9

Investor Alliances as Knowledge Commons

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9.1 INTRODUCTION

This chapter analyzes Investor Climate Alliances (ICAs) as a form of knowledge commons. "Knowledge commons" are not bounded physical commons, like forests or fisheries, but a systematic methodology for understanding the governance of knowledge resources. Stated simply, "knowledge commons is governance" (Madison 2024, 308). More specifically, the phrase "knowledge commons" refers to governance of shared knowledge, information, and data resources by a community.

Knowledge commons are often prompted by a community's need to manage complex and interconnected types of knowledge. Examples include the Human Genome Project, medical research consortium, Wikipedia, or patent pools. The knowledge, information, and data related to financially material climate risks are also complex, incomplete, opaque, and vast. Effectively managing these knowledge resources requires a collaborative governance system to generate, organize, and utilize the data and information. To satisfy this demand, private and public actors have formed Investor Climate Alliances (ICAs) such as Climate Action 100+[1] and Net Zero Asset Managers Alliance.[2] ICAs have proliferated in response to the impact of climate risk on investment returns, particularly for diversified investors. While ICAs have been mischaracterized as "climate cabals," a closer examination reveals that they are *collective-based governance institutions* for generating, sharing, and utilizing knowledge about how corporations can minimize their financially material climate risk. Crucially, the information that ICAs elicit, synthesize, interpret, and share is publicly available, and not proprietary.

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[1] https://www.climateaction100.org/about/.

[2] https://www.netzeroassetmanagers.org/.

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It is important to understand ICAs for several reasons. First, they have proven effective at generating knowledge resources about climate risk, an urgent global issue. However, their fate hangs in the balance due to a lack of understanding, which has led to hasty policy interventions. ICAs currently face mounting legal and political risks, driven by the misapplication of antitrust law, securities regulation, and investor fiduciary duties. These paradigms mistakenly assume that the production of knowledge resources requires either market incentives or government mandates. ICAs challenge this assumption, demonstrating that knowledge is often produced and utilized collaboratively by communities of heterogeneous actors following formal and informal rules, norms, and customs. Corporate law seeks to fit ICAs into its familiar paradigms, which draw sharp distinctions between the public and private sectors and rely on agency theory to explain the relationship between shareholders and directors. Rather than starting from theory, the Governing Knowledge Commons (GKC) framework observes how ICAs function in practice. This approach reveals that ICAs are governed by a range of formal and informal (sometimes conflicting) laws, rules, social norms, and customs.

However, as Elinor Ostrom (2010) often noted, commons governance is "no panacea" and presents its own unique social and ethical challenges. Consistent with knowledge commons research, this chapter will not draw normative conclusions or make policy recommendations about ICAs. Instead, it is intentionally descriptive and not prescriptive. We must first refine our understanding of ICAs before we can accurately assess their potential and limitations.

9.2 CASE STUDY OF CLIMATE ACTION 100+

ICAs are a relatively new phenomenon. They are rapidly morphing in response to increased regulatory scrutiny. This case study will focus on the first and largest ICA, Climate Action 100+, as it exists at the time of writing, while acknowledging that its future is far from certain. In addition to shedding light on Climate Action 100+, the GKC framework will help us identify the social dilemmas and vulnerabilities that affect ICAs in general, potentially offering insights into their future direction.

9.2.1 *Background Environment*

The study of knowledge commons often begins with an examination of the background environment, including the cultural and legal context. ICAs were not created by any one organization at a single point in time; their emergence is rooted in a broader sociohistorical context.

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9.2.1.1 Phase 1: Climate Risk Incentivizes Diversified Investors to Collaborate

The convergence of two major developments, seemingly unrelated, created the impetus for wide-scale collaboration on climate risk. First, due to index investing, investors today are highly diversified. These diversified investors are often referred to as universal owners (Condon 2020). They do not use the same strategies as undiversified investors, who pick individual companies and try to "beat the market" by selecting winners and losers. Instead, universal owners – such as pension funds or sovereign wealth funds – maintain diversified portfolios specifically to avoid idiosyncratic risks (Quigley 2020). Indeed, many universal owners are required to do so by law; the State of California's Constitution, for example, requires the state's pension funds to diversify. In other words, universal owners' highly diversified portfolios are exposed to systemic risks *by design*. That fact immediately changes the incentive for diversified investors from competition to collaboration, at least insofar as it relates to reducing systemic or portfolio-wide risks (Condon 2020; Gordon 2022).

But investors are not, obviously, the only ones who are focused on climate risk, nor can they reduce that risk on their own. Other actors, including governments and NGOs, are also motivated to pressure corporations to reduce their climate risk, prompting the need for institutional infrastructure to support collaborative efforts. This level of collaboration is starkly at odds with corporate law's long-standing norms, rooted in the law and economics tradition. Collaboration resists two narratives that permeate corporate law: the private market narrative and the competition narrative. The private market narrative supposes that individual private market actors exist only to generate profits and externalize costs, and that the public sector must place limits or price tags on those externalities through regulation or taxes (Friedman 1970). Adherents of this view characterize ICAs as a form of "private regulation," reflecting that government has been captured by private interests, or is too weak or inept to address the externalities (Bebchuk and Tallarita 2020). Under the private market narrative, the public and private sectors are presented not only as separate but also as rivals.

The competition narrative is similarly adversarial, telling us that the desire to outperform competitors animates most, if not all, of the decisions that market actors make. Consequently, we cannot count on private firms to invest in minimizing externalities, particularly if the benefits of the externalization also inure to their competitors. At the same time, we can absolutely count on private firms to externalize their costs onto society if it means that they can outperform their competitors. Competition is not just accepted as a natural part of "free markets" but is also valorized as a normative goal, because it (purportedly) addresses concentrations of market power (Miazad 2022). Accordingly, adherents of the competitive narrative have described investor alliances as corporate governance cartels that need to be broken up (Chaim 2025). Thus, the dual narratives underlying corporate law scholarship either villainize collaboration outright or view it with a high degree of suspicion.

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Viewing ICAs through these theoretical paradigms has obscured their reality. In fact, ICAs comprise both public and private actors that are creating and adhering to public and private rules and norms to govern information. Certainly, this reality is far messier than a caricature that arbitrarily assigns roles and incentives to "market" actors versus "public" actors. It is neither surprising nor novel that ICAs are a combination of public and private actors and resources. To the contrary, financial markets have always been sustained by *shared intellectual infrastructure* (Frischmann 2012; Dekker and Kuchař 2022). This infrastructure is not exclusively private or public but rather is created through collaborative efforts by public and private actors. ICAs are also a type of infrastructure that is co-created and shared by public and private actors.

This infrastructure was not built from scratch. The history of ICAs can be traced back to less systematized forms of investor collaboration, such as principles and stewardship codes initiated by the United Nations. Most notably, the UN's Principles for Responsible Investment (PRI) was formed in 2006 by the UN Global Compact, the UN Environment Programme (UNEP) Finance Initiative, and a group of large institutional investors. The PRI was the first time that large, diversified investors jointly agreed that oversight of environmental and social risks is essential to securing the long-term sustainability of their investment portfolios, marking a turning point in sustainable finance.

By participating in the PRI, these investors formally acknowledged their mutual interest in mitigating long-term systemic risks, creating a norm that laid the foundation for more robust investor collaboration. The next step was the creation of several PRI-supported "climate networks" of investors, organized regionally or by investor type. Examples include the Institutional Investors Group on Climate Change (IIGCC) or the Investor Group on Climate Change (IGCC) Australia/New Zealand. These networks evolved, adding systems for collaborative stewardship as investors worked together to draft stewardship codes. They created a forum to share information, engagement priorities, and strategies. Indeed, the PRI's "Collaboration Platform," described as "a unique private forum that allows signatories to pool resources, share information, and enhance their influence on ESG issues,"[3] is itself a knowledge commons.

These investors acutely recognized that their collaboration and long-term orientation was in tension with more traditional view of fiduciary duties and other legal norms. To strengthen the legitimacy of their approach, the PRI partnered with law firms and advisors to establish and proliferate norms within the global legal community, clarifying that investor fiduciary duties in most major jurisdictions require collaboration to mitigate systemic risks (Elliott et al. 2019).

Investor stewardship codes marked another significant milestone in the evolution of ICAs. The UK was the first country to adopt a stewardship code, leading to a proliferation of global stewardship codes. The US does not have a formal

[3] https://collaborate.unpri.org/.

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stewardship code and relies instead on private ordering. In 2016, a group of asset managers created the Investor Stewardship Group, which established a "Framework for U.S. Stewardship and Governance."[4] This approach aligns with the cultural context in which corporate law serves as an enabling mechanism for private ordering rather than public regulation (Millon 1990).

9.2.1.2 Phase Two: Climate Action 100+ Introduces More Robust Infrastructure for Collaboration

ICAs emerged from this polycentric background environment, characterized by overlapping institutions made up of both public and private actors. While this approach may seem inefficient compared to centralized governance, as Ostrom (2010) recognized, these redundancies offer several advantages. Polycentricity enables non-state actors, such as businesses and nongovernmental organizations, to overcome the problem of insufficient government regulation. This is especially true for large-scale, transnational issues like the climate crisis.

Although these early collaborative arrangements were foundational, the climate crisis demanded more sustained and systematic collaboration than informal stewardship codes and principles could offer. This realization prompted investors to create Climate Action 100+, the first and largest of investor alliances focused on climate risk. Climate Action 100+'s origin story reflects the economic logic of commons governance. The alliance originated in 2017 when Anne Simpson, then director of CalPERS, the largest pension fund in the United States, conducted a carbon audit of the pension fund's $400 billion portfolio. This audit revealed that about 100 companies contributed to about 85 percent of the emissions in CalPERS' highly diversified portfolio. This led to a key insight: CalPERS could concentrate its engagement efforts on a small number of companies, and it could also collaborate with other investors, as the highest-emitting firms were likely the same across their portfolios.

In response, a group of about a dozen investors held meetings at the United Nations and created Climate Action 100+, the largest voluntary initiative for investors addressing climate change. This alliance was also polycentric and benefited from these investors' long-standing participation in past collaborative efforts. Climate Action 100+ was cofounded by five global investor networks: Asia Investor Group on Climate Change (AIGCC); IGCC (Australia and New Zealand); Institutional Investor Group on Climate Change (IIGCC) (Europe); Ceres Investor Network in Climate Risk and Sustainability (North America); and the Principles of Responsible Investment (global). What began with a small coalition of investors in 2017 has now expanded to over 600 investors across more than 30 countries.

Notably, Climate Action 100+ is not a legal entity; rather, it is a voluntary system of rules and norms for creating knowledge resources about climate risk.

[4] https://isgframework.org/.https://isgframework.org/

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9.2.1.3 Phase Three: Cultural, Political, and Legal Norms Threaten ICAs

In 2017, addressing climate risk and other ESG risks, such as diversity, was emerging as a business and investment norm. By 2020, the business community seemed to embrace the importance of responding to climate change, with Larry Fink famously writing in his 2020 letter to CEOs that "climate risk is investment risk" (Fink 2020). That same year, the World Economic Forum released the Davos Manifesto, outlining the obligations companies owe to their stakeholders. To fully address the financial harms of climate risk, firms turned to collaboration – and diversified investors seemed to be on board.

Despite this apparent convergence, the background cultural context was never entirely copacetic. For one thing, corporate law varies by jurisdiction, and ICAs are transnational. More important than legal mandates, corporate law narratives and norms differ, and norms drive behavior. As Mark Roe (1991, 33) has noted, in the US, there is a "widespread attitude that large institutions and accumulations of centralized economic power are inherently undesirable and should be reduced, even if concentration is productive." Antitrust law is often used as a tool to reinforce this norm, even when the actual collaboration is *procompetitive* (Miazad 2022).

It should come as no surprise, then, that the financial institutions that are departing from ICAs are overwhelmingly US-based, and reacting to US regulators' and lawmakers' (misguided) claims that collaboration is synonymous with collusion. The general mistrust of international law in the US exacerbates this – the US has repeatedly stepped into and out of the Paris Climate Accord, to which these ICAs are tethered. Additionally, there is a lack of consensus in the US about the extent to which climate risk is financial risk, with many noting that climate risk is a social preference or a contested value, and therefore outside the scope of what fiduciaries may consider.

As this chapter will explore, this increasingly discordant background environment has both facilitated and constrained ICAs. The GKC framework allows us to examine how these conflicting legal regimes materialize into social conflicts within Climate Action 100+, including high-profile departures of asset managers, from BlackRock to Goldman Sachs. First, though, it is important to detail the various knowledge resources that ICAs produce and manage, which the next part turns to.

9.2.2 *Relevant Knowledge, Information, and Data Resources*

Broadly speaking, ICAs produce and govern knowledge about financially material climate risk, which includes transition risk, physical risk, and liability risk. The GKC framework helps to delineate the different types of resources that fall under this broad umbrella, which includes data, information, and expertise. This type of knowledge cannot be produced unilaterally and demands knowledge commons governance for several reasons.

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When an individual corporation discloses information about its climate risk to investors, that information is useful only to the extent that it is *comparable* to other corporations. This fundamental idea underlies financial accounting, which requires comparability, made possible through standardized accounting rules and guidelines such as Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRS). To be decision-useful, financial information must also be specific and accurate. These three attributes – comparability, specificity, and accuracy – are made possible through standard-setting. They transform the resource from financial data into *knowledge and expertise* about financial risk. Importantly, the financial standard-setting process is ongoing, and financial standards can only be produced and maintained collectively by public and private actors.

Outside of financial markets, many types of information become significantly more valuable when considered in aggregate. Take the Human Genome Project, for example. Genomic Data Commons create knowledge by pooling genetic health data, then "drawing statistical inferences based on which variants and health conditions appear to occur together in the same individuals" (Evans 2017, 77). Thus, an individual human's genome sequence may be valuable to that person and researchers, but it is only in *aggregate* that it becomes a knowledge resource for the broader scientific community (Gregg, this volume).

Climate risk data is analogous. An individual corporation's climate risk disclosure is valuable to investors, regulators, and other stakeholders only if they can interpret how the data relates to other corporations, and to the financial system more broadly. Investor demand for consistent climate risk data has been driven by years of advocacy for mandatory climate disclosures. Investors emphasize that these disclosures should be "consistent, comparable, reliable, and decision useful" (Ceres 2020).

Managing financially material climate risk demands knowledge commons governance because it is a new and uncertain area. There is little consensus on which specific corporate governance reforms minimize transitional, physical, and litigation risks linked to climate change. Successfully navigating these challenges will require collaboration among investors, corporations, regulators, and society. Key questions remain unanswered, such as: What level of board oversight is most effective at minimizing climate risk? Do net zero commitments lead to real reductions in greenhouse gas emissions? What level of capital allocation is sufficient for transitioning from fossil fuels?

9.2.2.1 Categories of Knowledge Resources Produced by ICAs

We begin applying the GKC framework by examining the types of resources that knowledge commons produce. With ICAs, there is much to unpack. While the end goal of ICAs is to protect the value of their diversified asset pools, the resources that ICAs produce and utilize are *knowledge resources*. As the knowledge commons tradition recognizes, unlike physical resources, information can be generated and

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consumed (notwithstanding technological constraints like data storage) without being depleted. In economic terms, information and knowledge are non-rivalrous resources. Thus, Garett Hardin's "tragedy of the commons," which arises from the overconsumption of a finite resource, generally does not occur in knowledge commons (Frischmann et al. 2014). However, a key insight of the GKC framework is that other social dilemmas, such as collective action problems, information asymmetries, and misaligned incentives, can, and often do, impact knowledge commons.

The foregoing discussion synthesizes the types of resources that ICAs create and maintain. Each of these resources are *intangible knowledge resources*, such as data, information, and expertise, or other intangible resources like trust and time.

9.2.2.1.1 SHARED NORMS AND GOALS At the highest level, ICAs offer a set of shared objectives to organize activities and evaluate outcomes under a common framework. Climate Action 100+'s overarching goal is to reduce emissions "in line with the goals of the Paris Agreement to pursue efforts to limit warming to 1.5°C."[5] This shared goal is itself a resource because it aligns investor preferences and incentivizes corporations to produce more information, even absent regulatory obligations to do so (Bond and Zeng 2022). Moreover, the fact that this goal is linked to the Paris Agreement creates another resource: legitimacy. The investors are not unilaterally articulating this goal as so-called private actors. Rather, they are adhering to international law and norms (Gordon 2023). This allows for corporations to keep in line with the growing body of regulations which implement the Paris Agreement, even when the US is hesitant to adopt regulations that adhere to international norms.

Curiously, these shared norms and goals are also a liability. In the polarized landscape in the US, there is a high degree of criticism of international law and norms. This is evidenced by the US's fickle commitment to the Paris Agreement, which has changed with each administration. Moreover, there is disagreement as to whether the Agreement is binding international law, given that the US Congress has not ratified it. Critics have also argued that voluntary collaborative efforts by investors represent private regulatory efforts that lack democratic legitimacy (Lund 2022). There are concerns that the consolidation of economic power in large organizations is inherently undesirable, even if it offers benefits. And other critics claim that Climate Action 100+'s requirement that corporations adhere to an international treaty is inconsistent with individual investors' claims that they are developing their investment strategies unilaterally. In sum, while alignment allows US investors to consistently adhere to international norms despite shifting domestic policy, it also presents social dilemmas.

[5] https://www.climateaction100.org/about/.

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9.2.2.1.2 THREE ASKS FROM COMPANIES Managing climate risk can be amorphous and is exceedingly complex. An additional resource that Climate Action 100+ provides is consistency in its message to companies about what, specifically, investors want from companies. Climate Action 100+ has synthesized this into three "asks":

1. Implement a strong governance framework that clearly articulates the board's accountability and oversight of climate change risk.
2. Take action to reduce greenhouse gas emissions across the value chain, including engagement with stakeholders such as policymakers and other actors to address the sectoral barriers to transition. This should be consistent with the Paris Agreement's goal of limiting global average temperature increase to well below 2°C above preindustrial levels, aiming for 1.5°C. Notably, this implies the need to move toward net zero emissions by 2050 or sooner.
3. Provide enhanced corporate disclosure on and implement transition plans to deliver on robust targets. This should be in line with the final recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) and other relevant sector and regional guidance, to enable investors to assess the robustness of companies' business plans and improve investment decision-making.[6]

When investors ask for the same type of information, climate disclosure becomes a norm within the investor community, and companies are likely to disclose more information. However, converging on similar goals has also subjected ICAs to increasing antitrust scrutiny. Critics have characterized shared goals, like net zero commitments, as veiled "group boycotts" of the fossil fuel industry. These threats have manifested in legal and regulatory investigations. For example, in 2023, a group of state attorneys general accused ICAs of exerting "coordinated pressure" on companies to reduce emissions. The House Judiciary Committee has also issued subpoenas to organizations involved in Climate Action 100+ on the theory that they facilitate collusion.

9.2.2.1.3 KNOWLEDGE OF ENGAGEMENT BEST PRACTICES. Climate Action 100+ offers infrastructure for investors to share information about best practices on effective engagement strategies. This information is neither proprietary nor commercially sensitive; investors had previously been sharing best practices in more ad hoc and informal forums. Climate Action 100+ enables investors to share this information in a systematized way, making the information useful to investors. While CA100+'s procedures have evolved, the initial structure enabled lead investors – those who volunteer to engage a specific company – to share their annual

[6] https://www.climateaction100.org/the-three-goals/

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engagement plans and periodic progress updates with other Climate Action 100+ members. This information was stored in a members-only portal and organized in a standardized format to enhance its usefulness to investors engaging with the same or other companies on the focus list.

9.2.2.1.4 MORE RELIABLE COMPANY SPECIFIC INFORMATION AND DATA. Compared to its other two asks from companies, Climate Action 100+ has been most successful in increasing corporate disclosure. More disclosure is not, of course, always a good thing for investors. Indeed, more data and information can sometimes impede investors' ability to use that data, and voluntary disclosures have also been associated with less reliability, or "cheap talk." Here, too, Climate Action 100+ improves the quality of corporate disclosures. A recent study found that companies engaging with Climate Action 100+ provided more reliable and actionable climate disclosures, with significantly less "cheap talk" (Bingler et al. 2022).

9.2.2.1.5 THE NET ZERO BENCHMARK. To ease the monitoring burden on investors, Climate Action 100+ launched the Net Zero Company Benchmark in 2020.[7] This benchmark utilizes both publicly available and self-reported data to track the progress of targeted companies. It consists of two main components: the Disclosure Framework, which assesses the quality of disclosures, and the Alignment Assessments, which determine whether a company's actions are consistent with its net zero commitments. The benchmark was developed in collaboration with external NGOs, academics, and technical experts, so that it could ensure the data's validity. Moreover, the specific standards in the benchmark are regularly updated. Importantly, to elicit "buy-in," updates to the benchmark incorporate feedback from Climate Action 100+ members. Still, the Net Zero Benchmark faces legitimacy challenges; some claim that the connection between carbon emissions and climate change is tenuous, or at the very least extremely difficult to measure.

9.2.2.1.6 SCIENTIFIC KNOWLEDGE AND EXPERTISE. We are far from fully understanding how carbon emissions impact investor portfolios, or what "net zero" means. These are scientific questions as much as they are financial or political ones. Climate Action 100+ provides the infrastructure for investors to collaborate with experts in the scientific community, including the Transition Pathway Initiative Centre (TPI Centre), Carbon Tracker Initiative (CTI), and InfluenceMap, to create specific indicators and sub-indicators in the Net Zero Benchmark. In doing so, Climate Action 100+ creates scientific knowledge and expertise within the investor community, and financial expertise within the scientific community.

[7] https://www.climateaction100.org/net-zero-company-benchmark/.

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9.2.2.1.7 LEGAL COMPLIANCE. Climate Action 100+ creates knowledge resources about compliance with a growing body of regulations on climate risk, particularly those governing corporate disclosure. In 2017, corporate disclosure of climate risk was voluntary in all jurisdictions. Since then, global securities regulators have required disclosure. These disclosure mandates have converged to recognize the voluntary TCFD framework as compliant with regulatory mandates. Since its inception, Climate Action 100+ has been working with the highest emitting companies to enhance their TCFD reporting, facilitating legal compliance.

In addition to knowledge resources, Climate Action 100+ provides its members with other intangible resources, including administrative support, time, and, perhaps most importantly, trust.

9.2.2.1.8 SHARED INFRASTRUCTURE FOR ADMINISTRATION. Collecting and synthesizing climate risk data and information requires administrative and logistical support. Thus, one key resource that Climate Action 100+ provides is the shared infrastructure, coordinated by the five founding investor networks. This infrastructure makes it easier for investors to communicate and overcome long-standing collective action problems that institutional investors have faced.

9.2.2.1.9 TIME. Monitoring, engagement, and voting rely on bespoke information, which is time-consuming (and costly) to obtain. Climate Action 100+ streamlines stewardship by focusing on the companies in investors' portfolios that emit the most greenhouse gasses. Therefore, an important intangible resource that Climate Action 100+ provides its members is the time to engage with companies in a meaningful way.

9.2.2.1.10 TRUST. The shared infrastructure enables institutional investors to engage in more "repeat play" than ever before. As Ostrom (2010) recognized, market actors often collaborate when they can communicate repeatedly and build trust, and this can function more effectively than externally imposed regulation or market sanctions. Lynn Stout and Margaret Blair (2001) also emphasized the power of repeat play to build trust among corporate actors, which underscores their Team Production Theory of the Corporation. Therefore, perhaps the most important resource that ICAs provide is trust, which incentivizes the participants to continue producing more knowledge resources.

9.2.2.2 Characteristics of Climate Action 100+'s Knowledge Resources

9.2.2.2.1 SCARCE AND ABUNDANT. While policymakers and scholars focus most often on scarcity, information resources – unlike finite natural resources – also suffer from problems related to abundance. Similarly, climate risk information is both scare and abundant. Indeed, investors backing the SEC's climate risk

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disclosure rule highlighted that there is insufficient information on how companies manage climate risk, yet also too much immaterial information. The SEC has acknowledged this, noting that "high levels of immaterial disclosure can obscure important information or diminish incentives for market participants to trade or create markets for securities."[8] This abundance necessitates intermediary systems like ICAs.

9.2.2.2.2 NON-RIVAL, ANTI-RIVAL, AND NON-EXCLUDABLE. The GKC framework clarifies that intangible information and knowledge resources, unlike physical resources, are often (but not always) non-rival and non-excludable. Therefore, knowledge resources generally do not suffer from problems of overconsumption; rather, they struggle with underproduction or coordination. With respect to underproduction, the concern is that intangible resources, such as creative works, will not be produced if access is not restricted. This concern undergirds intellectual property laws, such as those protecting copyrights and patents, which create production incentives by precluding access. But these concerns do not apply to climate risk information for several reasons.

Most of the information managed by ICAs either consists of publicly available climate disclosures or knowledge about how to obtain more such disclosures from corporations. For investors that are highly diversified, there is no competitive advantage in exploiting informational asymmetries to reduce systemic risks. To the contrary, it benefits CalPERS to invest in producing and sharing (at no cost) information about climate risk governance with other diversified investors. That is true even if the other investors in Climate Action 100+ fail to participate in or invest time or money into *generating* the resource.

While it might be optimal if all investors were contributing to generating knowledge resources, it still benefits CalPERS if other investors utilize the knowledge resources that CalPERS creates. In this way, climate risk information is akin to public health information – the more individuals voluntarily adopt health and hygiene guidelines, like wearing masks or handwashing, the better it is for the overall community. This is different from commercially sensitive information that can be leveraged for individual profit.

Certain types of information are not only non-rival but also anti-rival. In other words, the information becomes *more* valuable as more people use it (Weber 2005; Cooper 2006). This is evident in Artificial Intelligence (AI) platforms or open-source software programs where increased data input enhances the AI's learning model and, over time, makes the data more reliable or more useful. The knowledge and information resources that Climate Action 100+ produces are similar. Climate risk knowledge resources, both at the company and investor levels, are anti-rival.

[8] Business and Financial Disclosure Required by Regulation S-K, 81 Fed. Reg. 23,916, 23,919 (Apr. 22, 2016).

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The more investors and corporations utilize the information and data, the more valuable it becomes.

Climate risk disclosure is both non-rival and anti-rival. It is a non-rival good because it can be used by multiple stakeholders without diminishing its availability to others. At the same time, it is anti-rival because the more people use climate risk data and information, the more valuable and useful it becomes for everyone. More specifically, the broader the participation in sharing and using climate risk information, the more comprehensive and accurate the data becomes.

9.2.2.3 Key Actors and Stakeholders

In contrast to trade associations or industry alliances, Climate Action 100+'s members and key players are a myriad of public and private actors, including investors, NGOs, scientific experts, civil society, and international organizations like the United Nations. Even within the investor community, the actors are far from homogeneous – private asset managers, public pension funds, and sovereign wealth funds are all investors. However, this diverse membership brings with it different incentives, legal obligations, rules, cultures, and norms, as this part details.

9.2.2.3.1 CA 100+ INVESTOR MEMBERS. While there are different individuals and organizations involved in Climate Action 100+, only three types of entities can join as official members: asset owners, asset managers, and engagement service providers.[9] Recognizing these entities are distinct, the Climate Action 100+ Signatory Handbook outlines different roles for each.

Asset managers and service providers join Climate Action 100+ as "investor participants," whereas asset owners have the option to join as "investor supporters." Investor participants engage directly with designated companies, while investor supporters are encouraged to advocate for their investment managers or service providers to join the initiative. These classifications acknowledge that certain legal and contractual barriers prevent asset owners from participating directly in engagements with focus companies. However, asset owners are still encouraged to persuade their asset managers and engagement service providers to participate in Climate Action 100+. In practice, of the 600 investors who comprise the Climate Action 100+, most are asset owners or asset managers like CalPERS and AXA Investment Managers. However, most of the engagement service provider members are either faith-based investor groups or ESG and sustainability advocacy and advisory organizations such as As You Sow.

Unlike investor supporters, investor participants engage directly with focus companies. Their engagement can take one of three forms: (1) lead company investors, (2) contributing company investors, and (3) individual participants. Lead company investors serve as the main liaison between focus companies and other investors

[9] https://www.climateaction100.org/wp-content/uploads/2023/06/Signatory-Handbook-2023-Climate-Action-100.pdf.

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involved in Climate Action 100+. They gather and relay information regarding the focus companies, and their primary task is to create an annual engagement plan that is shared with alliance members. The Climate Action 100+ signatory handbook emphasizes the importance of lead investors developing "deep knowledge" of their focus companies through consistent engagement. Contributing company investors support the lead investors to implement the engagement plan. Some investors prefer to join as individual participants, which means that they engage with companies without the participation of other Climate Action 100+ members. Individual investors must also, however, ensure that their engagements are "aligned with the goals of the initiative and with the collaborative approach" that Climate Action 100+ fosters. All three participant types exchange information about the focus companies with other members of the alliance. Although this information is neither nonpublic nor proprietary, it can be difficult for individual investors to gather such information from each corporation unilaterally. Therefore, Climate Action 100+ also serves as a mechanism to govern access to this information.

Beyond these formal designations that are outlined in the signatory handbook, Climate Action 100+'s members are extremely diverse. For one thing, they are transnational, comprised of entities that operate in 35 countries. These jurisdictions have different corporate law rules and norms. In addition to these jurisdictional differences, the asset owners are different types of legal entities. At a high level (Figure 9.1), there are four different types of asset owners: (1) public entities; (2) private corporations; (3) socially responsible or impact organizations; and (4) religious organizations.

Some asset owners and managers are private entities, whereas others are government pension funds or sovereign wealth funds. Private asset managers are governed by their own boards, elected by shareholders. Private asset managers are governed by their own corporate boards and are accountable to their shareholders. Moreover, private asset owners can be publicly traded or privately held, leading to vastly different incentives and accountability structures.

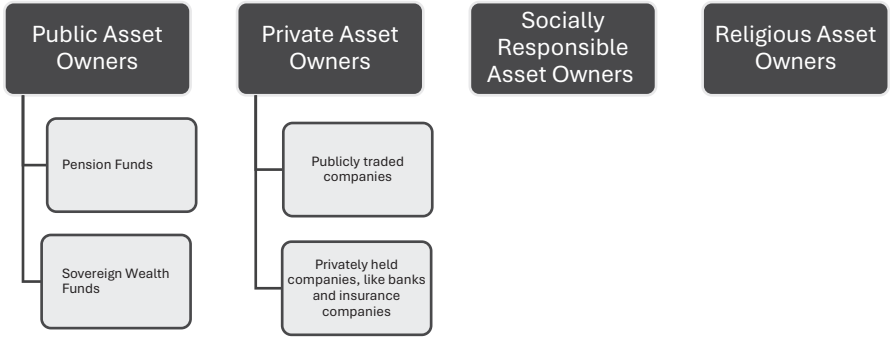


FIGURE 9.1 Types of asset owners.

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In contrast, public asset owners, like state pension funds and sovereign wealth funds, are political entities, and accountable to the political process. While it varies by jurisdiction, the leadership of public pension funds is either elected by beneficiaries or appointed by state officials (such as the treasurer), or a combination of the two (Fisch and Schwartz 2024). In contrast, other members, including various impact and socially responsible investors, operate under different motivations. Likewise, religious asset owners are guided by religious orders that authorize and monitor their investment decisions through established governance processes (Miazad, 2026).

This diversity extends beyond mere legal frameworks and motivations; many of these investors do not function as market competitors in the traditional sense. While large asset managers like BlackRock and State Street may compete for clients, a pension fund such as CalPERS does not vie with another state's pension fund for beneficiaries. Instead, relationships among pension funds are typically collaborative, reflecting a shared interest in promoting ethical and sustainable investment practices. Similarly, faith-based investors, like the pension funds associated with the Catholic and Baptist churches, do not compete for clients but are incentivized to work together on pressing ethical issues, such as climate risk.

9.2.2.3.2 FOCUS COMPANIES. When the initiative was first founded, the investor members used data from the MSCI All Country World Index (MSCI ACWI) and Carbon Disclosure Project (CDP) reports to identify companies that are responsible for roughly two-thirds of annual industrial carbon dioxide emissions. The MSCI ACWI is an index that tracks performance in both developed and emerging nations, while CDP reports provide sustainability ratings to companies based on their voluntarily disclosed carbon emissions data. Climate Action 100+ originally comprised 100 of these focus companies. Today, that number stands at 168 focus companies. These companies are effectively the data subjects for the initiative, as each individual company's climate risk information is the data that gets incorporated into the Net Zero Benchmark.

Certainly, there are similarities among the focus companies, as they are all classified as "high emitting." However, these companies span various industries, including agriculture, airlines, automobiles, electric utilities, oil and gas, paper, shipping, and steel. Each industry requires a tailored engagement approach, which is why Climate Action 100+ has recently launched sector-specific strategies. In addition to industry variability, cultural differences also play a role, often reflecting norms around investor engagement. While it may be overstating the case to say corporations "welcome" the opportunity to become focus companies, Climate Action 100+ case studies highlight that many corporations recognize the value in it. These companies not only provide data about their own operations but also leverage data to learn from best practices among their peers.

More recently, Climate Action 100+ has shifted its perspective to view individual focus corporations more as research partners and collaborators, rather than as

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adversarial targets of investor scrutiny. Some companies, like Total, have embraced this collaborative role, while others, like Exxon, have resisted, even suing Climate Action 100+ members to block information gathering about their climate risk mitigation plans. Thus, while all focus companies are high-emitting, they exhibit significant heterogeneity in their approaches to shareholder engagement. While corporate law traditionally views the relationship between investors and corporations through agency theory, scholars argue that we are entering an era of collaborative information sharing. They suggest that "collaboration offers a mechanism for enhancing firm value that unilateral decision-making by either insiders or shareholders cannot provide" (Fisch and Sepe 2020).

9.2.2.3.3 LAWMAKERS AND REGULATORS. Global regulators have enacted laws that align with the goals of the Paris Agreement. Climate Action 100+ facilitates compliance with these legal frameworks. This eases the burden on regulators to monitor corporate adherence to climate-related commitments. Insights gained from Climate Action 100+ can help regulators identify gaps in existing legislation and inform the development of new regulatory measures that better support the transition to a low-carbon economy. Climate Action 100+ also encourages companies to disclose how their lobbying efforts align with the Paris Agreement. This transparency not only sheds light on corporate influence but also exposes the role of trade associations, holding legislatures accountable by disclosing when there is corporate influence in the legislative process. Finally, regulators benefit from Climate Action 100+ efforts to help harmonize global climate disclosure standards.

9.2.2.3.4 THE SCIENTIFIC COMMUNITY. The scientific community is in the process of defining precisely what "net-zero" means. As noted, this community contributes to the knowledge commons by providing inputs into Climate Action 100+'s standard-setting process, particularly the Net Zero Benchmark indicators. At the same time, the scientific community also benefits from the knowledge commons, as corporate disclosures provide valuable data and knowledge resources that would be challenging to access.

9.2.2.3.5 THE PUBLIC. The public is a key stakeholder in climate risk governance, which has garnered significant public attention and is frequently covered in the media. Climate risk affects the public in numerous ways, and thus, climate risk information and data are regarded as a public good. Research and mitigation efforts, as well as responses to climate disasters, are often funded by taxpayer dollars. Therefore, even if the public does not actively engage with data from the Net Zero Benchmark or other resources, it still gains from the overall reduction of climate risk.

While large asset managers and major financial institutions can hire analysts to perform private climate-risk assessments, the public relies on accessible data.

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Resources like the Net Zero Benchmark, corporate disclosures, and TCFD reports enhance transparency in the public domain. US securities law uses disclosure requirements as the main tool of addressing information asymmetries. Disclosure requirements enable the public to make investment decisions that address their financial needs, which includes information about climate risks. In this sense, disclosure requirements enable the market to address climate change more effectively and competitively, and financial securities disclosures are often considered a public good (Sale 2019). Climate risk reports and data share similar characteristics: They are non-rivalrous and non-excludable, meaning that individuals cannot be prevented from accessing them (Samuelson 1954). However, climate risk reports may more aptly be described as *contribution goods*; while they are technically accessible to all, barriers such as limited expertise can prevent the public from meaningfully consuming this information (Kealey & Rickets 2014). Nonetheless, even when not widely consumed, scientific insights still benefit society. Indeed, a specific resource that is created for a private benefit often has "downstream" benefits and generates public and/or social goods (Frischmann 2012).

9.2.2.4 Governance

Governance refers to the methods or tools that members of a community use to meet their goals or resolve conflicts. For Climate Action 100+, this consists of a combination of laws, norms, rules, and socio-technical devices which are administered through polycentric governance by the following five coordinating networks.

1. Ceres: A sustainability nonprofit organization working with the most influential investors and companies to build leadership and drive solutions throughout the economy.
2. Principles for Responsible Investment: A UN-supported international network of investors working together to implement its six aspirational principles.
3. Asia Investor Group on Climate Change: A network dedicated to creating awareness and encouraging action among Asia's asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing.
4. Investor Group on Climate Change: A collaboration of Australian and New Zealand investors focusing on the impact that climate change has on the financial value of investments.
5. Institutional Investor Group on Climate Change: The European membership body for investor collaboration on climate change and the voice of investors taking action for a prosperous, low-carbon future.[10]

[10] https://www.climateaction100.org/.

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Some of these networks are regional, whereas others are nonprofits or intergovernmental organizations. Moreover, it is common for investor participants to be members of several of these networks – most investors are members of PRI and Ceres, for example. Ostrom (2010) recognized that duplication or redundancy is a feature, and not a bug, of polycentric governance systems.

It is important to recall that Climate Action 100+ is not a separate legal entity. Members join the alliance by signing an agreement and adhering to the informal rules set forth in the signatory handbook. Therefore, the alliance's members have voluntarily adopted a governance structure for coordinating their communications and activities. They have opted for shared governance and dispersed power throughout the five global investor networks. The alliance delegates formal oversight to a Global Steering Committee, which includes one investor network representative and two investor representatives from each global network. To ensure that one investor network does not have outsized power, the Steering Committee Chair and Vice Chair rotate each year. Legal institutions and norms, which we will turn to next, both enable and constrain the alliance's activities.

9.2.3 *Legal Institutions, Structures, and Norms*

Climate Action 100+'s members are transnational, subject to various and sometimes conflicting regulatory regimes. The corporations on the Climate Action 100+ focus list are also multinational, such as Exxon (incorporated in Texas with operations in over 60 countries) and Nestlé (incorporated in Switzerland with operations in 188 countries). This diversity necessitates navigating a complex web of laws, regulatory frameworks, and legal norms.

The legal environment for Climate Action 100+ is therefore highly complex, incorporating both "soft law" norms and an increasing number of hard law requirements. Climate risk oversight is becoming an integral part of board and investor fiduciary duties, reinforcing pro-climate regulatory trends that help legitimize Climate Action 100+. While regulatory frameworks are increasingly aligning globally, the legal environment remains fragmented. Corporate law paradigms, cultural norms, and a partisan anti-climate agenda in the US threaten the viability of Climate Action 100+ and similar alliances. Addressing the full legal complexity is beyond the scope of this chapter, so we will focus on the key legal rules and norms.

9.2.3.1 Legal Rules and Norms that Foster Climate Action 100+

On December 12, 2015, nearly 200 nations adopted the Paris Agreement, which aims to limit global warming to well below 2°C, with an aspirational target of 1.5°C. The agreement is unique in that it invites non-state actors to participate, resulting in over 13,000 commitments from myriad entities, from corporations to cities. It has also been incorporated into national, state, and local legislation. For example, carbon

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markets are mandatory in the EU, UK, and California, and many countries have submitted Nationally Determined Contributions (NDCs) detailing their climate actions. Additionally, twenty-four US states require pension funds to align their portfolios with the Paris Agreement's emissions targets.

On the other hand, the legitimacy of the Paris Agreement as binding international law remains hotly contested in the US, where it was never ratified by Congress, raising questions about enforceability. Unlike the United Nations Framework Convention on Climate Change (UNFCCC), which was ratified by Congress, the US enters and exists from the Paris Agreement via executive agreements. Despite this, the Paris Agreement operates as a form of soft law in the US, shaping the framework for Climate Action 100+. While soft law is not always legally enforceable through traditional means, it creates norms that shape corporate and investor behavior even without legal enforcement. Moreover, soft law can, and often does, have legal consequences if adopted through contracts.

For transnational institutional investors in particular, soft law is appealing because it involves minimal cost for amending voluntary commitments. In many jurisdictions, it is impractical to pass legislation quickly, particularly on addressing climate risk, which is a rapidly changing area, making soft law an attractive alternative.

Soft law also paves the way for future hard law by testing norms in the market. An example of this is net zero commitments, which arose from the Intergovernmental Panel on Climate Change (IPCC). These voluntary commitments are driving the development of reporting frameworks, benchmarks, and climate disclosure methodologies. Also, these soft law norms are increasingly being incorporated into hard law, particularly through mandatory climate disclosures. California has taken a lead with the Climate Corporate Data Accountability Act, which mandates public disclosure of Scope 1, 2, and 3 emissions for large companies. Other laws, such as the Climate-Related Financial Risk Act and the Voluntary Carbon Market Disclosures Act, also impose disclosure requirements. Globally, the UN launched the International Sustainability Standards Board to develop standards for sustainability disclosures, while the EU's Corporate Sustainability Reporting Directive, effective in January 2023, requires all listed companies to disclose ESG data. These regulations will likely have a lasting impact on sustainability reporting. However, these legal frameworks often conflict with traditional corporate law paradigms, which we will explore next.

9.2.3.2 Legal Rules and Norms that Constrain Climate Action 100+

The impetus for forming Climate Action 100+ was to help investors meet their fiduciary duty to oversee the risk of climate change. Recall that the alliance was formed when legal advisors and regulators were emphasizing that, as fiduciaries, investors not only have the right but also the obligation to manage it. Managing

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climate risk requires investors (and directors) to look beyond the profits of a single firm and toward the impacts that firms have on the rest of investors' portfolios. While investors' portfolios are not analogous to a common-pool resource like a fishery, there is a commons governance logic at play. As Climate Action 100+ explains, "[climate change] has the potential to harm all economies, asset classes and industries, whether directly or indirectly, with escalating consequences for all financial market actors."[11] Climate Action 100+ members are broadly diversified, which means they are invested in the same companies which span the economy. Its members invoke commons governance logic to justify their collaborative efforts. Members of investor alliances recognize that investing in "dirty assets" is a short-term gain that comes at the expense of long-term, portfolio-wide sustainability, much in the same way that overfishing or overharvesting timber threatens future abundance. This metaphor analogizing the physical commons to the financial commons is also woven throughout "universal owner" theory. Consider the words of Rick Alexander, founder of the Shareholder Commons: "Thus, like the villagers who are each rationally incentivized to overgraze the common meadow, leading to failure for the entire village, rational companies make decisions not to audit supply chains or use renewable energy because they have no rational reason to do otherwise. How can we [as investors] instill the value of an honorable harvest?"

While the basic economic logic of "portfolio primacy" for diversified investors is obvious, it is in tension with corporate law norms underlying fiduciary duty, antitrust, and securities law (Miazad 2025). I use the word *norm* intentionally – Climate Action 100+'s collaborative efforts have been carefully designed to ensure compliance with corporate law. Notwithstanding the legal merits, investors are still leaving the alliance because conservative lawmakers are equating collaboration with collusion, claiming it violates antitrust and securities regulations that limit investor communication. These lawmakers also argue that investors' efforts to reduce climate risk prioritize social values over economic returns, which they view as a breach of investors' fiduciary duty. Certainly, partisan politics is at play here. But the fact that investors are departing highlights that corporate law norms and theoretical paradigms are fundamentally in tension with collaborative efforts. These legal paradigms operate as institutional impediments to communication, which is necessary to shift from a competitive game to a collaborative one (Ostrom et al. 1994).

As Ostrom (2010) often stressed, real-world collaborative governance systems are complex and messy, in contrast to the neat theoretical models favored by economists. It is difficult to fit the real world into rigid legal frameworks. This may explain why corporate law begins with the assumption that individual directors and shareholders aim to maximize the value of their own firms, with the idea that, in aggregate, this will increase the overall value of investors' portfolios. But this overlooks the complex reality of systemic risks like climate change. One company

[11] https://www.climateaction100.org/approach/business-case/.

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may increase its own value by externalizing costs, which may reduce the value of other companies – all of which are in the portfolio of the diversified investor.

There are two reasons why diversified investors do not simply divest from high-emitting companies. First, many are legally required to diversify, or are invested in index funds, which makes exit impossible or highly costly. But even if they *could* exit, other shareholders would readily purchase shares in the same high-emitting corporations. Worse, these other shareholders may not be diversified and therefore benefit from certain corporations, like Exxon, externalizing its climate impacts. Since divestment is often not economically rational for diversified investors, they have opted to collaborate on nudging high-emitting companies to reduce their emissions. The problem is that these emission reductions could reduce the share price of individual corporations. This reality exposes that the fiduciary duties of diversified investors are in tension with the fiduciary duties of other investors and the duties of directors.

For example, the Uniform Prudent Investor Act mandates that "[t]he standard of prudence is applied to any investment as part of the total portfolio, rather than to individual investments."[12] The Act further requires trustees to consider "general economic conditions," "inflation or deflation," and "the role that each investment or course of action plays within the overall trust portfolio."[13] But this is fundamentally at odds with the single-firm fiduciary duties of directors and officers, as the Delaware court recently reiterated in *McRitchie v. Zuckerberg*.[14] In that case, the Delaware Court of Chancery addressed a fundamental question of corporate governance: whether directors owe fiduciary duties to stockholders as diversified investors or specifically as stockholders in one company. The plaintiff argued that Meta's directors breached their duties by focusing solely on the company's interests without considering the broader impact on their diversified investors' portfolios. The court held that the directors' fiduciary duties are firm-specific, meaning that they owe their duties only to stockholders in their capacity as stockholders of that company, not as diversified investors. This ruling reinforced the principle that fiduciary duties are inherently tied to the specific company, not the individual stockholder's broader investment portfolio.

The tension between the single firm and the wider economy is also apparent in antitrust law. The argument that ICAs are anticompetitive centers on the claim that net zero commitments are a veiled group boycott of the fossil fuel industry because they result in decreased output of fossil fuels – ultimately harming consumers through higher prices or reduced availability of that product. But if we apply a portfolio-wide or commons lens to the problem, it becomes apparent that collaborative investor stewardship can increase the availability of multiple products for consumers in the long term. Consider home insurance – many consumers of

[12] Adding that the term "'portfolio' embraces all the trust's assets." See Uniform Prudent Investor Act 1994, Prefatory Note, § 2(b).

[13] Uniform Prudent Investor Act 1994, Section 2.

[14] *McRitchie v. Zuckerberg*, C.A. No. 2022–0890-JTL (D. Del. 2024) (order granting motion to dismiss).

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insurance are either not able to secure coverage at all or are priced out of home insurance markets. If we acknowledge that climate change resulting from greenhouse gas emissions has increased the frequency and severity of natural disasters, it follows that the increase in greenhouse gas emissions has already reduced the output of insurance. Thus, a portfolio-wide approach makes it clear that even if we assume that the goal of antitrust law is to enhance consumer welfare, collaborative efforts could further impede that goal.

Finally, securities regulators across jurisdictions impose restrictions on shareholder collaboration through "acting in concert" rules. These rules were designed to alert boards when shareholders are forming a group for the purpose of a hostile takeover. However, these rules are also chilling efforts by shareholders who seek to file shareholder proposals asking corporate boards for better oversight of climate change risk. This highlights a key issue: shareholder collaboration is being restricted in areas that could benefit long-term corporate sustainability, such as tackling climate-related risks (Miazad 2024; Puchniak and Varottil 2024).

In sum, certain corporate law norms are in tension with investor collaboration. At the same time though, regulatory regimes around the world are placing more pressure on investors to oversee climate risk. ICAs are still evolving and will ultimately be shaped by these external regulatory forces.

9.3 OUTCOMES AND CONCLUSION

Corporate governance encompasses the methods for mediating between competing claims on who has the right to provide inputs into and extract benefits from the corporation. Those methods can take numerous forms, from shareholder primacy to stakeholder theory. But these simple distinctions belie the fact that even shareholder primacy is infused with polycentricity. Shareholders represent the diverse interests of a wide set of stakeholders. When shareholders were dispersed, rational apathy and the separation between ownership and control were the dominant concerns of corporate law. As institutional investors rose in number and prominence, the heterogeneity of investor preferences were being mediated by these investors. ICAs represent an evolution of this infrastructure for mediating this heterogeneity in more sophisticated ways.

Importantly, this is not a rebuke of agency theory. As Adolf Berle (1932) envisioned it, the corporate share still provides a superior accountability mechanism for shareholders to express their voice. That is what ICAs help facilitate – the use of the share, and the shareholder proposal process, as a vehicle for aligning and expressing shareholder preferences on climate risk.

Though collaboration is out of sync with the neoliberal economics that have dominated corporate law since the 1970s, it is in harmony with Ostrom's (2009, 2010) "polycentric" theories of governance and Berle's collaborative or "corporatist" theory of corporate governance (Bratton and Wachter 2008). While many credit Berle for

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laying the foundation for agency theory, his normative preference for collaboration over competition and groups over individuals would surprise many. Berle recognized that, in addition to legal mandates, companies were limited by "inchoate laws" or a set of community expectations for corporate behavior (Pollman 2019). ICAs reflect Adolf Berle's conception of collaborative governance shaped as much by norms and expectations as by formal legal mandates.

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