this by taking a security interest in the firm's assets or by insisting on restrictive loan covenants.³⁰ The availability of plausible contractual mechanisms for protecting creditor interests reduces the need to arm creditors with governance rights. And if creditors cannot protect their interests *ex ante* in a particular case, they can negotiate for *ex post* leverage or governance rights.³¹

29. See Fisch, *supra* note 21, at 666–67 (“[M]ost stakeholders can exit, either continuously or periodically, at relatively low cost. The value of the stakeholder’s investment is only affected to a limited extent by its withdrawal from the corporation.” (footnote omitted)). But some stakeholders do make firm-specific investments or face other difficulties in exiting on competitive terms. See Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 253 (1999) (arguing that delegation of management to the board of directors is intended to protect “firm-specific investment” by groups including “managers, rank and file employees, and possibly other groups, such as creditors”); Suresh Naidu, Eric A. Posner & Glen Weyl, *Antitrust Remedies for Labor Market Power*, 132 HARV. L. REV. 536, 560–65 (2018) (describing evidence that labor markets are not competitive); Ioana Marinescu & Herbert Hovenkamp, *Anticompetitive Mergers in Labor Markets*, 94 IND. L.J. 1031, 1042–43 (2019) (same).

30. Williamson, *supra* note 1, at 1211; Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U. PA. L. REV. 1209, 1248 (2006) (“Lenders . . . are quite capable of taking care of themselves. Rather than adding ill-defined fiduciary duties to the contracts that they write, a better course may be to ensure that such duties do not impede the exercise of contractual rights for which creditors have bargained.”).

31. See DEL. CODE ANN. tit. 8, § 221 (providing that companies may confer upon creditors “the power to vote in respect to the corporate affairs and management of the corporation,” the “right of inspection,” and “also any other rights” held by stockholders). This is particularly sensible at firms that face a real threat of insolvency, so that creditors internalize some of the consequences of shifts in the corporation’s value. This can happen at distressed firms and at venture capital-backed firms with a high risk of failure. Formal corporate law does not always accommodate these bespoke governance arrangements, though judicial regulation may have limited impact at private firms. See Pollman, *supra* note 15, at 217–18 (describing and criticizing doctrines limiting certain bespoke governance arrangements); Anthony J. Casey & M. Todd Henderson, *The Boundaries of “Team” Production of Corporate Governance*, 38 SEATTLE U. L. REV. 365, 385–86 (2015) (describing and criticizing judicial resistance to certain bespoke arrangements); Brian J. Broughman & Matthew T. Wansley, *Risk-Seeking Governance*, 76 VAND. L. REV. 1299, 1370–71 (2023) (presenting a nuanced account of judicial skepticism and noting that many arrangements will never come to light or be litigated). Courts also will not supplement the rights that creditors have explicitly bargained for, based on a presumption that creditors can insist on adequate protections *ex ante*. See *N. Am. Cath. Educ. Programming Found., Inc. v. Gheewalla*, 930 A.2d 92, 100–01 (Del. 2007) (reasoning that fiduciary duties to creditors may be minimal and even redundant, and declining to apply them

Shareholders thus have the strongest interest in maximizing the value of the enterprise. But it is inherently difficult to specify the optimal course of action in advance. Because shareholders cannot possibly anticipate every situation, determine the appropriate course of action, and specify it in a contract, they must instead rely on *ex post* mechanisms of corporate law and governance.³² Corporate law thus subjects corporate leaders to a fiduciary duty to maximize the value of the firm for its shareholder owners, makes them electorally accountable to shareholders on a regular basis, and threatens them with the possibility of replacement through a takeover if they fail to keep the company's share price high.³³ These *ex post* governance tools allow shareholders to solve problems that they would struggle to handle *ex ante* through contract.

Third, giving shareholders control rights reduces the potential for destructive conflicts within firms. If managers had discretion to balance the interests of competing groups, it would reduce accountability to any given group and make it easier for managers to self-deal.³⁴ And if competing stakeholder groups all had a role in governing the firm, the firm would struggle to aggregate the preferences of a group of individuals in a rational way.³⁵ The firm could struggle to set a stable and rational policy if diverse individuals with competing preferences were permitted to participate in governance.

Admittedly, shareholders may have divergent preferences.³⁶ But complete markets should allow shareholders to neutralize many of those differences.³⁷ For example, shareholders with an idiosyncratic need for cash now can raise cash by borrowing against their shares. Product, supply, labor, and capital markets do the work of balancing competing preferences, along with the supply and demand for capital, and translating them into prices. This

to the creditors of a solvent corporation operating in the “zone of insolvency”); Jared A. Elias & Robert J. Stark, *Bankruptcy Hardball*, 108 CALIF. L. REV. 745, 749–50 (2020) (discussing the motivation behind the *Gheewalla* decision and arguing it has made “control opportunism” commonplace).

32. EASTERBROOK & FISCHER, *supra* note 1, at 91–93.

33. See Anil Kovvali & Jonathan R. Macey, *Toward a “Tender Offer” Market for Labor Representation*, 63 B.C. L. REV. 2111, 2137 (2022) (describing a “triad of mechanisms for disciplining officers and directors”); Leo E. Strine, Jr., *The Dangers of Denial: The Need for a Clear-Eyed Understanding of the Power and Accountability Structure Established by the Delaware General Corporation Law*, 50 WAKE FOREST L. REV. 761, 765–67 (2015) (“In the corporate republic, no constituency other than stockholders is given any power.”).

34. See EASTERBROOK & FISCHER, *supra* note 1, at 38 (“[A] manager told to serve two masters (a little for the equity holders, a little for the community) has been freed of both and is answerable to neither.”).

35. HANSMANN, *supra* note 15, at 62; EASTERBROOK & FISCHER, *supra* note 1, at 69–70.

36. See Iman Anabtawi, *Some Skepticism About Increasing Shareholder Power*, 53 UCLA L. REV. 561, 577–92 (2006) (section “catalogu[ing] five schisms among modern shareholders”).

37. See Anil Kovvali, *ESG and Securities Litigation: A Basic Contradiction*, 73 DUKE L.J. 1229, 1269–71 (2024) (describing how markets reconcile shareholder preferences on many issues).

eliminates the potential dispute between shareholders; all should agree on maximizing the firm's value given existing prices.³⁸ At least as to matters covered by financial market products, shareholders should agree.

B. Government Interventions

Of course, the market does not always produce optimal outcomes. These market failures create a standard set of rationales for government interventions. But despite the variety of situations in which the government intervenes to direct the allocation of capital, the playbook for government interventions remains limited.

1. Rationales.—Standard justifications for government interventions pick at the assumptions that underlie shareholder primacy. *First*, the government might intervene to force firms to bear the social costs of risky or harmful activities. After all, groups affected by corporate action are sometimes unable to protect themselves by striking voluntary deals on the market.³⁹ For example, it may not be feasible, or it may offend notions of fairness or justice, for individuals who are adversely affected by pollution to coordinate to pay potential polluters to abstain. Even if such a market could be constructed and individuals and firms could be induced to participate, it surely would not be an efficient solution to the problem. Instead, the government sets a price on pollution through regulations.

Second, the government might intervene to coordinate demand. It is sometimes difficult for people to coordinate through markets even when there is demand for a particular good or service.⁴⁰ An effective national defense is a public good. It would be difficult to induce everyone who benefits from an effective military to pay. And even if everyone could be induced to make a fair payment to support the national defense, uncoordinated market transactions by those consumers would surely be an inefficient way to make decisions on matters like whether to buy a missile or submarine. Instead, the government collects taxes and funds various defense projects.

38. See MAS-COLELL ET AL., *supra* note 25, at 152–54 (reasoning that profit maximization is a goal that all owners would agree upon, assuming fixed prices, certain profits, and control of managers); Oliver D. Hart, *On Shareholder Unanimity in Large Stock Market Economies*, 47 *ECONOMETRICA* 1057, 1059 (1979) (noting that shareholders agree that firms should maximize profits in conditions of complete markets and perfect competition while at the same time recognizing that even if shareholders agree on the goal, they may still disagree on how best to achieve it).

39. See, e.g., Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 *HARV. L. REV.* 1089, 1119 (1972) (explaining that without a nuisance remedy, a large group of injured parties would face enormous difficulty in “buying out” a polluter given the free-rider problem).

40. MAS-COLELL ET AL., *supra* note 25, at 362.

Third, the government might intervene to support risky, capital-intensive investments. A for-profit firm may not be willing to make a large up-front investment when research costs are high or there is uncertainty about the viability of the product.⁴¹ It can take decades to construct state-of-the-art nuclear reactors, develop innovative weapons systems, or identify new drugs. While investors may have an appetite for some of these projects, they may not invest if they are risk averse, their investment horizons are short, or there is a risk that the market for the product may collapse in twenty or thirty years.

Investors may also worry that the value of anything the firm builds or invents will be eroded by competitor copying or government expropriation. To create an *ex ante* incentive to pursue these projects, the government might guarantee that the company that makes the investment is entitled to a certain return—either by paying the company directly or by granting it a monopoly.

Another set of financing problems relates to size. Government support for large infrastructure projects is often based on the view that private markets would not generate sufficient financial support for bridges, highways, or railroads.⁴² More recently, the Department of Energy and some state public utility commissions have offered large subsidies to projects such as nuclear reactors, battery storage facilities, and hydrogen research.⁴³ Some of these projects are currently uneconomic, but they are thought to offer potentially enormous environmental and economic benefits in the future.⁴⁴

41. See Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 609, 619 (1962) (“To sum up, we expect a free enterprise economy to underinvest in invention and research (as compared with an ideal) because it is risky, because the product can be appropriated only to a limited extent, and because of increasing returns in use.”).

42. See Joseph Stiglitz, *The Harms of Infrastructure Privatization: A Step Backward in Progressive Policymaking*, ROOSEVELT INST. (July 26, 2021), <https://rooseveltinstitute.org/2021/07/26/the-harms-of-infrastructure-privatization-a-step-backward-in-progressive-policymaking/> [<https://perma.cc/3FYE-GGUU>] (“[T]he private sector faces much higher costs of capital, and infrastructure projects are long-term investments, where differences in the cost of capital matter a lot. This puts the private sector at a marked disadvantage.”).

43. See Brad Plumer & Ivan Penn, *U.S. Bets on Small Nuclear Reactors to Help Fix a Huge Climate Problem*, N.Y. TIMES (Nov. 12, 2023), <https://www.nytimes.com/interactive/2023/11/12/climate/nuclear-reactors-clean-energy.html> [<https://perma.cc/UPM4-5FYA>] (discussing state plans on nuclear reactors); Press Release, Dep’t of Energy, Biden-Harris Administration Announces \$7 Billion for America’s First Clean Hydrogen Hubs, Driving Clean Manufacturing and Delivering New Economic Opportunities Nationwide (Oct. 13, 2023), <https://www.energy.gov/articles/biden-harris-administration-announces-7-billion-americas-first-clean-hydrogen-hubs-driving> [<https://perma.cc/6PYZ-7QRJ>] (announcing major green energy investments); Brad Plumer, *Energy Department Targets Vastly Cheaper Batteries to Clean Up the Grid*, N.Y. TIMES (July 14, 2021), <https://www.nytimes.com/2021/07/14/climate/renewable-energy-batteries.html> [<https://perma.cc/F9HX-Q87C>] (reporting on subsidies for new battery storage investments).

44. See *What the Inflation Reduction Act Has Achieved in Its First Year*, THE ECONOMIST (Aug. 17, 2023), <https://www.economist.com/the-economist-explains/2023/08/17/what-the-inflation-reduction-act-has-achieved-in-its-first-year> [<https://perma.cc/LQV8-AJB2>] (“The big projects it supports take time to plan and build. ‘Could,’ ‘will’ and ‘may’ still pepper progress reports from the White House and from research firms.”).

When projects are too large or too risky for financial markets to handle effectively, they may be beyond the resources of individual parties with capital.

Finally, the government might intervene to address distributional concerns. Even under ideal conditions, markets will not always deliver optimal distributional outcomes. The standard law and economics prescription is to rely on tax and transfer schemes that reallocate income with minimal distortions.⁴⁵ But because of concern that recipients will not use cash effectively or because of simple political realities,⁴⁶ the government often insists on the purchase of specific goods. For example, the government sometimes provides food stamps, Medicaid, or Medicare instead of providing funds with which impoverished individuals could choose to purchase food or medical coverage. Other interventions such as price controls are similarly intended to achieve better distributional outcomes within a market for specific goods.

2. *Existing Approaches.*—The government interventions described in the previous section are motivated by the perception that markets are failing to generate appropriate price signals. To correct these problems, the government can take an external approach that seeks to replicate or correct price signals through regulation or contract, or it can take an internal approach that seeks to revise governance at the relevant firms to reduce their shareholder orientation. Though there are some exceptions, American policymakers have largely selected the external approach of proceeding through regulation or contract.⁴⁷

Regulatory interventions change the price of engaging in certain conduct. The government might directly set a price by charging for access to some necessary resource or facility, tax conduct, or ban a practice and impose

45. Louis Kaplow & Steven Shavell, *Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income*, 23 J. LEGAL STUD. 667, 669 (1994).

46. See, e.g., Lee Anne Fennell & Richard H. McAdams, *The Distributive Deficit in Law and Economics*, 100 MINN. L. REV. 1051, 1053 (2016) (describing the “two impediments to [welfare] maximization” as transaction costs and political action costs).

47. This is not true globally. For example, many top electric utilities outside the United States are fully or partially state owned. See *Distribution of the Top 100 Utility Companies in Italy in 2017, by Ownership Type*, STATISTA (Aug. 1, 2022), <https://www.statista.com/statistics/957739/utility-companies-by-ownership-type-in-italy/> [<https://perma.cc/7R2M-9NR4>] (“As of the survey period, the majority of the top utility companies in Italy were state-owned (about 67 percent), while about a fifth were semi-public. By contrast, only four percent were private companies.”). Even in the United States, some customers are served by electric utilities that are cooperatives, municipalities, or publicly owned. See *Investor-Owned Utilities Served 72% of U.S. Electricity Customers in 2017*, U.S. ENERGY INFO. ADMIN. (Aug. 15, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=40913> [<https://perma.cc/CBU5-JSP3>] (“Although there are fewer investor-owned utilities than the other two types of utilities, they tend to be very large. Investor-owned utilities serve three out of every four utility customers nationwide.”).

a fine equivalent to a price.⁴⁸ The government can also seek to replicate the outcomes that would occur if appropriate prices were charged in the market. For example, if the government believes that a company would not persist in conduct if it were forced to internalize the full social cost of the conduct, the government could impose a ruinous fine for engaging in it.⁴⁹

Contractual interventions are another external mechanism through which the government influences the allocation of capital and goods. These transactions either set a price, as when the government is the only buyer or seller, or merely influence the price, as when the government is an important buyer or seller.⁵⁰ The government becomes a monopsonist in important areas of the economy, such as manufacturing of major weapons systems. In other areas such as pharmaceuticals or baby food, it is merely an important economic actor, as other smaller buyers do exist.

Governance interventions reorient firms to focus on goals other than shareholder profit maximization. The purpose of these interventions is to change the way that firms *react* to existing price signals and opportunities, as opposed to changing the signals and opportunities themselves. Although such interventions are relatively rare, governance-style arguments have had some traction. Most state governments have attempted to shift the shareholder focus of corporations in an apparent effort to protect the jobs of in-state workers.⁵¹ The federal government has established organizations with a nonprofit or mixed orientation to manage parts of the economy,⁵² and

48. Examples of such policies in the environmental domain include selling oil leases, environmental permitting, fines for environmental violations, cap and trade schemes, and emissions taxes. *See, e.g.*, NATHANIEL O. KEOHANE & SHEILA M. OLMSTEAD, *MARKETS AND THE ENVIRONMENT* 139–67 (2d ed. 2016).

49. *See, e.g., id.* at 213 (“Penalties for violating the [Individual Fishing Quota] regulations in New Zealand include forfeiture of fishing quotas, seizure of property, and exclusion from the fishing industry.”).

50. *See, e.g.*, Erwin A. Blackstone, *Monopsony Power, Reciprocal Buying, and Government Contracts: The General Dynamics Case*, 17 *ANTITRUST BULL.* 445, 452 (1972) (“The purpose of the contract system, once the contractor and the basic price of defense output have been determined, is to encourage efficiency in the utilization of scarce resources. By efficiency is meant the securing of the desired defense output at the lowest cost to the government.”).

51. *See* Bebchuk & Tallarita, *supra* note 3, at 105 (explaining that most states have adopted statutes which make clear that corporations’ interests include “the interests of employees, customers, suppliers, and sometimes creditors, local communities, or even the whole economy or nation”).

52. *See, e.g.*, Roberta S. Karmel, *Should Securities Industry Self-Regulatory Organizations Be Considered Government Agencies?*, 14 *STAN. J.L. BUS. & FIN.* 151, 160 (2008) (describing governance reforms intended to force a public orientation on self-regulatory organizations in finance); Shelley Welton, *Rethinking Grid Governance for the Climate Change Era*, 109 *CALIF. L. REV.* 209, 227 (2021) (describing a regional transmission organization that “functions like a not-for-profit” and runs the electric grid in parts of thirteen states and Washington, D.C.).

it has simply acted directly through its own massive workforce where a public orientation was deemed essential.⁵³

Policymakers have also occasionally experimented with governance reforms in the industries discussed here. In the context of government-dominated industries, some regulators have special authority to conduct merger review.⁵⁴ Most, though not all, of these agencies have chosen to defer to shareholder preferences about whether a merger should be approved. Still, the government's decision to allow agencies to veto proposed mergers suggests that, at certain points, policymakers have had reason to think shareholders do not have the correct incentives to determine whether a proposed merger is in the public interest. Similarly, state and federal agencies often have authority to review executive compensation.⁵⁵ In these cases, policymakers appear to have anticipated that government-dominated industries raise unusual challenges that create reasons for policymakers to involve themselves in internal governance matters.

But for the most part, American policymakers have been reluctant to shift corporate governance. Many policymakers and elected officials appear to believe that it would be improper, immoral, or imprudent to meddle with the profit motive of corporations.⁵⁶ It may be that they trust market outcomes more than government-driven outcomes, at least in certain domains. But part of the reason is surely the commanding dominance of the shareholder primacy point of view.

II. Government-Dominated Industries

This Part surveys industries where some policy challenge has prompted a government intervention that replaces market competition with a system of price controls. Two themes emerge from our analysis. First, information

53. P'SHIP FOR PUB. SERV., FEDERAL WORKFORCE 1 (2019), https://ourpublicservice.org/wp-content/uploads/2022/03/FedFigures_FY18-Workforce-1.pdf [<https://perma.cc/CT59-JGNU>] (depicting that most of the government's two million employees work for defense- and security-related agencies).

54. *See, e.g.*, Federal Power Act § 203(a), 16 U.S.C. § 824b(a) (prohibiting public utilities from merging without authorization from the Federal Energy Regulatory Commission); Bank Merger Act, 12 U.S.C. § 1828(c) (prohibiting bank mergers without approval by the Federal Deposit Insurance Corporation).

55. *See, e.g.*, 31 C.F.R. § 30.4(a) (2023) (requiring a compensation committee to review compensation plans for executive officers and employees of financial institutions that received certain federal funding); N.Y. COMP. CODES R. & REGS. tit. 10, § 1002.3 (2021) (providing for review by the Director of the Division of the Budget of executive compensation by covered health care providers when state funds are used).

56. *Cf., e.g.*, Zachary Warmbrodt, *Senate Passes Deregulation Bill Scaling Back Dodd-Frank*, POLITICO (Mar. 14, 2018, 7:59 PM), <https://www.politico.com/story/2018/03/14/senate-passes-bill-scaling-back-dodd-frank-463825> [<https://perma.cc/2UFR-47YU>] (reporting bipartisan support for "a milestone bank deregulation bill that would mark the biggest rollback of financial rules since the 2008 market meltdown").

asymmetries between the government and market participants make it difficult for the government to properly calibrate incentives *ex ante*. Second, government interventions often put market participants in a position to hold up the government. This can occur when the market participant becomes a monopolist in its relationship with the government or when the economic consequences of a firm's failure impose excessive societal costs. Regardless of the cause, this holdup problem makes it difficult for the government to plausibly commit to enforcing the compensation structure it established *ex ante*: If the government wants to build a naval destroyer or nuclear reactor, and if only one firm is in a position to pursue the project, then the government will often be disinclined to impose large fines for firm misconduct, and the firm will often be able to demand additional revenue to cover cost overruns.

These features may not be unique to the four industries discussed here. For example, airlines have successfully diverted value to shareholders in good times and obtained government support during crises.⁵⁷ While the analysis might be expanded into a broader challenge to shareholder primacy, the four industries selected at least highlight the salience of the holdup problem that arises as a result of certain government interventions.

A. *Electric Utilities*

In segments of various industries, including railroads, gas pipelines, telecommunications, and electric utilities, it may make sense to have only one supplier. This situation can create a holdup problem. The government fears that a private party will build the infrastructure then charge inordinate prices. Private investors fear that after they have paid to build the infrastructure, the infrastructure will be seized by the government. Rate regulation is partly a response. In rate-regulated markets, the government grants a firm a legal right to a monopoly, imposes service obligations, and limits the firm's ability to charge monopoly prices.⁵⁸ Regulators approve investment decisions, tell utilities who to serve and on what terms, and determine the acceptable level of utility profits. In many ways, therefore, utility regulators already involve themselves in matters that are normally determined internally within corporations.

57. See Michael Laris & Lori Aratani, *Taxpayers Spent Billions Bailing Out Airlines. Did the Industry Hold Up Its End of the Deal?*, WASH. POST (Dec. 14, 2021, 6:00 AM), <https://www.washingtonpost.com/transportation/2021/12/14/airline-bailout-covid-flights/> [<https://perma.cc/7GXX-LN39>] (describing the \$50 billion bailout given to ten major passenger airlines during the Covid-19 pandemic); William Turvill, *U.S. Airlines Pushing for Massive Bailout Gave \$45bn to Shareholders in Five Years*, THE GUARDIAN (Mar. 18, 2020, 12:16 PM), <https://www.theguardian.com/business/2020/mar/18/america-airlines-bailout-shareholders-coronavirus> [<https://perma.cc/EGM3-TXUS>] (explaining that five of the firms distributed more than \$45 billion to shareholders and executives from 2015–2020).

58. See KAHN, *supra* note 4, at 3, 40–41 (describing the fundamental differences between the government's role in the free market versus rate-regulated markets).

These interventions give investor-owned utilities powerful property-like legal entitlements against the government and allow them to retain the benefit of important information asymmetries. As a result, they can force the government to fund flawed projects. The structure of rate regulations reduces any incentive shareholders might have to independently pursue productive investments and instead encourages them to use holdup problems to their advantage.

1. Basic Challenges.—Scholars have long debated why American policymakers chose to grant monopoly privileges to firms that operate in certain industries. However, there are some common explanations.

Natural Monopoly. Rate regulation could be a response to economies of scale. Some have justified public utility regulation on efficiency grounds.⁵⁹ If regulators know that an industry is a natural monopoly, and that it will be more cost-effective for a single firm to control an entire market, it should support that outcome by intervening prospectively to grant a single firm a monopoly franchise.

Importantly, this concern is more relevant in some segments of the electric industry than others. It is perfectly plausible to have many small merchant generators selling the electricity they generate in competitive markets, even if it makes sense to have only one set of facilities for long-range transmission and only one set of wires for retail distribution to homes.

Holdup and Monopoly Pricing. If a private party owns essential infrastructure, it can demand excessive prices for its use. Rate regulation solves the problem by limiting what utility companies can charge. A related problem concerns the construction of new infrastructure. Once the project is underway, it can be difficult for the government to cut its losses and halt further efforts.

Financing. The provision of electric service is a capital-intensive undertaking. There is also limited potential for an upside surprise, particularly if the government will not allow the utility to set its own prices. And private investors might worry about the threat of expropriation once the desired facilities have been built. By guaranteeing returns, the government can make it easier for firms to attract capital.

Political Economy and Path Dependence. It is in industry's interest for regulators to protect incumbents from competition. A political economy account has argued that public utility regulation reflects successful industry lobbying for a regulatory intervention that serves industry's financial

59. E.g., Erwin A. Blackstone & Joseph P. Fuhr, Jr., *The Economics of Public Utility Regulation*, ATL. ECON. J., June 1989, at 68, 68.

interests.⁶⁰ By creating entrenched interests holding relevant legal entitlements, the resulting system of regulation has strengthened the economic and lobbying might of these firms and made change more difficult.

2. *Profit Policy*.—Rate-regulated utilities are permitted to charge an amount set in administrative proceedings. The utility companies are often permitted to pass some costs, such as fuel, onto consumers. The companies are also entitled to earn a return on capital investments, provided that the investments are deemed “prudent” when made or “used and useful.”⁶¹ A utility that is authorized to earn a ten percent return can therefore expect \$10 in profit if it makes \$100 of new investments but \$100 in profit if it makes \$1,000 in new investments. As a result, utilities can increase profits by making additional capital investments.⁶²

The regulations are intended to create incentives for utilities to contain costs and pursue useful projects. A utility should only earn a return if the investment creates social value. And the authorized return is calibrated to reflect the cost of raising capital in the financial markets—holding the company to a lower return could make investors unwilling to contribute capital.

3. *Problems and Existing Governance Regulation*.—The utility model creates perverse incentives for shareholders. *First*, utilities lack an incentive to innovate beyond whatever incentive structure its regulators created when authorizing its rates. Because shareholder profits do not increase when a utility makes value-enhancing investments or increase only slightly based on pre-determined performance criteria, shareholders do not have an incentive to push for investments that would generate value beyond whatever the regulator prioritizes *ex ante* during rate cases. If a utility invests in reliability improvements, it is ratepayers, not shareholders, who receive all the benefits. If a utility invests in improving its environmental performance beyond what the regulator mandates, it is again ratepayers who benefit. Thus, ratepayers, the people who pay utility bills, are the true residual claimants of public utilities.⁶³

60. See, e.g., George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3, 5 (1971) (examining how large companies can use regulation to control entry into the market); cf. Jill E. Fisch, *How Do Corporations Play Politics?: The FedEx Story*, 58 VAND. L. REV. 1495, 1499 (2005) (exploring how FedEx’s political activity influences the legislative process and its business strategy).

61. E.g., TEX. UTIL. CODE ANN. § 104.052 (West 2023); *Entergy Gulf States, Inc. v. Pub. Util. Comm’n of Tex.*, 112 S.W.3d 208, 214 (Tex. App.—Austin 2003, pet. denied).

62. See Harvey Averch & Leland L. Johnson, *Behavior of the Firm Under Regulatory Constraint*, 52 AM. ECON. REV. 1052, 1059 (1962) (“[T]he firm has an incentive to acquire additional capital if the allowable rate of return exceeds the cost of capital.”).

63. Kovvali & Macey, *supra* note 6, at 573–74.

For example, it may increase safety for an electric utility to trim trees to reduce the risk that a transmission line will cause wildfires, or to winterize gas generating units so that they are able to operate during extreme cold events. Yet shareholders are unlikely to pursue these investments if they do not allow the utility to expand its market share or raise prices. If the regulator does not authorize the utility to recover the costs of safety investments or to earn a return on these investments, then the utility's margins will go down.

Conversely, utilities also have an incentive to make investments that do not create societal value. Because utilities earn a return on capital investments and regulators are unable to predict which projects will turn out to be worthwhile, utilities are often rewarded for spending money on new capital investments with little real value. This phenomenon, known as gold-plating or the Averch–Johnson effect, reflects the fact that profit-maximizing shareholders are indifferent about whether an investment improves social value.⁶⁴ As long as the regulator authorizes the expense, shareholders increase profits by incurring costs. As a result, profit-maximizing rate-regulated utilities lack an incentive to pursue projects that *are* in the public interest, and, moreover, lack an incentive to avoid projects that are *not* in the public interest.

Second, utility regulation creates opportunities for shareholders to expropriate value *ex post* after the firm has been granted a monopoly franchise. Regulators frequently struggle to induce utilities to meet their service obligations. Recent examples of utility misconduct and neglect include tens of billions in cost overruns at nuclear facilities,⁶⁵ coal ash spills that released tens of millions of gallons of ash into water systems,⁶⁶ and wildfires that resulted in over one hundred deaths.⁶⁷ In the wake of these crises, regulators have struggled to discipline shareholders through contract and regulation. For example, critics fear that Georgia regulators will allow Georgia Power to recover more than \$30 billion—to the tune of \$17 billion in cost overruns—to pay for mistakes during construction of a new nuclear

64. See Averch & Johnson, *supra* note 62, at 1059 (“[T]he problem is generally viewed as one of proper valuation of rate base, i.e., the firm would always have an incentive to have its property stated at a value higher than its cost.”); Charles W. Needy, *The Gold-Plating Controversy: A Reconciliation*, 45 S. ECON. J. 576, 577 (1978) (summarizing the theory).

65. See Jeff Amy, *Georgia Nuclear Rebirth Arrives 7 Years Late, \$17B Over Cost*, ASSOCIATED PRESS (May 25, 2023), <https://apnews.com/article/georgia-nuclear-power-plant-vogtle-rates-costs-75c7a413cda3935dd551be9115e88a64> [https://perma.cc/BY62-7QRM] (“Critics fear Georgia Power will profit from mistakes. Staff estimates show Georgia Power could earn an extra \$9.4 billion in profit over 60 years if allowed to charge for all spending.”).

66. See *Dan River Coal Ash Spill*, U.S. DEP’T OF THE INTERIOR, https://www.cerc.usgs.gov/orda_docs/CaseDetails?ID=984 [https://perma.cc/URW7-A2MF] (“According to EPA approximately 39,000 tons of ash and 27 million gallons of ash pond water were released.”).

67. Kavya Balaraman, *Wildfires Pushed PG&E Into Bankruptcy. Should Other Utilities Be Worried?*, UTIL. DIVE (Nov. 19, 2020), <https://www.utilitydive.com/news/wildfires-pushed-pge-into-bankruptcy-should-other-utilities-be-worried/588435/> [https://perma.cc/DP2Y-XY8S].

reactor.⁶⁸ Similarly, after inflicting approximately \$10 billion in environmental damage after coal ash leaked into local water systems, North Carolina regulators allowed Duke Energy to recover many of its costs to come into compliance with state and federal environmental law.⁶⁹ Perhaps most surprisingly, after Pacific Gas & Electric Company (PG&E) pled guilty to involuntary manslaughter for its role in fatal California wildfires, the bankruptcy court gave shareholders of old PG&E a financial stake in the reorganized company.⁷⁰

While it is possible to dismiss these as examples of bad regulatory decisionmaking, they also demonstrate that rate regulation empowers utilities to hold up their regulators. Once Georgia committed to building a state-of-the-art nuclear reactor, the Georgia Public Service Commission could not plausibly prevent Georgia Power from increasing rates to cover cost overruns. Georgia had committed billions of dollars to constructing the facility.⁷¹ The firm, Georgia Power, had developed specific expertise and held property rights in the nuclear reactor. Finding a new developer would have been disruptive and expensive and have led to legal challenges.⁷² In retrospect, that investment may not have been prudent. But having already committed so much money, it may have been cost effective to authorize

68. Amy, *supra* note 65. For a discussion of this episode and its implications, see Shelley Welton & Conor Harrison, *Lessons in Climate Derisking: The United States' Failed Nuclear Renaissance*, 173 U. PA. L. REV. (forthcoming 2025) (manuscript at 4–5) (on file with authors), in which the authors describe how recent experiments with nuclear derisking “reveal[] deep webs of legislative and administrative capture that drove questionable legal precommitments to certain nuclear projects, which then proved politically hard to abandon as sunk costs and mismanagement mounted.”

69. Michael Falero & Gary D. Robertson, *Duke Energy Customers Won't Be Charged \$1.1B for Coal-Ash Cleanup After NC Settlement*, WFAE 90.7 (Jan. 25, 2021, 12:40 PM), <https://www.wfae.org/energy-environment/2021-01-25/duke-energy-nc-officials-announce-coal-ash-expense-deal> [<https://perma.cc/NBB9-EQ7K>]. Corporate law mechanisms also did little to hold Duke Energy's managers accountable for the lapse. A shareholder suit seeking to hold Duke Energy directors and officers liable for oversight failures was dismissed by the Delaware Supreme Court. *City of Birmingham Ret. & Relief Sys. v. Good*, 177 A.3d 47, 64 (Del. 2017).

70. Ivan Penn & Peter Eavis, *PG&E's Plan to Resolve Bankruptcy Wins Court Approval*, N.Y. TIMES (July 28, 2020), <https://www.nytimes.com/2020/06/19/business/energy-environment/pge-bankruptcy-court-approval.html> [<https://perma.cc/XD63-PXRH>]; *see also* Joint Motion for Approval of Settlement Agreement at 1, *Involvement of Pac. Gas & Elec. Co.'s Elec. Facilities in 2020 Zogg Fire*, H.22-11-015 (Pub. Utils. Comm'n of Cal Nov. 21, 2022), <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/acos-and-aeos/zogg-jt-motion-approving-settlement-agreement-btwn-pge-and-sed.pdf> [<https://perma.cc/22L9-85CM>] (settling a civil enforcement action related to a different wildfire by assessing PG&E a \$150 million penalty).

71. Amy, *supra* note 65.

72. *See, e.g.*, Jeff Amy, *Georgia Power Will Pay \$413 Million to Settle Lawsuit Over Nuclear Reactor Cost Overruns*, ASSOCIATED PRESS (Oct. 6, 2023, 8:58 AM), <https://apnews.com/article/georgia-power-vogle-nuclear-plant-oglethorpe-lawsuit-899e34f518cb137a5d57542b51d1244b> [<https://perma.cc/J3CZ-LK8H>] (reporting large settlements from the litigation already stemming from the project).

additional rate increases to finish the project. As a result, regulators lacked the tools to prevent Georgia Power shareholders from shifting costs and risks onto the rate-paying public.

Similarly, PG&E undertook a bankruptcy reorganization due to the prospect of tens of billions of dollars of liability for its contribution to wildfires in California. But although shareholders are supposed to be the last in line to recover, and the first in line to be wiped out, PG&E's existing shareholders owned a substantial portion of the company when it emerged from bankruptcy.⁷³ A more punitive approach might have increased the company's cost of capital, ultimately increasing the rates paid by customers. California also established a wildfire fund, effectively socializing part of the risk of another catastrophe.⁷⁴ In effect, PG&E's shareholders were able to use the company's unique position to force meaningful concessions.

All these misaligned incentives suggest that the justifications for shareholder primacy apply with less force to the corporate governance of public utilities. *First*, consider the justification that shareholder profit or preference maximization aligns with societal wealth maximization. These aligned incentives only exist when shareholders internalize shifts in the value of a firm and therefore bear the consequences of changes in the firm's value. But in the utility space, the government grants monopolies to rate-regulated firms and sets rates. As a result, ratepayers, not shareholders, profit from value-enhancing investments and incur losses when other firms provide greater value in the form of cheaper or higher quality goods.

Second, consider the justification that unlike shareholders, non-shareholder counterparties have several tools to protect their interests, including turning to a competitor or writing and enforcing a more complete contract *ex ante*.⁷⁵ Like shareholders of firms that operate in competitive markets, regulators in utility industries cannot exit existing relationships and turn to competitors, and they are often unable to specify all outcomes *ex ante*. To convince a corporation to undertake a risky capital-intensive investment, regulators must promise a return on the costs. Because of the intervention, shareholders no longer internalize the costs and benefits of corporate decisions, and shareholders will have an incentive to encourage the corporation to increase recoverable costs and hide opportunities to improve efficiency.⁷⁶ This is a form of holdup. The firm takes advantage of

73. Penn & Eavis, *supra* note 70.

74. See Jared A. Elias & George Triantis, *Government Activism in Bankruptcy*, 37 EMORY BANKR. DEVS. J. 509, 536–37 (2021) (summarizing California's efforts).

75. See *id.* at 542 (describing how California's governor forced PG&E to accept harsh conditions to account for public interests moving forward).

76. See Jean-Jacques Laffont & Jean Tirole, *The Dynamics of Incentive Contracts*, 56 ECONOMETRICA 1153, 1155 (1988) (“The focus of this paper is the *ratchet effect*: an agent with a

information asymmetries and bargaining leverage to raise rates above the agreed-upon price. While the government can seek to create external incentives that will drive optimal behavior, the exercise requires the government to develop information and expertise that may only be obtainable within the corporation. The government must find out what corporate managers know or discipline wasteful management, effectively crossing into the internal spaces of the corporation. Finally, because the government cannot plausibly exit its relationship with a utility—the utility possesses a franchise to operate and has likely developed special expertise in costly new capital projects—the government will often be vulnerable to holdup and *ex post* exploitation that reduces the credibility of *ex ante* contractual threats that are designed to bring shareholders' incentives into alignment with the government's preferences.

These misaligned incentives undermine the logic that justifies broad deference to shareholders. Consider American merger review. Absent traditional antitrust concerns, American corporate law typically defers to shareholders and management about whether to approve a proposed merger on the theory that the acquirer's willingness to pay a premium to the target's shareholders demonstrates that the combination would create real value.⁷⁷

Yet that logic does not apply to public utilities. When a public utility offers to acquire another public utility, one cannot determine whether the merger will unlock value simply by looking at the premium offered by the acquirer. A utility that offers a premium to acquire another utility will only be rewarded if it convinces its regulators to allow it to increase its profits, because revenues are set by regulators. The utility may believe that it can create value that will be recognized by regulators. But it may believe it can convince its regulators to authorize rate increases without improving services, or to use financial complexity to exploit regulatory gaps. The merger might deprive regulators of a useful benchmark by eliminating a competitor⁷⁸ or create opportunities to shift costs to rate-regulated affiliates

high performance today will tomorrow face a demanding incentive scheme. He should thus be reluctant to convey favorable information early in the relationship.”); Averch & Johnson, *supra* note 62, at 1059 (“[T]he firm has an incentive to acquire additional capital if the allowable rate of return exceeds the cost of capital.”).

77. See Lynn A. Stout, *Are Takeover Premiums Really Premiums? Market Price, Fair Value, and Corporate Law*, 99 YALE L.J. 1235, 1237 (1990) (“The belief that takeover premiums reflect efficiency gains rather than simple price pressure has led courts to hold state anti-takeover statutes unconstitutional.”).

78. See SCOTT HEMPLING, *REGULATING MERGERS AND ACQUISITIONS OF U.S. ELECTRIC UTILITIES: INDUSTRY CONCENTRATION AND CORPORATE COMPLICATION* 171–72 (2020) (overviewing the harms of horizontal mergers in the utilities context); Joshua C. Macey, *Utility Mergers and the Modern (and Future) Power Grid*, 42 ENERGY L.J. 237, 239 (2021) (reviewing SCOTT HEMPLING, *REGULATING MERGERS AND ACQUISITIONS OF U.S. ELECTRICAL UTILITIES: INDUSTRY CONCENTRATION AND CORPORATE COMPLICATION* (2020)) (agreeing with Hempling that “utility mergers exacerbate informational asymmetries” between utilities and the government).

and profits to non-rate-regulated affiliates.⁷⁹ While these are reasons to think that a merger will be in shareholders' interests, they do not promote public welfare.

There is also little reason to think that utilities' shareholders or their board representatives should receive deference when they make personnel decisions. Because firm profits normally indicate that the firm is producing a good or offering a service that meets customer demand, regulators can trust that shareholders will create incentives for management to reduce costs and to invest in products that people want. These mechanisms are unlikely to work in utility industries. If regulators allow the utility to raise rates to cover cost overruns, or if they allow the utility to pass the costs of liability onto ratepayers, the social harm will not be reflected in reduced shareholder profits. As a result, shareholders may not discipline managers even when a utility engages in gross misconduct or wastes billions of dollars in imprudent investments.

Finally, managers' fiduciary duties to shareholders are also less justified in utility industries. Utility managers can engage in socially destructive conduct without harming shareholders because regulators raise rates to allow the utility to cover the costs of a corporate disaster.⁸⁰

Although these points suggest a profound governance problem with investor-owned, rate-regulated utilities, policymakers have only taken limited steps to address it. In principle, utilities are subject to a specialized merger review by FERC and by state regulators that is intended to prevent abuse or evasion of rate regulation, but in practice, energy regulators appear to defer to ordinary antitrust authorities on the merits of particular transactions.⁸¹ Utilities are also subject to structural limitations and rules on financing, but these limits have been substantially weakened in recent years

79. See Aneil Kovvali & Joshua C. Macey, *Hidden Value Transfers in Public Utilities*, 171 U. PA. L. REV. 2129, 2131 (2023) (explaining strategies used by electric utilities to transfer value to non-rate-regulated affiliates).

80. For example, Duke Energy paid an over \$100 million fine for Clean Water Act violations that "sent a slurry of coal ash and wastewater—containing lead, mercury, and arsenic—into the Dan River." *City of Birmingham Ret. & Relief Sys. v. Good*, 177 A.3d 47, 50 (Del. 2017). But regulators permitted Duke to recover a substantial portion of the cleanup costs, and even to earn a return on part of the balance. Sonal Patel, *Duke Energy Reaches \$1.1B Deal to Resolve North Carolina Coal Ash Cost Issues*, POWER (Jan. 28, 2021), <https://www.powermag.com/duke-energy-reaches-1-1b-deal-to-resolve-north-carolina-coal-ash-cost-issues/> [https://perma.cc/4N6Y-TNPH]. And Delaware courts concluded that shareholders could not sue the directors of the company over the company's success in capturing its regulators. *Good*, 177 A.3d at 60–64. As a result, any injury experienced by shareholders was substantially less than the injuries experienced by the broader society, and fiduciary duty principles were not adequate to hold individual directors and officers responsible for the harms caused.

81. See Macey, *supra* note 78, at 239–42 (describing FERC's scant analysis of utility mergers, which implies the only remaining reviewers are the usual antitrust authorities).

and are underenforced.⁸² California bargained for special governance measures at PG&E, but only seems to have obtained them because of the unique circumstances of PG&E's bankruptcy reorganization and the state's willingness to make a financial contribution.⁸³

B. Defense

Defense procurement spending is concentrated.⁸⁴ Just five contractors captured over \$100 billion in total spending in fiscal year 2021: “Lockheed Martin (\$39.2 billion), Boeing (\$23.6 billion), Raytheon Technologies (\$21.4 billion), General Dynamics (\$16.9 billion), and Northrop Grumman (\$15.0 billion).”⁸⁵

As a result, there are often only a few credible bidders on major projects, empowering those bidders to demand concessions from the government. The situation can become even more challenging after the government has initially selected a contractor and embarked on a project, as the contractor will develop expertise and facilities that will make it difficult to replace with a competitor.

The government must also ensure that this small set of private parties finds it profitable to maintain excess capacity, as an unexpected crisis could create a sudden need for weapons and equipment. Shareholder-focused firms rationally seek to exploit these vulnerabilities after projects are underway, increasing costs and decreasing performance.

1. Basic Challenges.—Because the government is the only buyer of advanced weaponry,⁸⁶ it cannot simply rely on a consumer market to set

82. See Kovvali & Macey, *supra* note 79, at 2139–40 (analyzing FERC's limited review of utility transactions).

83. See Ellias & Triantis, *supra* note 74, at 544 (noting how California's special measures for PG&E were a unique case).

84. Other areas of defense spending raise related concerns. The use of private military contractors—mercenaries—can raise questions about incentives, accountability, and control. See Martha Minow, *Outsourcing Power: Privatizing Military Efforts and the Risks to Accountability, Professionalism, and Democracy*, in GOVERNMENT BY CONTRACT, *supra* note 9, at 110, 110–11 (introducing the problem of private military contractors and the increased threat they pose to public accountability).

85. LUKA A. NICASTRO & HEIDI M. PETERS, CONG. RSCH. SERV., IF10548, DEFENSE PRIMER: U.S. DEFENSE INDUSTRIAL BASE 1 (2023), <https://crsreports.congress.gov/product/pdf/IF/IF10548> [<https://perma.cc/CCU8-XGLW>]; see also JOMANA AMARA & RAYMOND E. FRANCK, THE U.S. DEFENSE ECONOMY 48–49 (Keith Hartley ed., 2021) (identifying increased concentration in the defense industry).

86. Foreign governments also purchase U.S. defense-industry products, though the U.S. government closely controls those exports. This can present new avenues for abuse, as U.S. taxpayers may pay for innovation that contractors can sell to other nations. Similar dynamics may be present in the pharmaceutical sector. But although it may have important practical implications, the complication has relatively little impact on our analysis. A deeper challenge may be present in

demand or incentivize resilience. Technical features of defense projects can complicate efforts to protect governmental interests through contract. And defense contractor activities can have subtle spillover effects.

Assessing Needs. In a typical market, individual consumers' purchasing decisions send clear signals about what products should be produced. Because the federal government is the principal buyer of key defense-industry products, it cannot rely on a market. Instead, officials in all three branches of government, many with conflicting preferences,⁸⁷ must find some way to capture and aggregate social needs.⁸⁸ These features may limit the market power the government would ordinarily have as a monopsonist and reduce its ability to discipline relatively united suppliers.

Demand Surges and Resilience. The government must also prepare for crises and surges in demand. While the military uses few bombs or missiles during peacetime, its needs could rapidly increase.⁸⁹ To address this concern, the government must maintain an industrial base that can meet the military's needs in a conflict.

The government must also ensure resilience. America might be cut off from foreign sources at times when its needs are greatest, challenging integrated supply chains. Consolidation and cost-cutting within the defense industry can similarly create choke points in supply chains. If the industry is

areas where the government purchases goods that have a consumer market. Simple products like paper clips, services like data hosting, and even guns and ammunition may have both civilian and military applications and purchasers. The implications of this fact will vary depending on the size and features of the respective civilian and military markets. The government may be able to act as a simple price taker for some products where it is a relatively small player, may end up paying for the development of products that are profitable to the contractor, or may play a dominant role in setting price and quality for regular consumers. Similar challenges can arise in the energy industry, where rate-regulated utilities can sometimes use their special relationship to the government to claim advantages in markets that are theoretically competition based. *See Kovvali & Macey, supra* note 79, at 2132–33 (detailing how utilities use non-rate-regulated affiliates to pass costs on to captive customers). The analysis presented here is focused on advanced weaponry that is not available to ordinary civilian purchasers.

87. *See* AMARA & FRANCK, *supra* note 85, at 55 (“[T]he government sometimes functions more like a ‘quarrelsome committee’ than the monopsonist in standard economic theory.”).

88. This process may not be working. Defense spending has increased steadily and appears to follow patterns that are difficult to justify based on real-world defense needs and priorities. *See* Mackenzie Eaglen, *Is Army Richest Service? Navy? Air Force? AEI’s Eaglen Peels Back Budget Onion*, BREAKING DEF. (Feb. 5, 2020, 6:30 AM), <https://breakingdefense.com/2020/02/is-army-richest-service-navy-air-force-aeis-eaglen-peels-back-budget-onion/> [<https://perma.cc/Q5K9-FZUP>] (challenging the “myth” of equal spending across different service branches).

89. Haley Britzky & Oren Liebermann, *Ukraine Is Burning Through Ammunition Faster than the US and NATO Can Produce It. Inside the Pentagon’s Plan to Close the Gap*, CNN (Feb. 17, 2023, 12:01 AM), <https://www.cnn.com/2023/02/17/politics/us-weapons-factories-ukraine-ammunition/index.html> [<https://perma.cc/BS5J-ZQND>]; *see also* SETH G. JONES, CTR. FOR STRATEGIC & INT’L STUD., *EMPTY BINS IN A WARTIME ENVIRONMENT 1* (2023), https://csis-website-prod.s3.amazonaws.com/s3fs-public/2023-01/230119_Jones_Empty_Bins.pdf?VersionId=y_iEwCalRVFiVedETHwrcuwDaenf7zez [<https://perma.cc/HNX3-ZZUU>] (concluding that America would run out of critical munitions within a week of conflict with China).

overly dependent on one facility, it may be vulnerable to enemy action or simple accidents.⁹⁰

These governmental needs give firms the ability to resist attempts at discipline. If the government is too harsh with contractors, contractors will reduce investments or withdraw from the industry. And some of the private sector's normal tools for achieving efficiency—rationalizing operations, consolidating facilities and achieving returns to scale, or eliminating slack and excess inventory—can reduce resilience.⁹¹

Technical Innovation. Major weapons projects often entail the development of new technologies. For example, the F-35 Joint Strike Fighter was initially conceived as a fighter jet that would include a then-impossible combination of stealth, vertical takeoff and landing, supersonic flight, and computational capabilities.⁹² The need for technological innovation creates challenges for defense contracting. Contractors are rationally reluctant to bear the risk that a problem cannot be solved, that the problem will be more expensive than expected to resolve, or that new problems will crop up.⁹³ The need for innovation also makes it impossible to write a contract in advance that covers all potentialities and fully specifies all features of the project.

The need for technological innovation can also contribute to holdup problems. Once an expensive project is underway, the contractor gains

90. See U.S. DEP'T OF DEF., SECURING DEFENSE-CRITICAL SUPPLY CHAINS 2 (2022), <https://media.defense.gov/2022/Feb/24/2002944158/-1/-1/1/DOD-EO-14017-REPORT-SECURING-DEFENSE-CRITICAL-SUPPLY-CHAINS.PDF> [<https://perma.cc/L8QX-CNMT>] (introducing the Department's assessment of the defense industry supply chain); Gordon Lubold, *The U.S. Military Relies on One Louisiana Factory. It Blew Up.*, WALL ST. J. (Apr. 26, 2023, 9:34 AM), <https://www.wsj.com/articles/the-u-s-military-has-an-explosive-problem-6e1a1049> [<https://perma.cc/8HB7-EKC4>] (noting that a small spark at a factory “shut down the sole domestic source of an explosive the Department of Defense relies on to produce mortar shells, artillery rounds and Tomahawk missiles”).

91. See Aneil Kovvali, *Essential Businesses and Shareholder Value*, 2021 U. CHI. LEGAL F. 191, 198–201 (noting that firms that “relentlessly optimized in the pursuit of corporate profits” were often ill-prepared for the exigencies of the COVID-19 pandemic).

92. See generally JENNIFER DiMASCIO, CONG. RSCH. SERV., R48304, F-35 LIGHTNING II: BACKGROUND AND ISSUES FOR CONGRESS (2024), <https://crsreports.congress.gov/product/pdf/R/R48304> [<https://perma.cc/4RWH-25BZ>] (describing the history of the F-35 fighter). See also Valerie Insinna, *The Number of Major F-35 Flaws Is Shrinking, but the Pentagon Is Keeping Details of the Problems Under Wraps*, DEF. NEWS (July 16, 2021), <https://www.defensenews.com/smr/hidden-troubles-f35/2021/07/16/the-number-of-major-f-35-flaws-is-shrinking-but-the-pentagon-is-keeping-details-of-the-problems-under-wraps/> [<https://perma.cc/83KU-7U5Y>] (detailing some of the difficulties with the design).

93. See Parrillo, *supra* note 5, at 118–19 (explaining that fixing cost benchmarks at the outset of a war can be less effective than setting price benchmarks later on); Doug Cameron & Drew FitzGerald, *Why Defense Contractors Are Saying No to Their Biggest Customer: The Pentagon*, WALL ST. J. (Jan. 30, 2024, 5:30 AM), <https://www.wsj.com/politics/national-security/why-defense-contractors-are-saying-no-to-their-biggest-customer-the-pentagon-ad557306> [<https://perma.cc/RH2H-3ZTM>] (reporting that major defense contractors are increasingly reluctant to accept the risk of a cost overrun on large defense projects).

experience that cannot easily be transferred to a competitor. The government thus struggles to contract for all scenarios with an innovative project *ex ante*, and struggles to provide discipline through competition *ex post*, making it vulnerable to opportunistic demands.

Lobbying and Externalities. Like most major enterprises, defense contractors have a clear incentive to participate in politics.⁹⁴ But efforts by defense contractors could have particularly pernicious externalities, as defense contractors profit when the government adopts a militaristic orientation. Beyond direct lobbying for its preferred outcomes, defense contractors have proven adept at shifting the broader cultural conversation by influencing media coverage⁹⁵ and embedding subtle advertising in popular films.⁹⁶

2. *Competition.*—The government has adopted varying approaches to competition in the defense industry, both over time and across projects. While it may be difficult to transfer a project from one contractor to another after it is in motion, multiple competing bids at the beginning of a project can help the government obtain information and strike favorable deals. At the same time, the government might prefer to deal with a small number of trusted and healthy firms rather than a large number of firms that have been weakened by competition. And the government must address other interests with rules that may have the effect of curtailing competition. Because these tradeoffs vary, they have resulted in variation in policy.

Variation in Views on Consolidation. At an infamous “Last Supper” in 1993, top Pentagon officials told defense contractors that consolidation would be necessary with the end of Cold War spending, and that they would support consolidation with financial incentives and advocacy during antitrust reviews.⁹⁷ A \$55 billion wave of consolidations followed, in which fifty-one companies were combined into five.⁹⁸ The mergers included the combination of Northrop and Grumman, Lockheed and Martin, and Boeing and McDonnell Douglas.⁹⁹ The Pentagon also facilitated the formation of the

94. See Fisch, *supra* note 60, at 1500 (“[C]orporate demand for political activity is a natural response to the effect of legal rules on business operations.”).

95. Aditi Ramaswami & Andrew Perez, *Don’t Trust the Defense Industry’s Ukraine Pundits*, JACOBIN (Apr. 12, 2022), <https://jacobin.com/2022/04/defense-industry-ex-military-officials-pundits-corporate-news-ukraine> [<https://perma.cc/F7JK-7AYK>].

96. See Jazz Tangcay, “*Top Gun: Maverick*”: How Real-Life Engineers Inspired the DarkStar Plane, VARIETY (Dec. 8, 2022, 8:00 PM), <https://variety.com/2022/artisans/awards/top-gun-maverick-darkstar-production-design-1235454705/> [<https://perma.cc/Y35Y-C7PH>] (noting that a popular movie’s plane was inspired by a real Lockheed Martin fighter jet).

97. AMARA & FRANCK, *supra* note 85, at 34.

98. *Id.*

99. *Id.*

United Launch Alliance, a joint venture between Boeing and Lockheed Martin that held a monopoly on heavy lift launches from 2005 to 2016.¹⁰⁰

The government's position has not been uniformly in favor of consolidation. The government successfully opposed Lockheed Martin's proposed merger with Northrop Grumman in 1998.¹⁰¹ Prompted by Congressional mandates to inject competition and reduce dependence on Russian components, the Pentagon sought to support launch development by three companies: ULA, SpaceX, and Blue Origin.¹⁰² Ironically, SpaceX developed a de facto monopoly on launch services as its competitors seek to develop new vehicles.¹⁰³ The government also imposed conditions on Northrop Grumman's acquisition of Orbital ATK, a supplier of solid rocket motors, although it is not clear how effective the conditions were in facilitating competition on major projects.¹⁰⁴

Barriers to Entry. The government has imposed restrictions and requirements that have the effect of reducing competition, such as bans on

100. *Id.* at 56–57, 56 n.43; *see also* William E. Kovacic, *Competition Policy Retrospective: The Formation of the United Launch Alliance and the Ascent of SpaceX*, 27 GEO. MASON L. REV. 863, 865 (2020) (“The FTC board’s collective intuition was that the government purchasers would make good faith efforts to encourage entry by other firms as a way to motivate ULA.”). Various types of collaboration and supplier relationships are common in the defense industry. Although Lockheed Martin is the prime contractor for the F-35 Joint Strike Fighter, Raytheon’s Pratt & Whitney division makes the engine, Northrop Grumman makes the fuselage, and BAE Systems makes various components. *F-35 Lightning II*, NORTHROP GRUMMAN, <https://www.northropgrumman.com/what-we-do/air/f35-lightning> [<https://perma.cc/V2X2-K723>]; *F-35—A Trusted Partner on the World’s Largest Defence Programme*, BAE SYSTEMS, <https://www.baesystems.com/en-us/product/f-35> [<https://perma.cc/5E9H-S4AZ>]. Northrop Grumman has already withdrawn from the competition to produce the next generation fighter for the Air Force, but explicitly signaled its willingness to act as a supplier for other bidders. Aaron Mehta & Michael Marrow, *Northrop Not Competing for NGAD Sixth-Gen Fighter: CEO*, BREAKING DEF. (July 27, 2023, 10:28 AM), <https://breakingdefense.com/2023/07/northrop-not-competing-for-ngad-sixth-gen-fighter-ceo/> [<https://perma.cc/X6P6-N5XJ>].

101. AMARA & FRANCK, *supra* note 85, at 47.

102. *Id.* at 58; Doug Cameron, *Pentagon’s Rocket Plan Runs into Challenges*, WALL ST. J. (Mar. 19, 2015, 7:27 PM), <https://www.wsj.com/articles/pentagons-rocket-plan-runs-into-challenges-1426807677?KEYWORDS=ula> [<https://perma.cc/S3DA-9SVL>] (“Congress has told the Air Force to have two competing launch systems ready by 2019. Amid growing U.S.–Russia tension last year, Congress directed the Pentagon to explore developing one of them itself.”).

103. Micah Maidenberg, *Elon Musk’s SpaceX Now Has a ‘De Facto’ Monopoly on Rocket Launches*, WALL ST. J. (July 7, 2023, 12:35 AM), <https://www.wsj.com/articles/elon-musks-spacex-now-has-a-de-facto-monopoly-on-rocket-launches-3c34f02e> [<https://perma.cc/JTL8-FWHA>]; *see also* Eric Lipton, David A. Fahrenthold, Aaron Krolik & Kirsten Grind, *U.S. Agencies Fund, and Fight With, Elon Musk. A Trump Presidency Could Give Him Power Over Them.*, N.Y. TIMES (Oct. 21, 2024), <https://www.nytimes.com/2024/10/20/us/politics/elon-musk-federal-agencies-contracts.html> [<https://perma.cc/9HHX-5QHU>] (“Mr. Musk’s rocket company, SpaceX, effectively dictates NASA’s rocket launch schedule. The Defense Department relies on him to get most of its satellites to orbit. His companies were promised \$3 billion across nearly 100 different contracts last year with 17 federal agencies.”).

104. AMARA & FRANCK, *supra* note 85, at 38–41; Kovacic, *supra* note 78, at 879–80.

foreign suppliers.¹⁰⁵ The government has also adopted rules on matters like cybersecurity that would be expensive for a new entrant to comply with. Incumbent firms with existing contracts may also be able to have the government cover compliance expenses, creating a further advantage over potential entrants.¹⁰⁶

Potential new entrants can also be intimidated by the complexity and bureaucracy of the Pentagon's acquisition process, which may lead them to believe that large and experienced contractors have an insuperable advantage. This may be changing because of deliberate outreach by the Pentagon and the high-profile successes of new entrants SpaceX, Palantir Technologies, and Anduril Industries.¹⁰⁷

3. *Profit Policy.*—The inability of ordinary market forces to deliver the government's policy goals requires the government to devise incentives that encourage adequate investment in the space and causes participants to deliver high-quality products at reasonable prices. The government's "profit policy" is intended to balance these objectives.¹⁰⁸

The government's basic tool for achieving these goals is the cost-plus contract, in which the contractor is entitled to recoup certain expenses plus a return on those expenses. Variations on cost-plus contracts include award-fee contracts, which tie the overall fee to the quality of the final product,¹⁰⁹ and incentive fee contracts, which tie the overall fee to achievement of performance goals such as cost savings.¹¹⁰ These arrangements effectively transfer some of the risk of cost overruns to the government, while seeking to preserve incentives for contractors to deliver good outcomes.

While the existing system seems successful in encouraging investment in the defense industry,¹¹¹ it is not clear that it is delivering on other efficiency and resilience goals. Partly because of limited managerial and organizational capacity at the Pentagon, and partly as a result of the monopoly status of

105. Relevant statutes include the Buy American Act of 1933, the Berry Amendment, and the Specialty Metals Clause. NICASTRO & PETERS, *supra* note 85, at 2; *see also* AMARA & FRANCK, *supra* note 85, at 25 (explaining that the Buy American Act "sets procurement preferences for domestic products").

106. AMARA & FRANCK, *supra* note 85, at 27–28.

107. *See* Sharon Weinberger, Robert Wall & Doug Cameron, *Pentagon Woos Silicon Valley to Join Ranks of Arms Makers*, WALL ST. J. (Mar. 26, 2023, 8:00 AM), <https://www.wsj.com/articles/pentagon-woos-silicon-valley-to-join-ranks-of-arms-makers-38b1d4c0> [<https://perma.cc/LH4B-JN53>] (stating that "[t]he Pentagon is seeking to enlist Silicon Valley startups" and referencing the recent successes of the three companies); *see also* AMARA & FRANCK, *supra* note 85, at 30 ("[B]ig tech firms seem to be eager to compete on large information technology (IT) defense programs . . .").

108. AMARA & FRANCK, *supra* note 85, at 29–30.

109. 48 C.F.R. § 16.305 (2023).

110. 48 C.F.R. § 16.405-1(a) (2023).

111. AMARA & FRANCK, *supra* note 85, at 30.

some suppliers, numerous firms appear to have been able to earn supernormal profits on contracts.¹¹² The system also does not give contractors strong incentives to control costs, and in fact, cost overruns are common.¹¹³

4. *Existing Governance Regulation.*—As with the utility industry, the structure of defense contracting makes shareholder primacy an awkward fit. The government has limited flexibility to use external tools to encourage good behavior given concentration in the industry and the bilateral monopolies that develop in pursuing large and innovative projects. Shareholder-focused managers will seek to exploit these problems.

There have been some modest efforts to address misaligned incentives within the industry. Although the market for corporate control would ordinarily encourage managers to focus exclusively on profits, defense acquisitions are scrutinized differently. In reviewing defense transactions, the Department of Justice (DOJ) and Federal Trade Commission (FTC) defer heavily to the Department of Defense's views. Indeed, the FTC probably would not have approved Boeing and Lockheed Martin's decision to work together on satellite launches if not for the Department of Defense's support.¹¹⁴ The Committee on Foreign Investments in the United States also reviews transactions involving foreign parties to address national security concerns.¹¹⁵

The government also imposes various corporate governance provisions on defense industry participants that are foreign-owned, -controlled, or -influenced due to concerns about foreign meddling and leaks of classified information.¹¹⁶ These measures might include a firewall between the sensitive operations and other parts of the firm, governance structures

112. See Aliza Chasan, *How the Pentagon Falls Victim to Price Gouging by Military Contractors*, CBS NEWS (May 21, 2023, 7:00 PM), <https://www.cbsnews.com/news/pentagon-budget-price-gouging-military-contractors-60-minutes-2023-05-21/> [<https://perma.cc/A25M-CPUM>] (describing overcharging by Raytheon, Lockheed Martin, Boeing, and TransDigm); AMARA & FRANCK, *supra* note 85, at 30–31 (explaining how commercial and military aerospace component supplier TransDigm's monopoly position has dramatically increased its profit margins).

113. See, e.g., U.S. GOV'T ACCOUNTABILITY OFF., GAO-23-106059, WEAPONS SYSTEMS ANNUAL ASSESSMENT 29–30 (2023), <https://www.gao.gov/assets/gao-23-106059.pdf> [<https://perma.cc/BAA3-F2SY>] (identifying numerous cost increases and finding that most programs that achieved cost reductions did so by reducing quantities instead of finding efficiencies).

114. See Kovacic, *supra* note 100, at 880 (noting FTC commissioners' reluctance to approve the ULA joint venture).

115. See Kristen E. Eichensehr & Cathy Hwang, *National Security Creep in Corporate Transactions*, 123 COLUM. L. REV. 549, 562–64 (2023) (describing the Committee's process and noting that its scope has expanded in recent years).

116. See Verstein, *supra* note 9, at 777 (describing one government process of infiltrating corporate boards as “national security corporate governance”).

including management committees focused on national security concerns, and board representation or even dominance.¹¹⁷

A more subtle form of influence may come from the revolving door between the government's national security apparatus and the defense industry.¹¹⁸ Although it poses the obvious risk of causing government officials to prioritize private interests,¹¹⁹ it could theoretically have the effect of placing public-spirited individuals with a real reputational interest in appearing honest in a position to police misconduct at contractors.¹²⁰

C. Finance

Financial institutions differ from electric utilities and military contractors in at least three respects. First, they typically do not possess a monopoly over particular goods or services.¹²¹ In fact, the banking sector remains fragmented, though the number of American banks insured by the Federal Deposit Insurance Corporation (FDIC) has been declining steadily for the past twenty years.¹²² Second, when firms are not in financial distress, shareholders of financial institutions act, at least in many respects, as residual claimants. If a financial institution pioneers a socially useful innovation, shareholder profits increase. If a financial institution becomes distressed, its shareholders are wiped out—at least so long as the various mechanisms for resolving financial institutions work as planned.¹²³ Third, the government

117. *Id.* at 796–97, 803.

118. See Eric Lipton, *New Spin on a Revolving Door: Pentagon Officials Turned Venture Capitalists*, N.Y. TIMES (Dec. 30, 2023), <https://www.nytimes.com/2023/12/30/us/politics/pentagon-venture-capitalists.html> [<https://perma.cc/PJ7U-7HMP>] (describing the revolving door and noting that officials' choice of destination after exiting the Defense Department has evolved).

119. See Verstein, *supra* note 9, at 819–20 (describing the “quid-pro-quo corruption” created by the revolving door); Mara Faccio, *Politically Connected Firms*, 96 AM. ECON. REV. 369, 369 (2006) (recognizing the impact of corporate political connections on success).

120. Cf. Wentong Zheng, *The Revolving Door*, 90 NOTRE DAME L. REV. 1265, 1268 (2015) (noting that revolving door can have complex effects on enforcement as officials attempt to increase and signal the value of their human capital).

121. See Dan Awrey & Joshua Macey, *The Promise and Perils of Open Finance*, 40 YALE J. ON REGUL. 1, 5 (2023) (describing the fragmentation of banking in the United States). While this is true in many financial services industries, it is not the case with financial infrastructures such as securities depositories, clearinghouses, and payments systems. See Dan Awrey & Joshua C. Macey, *Open Access, Interoperability, and DTCC's Unexpected Path to Monopoly*, 132 YALE L.J. 96, 123–24 (2022) (describing how two companies essentially monopolized two financial services markets).

122. *Number of FDIC-Insured Commercial Banks in the United States from 2000 to 2023*, STATISTA (Apr. 2024), <https://www.statista.com/statistics/184536/number-of-fdic-insured-us-commercial-bank-institutions/> [<https://perma.cc/BX3W-XDYX>].

123. *Investors Wiped Out as Bank Run Causes Collapse of Silicon Valley Bank*, FORBES (Mar. 13, 2023, 10:42 AM), <https://www.forbes.com/sites/qai/2023/03/12/investors-wiped-out-as-bank-run-causes-collapse-of-silicon-valley-bank/> [<https://perma.cc/Z9CU-5QR2>]; see Report of Anton R. Valukas, Examiner at 13, *In re Lehman Bros. Holdings Inc.*, 541 B.R. 551 (Bankr. S.D.N.Y. 2010) (No. 08-13555), <https://web.stanford.edu/~jbulow/Lehmandocs>

does not typically directly intervene to establish demand or set profits. Instead, financial institutions compete for willing customers who are often able to sever their relationship with their financial institution and switch to a competitor.

Yet financial institutions, like defense contractors and electric utilities, are in a position to expropriate value from regulators in ways that cause shareholder interests to diverge from society's. Because the consequences of allowing a systemically important financial institution to fail are simply intolerable from society's perspective, regulators cannot commit to allowing a bank to fail if doing so would trigger a financial crisis. As a result, governments often intervene either directly to bail out failing financial institutions¹²⁴ or indirectly by committing to honor a failing firm's financial obligations.¹²⁵ The inevitability of these interventions creates an incentive for managers to take excessive risk *ex ante*.

1. Basic Challenges: Externalities.—Problems at a particular bank can have wide-ranging consequences. Most narrowly, failure at one bank can prompt problems at other institutions, as customers who are unable to determine whether the bank is facing an isolated problem pull funds from other institutions. Although Silicon Valley Bank had an idiosyncratic customer portfolio and deficient risk management processes, its failure prompted customer and shareholder flight from a broad range of similar-sized institutions, making them unstable.¹²⁶ More broadly, financial failures cause problems in the real economy, as businesses are unable to raise the funds required to sustain operations or undertake new projects. This can have a disastrous effect on employment and stakeholders throughout the economy. As a result, shareholders of a particular financial firm do not bear the full risks created by the firm's conduct.

/VOLUME%201.pdf [https://perma.cc/G8WT-SYEA] (describing how the collapse of a systemically important bank caused larger losses than most investors can bear and thus precipitated a financial crisis).

124. In 2008, Congress passed the Emergency Economic Stabilization Act of 2008, which created the Troubled Asset Relief Program. *See* Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, §§ 101–136, 122 Stat. 3765, 3767–800 (codified at 12 U.S.C. §§ 5211–41) (granting the federal government authority to purchase distressed assets from financial institutions to provide support to systemically important financial institutions).

125. Title II of Dodd-Frank created the Orderly Liquidation Authority, which gives the FDIC authority to resolve a failing financial institution, as well as issue loans and loan guarantees to the bridge company. *See* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 202(a)(1)(A)(v), 124 Stat. 1376, 1445 (codified at 12 U.S.C. § 5382(a)(1)(A)(v)) (allowing for automatic liquidation of a failing financial institution upon the grant of the petition).

126. *See* Andrew Ackerman, *SVB Collapse Shows Smaller Banks Can Pose Risk in Numbers*, WALL ST. J. (Mar. 20, 2023, 12:55 PM), <https://www.wsj.com/articles/svb-collapse-shows-smaller-banks-can-pose-risk-in-numbers-4c676894> [https://perma.cc/N56W-2PFB] (“[A] bank that has extreme concentrations of any type of asset or liability may create ripple effects through the system.”).

Holdup and Moral Hazard. Because the consequences of financial crises are so severe, financial institutions can hold up the government, forcing it to step in *ex post* to halt or mitigate a crisis by bailing out at least some of a failing bank's counterparties.¹²⁷ More dangerously, the likelihood of a government intervention can be forecasted up front. In some instances, the government's intervention is statutorily guaranteed: The FDIC guarantees deposits up to \$250,000. Other interventions are ad hoc but predictable; it is unlikely that the government will tolerate losses even on deposits over \$250,000 or the failure of a major financial institution.

These problems are not limited to banks. Non-bank financial institutions face similar run risks and collective action problems. Complex financial products are themselves vulnerable to run risk. Even though the FDIC does not formally insure money market mutual funds, repos, and credit default swaps, the government has bailed out financial institutions that took excessive risks in these markets to stave off a financial crisis.¹²⁸

The prospect of a bailout creates incentive problems that are relevant to corporate governance. First, shareholders have an incentive to take excessive risks because they know that they will receive the upside but may not internalize the full losses if investments go sour.

Second, the government's interventions might crowd out governance forms that would do a better job of policing risk-taking by managers. Mutuals and other nonprofit forms may have been more effective in assuring depositors and commercial customers that their funds were safe. Once the government stepped in to assure safety, investor-owned firms lost their competitive disadvantage.¹²⁹

Third, when a financial institution is allowed to fail, the government itself becomes the residual claimant. Ordinarily, a firm's creditors become the residual claimants when the firm fails. The shareholders are wiped out, so the creditors who are in the fulcrum position—those who can expect to take a loss but will not be wiped out entirely¹³⁰—become the residual

127. George A. Akerlof & Paul M. Romer, *Looting: The Economic Underworld of Bankruptcy for Profit*, 1993 BROOKINGS PAPERS ON ECON. ACTIVITY, no. 2, at 1, 1–5.

128. *E.g.*, *The Causes and Effects of the AIG Bailout: Hearing Before the H. Comm. on Oversight & Gov't Reform*, 110th Cong. 1–2 (2008) (statement of Rep. Henry A. Waxman, Chairman, H. Comm. on Oversight & Gov't Reform); *see also* Gabriel V. Rauterberg & Jeffery Y. Zhang, *Shadow Banking and Securities Law*, 77 STAN. L. REV. (forthcoming 2025) (manuscript at 22–23), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4936041 [<https://perma.cc/62TC-ZN8M>] (describing the bailouts of money market mutual funds).

129. HANSMANN, *supra* note 15, at 255–58.

130. Anthony J. Casey & Joshua C. Macey, *The Hertz Maneuver (and the Limits of Bankruptcy Law)*, U. CHI. L. REV. ONLINE (Oct. 7, 2020), <https://lawreview.uchicago.edu/online-archive/hertz-maneuver-and-limits-bankruptcy-law> [<https://perma.cc/CCJ8-MH6K>]; *see also* Anthony J. Casey, *The Creditors' Bargain and Option-Preservation Priority in Chapter 11*, 78 U. CHI. L. REV. 759,

claimants of the firm. Because shareholder-focused managers would want to take excessive risks at creditors' expense, creditors are granted governance powers to protect their interests: Creditors possess significant governance powers in bankruptcy, are entitled to equity in the reorganized firm, and often contract for governance rights when firms are approaching financial distress.¹³¹

However, when the government guarantees a financial institution's debts or other contractual obligations, it has a direct financial stake in the firm's operations. This means that the residual claimant of financial institutions is state-specific; shareholders operate as residual claimants when the bank is solvent whereas the government does when the bank is in distress. This creates a mismatch in which shareholder-focused managers want to take excessive risks, knowing that the government will be forced to bear the financial consequences if a speculative investment does not pay off.

2. *Profit Policy.*—The government has imposed various regulations to help align shareholder profits with social interests. First, systemically important financial institutions undergo periodic stress tests to make sure they can absorb losses and pay out deposits and other debts.¹³² When a bank fails a stress test, regulators can prohibit it from paying dividends, thus preventing shareholders from taking profits. Second, banks are required to hold more capital as they get bigger, more interconnected, or engage in risky activities.¹³³ The requirement to hold additional capital limits the profitability of these steps. And third, systemically important financial institutions are required to produce living wills in which they offer a plan about how they

773–75 (2011) (discussing the prioritization of creditors); Kenneth Ayotte & David A. Skeel, Jr., *Bankruptcy Law as a Liquidity Provider*, 80 U. CHI. L. REV. 1557, 1580 (2013) (showing the importance of creditors and how information asymmetries between creditors and insiders can cause liquidity problems); Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U. PA. L. REV. 1209, 1215–16 (2006) (describing creditors' lack of "special rights" since they recover funds simply through debt instruments); Anthony J. Casey & Edward R. Morrison, *Beyond Options*, in RESEARCH HANDBOOK ON CORPORATE BANKRUPTCY LAW 193, 195 (Barry E. Adler ed., 2020) (setting out the rights of senior creditors during foreclosures); Alan Schwartz, *A Normative Theory of Business Bankruptcy*, 91 VA. L. REV. 1199, 1257 (2005) (noting a creditor would be willing to agree to updated contract terms when insolvency payoffs increase); Lucian Arye Bebchuk, *A New Approach to Corporate Reorganizations*, 101 HARV. L. REV. 775, 785–87 (1988) (distinguishing the rights of senior creditors, junior creditors, and equity holders).

131. Bebchuk, *supra* note 130, at 776.

132. Dodd-Frank Wall Street Reform and Consumer Protection Act § 165(i), 12 U.S.C. § 5365(i); 12 C.F.R. pt. 252 (2024).

133. See ANDREW P. SCOTT & MARC LABONTE, CONG. RSCH. SERV., R47447, BANK CAPITAL REQUIREMENTS: A PRIMER AND POLICY ISSUES 8–10 (2023) (defining "risk-weighted assets" and their relationship to minimum capital requirements); 12 U.S.C. §§ 5381–94 (creating the "orderly liquidation authority" that permits FDIC to liquidate systemically important banks).

will be resolved if they fail.¹³⁴ These wills seek to formalize the shareholders' place at the end of the line in the event of a failure.

These interventions are designed to reduce the economic risks posed by the failure of a financial institution, but they can also limit shareholders' incentives to pursue socially beneficial innovation or extend credit to worthy projects.¹³⁵ Of course, the bank might be able to raise additional capital in equity markets to support a new venture or loan, but at the very least, higher capital requirements increase the costs of pursuing potentially profitable new ventures. Capital requirements may also lessen incentives to develop innovative risk management practices, since such practices will only translate into shareholder profits if business managers are able to convince regulators to give them credit for any improvement. These regulations may be entirely justified because they reduce the likelihood of a financial crisis. Yet they also reduce firms' discretion to pursue valuable new projects. The opposition that firms have expressed to being designated as systemically important suggests that the designation has a significant effect on firm behavior.¹³⁶

Prudential financial regulations thus limit the potential upside that shareholders receive for socially useful innovations, while the various programs that guarantee financial institutions' contractual obligations reduce the financial risk shareholders and creditors face for engaging in excessively risky behavior. As a result, both assumptions underlying the residual-claimant justification for shareholder primacy are relatively attenuated in the financial services context.

3. Existing Governance Regulation.—The government's financial exposure provides additional justification for the enormous authority the government possesses to control systemically important financial institutions that are in distress.¹³⁷ This authority includes the right to determine which affiliates will receive financial assistance, which business lines will be saved, and which counterparties will be paid.¹³⁸ The government, through the FDIC, the Federal Reserve, and the Office of the Comptroller of the Currency (OCC), thus effectively determines which businesses the reorganized firm will continue and which business lines will be liquidated. This authority, and

134. Dodd-Frank Wall Street Reform and Consumer Protection Act § 165(d), 12 U.S.C. § 5365(d).

135. We take no position here on whether any such socially beneficial innovations exist in the financial industry, and simply stress that shareholders have little incentive to pursue them.

136. *MetLife, Inc. v. Fin. Stability Oversight Council*, 177 F. Supp. 3d 219, 229, 231 (D.D.C. 2016).

137. For a critique of these tools, see generally David Zaring, *The Corporatist Foundations of Financial Regulation*, 108 IOWA L. REV. 1303 (2023).

138. Dodd-Frank Wall Street Reform and Consumer Protection Act § 210(b)(4)(A), 12 U.S.C. § 5390(b)(4)(A) (authorizing the FDIC to treat claims that would ordinarily receive the same priority in bankruptcy differently).

the legal process by which the government assumes this role, has been the subject of numerous legal challenges on the ground that it deprives the firm of its due process rights.¹³⁹ From one perspective, however, the government is simply protecting its own property rights. By assuming so many of the firm's financial obligations, the government may be the party that has the largest financial stake in maximizing the firm's value. It may therefore make sense for the government to make what look like ordinary business decisions, since it faces exposure for bad decisions and receives the upside of good decisions.¹⁴⁰

Regulators also possess unusual authority to intervene in governance matters at financial firms prior to failure. The Federal Reserve has authority to fire managers and bar them from the financial services industry.¹⁴¹ Executive clawback provisions further empower financial regulators to intervene in internal governance to force managers to consider the systemic consequences of firm behavior.¹⁴² Section 956(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act called on financial regulators to jointly issue rules that would “prohibit any types of incentive-based payment arrangement . . . that the regulators determine encourages inappropriate risks by covered financial institutions . . . by providing . . . excessive compensation . . . or that could lead to material financial loss to the covered financial institution.”¹⁴³ Progress toward implementing this provision has been fitful.¹⁴⁴

Special bank merger review provides an additional means of reviewing bank mergers, instructing the Fed, the OCC, and the FDIC to consider not just the anticompetitive effects of proposed bank mergers but also any proposed merger's implications for financial stability, its likely effect on the public interest, and the merging firms' financial and managerial resources.¹⁴⁵

139. See, e.g., Thomas W. Merrill & Margaret L. Merrill, *Dodd-Frank Orderly Liquidation Authority: Too Big for the Constitution?*, 163 U. PA. L. REV. 165, 171 (2014) (recounting Due Process challenges by state attorneys general).

140. This justification applies when there is certainty that the firm is insolvent, and to varying degrees otherwise.

141. Lin & Menand, *supra* note 9, at 5.

142. See 15 U.S.C. § 78j-4(b)(2) (authorizing recovery of executive compensation resulting from noncompliance with reporting requirement).

143. 12 U.S.C. § 5641(b).

144. See Press Release, Off. of the Comptroller of the Currency, Agencies Issue Proposal on Incentive-Based Comp. (May 6, 2024), <https://www.occ.gov/news-issuances/news-releases/2024/nr-ia-2024-47.html> [<https://perma.cc/X68Z-Q5A2>] (announcing the third attempt to impose rules under this provision, by only some of the regulatory agencies identified in the statute).

145. See Bank Merger Act, 12 U.S.C. § 1828(c) (requiring consideration of systemic risks, among other factors, for a proposed merger); Bank Holding Company Act of 1956 § 3(c), 12 U.S.C. § 1842(c) (delineating six additional factors beyond competition that the Fed must consider); see also Jeremy C. Kress, *Modernizing Bank Merger Review*, 37 YALE J. ON REGUL. 435, 437 (2020) (summarizing the factors set out in the two statutes).

Under the Community Reinvestment Act, federal banking regulators also review banks' records of extending credit to minority and disadvantaged communities when reviewing applications for new branches or mergers.¹⁴⁶

These interventions can be explained as partial responses to the breakdown of the conventional justification for shareholder primacy within financial institutions. If shareholders are inclined to take excessive risks, it may be necessary for the government to intervene directly in setting executive compensation and even barring former bank employees from the financial services industry. Similarly, because financial institutions may pursue a merger to become more systemically important, and thus to increase the likelihood of a bailout, banks may pursue inefficient mergers simply to increase the strength of its implicit government backing.¹⁴⁷ As a result, it makes sense for bank regulators to review proposed mergers to make sure that the merger does not increase systemic risk, and that the consolidated firm will be able to withstand a financial crisis. Finally, government incentives to extend credit to underserved communities may help counter disincentives to innovate.

D. *Pharmaceuticals*

The pharmaceutical industry differs in important respects from utilities, defense, and finance. There is an unequivocal benefit to pharmaceutical innovation that is prompted by real consumer needs, and much of the innovation that occurs is generated by shareholder-focused firms that do profit from their discoveries. This makes it necessary to distinguish between segments of the industry: Early-stage research is often financed by the government or nonprofits due to the difficulty of assuring shareholder profits; the basic research sometimes leads to advances that are pursued by shareholder-focused biotech firms; and successful biotech firms are acquired by pharmaceutical firms that navigate the product through regulatory approvals and pursue manufacturing and marketing.

In administering this ecosystem, the government uses two basic levers: (a) calibrating the level of competition in producing certain drugs and (b) setting prices or using other financial incentives. These problems can create gaps in the early research and biotech segments, where private investors will be unable to earn an adequate risk-adjusted return, and a governance problem in the pharmaceutical segment, where private companies are empowered to hold up the government and patients to demand high prices for finished drugs.

146. See 12 C.F.R. pt. 345 (2024) (outlining FDIC regulations for implementing the statute).

147. See, e.g., Roe, *Too-Big-to-Fail*, *supra* note 9, at 1437 (“Several historical studies analogously attributed financial firm mergers to the desire to obtain the too-big-to-fail funding benefits.”).

1. *Basic Challenges.*—The government faces several key challenges in regulating the pharmaceutical industry. It must encourage development of new drugs that are socially valuable and ensure that they are delivered to patients who need them despite the difficulty of arranging private financing of large uncertain projects.

Innovation. Pharmaceutical development is uncertain, complex, and time-consuming. A drug may take over a decade to shepherd to market, and drug candidates face extraordinary failure rates. Tens of thousands of compounds may need to be evaluated before reaching clinical trials, and approximately 92% of clinical trials end in failure.¹⁴⁸ This process is extremely expensive. Taking a treatment from the laboratory bench to the patient’s bedside may cost hundreds of millions or even billions of dollars.¹⁴⁹

Externalities and Anticommons Problems. Innovative treatments can have various externalities. A drug company might spend hundreds of millions of dollars and take substantial financial risks to develop a drug addressing a new disease, only for other companies to develop follow-on or “me-too” drugs that target the same disease.¹⁵⁰ Drug companies may also struggle to capture adequate value when their products are used in combination with others. Doctors often treat HIV and various cancers with combination therapies, in which a group of drugs with relatively little individual impact are combined to great effect.¹⁵¹ Absent conscious regulatory intervention, it would be difficult for the creator of each constituent element to capture enough value to justify research and development expenses.¹⁵²

Redistribution. Like most industrialized nations, the United States is committed to providing access to a minimal standard of healthcare for certain groups, including the elderly, the poor, and veterans. To address this commitment, the government has created programs and agencies, including Medicare, Medicaid, and the Department of Veterans’ Affairs, that are major purchasers of healthcare products and services. These purchases drive a large

148. ANDREW W. LO & SHOMESH E. CHAUDHURI, HEALTHCARE FINANCE: MODERN FINANCIAL ANALYSIS FOR ACCELERATING BIOMEDICAL INNOVATION 1, 12 fig. 1.6 (2023).

149. *Id.* at 11; Aylin Sertkaya, Trinidad Beleche, Amber Jessub & Benjamin D. Sommers, *Costs of Drug Development and Research and Development Intensity in the US, 2000-2018*, JAMA NETWORK OPEN (June 28, 2024), <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2820562> [<https://perma.cc/G66D-JZZU>].

150. Heled et al., *supra* note 9, at 84.

151. See LO & CHAUDHURI, *supra* note 148, at 13 (discussing the role of the AIDS “cocktail,” a well-known combination therapy, in treating HIV).

152. See D. Dankó, J-Y Blay & L.P. Garrison, *Challenges in the Value Assessment, Pricing and Funding of Targeted Combination Therapies in Oncology*, 123 HEALTH POL’Y 1230, 1233–34 (2019) (explaining the “economic return challenge” in developing combination therapies). This is related to challenges with coordinating demand. See Rachel E. Sachs, *Delinking Reimbursement*, 102 MINN. L. REV. 2307, 2309 (2018) (describing how approval of more experimental therapies could overburden Medicare and Medicaid).

fraction of revenues at major pharmaceutical companies. One analysis found that Medicare and Medicaid sales accounted for 56% of 2020 revenues at Amgen, 52% at Gilead, 40% at Biogen, and 35% at Vertex Pharmaceuticals.¹⁵³

These expenditures could cause drug companies to pursue projects that would otherwise be uneconomic, discovering drugs that may help people who are not direct beneficiaries of the government programs.¹⁵⁴ But they could also attract research dollars that would otherwise be spent elsewhere. For example, GSK is accused of having prioritized a vaccine for shingles, an infection that causes a painful rash, over a potential vaccine for tuberculosis, a disease that kills 1.6 million people per year.¹⁵⁵ Because shingles affects seniors, who in the United States are covered by Medicare, it is a more lucrative target. Domestically, drug manufacturers are often able to capture higher prices for drugs sold through Medicare than through Medicaid, incentivizing them to focus on diseases affecting the elderly instead of the poor.¹⁵⁶

Financing. Taking a drug from bench to bedside is financially demanding, risky, and time consuming. These features make it difficult for profit-seeking investors to back a complete project. Pharmaceutical financing can also be affected by asymmetric information, which creates agency and adverse selection problems. Financial backers lacking expertise and inside information can find it difficult to determine whether a particular drug candidate is actually promising. Developers may suggest that the candidate

153. Christopher Newman, *Pharma CEOs Press Case Against Drug Price Negotiation as Bill Gains Support*, BIOPHARMA DIVE (Aug. 4, 2022), <https://www.biopharmadive.com/news/pharma-drug-pricing-negotiation-bill-ceo-response/628872/> [<https://perma.cc/JVL8-FDBE>]. The government also uses tax policy to support the provision of employer-based health insurance. *How Does the Tax Exclusion for Employer-Sponsored Health Insurance Work?*, TAX POL'Y CTR. (Jan. 2024), <https://taxpolicycenter.org/briefing-book/how-does-tax-exclusion-employer-sponsored-health-insurance-work> [<https://perma.cc/3WYS-XCNX>]; cf. Mark J. Loewenstein & Jay Geyer, *Shareholder Primacy and the Moral Obligation of Directors*, 26 FORDHAM J. CORP. & FIN. L. 105, 137 (2021) (describing how the Affordable Care Act required private insurers to cover all prescription drugs).

154. See Mark A. Lemley, Lisa Larrimore Ouellette & Rachel E. Sachs, *The Medicare Innovation Subsidy*, 95 N.Y.U. L. REV. 75, 117 (2020) (explaining how a Medicare innovation subsidy would encourage pharmaceutical development and also decrease drug prices); see also Jeanne Whalen, *Why the U.S. Pays More than Other Countries for Drugs*, WALL ST. J. (Dec. 1, 2015, 9:27 PM), <https://www.wsj.com/articles/why-the-u-s-pays-more-than-other-countries-for-drugs-1448939481> [<https://perma.cc/TRG9-CU7D>] (citing an industry analyst for the proposition that “[i]f U.S. pricing fell to European levels, the industry would almost certainly cut its R&D spending”).

155. Anna Maria Barry-Jester, *How a Big Pharma Company Stalled a Potentially Lifesaving Vaccine in Pursuit of Bigger Profits*, PROPUBLICA (Oct. 4, 2023, 5:00 AM), <https://www.propublica.org/article/how-big-pharma-company-stalled-tuberculosis-vaccine-to-pursue-bigger-profits> [<https://perma.cc/M8LA-GV4M>].

156. Rachel E. Sachs, *The Accidental Innovation Policymakers*, 72 DUKE L.J. 1431, 1472 (2023).

is promising to attract additional funds and developers may selectively sell stakes only in projects that they are skeptical of.¹⁵⁷

These problems have affected the structure of the industry. After years of low returns and pressure from Wall Street investors, pharmaceutical companies essentially retreated from financing much of the basic research that leads to new drugs. Nonprofit organizations—universities, charitable organizations, and government agencies—are the major funders of basic research.¹⁵⁸ Expert venture capital firms finance small biotech companies that develop a few promising concepts through to the early stages of testing. And large pharmaceutical companies acquire biotech firms once the testing shows promise and the focus shifts from dealing with scientific uncertainty to managing the regulatory process and marketing the drug.¹⁵⁹

Lobbying. Lobbying is pervasive in the pharmaceutical industry. This can affect overall policy as industry participants frequently and successfully advocate for subsidies or against reforms by citing impacts on incentives to innovate.¹⁶⁰ It also appears to play out at the level of individual drugs or projects. For example, the FDA overruled an independent advisory committee to approve Aduhelm, an Alzheimer's drug with limited proven benefits and significant side effects.¹⁶¹ A subsequent review found that the FDA had engaged in an unusual degree of collaboration with the drug's maker, Biogen, and that FDA officials had undocumented meetings with the company.¹⁶² More crudely, high-profile Democrat Neera Tanden was a prominent critic of Mylan CEO Heather Bresch as the company raised the price of the EpiPen, a product used to deal with severe allergic reactions.¹⁶³

157. See Richard T. Thakor & Andrew W. Lo, *Optimal Financing for R&D-Intensive Firms 5* (Nat'l Bureau of Econ. Rsch., Working Paper No. 23831, 2017) (suggesting a mechanism to combat information asymmetry).

158. LO & CHAUDHURI, *supra* note 148, at 27–28; see CLARK, *supra* note 9, § 16.3.3, at 701 (noting that nonprofits may be more trustworthy recipients of funding for basic research than for-profit firms).

159. See Ed Silverman, *Follow the Money: How Biotech's Funding Shapes Its Direction*, BIOTECH. HEALTHCARE, July–Aug. 2004, at 41, 42–43, <https://pmc.ncbi.nlm.nih.gov/articles/PMC3564307/pdf/bh0103041.pdf> [<https://perma.cc/VZ52-KKFE>] (discussing the relationship between venture capital and big pharma).

160. See Sachs, *supra* note 156, at 1477–78 (evaluating the one-sided arguments the pharmaceutical industry presents to policymakers).

161. *Id.* at 1435.

162. Pam Belluck, *Congressional Inquiry into Alzheimer's Drug Faults Its Maker and F.D.A.*, N.Y. TIMES (Dec. 29, 2022), <https://www.nytimes.com/2022/12/29/health/alzheimers-drug-aduhelm-biogen.html> [<https://perma.cc/9JWS-SST2>].

163. Jacob Jarvis, *Neera Tanden Once Criticized Joe Manchin's Pharma CEO Daughter*, NEWSWEEK (Feb. 24, 2021, 3:52 AM), <https://www.newsweek.com/neera-tanden-criticized-joe-manchin-daughter-heather-bresch-1571531> [<https://perma.cc/9B4G-WTHA>].

Tanden later found her candidacy to lead the Office of Management and Budget defeated by Bresch's father, Senator Joe Manchin.¹⁶⁴

2. *Competition.*—The government's central tool for encouraging drug development is to limit competition. Patents protect the intellectual property involved in a drug or treatment, effectively preventing competitors from manufacturing the same drug while the patent remains in force.¹⁶⁵ During a market exclusivity period, the FDA will not approve a competing generic product for sale. During a data exclusivity period, the FDA will not allow a new applicant to rely on clinical data that had been submitted by the original innovator.

The importance of competition-reducing measures has led to various forms of opportunism and gamesmanship. Until recently, insulin manufacturers managed to maintain high prices on the drug (which was discovered over a century ago) by introducing new versions and new delivery devices.¹⁶⁶ Drug manufacturers have been accused of using a “product hopping” strategy in which they time the introduction of new drugs to coincide with the expiration of protection on their existing drugs.¹⁶⁷ Pharmaceutical manufacturers have used “pay for delay” strategies to cause generic manufacturers to hold off on introducing competing products.¹⁶⁸ Manufacturers can also develop “patent thickets”: a large number of patents on related intellectual property that make it difficult or impossible for another firm to develop a competing product, even when the patent on the product itself has expired. For example, Humira is one of the best-selling drugs within Medicare. Although the drug was first approved in 2002, it retained a

164. Alexandra Jaffe, *Budget Nominee Tanden Withdraws Nomination Amid Opposition*, ASSOCIATED PRESS (Mar. 2, 2021, 5:53 PM), <https://apnews.com/article/neera-tanden-withdraws-nomination-1f9245ff58e11533c16d7b3eff11db46> [<https://perma.cc/TD8L-T3VQ>].

165. The long lead times in pharmaceutical development reduce the utility of a patent. To help address this concern, the Hatch-Waxman Act restored a portion of patent terms for certain innovative drugs to compensate for years lost during the FDA's review. Sachs, *supra* note 156, at 1466.

166. Sachs, *supra* note 156, at 1433 & n.8. A new chemical might receive a five-year market exclusivity period, while related chemicals supported with new essential clinical studies might receive a three-year market exclusivity period. To encourage the study of certain rare diseases, the government has offered a seven-year market exclusivity period for drugs targeting rare conditions. Bryan Oronsky, Scott Caroen, Franck Brinkhaus, Tony Reid, Meaghan Stirn & Raj Kumar, *Patent and Marketing Exclusivities 101 for Drug Developers*, 17 RECENT PATS. ON BIOTECH. 257, 262–63 (2023).

167. Rebecca Robbins & Sheryl Gay Stolberg, *How a Drugmaker Profited by Slow-Walking a Promising H.I.V. Therapy*, N.Y. TIMES (July 23, 2023), <https://www.nytimes.com/2023/07/22/business/gilead-hiv-drug-tenofovir.html> [<https://perma.cc/W7Q6-DHAS>].

168. C. Scott Hemphill, *Paying for Delay: Pharmaceutical Patent Settlement as a Regulatory Design Problem*, 81 N.Y.U. L. REV. 1553, 1557 (2006).

dominant market position for decades because its manufacturer developed over 100 patents that blocked other attempts.¹⁶⁹

3. *Profit Policy*.—The government also intervenes to affect the profitability of pharmaceutical projects, though much of this policymaking has an “accidental” or haphazard quality.¹⁷⁰ There are two basic categories of intervention.¹⁷¹ The government uses tax credits and grants to make research and development more profitable *ex ante*, pushing companies to invest in innovation.¹⁷² The government also limits competition and purchases an enormous quantity of pharmaceuticals, creating an *ex post* incentive for firms to develop drugs that will be purchased.¹⁷³

Although *ex post* incentives could be a powerful tool to encourage good behavior, many are applied in an automatic way. Medicare Part B covers drugs administered at a hospital or in a doctor’s office and covers treatments that are “reasonable and necessary for the diagnosis or treatment of illness or injury,” regardless of cost.¹⁷⁴ Medicare Part D plans must cover at least two drugs in every therapeutic class.¹⁷⁵ Until recently, the government was not permitted to negotiate prices and had limited statutory authority to refuse to cover a drug. Instead of valuing the benefits of a drug and leveraging its

169. Sachs, *supra* note 156, at 1433–34; David Wainer, *What a \$200 Billion Blockbuster Drug Reveals About Big Pharma’s Playbook*, WALL ST. J. (Feb. 5, 2024, 7:00 AM), <https://www.wsj.com/health/pharma/what-a-200-billion-blockbuster-drug-reveals-about-big-pharmas-playbook-e8d917c3> [<https://perma.cc/Q2WV-63DJ>] (“Innovation remains key to pharma companies’ success. But increasingly, that can mean coming up with innovative ways to squeeze more years and money out [of] existing drugs.”). Humira’s manufacturer AbbVie managed to maintain a dominant market position in the United States even after the introduction of a competitor product by offering steep discounts—“a strategy some investors refer to as ‘burning down the house so nobody else can have it.’” David Wainer, *How AbbVie’s Humira Still Reigns, Despite New Competition*, WALL ST. J. (July 27, 2023, 11:45 AM), <https://www.wsj.com/articles/how-abbvies-humira-still-reigns-despite-new-competition-d4aa13a9> [<https://perma.cc/PK7P-EL3S>]. The strategy facilitated AbbVie’s plans to keep patients on Humira until they could be switched to newer drugs and had the effect of damaging the business model of companies seeking to develop similar products. *Id.*

170. See Sachs, *supra* note 156, at 1443 (introducing the accidental impact Medicare Part D and the ACA had on innovation in the pharmaceutical industry).

171. See Daniel J. Hemel & Lisa Larrimore Ouellette, *Beyond the Patents–Prizes Debate*, 92 TEXAS L. REV. 303, 378–81 (2013) (discussing the relationship between *ex ante* and *ex post* interventions).

172. Sachs, *supra* note 156, at 1464.

173. See Lemley et al., *supra* note 154, at 77, 106 (describing *ex post* incentives of intellectual property protections like patents and subsidies from Medicare and Medicaid). The government also takes other steps to align efficacy of treatment with profitability. See Amy Kapczynski, *Dangerous Times: The FDA’s Role in Information Production, Past and Future*, 102 MINN. L. REV. 2357, 2358 (2018) (noting that one function of the FDA’s regulation of drug marketing is “to generate and validate information about medicines”).

174. Lemley et al., *supra* note 154, at 84 (quoting 42 U.S.C. § 1395y(a)(1)(A)–(B)).

175. *Id.* at 85–86.

enormous market power to insist upon rational prices, the government essentially outsourced price-setting.¹⁷⁶

The Inflation Reduction Act of 2022 altered the landscape somewhat. The act capped insulin copays for Medicare participants at \$35 per month, eventually prompting insulin manufacturers Eli Lilly, Novo Nordisk, and Sanofi to agree to price reductions ranging from 70% to 78%.¹⁷⁷ It also installed a negotiation framework in which the government would directly bargain over the prices of ten drugs purchased by Medicare.¹⁷⁸ As of this writing, the negotiation program is underway, but has been challenged in court.¹⁷⁹ While it is difficult to forecast the consequences, there does seem to be a meaningful appetite for the government to take deliberate action to encourage better outcomes.

The COVID pandemic may have heightened this appetite. Under Operation Warp Speed, the government sought to foster the rapid manufacturing of new vaccines by addressing regulatory hurdles, smoothing production-related frictions, and pre-committing to enormous purchases.¹⁸⁰ While various parts of the program could be criticized, hundreds of millions of vaccine doses were ultimately delivered on a timeframe that would have been inconceivable previously; the government's failure to achieve similar results for other serious diseases has heightened dissatisfaction with existing policies.¹⁸¹

4. *Problems and Existing Governance Regulation.*—The challenges of the pharmaceutical industry create two governance problems: gaps in the

176. See *id.* at 86 (discussing the government's role as a price taker, accepting prices negotiated by private pharmacy benefit managers); Sachs, *supra* note 156, at 1450 (discussing legislative opponents' views on the irrationality of this approach); Sachs, *supra* note 152, at 2325–26 (describing the noninterference clause that prevents the government from negotiating Medicare prices).

177. Annika Kim Constantino, *Facing Political Pressure, Sanofi Follows Eli Lilly and Novo Nordisk in Slashing Insulin Prices*, CNBC (Mar. 16, 2023, 4:45 PM), <https://www.cnn.com/2023/03/16/sanofi-to-slash-us-insulin-prices-after-eli-lilly-and-novo-nordisk.html> [<https://perma.cc/6WH8-JR8J>].

178. *Medicare Drug Price Negotiation*, CTRS. FOR MEDICARE & MEDICAID SERVS. (Oct. 22, 2024, 1:37 PM), <https://www.cms.gov/inflation-reduction-act-and-medicare/medicare-drug-price-negotiation> [<https://perma.cc/5QP9-GYKR>].

179. Noah Weiland & Rebecca Robbins, *U.S. Unveils Price Limits for 10 Costly or Common Medications*, N.Y. TIMES (Aug. 15, 2024), <https://www.nytimes.com/2024/08/15/us/politics/drug-prices-medicare.html> [<https://perma.cc/22LW-V2LS>].

180. See U.S. GOV'T ACCOUNTABILITY OFF., GAO-21-319, OPERATION WARP SPEED: ACCELERATED COVID-19 VACCINE DEVELOPMENT STATUS AND EFFORTS TO ADDRESS MANUFACTURING CHALLENGES 6–7, 20–23 (2021) (explaining Operation Warp Speed and how it differed from traditional vaccine development).

181. See Daniel J. Hemel & Lisa Larrimore Ouellette, *Valuing Medical Innovation*, 75 STAN. L. REV. 517, 522–23 (2023) (contrasting the success of Operation Warp Speed to the failures of the drug pricing system in the cancer prevention context).

basic research and biotech segments, where shareholder profit-oriented investors refuse to fund socially valuable projects; and holdups and opportunism in the pharmaceutical segments, where shareholder profit-oriented firms exploit the government's commitment to purchase treatments through Medicare and other programs.

The government has responded to gaps by encouraging nonprofit organizations and public agencies to fill in holes that would otherwise exist in the ecosystem. Research is often funded by universities or charitable organizations, not companies focused on delivering financial profits to shareholders. And the government plays an active role. The National Institutes of Health control an annual budget of \$48 billion, using 11% for in-house research and 83% for grants at universities and other institutions.¹⁸²

In response to opportunism in later phases of drug development, the government has taken some steps to police aggressive conduct. For example, Medicare ultimately limited coverage for Aduhelm, the controversial Alzheimer's drug.¹⁸³ And the FTC has sought to curb exploitation of a strategy in which pharmaceutical companies list ineligible patents in the "Orange Book"—a listing of products that disables regulators from approving a generic competitor.¹⁸⁴ Pursuant to an Executive Order, the FTC has targeted "pay for delay" strategies in which pharmaceutical companies pay off generic manufacturers to prevent them from introducing competing products.¹⁸⁵ The FTC and DOJ have also sought to rethink their approach to pharmaceutical mergers.¹⁸⁶

182. *Budget*, NAT'L INSTS. OF HEALTH (July 30, 2024), <https://www.nih.gov/about-nih/what-we-do/budget> [<https://perma.cc/TW8T-RXLR>].

183. CTRS. FOR MEDICARE & MEDICAID SERVS., CAG-00460N, MONOCLONAL ANTIBODIES DIRECTED AGAINST AMYLOID FOR THE TREATMENT OF ALZHEIMER'S DISEASE (2022), <https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&ncaid=305> [<https://perma.cc/GGR9-LGL3>]; Pam Belluck, *Medicare Officially Limits Coverage of Aduhelm to Patients in Clinical Trials*, N.Y. TIMES (Apr. 7, 2022), <https://www.nytimes.com/2022/04/07/health/aduhelm-medicare-alzheimers.html> [<https://perma.cc/7WT2-AQ4Y>].

184. See FED. TRADE COMM'N, STATEMENT CONCERNING BRAND DRUG MANUFACTURERS' IMPROPER LISTING OF PATENTS IN THE ORANGE BOOK (2023), https://www.ftc.gov/system/files/ftc_gov/pdf/p239900orangebookpolicystatement092023.pdf [<https://perma.cc/4QVT-735H>] (describing the agency's planned "actions against companies and individuals that improperly list patents in the Orange Book"); Rebecca Robbins, *Common Patenting Tactic by Drug Companies May Be Illegal, F.T.C. Says*, N.Y. TIMES (Sept. 14, 2023), <https://www.nytimes.com/2023/09/14/business/ftc-drug-patents-inhalers.html> [<https://perma.cc/2R2Z-CCDR>] (reporting on the increased scrutiny); see also C. Scott Hemphill & Bhaven N. Sampat, *Fixing the FDA's Orange Book*, 41 HEALTH AFFS. 797, 799 (2022) (making patent-reform recommendations for fixing the problem with the Orange Book).

185. Exec. Order No. 14,036, 3 C.F.R. § 5(h)(iii) (2022).

186. See Press Release, Fed. Trade Comm'n, FTC, DOJ Issue Summary on Joint Pharm. Merger Analysis Workshop (June 1, 2023), <https://www.ftc.gov/news-events/news/press->

III. Implications for Corporate Governance

While electric utilities, defense contracting, financial, and pharmaceutical markets differ in important respects, they all present circumstances in which some of the justifications for shareholder primacy do not apply. Subpart III(A) shows that shareholders do not internalize consequences of firm decisions because they are insulated by regulations, purchasing programs, or imbalances in power. Although they are not the focus of this Article, subpart III(B) canvasses alternative justifications and shows that they operate differently within these industries.

A. *Shareholders Do Not Internalize Consequences of Firm Decisions*

Recall that two assumptions underlie the traditional view that shareholder interests align with society's. The first is that shareholders profit from developing new products or services for which there is demand. The second is that outside stakeholders can protect their interests through external mechanisms such as regulation and contract.

Both these assumptions break down in the industries described in the previous Part. In each case, some feature of the market puts firms in a position to expropriate value from the government after the government has committed to contractual or regulatory mechanisms to incentivize shareholders to cost-effectively pursue value-enhancing projects and to force shareholders to bear the costs of risky behavior. This can occur because of government intervention to establish demand or fix profits, economic features of the industry that give the government a strong interest in bailing out failing firms, or some combination of the two. Regardless of the cause, these government interventions have two consequences for corporate governance theory. The first is that shareholders can often demand additional profits to cover cost overruns; the second is that the government cannot plausibly commit to forcing shareholders to take losses when an investment does not work out.

Shareholders' incentives align with society's when shareholders have a financial incentive to pursue socially valuable projects. This ordinarily occurs in the market where the social value of a good or service can be assessed by customers' willingness to pay. In some industries (perhaps even pharma if better regulated), the government could be trusted to create a prize system that will encourage firms to develop useful products. The government may get the price wrong—it may create an excessively high or low incentive—but firms nevertheless compete for a large payout. If the

releases/2023/06/ftc-doj-issue-summary-joint-pharmaceutical-merger-analysis-workshop [https://perma.cc/4GZY-4LE5] (detailing a workshop which “served as a culmination of the Multilateral Pharmaceutical Merger Task Force, an effort to rethink the approaches to pharmaceutical merger review”).

government manages to create a high enough reward, and if the project provides social value, then shareholders stand to benefit from capturing that value by developing useful projects.

In the cases described above, however, shareholders lack incentives to pursue socially useful innovations, and the government lacks credibility in threatening to use price-based mechanisms to deter misconduct *ex post*. Often this occurs because a firm is in a position to hold up the government after receiving a contract and thus demanding additional revenue so that it will deliver a good or service. Firms will have the incentive and ability to hold up the government when a government intervention (1) limits the upside a company receives for socially useful innovations while (2) limiting the government's ability to exit its relationship with its counterparty.

1. Limited Returns to Socially Valuable Innovation.—In industries with pervasive government involvement, there are often limited returns for innovation. For example, rate-regulated electric utilities will often lack incentives to reduce costs, improve reliability, or reduce emissions beyond whatever targets its regulators have established. A rate-regulated utility's return on equity is capped at a government-set rate. Thus, even if the utility realizes that it could improve electric service in its area, the profit cap undermines its incentive to invest to pioneer such innovations. If the company's investment is successful in reducing costs or otherwise improving profitability, its regulator will reduce allowed rates at the next opportunity.¹⁸⁷ And if the company's investment does not lead to improved performance, its regulator may seek to prevent it from recovering costs entirely.¹⁸⁸ Other features of rate regulation can also be pernicious. If a utility is permitted to "pass through" certain costs such as fuel expenses, it will not earn a return on those expenses but will have little incentive to reduce them either. As a result, it will have little reason to shift to less expensive fuels or to renewable energy. Similar logic applies to military contracts in which the government agrees to bear the costs of a project, or financial institutions that know that the government will end up bearing key risks.

This concern does not apply with equal force throughout every part of the government-dominated industries considered here. For example, generators in a restructured energy market may engage in meaningful competition and could enjoy real returns from productivity-enhancing innovation. But the possibility of returns to innovation in the generation segment of a restructured market should not obscure the absence of returns to innovation in the transmission- or retail-distribution segments of that

187. See Laffont & Tirole, *supra* note 76, at 1155 (“[A]n agent with a high performance today will tomorrow face a demanding incentive scheme.”).

188. See *id.* (“[C]ost reductions of electric utilities often do not benefit the utilities after the usual regulatory lag . . .”).

market, or within vertically integrated, rate-regulated companies.¹⁸⁹ Similarly, biotech firms may derive substantial returns from identifying a promising drug candidate and navigating it through early clinical trials. But a large pharmaceutical company that acquires a promising drug candidate, completes trials, manufactures the drug, and markets it to patients is less likely to be involved in socially beneficial innovation. This may suggest a need for a diverse corporate ecosystem within these industries with different niches filled by differently governed enterprises.

It is also possible for firms within these industries to derive substantial returns from innovation with questionable social value, such as efforts to evade existing regulations. While the financial services industry does innovate in meaningful ways, it is not clear how much social value these efforts create.¹⁹⁰ Arguably, much of the creative energy in the financial services industry is directed toward influencing the content of rules and exploiting gaps in them. Non-bank firms also seek innovative ways of providing banking services without becoming subject to banking regulations.¹⁹¹ Even where these efforts create social value, it is not always clear that the benefits exceed the costs in heightened complexity and risk.

2. *Limited External Tools for Disciplining Firms.*—A second challenge to shareholder primacy in the markets described in Part II is that holdup problems render the usual external mechanisms for disincentivizing corporate misconduct less effective. When a firm is the only potential supplier to the government, or when its failure would trigger a financial crisis, it is difficult for the government to force shareholders to bear the costs of corporate misconduct. As a result, the government is likely to step in to make sure that a firm can continue operating even if it has not met its regulatory or contractual obligations.

As a result, when companies receive a contract to build a state-of-the-art nuclear facility or new naval destroyer that is already underway, the government has a strong incentive *ex post* to authorize the contractor to receive additional revenue to cover cost overruns. The contractor has already

189. Indeed, a failure to properly distinguish between these segments can create opportunities for companies to transfer value and distort outcomes. Kovvali & Macey, *supra* note 79, at 2133.

190. See, e.g., Saule T. Omarova, *License to Deal: Mandatory Approval of Complex Financial Products*, 90 WASH. U. L. REV. 63, 73 (2012) (describing forces that may lead to “socially useless” over-innovation” within the financial industry); Dan Awrey, *Complexity, Innovation, and the Regulation of Modern Financial Markets*, 2 HARV. BUS. L. REV. 235, 259 (2012) (reframing the “understanding of financial innovation as simply a process of (perceived) *change*—and not necessarily one of *improvement*”).

191. See Rob Copeland, *Your Online Lender May Not Be a Bank. Here’s How to Keep Your Money Safe.*, N.Y. TIMES (Aug. 10, 2024), <https://www.nytimes.com/2024/08/10/business/online-lending-banking-money-risks.html> [<https://perma.cc/8MRY-UJQY>] (describing financial startups that avoid FDIC regulation).

begun building the project and likely possesses special expertise. Switching to a competitor may be exorbitantly costly if the new firm has not developed special expertise in the area, and it may be illegal or require the use of eminent domain if the original contractor possesses property rights in the development.

Thus, if the government wants to actually build a new naval destroyer or nuclear power plant, it is likely to authorize revenue increases so that the contractor continues to develop the project. Doing so, however, creates problematic incentives *ex ante*. Because shareholders know that the government is likely to allow them to raise prices to cover unexpected costs, they lack an incentive to keep costs down and develop a cost-effective way to meet their contractual obligations.¹⁹² The contractor, like a private party possessing a bilateral monopoly or monopsony, can hold up its counterparty and demand additional revenue *ex post*. This is a classic problem in the relational contracting literature,¹⁹³ and it applies with just as much force to contracts with the government.

Shareholders' lack of incentives to prevent cost overruns is only one example of how the government struggles in long-term relational contracts to limit cost overruns. Because shareholders expect that the government will intervene to reduce the financial impacts they face for cost overruns, they may not make significant investments *ex ante* to keep costs down. Similarly, shareholders lack incentives to reduce systemic risk when they expect the government to bail them out. Thus, the enormous social cost of a financial crisis leads to government interventions (bailouts) that protect shareholders from paying for the consequences of taking excessive risks. Electric utilities, too, have managed to secure additional funding to cover the costs of corporate misconduct. For example, North Carolina regulators allowed Duke Power to recover the costs of coal ash spills that resulted in hundreds of deaths.¹⁹⁴ As a result, shareholders at these enterprises are not residual claimants and do not internalize the consequences of corporate decisions.¹⁹⁵

192. Cf. Lisa Fairfax, *Stakeholderism, Corporate Purpose, and Credible Commitment*, 108 VA. L. REV. 1163, 1199 (2022) (arguing that “the incentives of” corporate directors and shareholders “may not be aligned with stakeholder commitments,” which “necessarily raises credible commitment concerns”).

193. See generally, e.g., Hideshi Itoh & Hodaka Morita, *Formal Contracts, Relational Contracts, and the Threat-Point Effect*, AM. ECON. J.: MICROECON., Aug. 2015, at 318, 318 (arguing that fixed-price contracts retain value even when there are continuing transactions between buyers and sellers).

194. Patel, *supra* note 80.

195. This has implications for other arguments for shareholder primacy. The argument that shareholders face unique difficulties in protecting themselves through explicit contractual terms is based in part on the idea that shareholders are the residual claimants on the enterprise. See Fisch, *supra* note 21, at 667 (proposing that courts are the best institution for enforcement of shareholder interests due to this difficulty).

One could, of course, explain this as bad regulatory decisionmaking. But one might also think that the government was in a difficult position: It could not allow these firms to fail. Excessive liability would ultimately cause costs to go up, and a costly reorganization in which equity fought tooth and nail to recover could also cause costs to increase. In fact, when liability would not cause a firm to fail, regulators may be disinclined to keep the firm in financial-distress limbo, since doing so causes its capital costs to go up, which in turn can raise the cost the government or ratepayers pay for military contracts and electric service since creditors will charge higher interest rates. Thus, perversely, regulators have an incentive to allow utilities to recover for engaging in misconduct to reduce total costs. Regardless of whether any of these interventions were good policy, they highlight that interventions that prevent shareholders from paying for corporate misconduct undermine the viability of government threats to discipline a firm *ex post* through the imposition of liability.

The government's inability to force shareholders to take a loss provides some justification for giving the government direct authority to discipline executives who have failed to comply with government standards. For example, if liability for corporate misconduct does not translate into meaningful incentives to mitigate the risks of socially harmful activities, perhaps the government should simply fire managers who behave inappropriately. The government could also be empowered to bring the type of lawsuits that shareholders use to discipline managers who fail to monitor for risks.¹⁹⁶

B. *Other Justifications for Shareholder Primacy*

In the industries discussed above, the residual claimant argument applies with less force than it does in markets in which willing customers set the price for goods and services. But this fact alone is not a conclusive argument in favor of reorienting corporate governance away from shareholders in these industries. Although government interventions can weaken shareholders' incentives to innovate and counteract external mechanisms for deterring corporate misconduct by creating an opportunity for certain firms to hold up the government, they may not entirely disrupt other justifications for shareholder primacy.

First, one argument for giving shareholders control rights is that doing so mitigates agency problems. Managers may shirk or self-deal. A diverse and diffuse group of stakeholders may struggle to reach a consensus on goals and hold managers to account. Corporate law scholars have long argued that

196. See *In re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959, 970 (Del. Ch. 1996) (stating that corporate executives may be liable for losses where they fail to create an adequate risk-reporting system).

it is easiest to police managerial self-dealing and monitor managerial slack when managers are accountable to a single principal.¹⁹⁷ If these agency costs are exorbitant, then they may outweigh the concerns described in the previous Part.

While these concerns may weigh in favor of retaining shareholder primacy, they operate somewhat differently in the industries we have described. Shareholder primacy does not *eliminate* the costs of reaching a consensus among competing stakeholder groups. Instead, it pushes those costs outside the firm. In an ordinary industry, competitive markets meet the challenge efficiently. For example, preferences for high quality products are reconciled with preferences for cheaper items by consumers making choices in the market. But in a government-dominated industry, the government will have to handle the task (and bear the costs) of balancing competing stakeholder concerns.

Second, some commentators have offered the related argument that shareholder primacy offers a clear criterion on which corporate action can be judged.¹⁹⁸ It gives managers a clear instruction—maximize financial returns to shareholders—and promotes accountability because managers can be adjudged successes or failures based on the criterion.

Again, this consideration may weigh in favor of retaining shareholder primacy. But the difficulty of stating a clear criterion can also cut in the opposite direction within government-dominated markets. If it is not possible to distill competing stakeholder considerations into a single criterion, it will not be possible for the government to write a clear and explicit contract that addresses those concerns.¹⁹⁹ The difficulty of stating a clear criterion may thus enhance the case for government involvement in firm decisions.

Third, institutional specialization may weigh in favor of shareholder primacy. As Professor Jill Fisch has argued, diffuse shareholders are likely to be at a disadvantage in lobbying the political branches.²⁰⁰ As a result, a court hearing a fiduciary duty case may be the one institution that is likely to defend shareholder interests effectively. While this may be a strong reason for courts to favor shareholders over managers or even workers, it is less clear that the argument would apply to the even more diffuse and disempowered groups affected by corporations within these industries. For example, future

197. *E.g.*, EASTERBROOK & FISCHER, *supra* note 1, at 38.

198. *See, e.g.*, STEPHEN M. BAINBRIDGE, THE PROFIT MOTIVE: DEFENDING SHAREHOLDER VALUE MAXIMIZATION 131–32 (2023) (“Accountability is an essential component of corporate governance.”).

199. *See, e.g.*, CLARK, *supra* note 9, § 16.3.3, at 702 (observing that governments have difficulty in crystalizing their objectives in certain instances, like education, into contracts).

200. Fisch, *supra* note 21, at 664–66; *see also* Frank H. Easterbrook, *The Race for the Bottom in Corporate Governance*, 95 VA. L. REV. 685, 701–02 (2009) (observing that “[i]nvestors are so scattered and diversified that they cannot resist” unfavorable legislation).

victims of a disease are unlikely to be able to identify themselves today, let alone advocate for a research and development strategy that could save their lives or a treatment-pricing strategy that could save their future finances.

Finally, prudential considerations may weigh in favor of insulating corporate decisions from political interference. There may be instances in which it is desirable to allow corporations to set a steady policy even when political leaders have electoral reasons for preferring variations.²⁰¹ And while the lack of shareholder responsiveness may create a theoretical justification for empowering the government to fire managers and set executive compensation, such interventions may make it more difficult or more expensive to attract and maintain executive talent. Prospective CEOs may be less inclined to accept a job, or they may demand a higher salary, if they are worried that government officials—perhaps motivated by petty politics rather than sound business judgment—will step in and fire them on a moment’s notice. These concerns are not absent in private industry.²⁰² But the law recognizes that they have particular salience in the political context.²⁰³

A more pedestrian version of the concern is that the government may lack the expertise or capacity to take such a direct role in corporate affairs, or that corruption or capture concerns may outweigh all other considerations.²⁰⁴ If the government is simply incapable of making reasonable decisions about when to hire a manager or claw back her compensation, then perhaps it is worth accepting the somewhat suboptimal incentives of shareholder-focused managers in government-dominated industries. A system of mixed objectives could also distort policymaking as

201. See Menand & Ricks, *supra* note 9, at 1365–66 (suggesting that the federal government chartered national banks as federal instrumentalities to prevent federal officials from allocating assets in a politicized way).

202. See, e.g., *Brehm v. Eisner*, 746 A.2d 244, 250, 263, 267 (Del. 2000) (approving a massive no-fault termination fee that an executive had negotiated when joining Disney, based in part on Disney’s need to provide the executive with certainty to induce him to leave his former firm).

203. For example, the Pendleton Civil Service Reform Act was designed to end the “spoils system,” in which newly elected politicians would quickly replace subordinate officials with political allies. *Pendleton Act (1883)*, NAT’L ARCHIVES (Feb. 8, 2022), <https://www.archives.gov/milestone-documents/pendleton-act> [<https://perma.cc/JHJ8-MZWQ>]. Numerous high government officials also enjoy fixed terms that extend beyond any one presidential administration, in part to insulate them from petty political concerns. DAVID E. LEWIS & JENNIFER L. SELIN, SOURCEBOOK OF UNITED STATES EXECUTIVE AGENCIES 48 (2d ed. 2018), <https://www.acus.gov/projects/sourcebook-united-states-executive-agencies-second-edition> [<https://perma.cc/N6SJ-NA7D>]. The governors of the Federal Reserve remain in place for fourteen-year, staggered terms. 12 U.S.C. § 241.

204. Experiences with some state-owned enterprises may support this perspective. See, e.g., Milhaupt & Pargendler, *supra* note 15, at 478 (describing some of the “agency costs of state capitalism” at state-owned enterprises); Andrei Shleifer & Robert W. Vishny, *Politicians and Firms*, 109 Q.J. ECON. 995, 995 (1994) (“[P]ublic enterprises are highly inefficient, and their inefficiency is the result of political pressures from the politicians who control them.”).

politicians seek to deliver benefits to constituents through relatively opaque corporate decisions instead of relatively transparent taxing and spending decisions or try to enhance the value of a government stake in a particular corporation by changing corporate law or regulations more broadly.²⁰⁵

But institutional capacity is not merely a static outside constraint when designing a system of corporate governance. Some nations, such as Norway and Singapore, have enjoyed success with state-owned enterprises by adopting schemes aligned to their particular institutional arrangements.²⁰⁶ Although it is a problematic example due to corruption and political authoritarianism, China's system of state-owned enterprises built a coherent coalition of business and political elites that delivered a long period of phenomenal economic growth.²⁰⁷ More broadly, the level of state capacity is a choice; policymakers could always choose to build up the necessary capacity by hiring and making appropriate investments. America's enormous strengths—its rule of law, its low levels of corruption, its highly developed capital markets, and the breadth and size of its economy—suggest that it could navigate the challenges successfully.

IV. Solutions

This Part canvasses potential responses to the corporate governance mismatch described above. Subpart IV(A) examines the conventional policy playbook focused on external mechanisms. While many of these tools are worthwhile, they also have deficiencies and shade into internal governance approaches. Subpart IV(B) develops a playbook based on internal corporate governance reforms. Subpart IV(C) addresses the further potential step of insisting on public ownership, either of key facilities or of whole enterprises.

As noted above, the optimal strategies will depend on real-world trade-offs that are beyond the scope of this Article's analysis and that are likely to vary by context. The discussion here should not be understood as a blanket endorsement of a uniform solution across large swathes of the economy, but simply as the beginning of an extended playbook for policymakers seeking to improve the performance of industries closely entangled with the government.

205. See Mariana Pargendler, *State Ownership and Corporate Governance*, 80 *FORDHAM L. REV.* 2917, 2923 (2012) (“Conceding that the model of the firm as a profit maximizer may be a worse fit to state-owned firms does not mean that the government and managing bureaucrats are indifferent to the company's size, revenue, and profit distribution.”).

206. Milhaupt & Pargendler, *supra* note 15, at 532.

207. See Li-Wen Lin & Curtis J. Milhaupt, *We Are the (National) Champions: Understanding the Mechanisms of State Capitalism in China*, 65 *STAN. L. REV.* 697, 701–02 (2013) (explaining the contours of Chinese state-owned capitalism that created the incentives for rapid growth). For a discussion of the dangers of the Chinese government's interventions in civil society, see generally DANIEL C. MATTINGLY, *THE ART OF POLITICAL CONTROL IN CHINA* (2020).

A. *External*

This subpart briefly describes the external policy toolkit for addressing the governance problems described above. These tools include: (1) using purchase and sales decisions to create incentives for desired corporate conduct, (2) using regulations to require socially friendly conduct, and (3) using relational contracting to inject governance-style mechanisms into otherwise arm's-length arrangements. Although many of these tools are already in use, they have serious limitations.

1. *Purchase and Sales Decisions.*—The government can use its power as a key buyer or seller to create conditions that align shareholders' incentives with social aims. Importantly, these tools do not actually shift the corporation's goals. Instead, they are intended to create an environment in which shareholder-profit-maximizing behavior aligns with social welfare. This can make the tools ineffective or expensive.

For example, the Trump Administration's "Operation Warp Speed" sought to rapidly develop and deploy a vaccine for COVID-19. The program was an astonishing success. Americans received millions of doses within months, while vaccines typically take years to develop, test, and deploy.²⁰⁸ Perhaps because it wanted to avoid taxpayer-protective contract or statutory terms, Pfizer sought to maintain distance from the program. It did not formally participate, and its eventual deal was with Advanced Technology International instead of the government itself. As a result, Pfizer retained intellectual property it would ordinarily have to share with the government, suffered from manufacturing delays because it did not have access to government expertise and resources, and sent confusing messages about its progress to government officials desperately trying to plan the public response.²⁰⁹ Because Pfizer was the first to obtain an Emergency Use Authorization for a vaccine, it had the power to put its shareholders ahead of public concerns, much to the frustration of government officials.²¹⁰

This suggests real limits to the government's ability to obtain desired conduct through purchase and sales decisions. Even if the government successfully inserts protective terms into a contract, the most it can expect to

208. U.S. GOV'T ACCOUNTABILITY OFF., *supra* note 180, at 7, 27.

209. Sydney Lupkin, *The U.S. Paid Billions to Get Enough COVID Vaccines Last Fall. What Went Wrong?*, NPR (Aug. 25, 2021, 2:30 PM), <https://www.npr.org/sections/health-shots/2021/08/25/1029715721/pfizer-vaccine-operation-warp-speed-delay> [<https://perma.cc/GD4F-3NJ4>].

210. *Id.* Purchasing agreements with pharmaceutical companies also prohibited the use of vaccines for research purposes without company consent, frustrating efforts to compare vaccines or test the next generation of vaccines. See Benjamin Mueller, *The End of Vaccines at 'Warp Speed,'* N.Y. TIMES (Nov. 18, 2022), <https://www.nytimes.com/2022/11/18/health/covid-nasal-vaccines-warp-speed.html> [<https://perma.cc/49G2-NGYG>] (explaining how the agreements both "protect companies from the risks of a poorly run experiment hurting their product" and "insulate firms from head-to-head studies that may flatter a competitor").

obtain is grudging acquiescence with the explicit language of the provision. And it may not even achieve that if the contractor develops the power to hold up the government as the project unfolds. The government's capacity to attach terms to its purchases and sales may only be an effective tool where the desired conduct can be clearly and fully specified in advance,²¹¹ and the government will retain continuing leverage.

2. *Regulations.*—The government can also impose regulations designed to align shareholder interests with social goals. Indeed, this point is often offered as a central defense of shareholder primacy.²¹² Instead of asking firms to balance shareholder financial interests with social goals, the government can simply impose fines on destructive conduct so that shareholder profits are maximized when the corporation's conduct is aligned with social wellbeing.

Regulation is undoubtedly a critical part of the policy toolkit, but it has meaningful limitations. If corporations remain focused on shareholder profits, they will seek to evade regulations and may enjoy success unless the government remains focused and active. Corporations will also lobby to weaken or eliminate regulations that interfere with profits and may succeed due to their resources and unique access to information.

A full evaluation of the merits of regulation would be beyond the scope of this Article. But the forces that make shareholder primacy a difficult theoretical fit for these industries—information asymmetries, opportunism, the need for rapid *ex post* adjustments, and the threat of holdup—can make traditional regulation a difficult strategy for public officials to implement successfully.

3. *Relational Contracting.*—The government could also make greater use of contractual governance mechanisms to manage projects collaboratively. Relational contracts are intended to address the information asymmetries, opportunism, and bilateral monopolies that can develop over the course of a complex, innovative, or long-term project.²¹³ To accomplish

211. See CLARK, *supra* note 9, § 16.3.3, at 702 (“[C]ontracts by for-profit business corporations to provide services to governments are likely to flourish only where governmental goals have been clearly defined and the services are specified in terms of outputs and activities that are easily monitored yet meaningfully related to the goals.” (emphasis omitted)).

212. *E.g.*, EASTERBROOK & FISCHER, *supra* note 1, at 37; Bebchuk & Tallarita, *supra* note 3, at 102.

213. See Matthew Jennejohn, *Braided Agreements and New Frontiers for Relational Contract Theory*, 45 J. CORP. L. 885, 886–87 (2020) (discussing the importance of relational contracts in driving modern innovation); Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration*, 109 COLUM. L. REV. 431, 434–35 (2009) (explaining the rise of noncontractual bonds and informal cooperation to limit opportunism).

this, the contracts install formal mechanisms that force parties to share information or otherwise check in and use informal or relational mechanisms to constrain opportunistic behavior.²¹⁴

The government has experimented with aspects of this approach in various contexts. As Professor Matthew Jennejohn has explained, the Department of Defense has already used “alpha contracting” processes to develop projects collaboratively.²¹⁵ And as Professor Nicholas Parrillo has shown, the government experimented with various *ex post* renegotiation processes and administrative innovations to deploy new weapons during World War II at reasonable cost.²¹⁶ More broadly, the government has used phased competitions and audits to maintain discipline in large projects.²¹⁷

But the government’s ability to use these tools depends on its capacity to process any information it receives and the credibility of its threats. If the government is unable to handle the information it receives, it will be unable to react appropriately. Similarly, if it is unable to shift phases of projects from one contractor to another, it will be unable to use the tools afforded by a relational contract. For example, one mechanism identified in the relational contracting literature is the “hostage” exchange, in which a party that will have opportunities to make demands *ex post* hands over something of value *ex ante* to provide reassurance.²¹⁸ But when the government lacks the ability to follow through and seize the valuable asset, as when the government must ensure that continued participation in the industry is profitable in order to meet its broader goals, these mechanisms have limited utility.

More fundamentally, relational contracting empowers public officials to get closer to decisions and to use informal tools to make *ex post* adjustments. As a result, the line between relational contracting and governance interventions is blurry at best.

B. Governance Interventions

This subpart describes reforms intended to reorient the governance of relevant firms to address public interests. Because the existing shareholder-focused corporate governance system is supported by multiple mechanisms, an effort to rebalance objectives would call for changes on several fronts:

214. Gilson et al., *supra* note 213, at 435; cf. Pollman, *supra* note 15, at 186 (describing how venture capital firms use staged financing mechanisms to discipline managers at innovative firms, “reducing information asymmetry and the impact of uncertainty”); Williamson, *supra* note 1, at 1212 (describing use of progress payments and credible commitments to secure desired conduct).

215. Jennejohn, *supra* note 213, at 888–89.

216. Parrillo, *supra* note 5, at 120–22.

217. See *supra* subpart II(B).

218. See, e.g., Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519, 519 (1983) (arguing the practice undermines the typical assumption “that the legal system enforces promises in a knowledgeable, sophisticated, and low-cost way”).

(1) the market for corporate control, (2) managerial incentives, (3) representation on the board of directors, and (4) the fiduciary duties of directors and officers.

Of course, these authorities might be described as ordinary regulation and contract, rather than governance interventions. After all, heightened merger review is an ordinary legal intervention. The government can similarly use contract mechanisms and negotiate for a board position. But this is merely a semantic distinction. These issues are typically considered core governance matters that are reserved to a corporation's shareholders and their representatives on the board of directors. To the extent that the government limits shareholder discretion in these areas through contract or regulation, it is, in our view, involving itself in *ex post* decisionmaking about what projects the firm should pursue.

1. Market for Corporate Control.—Policymakers might intervene in the market for corporate control. At present, the market for corporate control encourages managers to focus on generating profits for shareholders. If a manager fails to maximize shareholder value, the corporation will be taken over and the managers terminated. The mechanisms that structure the market are all oriented toward shareholders: financing is driven by financial profits, only shareholders vote or sell shares, and directors and officers are subject to heightened fiduciary duties that demand a focus on shareholders' financial interests.²¹⁹

Deference to shareholder interests is sensible if shareholder value is created because the merger creates efficiencies. If an acquirer can pay a premium for a target because the company is being run in a sloppy manner and can be fixed, or because the combination of the acquirer and target would create unique opportunities to generate real value, the transaction will increase total wealth.²²⁰ But a combination may generate financial returns for shareholders by transferring wealth away from other groups. This point is already well understood in antitrust. If a company can buy its competitors and exercise monopoly power, it may be able to constrain production and charge monopoly rents—destroying total social wealth but achieving financial returns for shareholders by transferring wealth away from employees and customers. As a result, the FTC and DOJ review transactions for antitrust concerns.

219. See Bebchuk & Tallarita, *supra* note 3, at 143–46 (discussing how labor-market incentives cause firm management to maximize shareholder value); Leo E. Strine, Jr., *Our Continuing Struggle with the Idea that For-Profit Corporations Seek Profit*, 47 WAKE FOREST L. REV. 135, 135–36 (2012) (recognizing the stark harms emanating from stockholder maximization).

220. See Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18, 19–21 (1968) (suggesting such synergies might outweigh significant anticompetitive effects).

The analysis here suggests additional reasons for concern with transactions in the relevant industries. A merger between companies within a government-dominated market may complicate the government's task by removing competition, enhancing the bargaining power of the merged firm, reducing the credibility of any government threats of punishment for bad behavior, and denying the government the ability to benchmark a company's performance against rivals. And larger and more complex organizations are more difficult for the government to supervise, creating opportunities for managers to evade regulatory strictures.²²¹ This suggests a need for specialized review focused on particular problems within specific industries.

Existing legal structures already authorize this type of scrutiny in various contexts. The Committee on Foreign Investment in the United States reviews foreign acquisitions of American assets with a view toward national security implications.²²² Banks covered by the FDIC must secure regulatory preapproval before merging.²²³ And FERC has the authority to review transactions by electric utilities.²²⁴ All these authorities might be used creatively to address a broader range of concerns with mergers in particular industries and to encourage managers to consider more than shareholder welfare.

The government might also revive the New Deal tradition of structural prohibitions designed to protect regulatory objectives.²²⁵ The Glass-Steagall Act sought to separate commercial from investment banking in an effort to prevent financial crises from becoming broader economic crises.²²⁶ In 1998, Citicorp merged with Travelers Group pursuant to a temporary waiver of the prohibition, as its lobbyists confidently predicted that the Act would be repealed permanently.²²⁷ Congress obliged with the Gramm-Leach-Bliley Act in 1999.²²⁸ Some commentators have suggested that the repeal contributed to the global financial crisis of 2007 to 2008.²²⁹ Similarly, the Public Utility Holding Company Act of 1935 sought to eliminate complex

221. See Kovvali & Macey, *supra* note 79, at 2135 (describing this trend in utilities markets).

222. Eichensehr & Hwang, *supra* note 115, at 553.

223. 12 U.S.C. § 1828(c).

224. 16 U.S.C. § 824b(a)(1)(B).

225. Roberta S. Karmel, *Is the Public Utility Holding Company Act a Model for Breaking Up the Banks That Are Too-Big-to-Fail?*, 62 HASTINGS L.J. 821, 823 (2011); see also Saule T. Omarova & Graham S. Steele, *Banking and Antitrust*, 133 YALE L.J. 1162, 1181–83 (2024) (describing the New Deal structural prohibitions).

226. See Arthur E. Wilmarth, Jr., *The Road to Repeal of the Glass-Steagall Act*, CLS BLUE SKY BLOG (Oct. 3, 2017), <https://clsbluesky.law.columbia.edu/2017/10/03/the-road-to-repeal-of-the-glass-steagall-act/> [<https://perma.cc/MQ78-JJQJ>].

227. *Id.*

228. Gramm-Leach-Bliley Act, Pub. L. No. 106-102, § 101, 113 Stat. 1338, 1341 (1999).

229. See OONAGH McDONALD, CATO INST., POL'Y ANALYSIS, THE REPEAL OF THE GLASS-STEAGALL ACT: MYTH AND REALITY 2–3 (2016), https://www.cato.org/sites/cato.org/files/pubs/pdf/pa804_1.pdf [<https://perma.cc/3PN9-6P67>] (summarizing some critics' arguments).

corporations and financial structures within the utility industry.²³⁰ It was repealed in the Energy Policy Act of 2005.²³¹ There is good reason to believe that utility companies are using the relaxation of the regulatory scheme to transfer value, gain unfair advantages, and flummox policies designed to encourage a transition to clean energy.²³² Such prohibitions could be expanded to help ensure that corporate dealmaking in the relevant industries is intended to create real value and not simply exploit government failings.

2. *Managerial Appointment, Removal, and Incentives.*—The government might assert greater authority within the relevant industries to appoint or remove executives and to set their compensation. Under current law, corporate boards—whose members are answerable to shareholders—take the lead in exercising these powers.²³³ This creates an incentive for managers to advance shareholder interests, even where those interests conflict with social or governmental goals.

One way to address boards' misaligned incentives is to give public officials a say in managerial decisions. For example, public officials might be granted power over removal but not appointment; allowed to claw back compensation in the event of a corporate problem, but not allowed to set compensation in the first instance; granted a voice but not total authority over these matters; allowed to exercise authority within strict statutory parameters; or granted a complete and standardless veto on each issue. While different approaches are possible, every system would require a high level of capacity, activity, and public mindedness by public officials. Public officials would need to closely monitor corporate conduct within each affected industry and make aggressive, proactive use of their powers to protect the public interest—or at least be perceived as doing so—to create a deterrent effect.

The government already has the required legal authorities in certain industries, but it often does not appear to use those authorities aggressively or with the goal of focusing attention on public goals instead of shareholder interests. Although the Federal Reserve has substantial authority to remove bankers, it has never used that power against a senior executive at a major

230. ENERGY INFO. ADMIN., DOE/EIA-0563, PUBLIC UTILITY HOLDING COMPANY ACT OF 1935: 1935-1992, at 4–5 (1993), <https://www.eia.gov/electricity/archive/0563.pdf> [<https://perma.cc/F6FS-FKTB>]

231. Energy Policy Act of 2005, Pub. L. No. 109-58, § 1263, 119 Stat. 594, 974.

232. See Kovvali & Macey, *supra* note 79, at 2135 (discussing the benefits utilities give their non-rate-regulated businesses through their rate-regulated businesses).

233. Barbara Novick, *Executive Compensation: The Role of Public Company Shareholders*, HARV. L. SCH. F. ON CORP. GOVERNANCE (July 31, 2019), <https://corpgov.law.harvard.edu/2019/07/31/executive-compensation-the-role-of-public-company-shareholders/> [<https://perma.cc/HP3A-LSC2>].

U.S. bank.²³⁴ Special rules can limit “golden parachute” payments at troubled financial institutions regulated by the FDIC,²³⁵ subject executive compensation at banks to special scrutiny for conformance with risk management goals,²³⁶ and require clawbacks of certain improper compensation.²³⁷ Public utility commissions can refuse to allow utility companies to recover executive compensation expenses in rate cases and otherwise pressure companies to adopt suitable arrangements.²³⁸

As a result, it may not be necessary to make major changes to the legal framework. Instead, the first change would be ideological. At present, when the government intervenes in appointment, removal, or compensation, it often acts to make directors and managers more accountable to shareholders. Pursuant to Dodd-Frank and rules imposed by securities exchanges, boards of public companies have sought to give *shareholders* more power over management.²³⁹ Dodd-Frank imposed “say on pay” requirements giving shareholders more opportunity to voice disapproval over executive pay.²⁴⁰ The analysis here suggests that the government should act with a fundamentally different goal in mind. A second change would be to increase state capacity. The power to remove corporate leaders is meaningless unless public officials can monitor for problems and proactively exercise their power. That would require public officials to collect, analyze, and act on an enormous amount of information. Many major institutional investors struggle to engage in meaningful stewardship activities today.²⁴¹ The government would face similar challenges.

234. See Lin & Menand, *supra* note 9, at 7 (“In only three instances has the Fed used its removal power to address poor oversight and reckless management, and two of these instances involved employees of the same bank who jointly supervised a rogue trader.”).

235. WACHTELL, LIPTON, ROSEN & KATZ, *COMPENSATION COMMITTEE GUIDE 73* (2020), <https://www.wlrk.com/webdocs/wlrknew/ClientMemos/WLRK/WLRK.26789.20.pdf> [<https://perma.cc/9YWE-SF3L>].

236. *Id.* at 66.

237. Jesse Fried & Nitzan Shilon, *Excess-Pay Clawbacks*, 36 J. CORP. L. 721, 723 (2011).

238. Julia E. Sullivan & Jennifer Good, *Recovery of Executive Compensation Expenses in Utility Rate Cases*, ELEC. J., Apr. 2011, at 59, 61.

239. See Lund, *supra* note 23, at 393 (“Many faulted shareholder primacy for contributing to the environment of moral hazard that brought down the global economy, and yet, Dodd-Frank included multiple reforms that strengthened shareholder control over corporate decisionmaking.” (footnote omitted)).

240. LISA M. FAIRFAX, *SHAREHOLDER DEMOCRACY: A PRIMER ON SHAREHOLDER ACTIVISM AND PARTICIPATION* 78–79 (2011).

241. See Dhruv Aggarwal, Lubomir P. Litov & Shivaram Rajgopal, *Big Three (Dis)Engagements* 12 (Nw. L. & Econ. Rsch. Paper, Paper No. 23-17, 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4580206 [<https://perma.cc/THJ4-H5H2>] (“A final and crucial limitation on the Big Three’s ability to structure engagement efforts around shareholder value is the meager levels of staffing and resources asset managers dedicate to stewardship.”); Lucian Bebchuk & Scott Hirst, *Index Funds and the Future of Corporate*

3. *Representation.*—Policymakers could also consider revamping corporate boards within the relevant industries to ensure that the government’s interests are protected. At a typical American corporation, the directors are regularly elected by shareholders and serve as the shareholders’ representatives.²⁴² This system has two important functions. It incentivizes directors to focus on shareholders because directors know that shareholders have the power to hold them electorally accountable for their decisions.²⁴³ And it assures shareholders that someone acting in their interest is privy to the confidential corporate information that is needed to make critical decisions.²⁴⁴

Reforming the board so that other interests are represented might help reorient firms away from shareholders and toward public goals. Policymakers could choose from among a broad range of options for accomplishing this. At one extreme, directors accountable to the public could be given a majority of board seats, allowing them to direct corporate policy. At another, a single director accountable to the public could achieve meaningful results provided that the director was armed with important rights. These might include access to information and a means for disclosing it, a right to participate in key decisions and committees, and a right to veto important decisions. Policymakers might also select from different options for appointing these officials and keeping them accountable: they might be appointed by elected officials or relevant agencies, high officials at relevant agencies might have an *ex officio* seat on the boards of key contractors, corporations could select from a set of director candidates with relevant experiences or qualifications, or the public might elect directors.

A system of public representation would not be a total break from current practice. Defense contractors subject to foreign ownership, control, or influence must have government representatives on their boards.²⁴⁵ Less formally, major contractors and firms operating in these industries routinely employ former government officials, presumably on the theory that these

Governance: Theory, Evidence, and Policy, 119 COLUM. L. REV. 2029, 2095–116 (2019) (outlining “five types of stewardship activities that the Big Three *do not* adequately undertake”). The “Big Three” refers to the three largest asset management firms in the world: BlackRock, Vanguard, and State Street. Aggarwal et al., *supra*, at 2.

242. FAIRFAX, *supra* note 240, at 12–13.

243. *Id.* at 13, 29–30.

244. Although this would not eliminate information asymmetries on its own, this dynamic does reduce their impact. Shareholder-elected directors would also have an incentive to disclose any information needed to justify their positions.

245. See Verstein, *supra* note 9, at 777 (“The managers hired and entrenched are former spies, military officers, and law enforcement officials.”); cf. Amy Kapczynski & Joel Michaels, *Administering a Democratic Industrial Policy*, 18 HARV. L. & POL’Y REV. 279, 330 (2024) (noting that the leadership arrangements of various government instrumentalities reflect a principle of “structured contestation,” in which representatives of different interests are included).

officials are considered uniquely trustworthy by the government.²⁴⁶ More broadly, private parties regularly bargain for representation on the board of directors to protect their investments,²⁴⁷ and founders at successful technology firms often reserve outsized voting power to advance their idiosyncratic vision or broader preferences.²⁴⁸ Various actors have shown increasing interest in ensuring representation of women or racial minorities on boards in an effort to enhance social performance.²⁴⁹ Other advanced economies have struck even more extreme balances, mandating worker representation on boards²⁵⁰ or giving government officials “golden share” powers that arm them with a veto on important decisions.²⁵¹ Thoughtfully expanding representation on the boards of American companies in relevant industries would not be a totally anomalous approach. Of course, the fact that some representation strategies have been tried but problems remain may suggest limitations to the approach.

4. *Fiduciary Duties.*—Policymakers could also make changes to the fiduciary duties of directors at firms in government-dominated industries. At present, directors of most major corporations have a judicially enforceable obligation to advance shareholder interests.²⁵² And although the leaders of

246. Taylor Giorno, “Revolving Door” Lobbyists Help Defense Contractors Get Off to “Strong” Start in 2023, OPEN SECRETS (May 4, 2023, 4:22 PM), <https://www.opensecrets.org/news/2023/05/revolving-door-lobbyists-help-defense-contractors-get-off-to-strong-start-in-2023/> [<https://perma.cc/J2PG-Y3HP>].

247. See Verstein, *supra* note 9, at 777 (contrasting traditional corporate governance with government representatives’ roles on corporate boards in the national security context).

248. See Zohar Goshen & Assaf Hamdani, *Corporate Control and Idiosyncratic Vision*, 125 YALE L.J. 560, 566 (2016) (“The entrepreneur wants to retain control over management decisions to pursue her idiosyncratic vision for producing above-market returns. That is, control enables entrepreneurs to capture the value that they attach to the execution of *their* idiosyncratic vision.”).

249. California’s Women on Boards statute represented a governmental effort to insist on representation. Jill Fisch & Steven Davidoff Solomon, Centros, *California’s “Women on Boards” Statute and the Scope of Regulatory Competition*, 20 EUR. BUS. ORG. L. REV. 493, 504–05 (2019). Institutional investors such as State Street have also advocated for gender diversity at major corporations. Michal Barzuza, Quinn Curtis & David H. Webber, *Shareholder Value(s): Index Fund ESG Activism and the New Millennial Corporate Governance*, 93 S. CAL. L. REV. 1243, 1266 (2020).

250. See Leo E. Strine, Jr., Aneil Kovvali & Oluwatomi O. Williams, *Lifting Labor’s Voice: A Principled Path Toward Greater Worker Voice and Power Within American Corporate Governance*, 106 MINN. L. REV. 1325, 1335–36 (2022) (describing Germany’s system of codetermination, which mandates worker representation on boards).

251. See Yiming Sun, Comment, *The Golden Share: Attaching Fiduciary Duties to Bankruptcy Veto Rights*, 87 U. CHI. L. REV. 1109, 1119 (2020) (explaining the origin of the golden share in public–private governance structures).

252. *N. Am. Cath. Educ. Programming Found., Inc. v. Gheewalla*, 930 A.2d 92, 101 (Del. 2007) (“The directors of Delaware corporations have ‘the legal responsibility to manage the business of a corporation for the benefit of its shareholders owners.’” (quoting *Malone v. Brincat*, 722 A.2d 5, 9 (Del. 1998))); see also *Unocal Corp. v. Mesa Petrol. Co.*, 493 A.2d 946, 955 (Del. 1985)

Delaware corporations may consider the interests of other constituencies as part of their business strategy, “[p]romoting, protecting, or pursuing nonstockholder considerations must lead at some point to value for stockholders.”²⁵³

Reforming fiduciary duty law would be necessary to reorient firms toward the public. Even if directors are given incentives to focus on public objectives, they would be unable to do so if they retained a fiduciary obligation to focus on shareholders instead. Undertaking other corporate governance interventions without reforming fiduciary duties would thus accomplish nothing other than to create conflicts of interest. And while it would theoretically be possible to have public representatives on the board with duties to the public serving alongside shareholder representatives on the board with duties to the shareholders, that approach would seriously compromise the board’s ability to reach consensus on corporate policy.²⁵⁴

Reforms to fiduciary duties would not be a decisive break with existing practice. As noted, most states allow directors to consider interests of stakeholders other than shareholders. Private parties—including union pension funds—have often bargained for board representation, presumably in the belief that it would help them advance their particular interests.²⁵⁵ The government has also insisted on public-oriented directors in specific contexts. State fiduciary duty rules do not apply to government representatives on the boards of foreign-owned, -controlled, or -influenced defense contractors.²⁵⁶ Broadening these exceptions to Delaware’s stated

(“[C]orporate directors have a fiduciary duty to act in the best interests of the corporation’s shareholders.”); *eBay Domestic Holdings, Inc. v. Newmark*, 16 A.3d 1, 35 (Del. Ch. 2010) (“Directors of a for-profit Delaware corporation cannot deploy a rights plan to defend a business strategy that openly eschews stockholder wealth maximization—at least not consistently with the directors’ fiduciary duties under Delaware law.”). *But see* William T. Allen, *Our Schizophrenic Conception of the Business Corporation*, 14 *CARDOZO L. REV.* 261, 276 (1992) (suggesting that Delaware law reflected a “social entity” conception of the business corporation that allowed managers to reject economic or market discipline in ways that help meet corporations’ social obligations); William Savitt & Aneil Kovvali, *On the Promise of Stakeholder Governance: A Response to Bebchuk and Tallarita*, 106 *CORNELL L. REV.* 1881, 1888 (2021) (“Delaware law surely permits directors to advance stockholders’ interests as the stockholders themselves understand their interests. Investors today—or a critical mass of them at any rate—recognize that their interests require a broader focus, including stakeholders, and a clearer sense of corporate purpose.”).

253. *Newmark*, 16 A.3d at 33.

254. *See* Strine et al., *supra* note 250, at 1382 (suggesting that worker representation on the board of directors would be most effective if all directors had the same stakeholder-focused fiduciary duties).

255. *But see* RATTNER, *supra* note 7, at 258 (stating that the United Autoworkers instructed their representative on GM’s board to focus on maximizing the firm’s share price).

256. Verstein, *supra* note 9, at 798.

approach to fiduciary duties would be an evolutionary, not revolutionary, change.²⁵⁷

But changing fiduciary duties might not be a sufficient reform. Directors today already enjoy significant protection from liability for violations of their fiduciary duties under the business judgment rule, which shields many of their decisions from meaningful judicial scrutiny and makes it possible as a matter of practice for them to divert value to other corporate constituencies.²⁵⁸ Most states have also defined fiduciary duties differently from Delaware and allow directors to consider the interests of other constituencies.²⁵⁹ Yet despite these protections, directors overwhelmingly focus on shareholder interests, presumably because the other mechanisms of corporate governance only empower shareholders.²⁶⁰

These points suggest that there could be value in reforming the fiduciary duties of the directors at relevant companies, but that the intervention should be thoughtfully structured and accompanied by other reforms. A generic instruction to advance the public interest may be so broad as to be

257. Policymakers might also take a step in this direction by building on *Caremark* duties. At present, *Caremark* is understood to impose a fairly minimal duty on corporate directors to oversee a risk monitoring system that is tailored to the firm's particular regulatory and reputational risks. See *In re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959, 967, 971–72 (Del. Ch. 1996) (determining that director liability for breach of duty can only occur if a loss follows from a “negligent” board decision or an “*unconsidered failure of the board to act* in circumstances in which due attention would, arguably, have prevented the loss,” and further concluding that *Caremark*'s directors could not be faulted if they “did not know the specifics of the activities that lead to the indictments”). Although it has proven to have real teeth in some recent cases, this conception of *Caremark* duties is ultimately an ineffective tool for aligning director incentives with social interests. A deeper understanding of *Caremark* might impose a responsibility to cooperate with the basic goals of regulatory policy, even where existing rules and regulators are deficient. Cf. *City of Birmingham Ret. & Relief Sys. v. Good*, 177 A.3d 47, 65, 68 (Del. 2017) (Strine, C.J., dissenting) (suggesting an inference that Duke Energy's regulator was aware of, and arguably “shap[ed] easy conditions for” Duke's “skirt[ing]” and “violat[ing]” “important environmental laws”).

258. See Einer Elhauge, *Sacrificing Corporate Profits in the Public Interest*, 80 N.Y.U. L. REV. 733, 776–83 (2005) (arguing that corporate directors should use their judicially enshrined discretion under the business judgment rule to make business decisions that are in the public's best interest, not just decisions that maximize shareholder profits); see also *Newmark*, 16 A.3d at 33 (“When director decisions are reviewed under the business judgment rule, this Court will not question rational judgments about how promoting non-stockholder interests—be it through making a charitable contribution, paying employees higher salaries and benefits, or more general norms like promoting a particular corporate culture—ultimately promote stockholder value.”).

259. E.g., NEV. REV. STAT. ANN. § 78.138(4)(a)(3) (West 2021); TEX. BUS. ORGS. CODE ANN. § 21.401(c) (West 2013).

260. See Bebhuk & Tallarita, *supra* note 3, at 99 (describing incentives directors have to focus on shareholder interests rather than stakeholder interests); Strine, *supra* note 33, at 766 (describing the resulting focus on shareholders from the incentive structure in Delaware). But see Savitt & Kovvali, *supra* note 252, at 1891, 1894 (noting that even where governing law appears to allow consideration of nonstockholder constituencies, corporate directors might reasonably fear liability if they fail to prioritize stockholders).

unenforceable.²⁶¹ Policymakers might define duties more precisely and tailor them to the specific industries at issue. While varying fiduciary duties across firms and industries would create some costs, the operative content of many fiduciary duties already does vary. For example, within the duty of directors to install and oversee a reasonable system to monitor for legal violations and key risks, the appropriate measures and key risks will vary across firms and industries.²⁶² Formalizing that variation would be a useful complement to this reform.

Policymakers might also consider changes to business judgment deference. At its best, the business judgment rule encourages socially beneficial risk-taking by corporate leaders by assuring them that any failures will not be subject to judicial second-guessing in fiduciary duty lawsuits.²⁶³ But in contexts where the government uses external mechanisms to effectively dictate key decisions, the value of managerial risk-taking is sharply diminished. If the underlying fiduciary duties are owed to the public, it may be sensible to enforce them without the deference normally provided by the business judgment rule.²⁶⁴

C. *Public Ownership*

This subpart considers public ownership as an alternative to shareholder-owned firms in government-dominated industries. Public ownership might be applied to (1) certain assets and intellectual property that are critical to relevant projects or (2) entire enterprises.

1. Assets and Intellectual Property.—The government might address the issues associated with bilateral monopoly by insisting on public ownership of the facilities, intellectual property, and employment contracts needed to execute the relevant project. Even if an outside contractor was responsible

261. See Aneil Kovvali & Yair Listokin, *Valuing ESG*, 49 *BYU L. REV.* 705, 721–26 (2024) (describing how a lack of specificity in ESG and stakeholderism labels causes difficulty in director decisionmaking); Jill E. Fisch & Steven Davidoff Solomon, *The “Value” of a Public Benefit Corporation*, in *RESEARCH HANDBOOK ON CORPORATE PURPOSE AND PERSONHOOD* 68, 87 (Elizabeth Pollman & Robert B. Thompson eds., 2021) (discussing the ineffectiveness of existing methods of accountability in the context of public benefit corporations).

262. See *Marchand v. Barnhill*, 212 A.3d 805, 821 (Del. 2019) (acknowledging that “directors have great discretion to design context- and industry-specific approaches tailored to their companies’ businesses and resources”).

263. See *EASTERBROOK & FISCHER*, *supra* note 1, at 99–100 (describing how the business judgment rule acts as an implicit contract between investors and managers, exchanging lower salaries for lower damages and releasing managers from liability so that they will take on higher risks to pursue higher returns).

264. Within the current regulatory scheme, similar considerations may support a more searching review of corporate decisions. For example, regulators might do more to ensure that a public utility’s investments were prudent when made, used and useful before allowing the utility to earn a return.

for using these in the first instance, the government would retain the ability to replace the contractor through competitive bidding.²⁶⁵ Although the basic approach was suggested in the context of public utilities and other “natural monopolies,”²⁶⁶ it might be adapted to a broader range of industries. For example, the government might award an initial contract to Lockheed Martin to develop a warplane, but if the government retained ownership of any facilities built, the intellectual property developed, and the employment contracts of key individuals involved in the project, the government could always reopen the project to competitive bidding at a later date. In effect, Lockheed Martin’s advantage in assets and “know-how” would be neutralized.

In addition, government ownership of the key assets would substantially increase the government’s supervisory capabilities because any residual authority over the assets would reside with the government.²⁶⁷ If the contract between Lockheed Martin and the government was unclear or silent as to some aspect of the use of the critical assets and personnel, the government would be free to decide. And ownership would create more opportunities for the government to elicit information through bargaining.

This would not be a complete break with current practice, as the government currently reserves property or property-like interests in intellectual property developed with government support. Existing statutes allow the government to obtain patents on federally funded inventions, and to insist on licenses for itself and its contractors.²⁶⁸ The government also imposes regulatory schemes that force private actors to share critical facilities.²⁶⁹ And the government has significant authority under the Defense Production Act of 1950 to effectively commandeer materials, services, and

265. An alternative way to achieve a similar result would be to authorize the government to force divestitures of the relevant divisions. If the government could force Lockheed Martin to sell or spin off the portions of the business relevant to production of the F-35, it could achieve results similar to a Demsetz auction. *See, e.g.*, Eduardo M. R. A. Engel, Ronald D. Fischer & Alexander Galetovic, *How to Auction a Bottleneck Monopoly When Underhand Vertical Agreements are Possible*, 52 J. INDUS. ECON. 427, 427 (2004) (describing “Demsetz auctions” for seaport facilities between operators trying to offer the lowest cargo fee).

266. *See* Harold Demsetz, *Why Regulate Utilities?*, 11 J.L. & ECON. 55, 58 (1968) (explaining how natural monopolies can charge the monopoly price, since there are many buyers and multiple firms bidding to supply them, and the winning bidder necessarily has the lowest per-unit cost).

267. *Cf.* HART, *supra* note 7, at 5–6 (explaining the owner of capital has the “residual right of control,” meaning the owner can choose unspecified uses for it and will ensure that it is repaid or modified quickly so that it can be continued to be used productively).

268. Laura E. Dolbow, *Public Patent Powers*, 123 MICH. L. REV. (forthcoming 2025) (manuscript at 44), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4739492 [<https://perma.cc/LCY2-WGCV>].

269. *See* Verizon Commc’ns, Inc. v. Law Offs. of Curtis V. Trinko, LLP, 540 U.S. 398, 402–03 (2004) (discussing the interconnection obligations of certain carriers under the Telecommunications Act of 1996); RICKS ET AL., *supra* note 4, at 26–28 (discussing “equal access” and interconnection requirements).

facilities.²⁷⁰ These powers might be expanded with explicit statutory provisions or by revamping antitrust doctrines in this context.²⁷¹ However, the government's general reluctance to take full advantage of its existing powers suggests some limitations. The government has not been willing to be aggressive in forcing pharmaceutical companies to license intellectual property to generic manufacturers, either due to the political power of entrenched incumbents or concern that aggressive use of the authority would diminish *ex ante* incentives to invest.²⁷²

2. *Enterprises.*—The government might also own the entire enterprise, using public officials and employees to manage and execute projects. This would ensure that decisions are being made in a way that is responsive to the political system, as opposed to shareholder profits. Public ownership could be implemented in a variety of ways. Financially, the government might create a new organizational form or use a standard for-profit structure, fully own the entity or simply retain control, and exercise governance prerogatives or merely reserve the right to do so.²⁷³ Operationally, the government could attempt to carry out all functions with its own personnel or still contract out for various services while reducing the scope of those contracts. For example, in developing new weapons systems, the government might take on the responsibilities currently borne by prime contractors while continuing to contract out for specific parts or subsystems.

Again, this would not be a fundamental break with prior practice. The government currently executes many core functions with its own personnel. Within the industries considered here, there are also notable instances of public ownership. The Tennessee Valley Authority is a utility company created as part of the New Deal to electrify and develop the Tennessee Valley. It remains government owned.²⁷⁴ The military obviously continues to

270. See 50 U.S.C. §§ 4501, 4511(a), 4512, 4517(b)(1) (outlining situations in which the President may commandeer materials, services, and facilities).

271. Under the “essential facilities” doctrine, a company might be required to make a critical asset available to a competitor under specific and narrow circumstances. See HERBERT HOVENKAMP, *PRINCIPLES OF ANTITRUST* § 7.7, at 297–99 (2d ed. 2021) (detailing the origin of the “essential facilities” doctrine). The doctrine is limited, particularly in contexts where an effective regulatory regime already exists. *Id.* § 7.7, at 299; see *Trinko*, 540 U.S. at 407–08 (discussing the Court’s hesitancy to recognize exceptions to the right to refuse to deal with other firms).

272. See Dolbow, *supra* note 268, at 3–4 (describing the Biden administration’s reluctance to dilute patents).

273. See Milhaupt & Pargendler, *supra* note 15, at 480–529 (describing examples of different structures across eight jurisdictions); see also Marcel Kahan & Edward B. Rock, *When the Government Is the Controlling Shareholder*, 89 TEXAS L. REV. 1293, 1300–01 (2011) (describing U.S. government stakes in various enterprises).

274. *Tennessee Valley Authority*, FED. REG., <https://www.federalregister.gov/agencies/tennessee-valley-authority> [<https://perma.cc/BW4K-EGF4>]. Shelley Welton has also demonstrated that cities have played an important role in supplying electricity. See Welton, *supra* note 9, at 339 (praising many cities’ trend towards publicly owned energy to combat climate change).

handle many functions in-house, with hundreds of thousands of civilian employees (and over two million uniformed personnel) conducting various functions.²⁷⁵ The National Institutes of Health conduct substantial research in-house, in addition to funding research at universities and other institutions.²⁷⁶ And in finance, the Government National Mortgage Association, or Ginnie Mae, is a government-owned corporation that guarantees mortgages to promote the development of affordable housing.²⁷⁷

The analysis here suggests that further experimentation with these modes of ownership would be worthwhile. There are real costs associated with political control of important enterprises, including the potential for inefficient pandering to voters or special interests. But there are also costs to a model in which important enterprises are owned by shareholders and subjected to regulation by constrained public officials. The balance is likely to vary across industries and context.

Conclusion

In certain industries, firms can increase shareholder profits without creating value for society. The problem is particularly pronounced in environments where firms are in a position to hold up the government, as when the government grants firms monopolies, embarks on complex joint projects with firms, commits to purchases on set terms, or cannot avoid stepping in to absorb risk. In these environments, shareholders can profit when firms engage in opportunistic behavior that squeezes the government and damages the broader society. In situations where shareholders do not absorb the full consequences of managerial decisions, there is less justification for giving shareholders residual control rights and making managers responsible to shareholders. Policymakers should therefore consider reforms designed to reorient firms so that they consider objectives beyond maximizing financial returns to shareholders.

Beyond the corporate law reforms presented here, these observations have implications for other business law fields. For example, they suggest

275. ELIZABETH A. FIELD & SUZANNE M. PERKINS, U.S. GOV'T ACCOUNTABILITY OFF., GAO-23-106966, DEFENSE WORKFORCE: OPPORTUNITIES FOR MORE EFFECTIVE MANAGEMENT AND EFFICIENCIES 2 (2023), <https://www.gao.gov/assets/gao-23-106966.pdf> [<https://perma.cc/8S66-A6E5>].

276. See *Organization and Leadership*, NAT'L INSTS. OF HEALTH (Nov. 3, 2022), <https://irp.nih.gov/about-us/organization-and-leadership> [<https://perma.cc/XAQ4-J9SJ>] (describing the scope of the National Institutes of Health's internal research programs, collectively "the largest institution for biomedical science on earth").

277. See MITCHELL REMY, CONG. BUDGET OFF., GINNIE MAE AND THE SECURITIZATION OF FEDERALLY GUARANTEED MORTGAGES 1 (2022), <https://www.cbo.gov/system/files/2022-01/57176-GinnieMae.pdf> [<https://perma.cc/3UFS-TKH8>] (explaining that Ginnie Mae guarantees mortgage-backed securities crafted by private financial institutions with the ultimate goal of decreasing costs to borrowers on federally insured home loans).

that policymakers should consider how mergers and barriers to competition can have harmful consequences beyond the traditional emphasis on price and output. Similarly, labor law should perhaps be reoriented to consider whether ordinarily helpful arrangements become problematic for public-sector unions or unions within critical industries. In each of these areas, tidy and seemingly universal insights about how to organize doctrinal fields may need to give way to complex and context-specific realities.