CATALYZING SUSTAINABLE INVESTMENT

BY
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Calls for increased focus on environmental, social, and governance (ESG) issues—and more particularly, on the kind of sustainable investing that will help achieve the U.N.'s Sustainable Development Goals (SDGs)—run up against durable legal rules and norms of profit maximization. Corporate law, and especially Delaware law, remains committed to a shareholder wealth-maximizing orientation, and corporate directors typically can only consider other parties' interests to the extent that considering such interests can be justified as benefiting the shareholders. Trust law, which governs the behavior of many investment intermediaries, also generally requires a commitment to wealth maximization, as trustees generally may adopt ESG investing only if doing so will benefit the beneficiary by improving risk-adjusted returns. Thus, there is a tension between directors' and trustees' obligations under the law and the need to mobilize the trillions of dollars necessary to achieve the SDGs, at least to the extent that such investments sacrifice returns. Private capital will invest in sustainable projects, but only if the projects provide a market-rate risk-adjusted return.

To direct capital to critical, sustainable projects, some have called for changes in legal doctrine and governance norms that would allow for greater flexibility in investment decision-making, such that fiduciaries could invest in ESG projects even if they do not provide an at-market return. This Article describes a different approach: the catalyzation of sustainable investment by governments to direct capital to sustainable projects – sovereign entities use unique advantages to directly invest in sustainable projects and broker sustainable investments by taking on deal risk and reducing transaction costs for other investors. Rather than attempting to reform or re-orient market forces, governments can (and do) use existing market strategies that are successfully applied in private contexts. In other words, rather than expecting investors to sacrifice

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returns to achieve the SDGs or other public ESG benefits, governments are catalyzing sustainable investment by harnessing a profit-maximizing orientation.

I. INTRODUCTION

When the Business Roundtable announced an updated, more stakeholder-oriented "Statement on the Purpose of a Corporation" in August of 2019, it reinvigorated a long-standing debate on the role of business in society.[1] The debate in American academia stretches back at least to the 1930s, as illustrated by a series of articles by Berle and Dodd.[2]

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[1] *Statement on the Purpose of a Corporation*, BUSINESS ROUNDTABLE (2019), https://perma.cc/E4AG-T9YN; *see* Alan Murray, *America's CEOs Seek a New Purpose for the Corporation*, FORTUNE (Aug. 19, 2019), https://perma.cc/2VJL-YZXP; David Gelles & David Yaffe-Bellany, *Shareholder Value Is No Longer Everything, Top C.E.O.s Say*, N.Y. TIMES (Aug. 19, 2019), https://perma.cc/65RH-H9N2.

[2] *See* A.A. Berle, Jr., *Corporate Powers as Powers in Trust*, 44 HARV. L. REV. 1049, 1049 (1931); E. Merrick Dodd, Jr., *For Whom are Corporate Managers Trustees?*, 45 HARV L. REV. 1145, 1145 (1932); A.A. Berle, Jr., *For Whom Corporate Managers are Trustees: A Note*, 45

The political question of corporate purpose is nearly as old as the republic itself, with Hamilton, Jefferson, and Madison's debate on whether to incorporate a national bank in the 1790s.[3] A central question, then and now, is whether corporations exist for the sole purpose of making profits for their shareholders, or whether the corporation should perform "a social service as well as a profit-making function."[4]

This debate is not merely an American one, of course, and recently some other jurisdictions have nudged companies toward a more socially-focused, stakeholder-oriented view through their corporate codes. In France, for example, the recently-enacted Plan d'Action pour la Croissance et la Transformation des Entreprises requires each French company to be managed "in furtherance of its corporate interest" while also "taking into consideration the social and environmental issues arising from its activity."[5] The United Kingdom, meanwhile, requires medium and large companies to provide a directors' report outlining the company's engagement with employees, suppliers, customers, and other company stakeholders.[6]

At the same time, some shareholders are calling for an increased focus on higher environmental, social, and governance (ESG) standards for companies. Perhaps most prominently, Larry Fink, the CEO of investment behemoth BlackRock, stated that "[s]ociety is demanding that

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HARV. L. REV. 1365, 1365 (1932); E. Merrick Dodd, Jr., *Is Effective Enforcement of the Fiduciary Duties of Corporate Managers Practicable?*, 2 U. CHI. L. REV. 194, 194 (1935).

[3] A.A. Berle, Jr. characterized this claim more eloquently in his article *Corporate Powers as Powers in Trust*: "all powers granted to a corporation or to the management of a corporation, or to any group within the corporation, whether derived from statute or charter or both, are necessarily and at all times exercisable only for the ratable benefit of all the shareholders as their interest appears." See Berle, Jr., *supra* note 2, at 1049. For a helpful review of some of these early debates, see Scott Horton, *James Madison, Corporations, and the National Security State*, Remarks at the Liberty and Power Lecture, University of Alabama Law School 3 (Apr. 14, 2011).

[4] Dodd, Jr., *supra* note 2, at 1148.

[5] CODE CIVIL [C. CIV.] [CIVIL CODE] art. 1833 (Fr.) ("Toute société doit avoir un objet licite et être constituée dans l'intérêt commun des associés. La société est gérée dans son intérêt social, en prenant en considération les enjeux sociaux et environnementaux de son activité.").

[6] The directors' report must contain a statement

> describing the action that has been taken during the financial year to introduce, maintain or develop arrangements aimed at—
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> (i) providing employees systematically with information on matters of concern to them as employees,
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> (ii) consulting employees or their representatives on a regular basis so that the views of employees can be taken into account in making decisions which are likely to affect their interests

as well as a statement summarizing how the directors have regarded the need to foster the company's business relationships with suppliers, customers, and others, "and the effect of that regard, including on the principal decisions taken by the company during the financial year." The Companies (Miscellaneous Reporting) Regulations 2018, SI 2018/860, art. 4, ¶ 11 (Eng.).

companies, both public and private, serve a social purpose."[7] Not only should companies provide profits to their shareholders, "but also show how [they] make a positive contribution to society."[8] Companies must benefit not only shareholders but "employees, customers, and the communities in which they operate" as well.[9]

Despite the Business Roundtable statement and pressure from some shareholders, corporate codes and trust law generally remain focused on promoting shareholder interests over other interests.[10] Thus, calls for increased focus on ESG issues—and more particularly, on the kind of sustainable investing that will help achieve the U.N.'s Sustainable Development Goals (SDGs)—run up against durable (if not always actionable) legal rules and norms.[11] In the United States, for example, corporate law, and especially Delaware law, remains committed to a shareholder wealth-maximizing orientation.[12] Leo Strine, formerly Chief Justice of the Delaware Supreme Court, summarizes Delaware law as requiring "directors of a for-profit corporation" to pursue at all times "the best interests of the corporation's stockholders;" stakeholder "interests can be considered, but only instrumentally, in other words, when giving consideration to them can be justified as benefiting the stockholders."[13]

Trust law, which provides standards of conduct for many investment intermediaries, including fund managers, also generally requires wealth maximization.[14] Assessing the law and economics of ESG investing by

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[7] Larry Fink, *Larry Fink's 2018 Letter to CEOs: A Sense of Purpose*, BLACKROCK, https://perma.cc/JM4M-J4BH (last visited Nov. 30, 2021).

[8] *Id.*

[9] *Id.* For an analysis of this position, *see* Bernard S. Sharfman, *The Conflict Between BlackRock's Shareholder Activism and ERISA's Fiduciary Duties*, CASE W. RESERVE L. REV. (publication forthcoming). In his 2019 letter to CEOs, Fink clarified that a socially-oriented corporate strategy is not inconsistent with profit maximization; indeed, such a strategy can "drive long-term profitability." He argues that "[p]urpose is not the sole pursuit of profits but the animating force for achieving them," and that "profits and purpose are inextricably linked" such that "[p]rofits are essential if a company is to effectively serve all of its stakeholders over time." Larry Fink, *Larry Fink's 2018 Letter to CEOs: Profit & Purpose*, BLACKROCK,https://perma.cc/6M7A-AVAR (last visited Nov. 30, 2021).

[10] *See* Amir N. Licht, *Varieties of Shareholderism: Three Views of the Corporate Purpose Cathedral* Table 1 (Eur. Corp. Governance Inst., L., Working Paper No. 547/2020, 2020), (reporting results of scholars in thirty countries, with twenty-two countries' codes having a stakeholder-oriented corporate code, and eight countries having a stakeholder-oriented corporate code).

[11] *See* Stephen M. Bainbridge, *The Business Judgment Rule as Abstention Doctrine*, 57 VAND. L. REV. 83, 88, 107–09 (2004) (explaining that the Business Judgment Rule effectively insulates directors from suits to enforce wealth maximization).

[12] Joan MacLeod Heminway, *Shareholder Wealth Maximization as a Function of Statutes, Decisional Law, and Organic Documents*, 74 WASH. & LEE L. REV. 939, 941–42, 949 n.28 (2017).

[13] 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, 771 (2015).

[14] *But see* Paul Rose, *Public Wealth Maximization: A New Framework for Fiduciary Duties in Public Funds*, 2018 U. ILL. L. REV. 891, 894 (2018) (arguing for the consideration of public benefits in the management of public pensions).

trustees of pensions, charities, and personal trusts, Sitkoff and Schanzenbach show that ESG investing is generally permissible for these fiduciaries only "if: (1) the trustee reasonably concludes that the ESG investment program will benefit the beneficiary directly by improving risk-adjusted return; and (2) the trustee's exclusive motive for adopting the ESG investment program is to obtain this direct benefit."[15] In corporate law and trust law, then, there is a clear disconnect between calls for increased ESG investing—at least to the extent that such investments sacrifice returns—and the legal imperatives and governance norms of wealth maximization.[16]

Bridging this disconnect is crucial to the achievement of the SDGs in two ways. First, to the extent that business practices and current regulatory structures have created the need for the SDGs, an increased focus on environmental sustainability by businesses may help reduce negative impacts over time. Second—and the focus of this Article—if the SDGs are to be met, private markets must provide the majority of financing for green and sustainable projects. Government efforts alone will not be sufficient to achieve the SDGs. To move from "billions to trillions" in sustainable investment capital, governments must mobilize private capital.[17] Yet, as noted above, legal doctrine in the United States generally disfavors (and for some fiduciaries, completely prohibits) sacrificing private profits for public benefits such as would be achieved under the SDGs.[18]

Some scholars have suggested bridging this gap by changing the legal obligations applicable to corporate and investment intermediary fiduciaries to allow them to pursue sustainable projects, even if the projects sacrifice some margin of risk-adjusted returns.[19] While reshaping fiduciary duties may be possible, the persistence of wealth-maximization norms, even in the presence of stakeholder-oriented constituency statutes

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[15] Max M. Schanzenbach & Robert H. Sitkoff, *Reconciling Fiduciary Duty and Social Conscience: The Law and Economics of ESG Investing by a Trust*e, 72 STAN. L. REV. 381, 385–86 (2020). *See* Ann M. Lipton, *ESG Investing, or, If You Can't Beat 'Em, Join 'Em*, RES. HANDBOOK ON CORP. PURPOSE AND PERSONHOOD 3, 14, 17 (2021) (discussing the rise of ESG and its policy and regulatory challenges).

[16] Some proponents of ESG investment contest this assumption. *See, e.g.*, Soh Young In et al., Is 'Being Green' Rewarded in the Market?: An Empirical Investigation of Decarbonization and Stock Returns 1–2, 30 (Aug. 29, 2019) (unpublished manuscript), https://perma.cc/3WUD-TBAC ("[F]ind[ing] that an investment strategy of 'long carbon-efficient firms and short carbon-inefficient firms' would earn abnormal returns of 3.5–5.4% per year.").

[17] *Infra* text accompany note 52.

[18] *See* Einer Elhauge, *Sacrificing Corporate Profits in the Public Interest*, 80 N.Y.U. L. REV. 733, 746 (2005).

[19] *See, e.g.*, KENT GREENFIELD, THE FAILURE OF CORPORATE LAW: FUNDAMENTAL FLAWS AND PROGRESSIVE POSSIBILITIES 130 (2006). For an insight into a leading international effort, see Afra Afsharipour, *Redefining Corporate Purpose: An International Perspective*, 40 SEATTLE U. L. REV. 465, 468–69 (2017) (describing the development of India's stakeholder-oriented 2013 Companies Act).

in many jurisdictions, suggests that such a reform would probably not be fruitful.[20]

This Article describes a different approach: the catalyzation of sustainable capital markets through sovereign investment and market development efforts.[21] Providing the first systematic account of these efforts, this Article shows how governments have tended to assume profit-maximization and are helping to develop sustainable investment markets by directly investing in sustainable projects, absorbing risks in those projects, and supporting the development of legal frameworks that reduce sustainable investment risks. Rather than pushing back on the concept of profit and wealth maximization as the theoretical and practical imperative of firm and fund decision-making, governments tend to take wealth maximization as given, and a review of the strategies used by governments to promote sustainable investment shows that they develop sustainable investment programs around that paradigm. Indeed, in some cases, government investors take on additional risk or sacrifice their own investment returns through "blended finance" schemes that aim to attract the profit-maximizing private investment capital necessary to fund sustainable investment projects.[22]

This Article proceeds in four Parts. First, this Article explains why governments use and foster investment as a primary tool to achieve the SDGs. This Part also describes the particular advantages sovereign investors bring to sustainable investment markets. Second, this Article describes how sovereign investors directly support sustainable markets through two main mechanisms. One mechanism is typified through sovereign wealth fund (SWF) investment activity, which mobilizes trillions in capital through direct investments. The other mechanism employs a relatively new form of sovereign fund, the strategic investment fund (SIF), to serve as an originator and cornerstone investor in sustainable development projects. Third, this Article describes two other

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[20] At least twenty-five states have in place statutes that permit directors to consider the interests of non-shareholder constituencies when making corporate decisions. However, these statutes are often not used to benefit non-shareholder constituencies. A recent study reviewed over 100 deals governed by constituency statutes found that corporate directors were found to "have used their discretion to obtain gains for shareholders, executives, and directors . . . [and] generally did not use their discretion to negotiate for any stakeholder protections." Lucian A. Bebchuk et al., *For Whom Corporate Leaders Bargain*, 93 S. CAL. L. REV. (forthcoming 2021).

[21] This Article also sometimes refers to such investment as "sovereign investment," in keeping with the common description of such investment by such government funds themselves. *See* INT'L WORKING GROUP OF SOVEREIGN WEALTH FUNDS, SOVEREIGN WEALTH FUNDS: GENERALLY ACCEPTED PRINCIPLES AND PRACTICES "SANTIAGO PRINCIPLES" 3, 5 (2008).

[22] Blended concessional finance has been defined as "[c]ombining concessional finance from donors or third parties alongside [development financial institution]s' normal own account finance and/or commercial finance from other investors, to develop private sector markets, address the Sustainable Development Goals (SDGs), and mobilize private resources." INT'L FINANCE CORP. ET AL., DFI WORKING GROUP ON BLENDED CONCESSIONAL FINANCE FOR PRIVATE SECTOR PROJECTS 7 (2019).

sustainable investment strategies: green and sustainable bond offerings and regulatory infrastructure construction, through which sovereign investors develop and support green finance and markets. Fourth, this Article outlines the risks associated with sovereign investment, including corruption, politicization, and the crowding-out of private investment, and notes the steps sovereign investors and government regulators take to mitigate these risks.

II. GOVERNMENTAL INTERESTS IN PROMOTING SUSTAINABLE INVESTMENT

The U.N. Conference on Trade and Development (UNCTAD) estimates that it will take $3.9 trillion each year from 2015 to 2030 to meet the SDGs in developing countries alone.[23] Currently, 36% of this amount is met by public investment plans, leaving a $2.5 trillion "gap that the private sector could potentially help address."[24] These figures highlight both the crucial role that sovereign investment plays in achieving the SDGs, as well as the need for governments to develop creative ways of unlocking private capital to help fund sustainable projects.

Sovereign investors bring considerable advantages to green financial markets. As further described in this Part, there are several reasons, beyond their standard role as regulators, why sovereign investors are uniquely suited to catalyze sustainable investment.[25] First, governments

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[23] U.N. CONFERENCE ON TRADE & DEVELOPMENT, PROMOTING INVESTMENT IN THE SUSTAINABLE DEVELOPMENT GOALS 2, UNCTAD/DIAE/PCB/2018/4 (2018).

[24] *Id.*

[25] This article generally uses the term "sustainable development" in accordance with the definition suggested in the Brundtland Report:

> Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits - not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities.

United Nations Report of the World Comm'n on Env't & Dev., *Our Common Future*, ¶ 27, U.N. Doc. A/42/427 (1987), https://perma.cc/97AL-R8CA. This is the definition the U.N. employs. *The Sustainable Development Agenda*, U.N. SUSTAINABLE DEV. GOALS, https://perma.cc/9FJJ-63KA (last visited Oct. 24, 2021). As Clark and Monk point out, however, sovereigns may have broader or narrower views of sustainability:

> [S]ustainability can be conceived in a variety of ways. For illustration, it could refer to economic development that provides a steady flow of jobs for younger citizens. Alternatively, it could also refer to the type of development that bridges resource dependency with the industrial exploitation of resource endowments. Moreover, it could also refer to economic development that sustains the local environment and the lives of indigenous people (e.g. the Brazilian Development Bank). For the Gulf States, sustainable economic development often implies long-term investment in alternative sources of energy.

Peter B. Clark & Ashby H.B. Monk, *Sovereign Development Funds: Designing High-Performance, Strategic Investment Institutions* 7 (Oct. 6, 2015) (unpublished manuscript), https://perma.cc/T525-VMFF.

differ from private investors in that private investors often ignore negative externalities of their economic activity, including pollution, depleted natural resources, or negative health or safety effects because governments will often absorb the costs of such widespread externalities.[26] For funds managing wealth on behalf of other investors, express or implied duties to act in the interests of the fund's beneficiaries may even lead a fund manager to ignore negative externalities altogether.[27] Governments (and their citizens) that ultimately pay for remediation of these negative externalities have an interest in addressing these costs through ex ante investment choices, and sovereign investors, including SWFs and SIFs, should seek to invest in ways that minimize and mitigate such externalities, particularly when the costs of remediation are significantly more expensive then the costs of prevention.[28] And, as externalities often spill across borders, sovereign investors also have an interest in encouraging other investors, including other sovereigns, to minimize and mitigate negative externalities through sustainable investment strategies.

Second, governments are not limited by investment time horizons that may affect the type and tenor of their investments.[29] Private investment vehicles, such as hedge funds, venture capital funds, and private equity funds, are generally set up as time-limited limited partnership vehicles, with a seven- to fifteen-year investment life cycle.[30] Even many pension funds do not take a longer-term, "generational" view of their investment time horizons. According to one recent survey, 78% of fiduciary investors considered themselves to be "long-term" investors, although more than one-third of the pension investors surveyed considered "long-term" to be ten years or less.[31] Unlike private funds or even public pension funds, SWFs and SIFs typically do not have individual beneficiaries or investors with fixed contractual claims.[32] As a result, they do not have liquidity requirements that may limit the kinds of investments they make and the length of their investment commitments. Many sustainability-related infrastructure investments are both illiquid and have very long investment time horizons, stretching

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[26] Rose, *supra* note 14, at 895.

[27] *Id.*

[28] *Id.*

[29] *Id.* at 921.

[30] *Difference Between Private Equity, Hedge Funds and Venture Capital*, BUYSIDE HUSTLE, https://perma.cc/46DG-SZ2T (last visited Nov. 2, 2021); Alexander J. Davie, *The Lifecycle of a Private Equity or Venture Capital Fund*, STRICTLY BUS. (June 29, 2017), https://perma.cc/G5MC-A2MU.

[31] Jonathan Williams, *Pension Funds Split Over Meaning, Duration of Long-Termism*, INV. & PENSIONS EUR. (Nov. 4, 2014), https://perma.cc/9E9T-MNZF.

[32] ASHBY H.B. MONK, CTR. FOR RETIREMENT RES., IS CALPERS A SOVEREIGN WEALTH FUND? 3, 5 (2008).

out to thirty years or more.[33] Whereas such investments may not be possible for other investors, they are ideal for sovereign investors.

Sovereign investment activity will be key to achieving the SDGs. In essence, governments are essential to the task of building sustainable markets not only because of their capacity as investors, but also because they absorb many of the costs of climate change, environmental degradation, and water scarcity, among a myriad of other costs. Although citizens, of course, bear the ultimate risks associated with these problems, governments serve a key function in regulating risk, mitigating risk, and insuring compensation for damages. Indeed, the role of the government is to bear many of these risks on behalf of their citizens, then redistribute the costs associated with these problems through complex systems of taxes, fines, health care expenditures, investments, and technological subsidies, among other systems. And governments operate, at least in theory, at a time scale that allows them to manage these systems across generations.[34] The following Part describes these two advantages in greater detail and provides a theoretical foundation for the practical implications described in Parts III and IV.

A. Governing to Protect the Residual Risk-Bearers

As noted above, governments absorb or attempt to redistribute many of the costs of negative externalities caused by private economic activity.[35] Governments may also foist negative externalities onto other countries and their citizens, either inadvertently or intentionally. For example, a government may fail to regulate a business in its jurisdiction that produces pollutants carried by air or water into neighboring jurisdictions. Perhaps most commonly, however, externalities will be localized within the jurisdiction. Whether or not these externalities are localized or exported, a resulting principle is manifest: the cost of these negative externalities is borne by other private individuals and, more generally,

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[33] ORG. ECON. CO-OPERATION AND DEV., GREEN INFRASTRUCTURE IN THE DECADE FOR DELIVERY: ASSESSING INSTITUTIONAL INVESTMENT 2, 6 (2020); *see* Travis Hoim et al., *3 Renewable Energy Stocks Worth Buying and Holding Until at Least 2050*, MOTLEY FOOL (Oct. 25, 2021) https://perma.cc/K9BX-UEFV (suggesting that profitable renewable energy stocks have a thirty-year horizon).

[34] One of the major concerns with governmental action in sustainable markets, as discussed in Part V, is that governments will pursue short-term goals out of political expediency. While governments may exist in perpetuity, politicians are typically term-limited and are subject to short-term pressures, such as the desire to win the next election. Calibrating a sustainable equilibrium for future generations may necessitate relatively unpopular sacrifices or changes in lifestyle for present generations.

[35] The Economist provides examples of negative externalities: "Loud conversation in a train carriage that makes concentration impossible for fellow-passengers. A farmer spraying weedkiller that destroys his neighbour's crop. Motorists whose idling cars spew fumes into the air, polluting the atmosphere for everyone." *Pigouvian Taxes*, ECONOMIST (Aug. 19, 2017), https://perma.cc/453C-PVZ2.

the government that provides health and safety services to affected individuals.[36]

To be sure, the government may decide not to provide remedies or services to those injured by the economic activity or may not provide such remedies or services completely or fairly. In part, this may be due to the difficulty in assessing the harmful impacts of a given economic activity. As Claire Hill has observed, calculating harms relating to negative externalities is not only an extremely complex task, but also one which cannot be divorced from a lived human context.[37] One can accept this observation, however, and still recognize that governments generally will pay for some of these externalities in health care costs, environmental remediation, lost economic productivity and associated tax revenues, and the other myriad of negative effects that might result directly and indirectly from the externalities. Then, the government will, with inevitable imprecision, attempt to resolve some of these negative externalities through fines, taxation, and encouragement of alternative modes of production that do not create as high a level of negative externalities as prior technologies and modes of production. Other costs will typically be passed through to taxpayers, either directly through increased taxes or indirectly through reductions in government services.[38]

Pigouvian taxes provide one method of reallocating these costs to the source; the goal of such taxes is to essentially tax negative externalities

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[36] Even in a privatized health care system, the federal government and state governments spend a significant portion of their overall budgets on health care services. United States government health care expenditures totaled $74.1 billion in 1970, $1.4 trillion in 2000, and $3.8 trillion in 2019. Rabah Kamal et al., *How Has U.S. Spending on Healthcare Changed Over Time?*, PETERSON-KFF (Dec. 23, 2020), https://perma.cc/D95A-483S.

[37] She observes,

> The concept of negative externalities is intuitively appealing. It is firmly entrenched in economic analysis even though it is almost impossible to apply with any rigor in many important real-world contexts. What is the baseline from which "pollution" is measured? How clean must the air and water surrounding the firm be? And whose costs must the firm take into account in order to internalize the externalities? Clearly, the firm's next door neighbors harmed by the polluted air generated by the firm. But what about people who are more remotely affected?
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> The answer to these questions cannot be determined mechanically. There is no neutral way to set the baseline below which deviations count as costs (and above which positive deviations count as benefits), nor is there a neutral way of determining whose costs count. Indeed, the baseline that separates negative and positive externalities and, more broadly, taking only one's own versus others' interests into account, is not only indeterminate, it is also dynamic, affected by actions and reactions.

Claire A. Hill, *The Rhetoric of Negative Externalities*, 39 SEATTLE U. L. REV. 517, 517–18 (2016).

[38] Note, however, that some of the immediate costs may be funded through sovereign debt, with the ultimate bill coming due many years in the future. Indeed, there is debate as to whether the United States will ever need to repay all of its debt. *See* James McBride et al., *The National Debt Dilemma*, COUNCIL ON FOREIGN RELS., https://perma.cc/W2NW-RMYS (last updated Sept. 9, 2020).

such that they compensate for the damages suffered.[39] Critics, however, have noted challenges in applying Pigouvian reallocation. Coase, for example, argued that the belief that businesses should be forced to compensate others for negative externalities comes from a failure to "compar[e] the total product obtainable with alternative social arrangements."[40] Similarly, he believed proposals to adjust for negative externalities using taxes or bounties are also likely to fail, in part because the compensation system itself is flawed.[41] He noted that economists tend to think of taxes exclusively as a means of remedying harms and believe governments capable of creating a tax equal to the damage done that also "var[ies] with the amount of the harmful effect[s]."[42] However,

> [a]s it is not proposed that the proceeds of the tax should be paid to those suffering the damage, this solution is not the same as that which would force a business to pay compensation to those damaged by its actions, although economists generally do not seem to have noticed this and tend to treat the two solutions as being identical.[43]

Aside from the problem of imperfect compensation is the difficulty in identifying negative externalities in a timely fashion. Many harms take years to be identified. By the time they are so identified, the firms that caused them may no longer exist, and there may be no successor company to charge with remediation (the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund),[44] for example, was created in part because of this problem).

Notwithstanding the difficulties in ascertaining risks and allocating remediation and other costs, governments still have an important role to play in mitigating externalities, particularly since these imperfections in allocation will result in governments bearing many of the costs associated

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[39] A Pigouvian tax, named after the British economist Arthur Pigou, is a corrective tax "designed primarily to change behavior rather than raise revenue." Victor Fleischer, Essay, *Curb Your Enthusiasm for Pigovian Taxes*, 68 VAND. L. REV. 1673, 1675 (2015). The idea behind Pigouvian taxes, Fleischer explains, "is that by placing a small tax, equal to marginal social cost, on each unit of an activity to be discouraged—environmental pollution is the most common example—prices will rise, forcing polluters to internalize the social cost of the harmful activity." *Id.*

[40] R.H. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1, 40 (1960).

[41] *Id.* at 40–41.

[42] *Id.* at 41.

[43] *Id.* Hovenkamp argues that Coase actually owes a great deal to Pigou:

> Rather than acknowledging that he was building on Pigou's own highly creative and important work, Coase treated Pigou as someone who was ignorant of the law, enthusiastic about government intervention, and naive about the economic world. But Pigou, in fact, laid the essential groundwork for Coase, who could not have done what he did without Pigou's work. Many of the observations that collectively make up what is known today as the "Coase Theorem" were made in the first instance by Pigou.

Herbert Hovenkamp, *The Coase Theorem and Arthur Cecil Pigou*, 51 ARIZ. L. REV. 633, 635 (2009).

[44] Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601–9675 (2018).

with the externalities. A primary governmental role is providing systems that allow for private ordering of externalities, such as enforceable property rights, efficient court systems, and the regulation of externalizing activities, e.g., through emissions standards. But governments can also play a more direct role in managing risk by nudging capital markets to help limit negative externalities *ex ante* (through investment and the promotion of certain types of investments) and catalyzing remedial investments *ex post*. This nudging role begins with sovereign investment schemes that recognize externalities—positive and negative—to the extent that they are identifiable. This recognition may affect investment policies in several ways, including by increasing focus on sustainable investment and infrastructure spending. And, as discussed in the following Part, these investment priorities will be aided by what should be a long-term focus in government sustainable investment programs.

B. Sovereign Investment Time Horizons

Governments, like corporations, religions, and other social entities, eventually vanish or undergo revolutions or other radical changes such that they may be considered new entities. But, like corporations and religions, governments can, at least in theory, exist in perpetuity.[45] Through SWFs and SIFs, the investment arms of governments, a government can construct an investment program to match this infinite time horizon. Practically, this manifests itself in the selection of long-term investments that have higher risk profiles. As explained by Al-Hassan et al., investment tenor directly impacts risk preferences:

> In general, the longer a fund's investment horizon is, the higher its capacity to take on investment risks is. A short investment horizon signals a lower scope for exposure to "risky" assets. Investment funds with a strong intergenerational savings orientation tend to view their long horizon and attendant ability to ride through market downturns as a key competitive advantage, and they allocate more aggressively to "risky" assets.[46]

Sovereign investment vehicles thus have a structural, strategic advantage over most other investors: they are able to invest for longer periods and are also able to take on higher levels of risk than other investors.[47] In addition, SWFs and SIFs, in contrast to pension funds,

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[45] *See, e.g.*, Andrew A. Schwartz, *The Perpetual Corporation*, 80 GEO. WASH. L. REV. 764, 766, 774 (2012).

[46] Abdullah Al-Hassan et al., *Sovereign Wealth Funds: Aspects of Governance Structures and Investment Management* 15 (Int'l Monetary Fund, Working Paper No. 13/231, 2013).

[47] *Id.* at 23. The authors explain that

> [i]n particular, financial risks generally have a positive relationship between the risks and expected return, as they carry a premium for assuming those risks. For example, more risky and/or less liquid asset classes, such as alternative investments,

typically do not have defined liabilities (such as required payments to beneficiaries) and so are not required to maintain liquidity in their portfolio in order to be able to pay out these obligations.[48] The long-term investment view of these investors is so central to their purpose and strategy that it is often written into their governance documents, with examples noted in Table 1.

Table 1. Statements of Long-Term Purpose Among Select Sovereign Funds

Country	Fund	Establishment	Purpose
Australia	Future Fund	2005	To strengthen the Australian government's long-term financial position by making provision for unfunded Commonwealth superannuation liabilities.
France	SIF	2008	To make strategic investments in French firms to prevent them from being bought at discounted prices by foreign investors through participation and investment in innovative enterprises with a long-term investment horizon.
Malaysia	Khazanah	2003	To promote economic growth and make

on average tend to generate higher returns than safer more liquid assets over medium to long-term investment horizons.

Id.

[48] The lack of defined liabilities is a key characteristic of SWFs, as explained by the International Forum of Sovereign Wealth Funds (IFSWF):

> SWFs are defined as special purpose investment funds or arrangements, owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies which include investing in foreign financial assets. The SWFs are commonly established out of balance of payments surpluses, official foreign currency operations, the proceeds of privatizations, fiscal surpluses, and /or receipts resulting from commodity exports.

INT'L WORKING GROUP OF SOVEREIGN WEALTH FUNDS, *supra* note 21, at 27. The IFSWF goes on to note that the definition excludes, inter alia, government-employee pension funds or assets managed for the benefit of individuals. *Id.* This is not to say that SWFs are not used as tools to help manage liabilities relating to pension underfunding; that is part of the explicit mandate of the Australia Future Fund, as noted in Table 1. However, even in such cases, SWFs "(may) have liabilities that are only broadly defined, thus allowing SWFs to employ a wide range of investment strategies with a medium- to long-term timescale." *Id.*

			strategic investments on behalf of the government, contributing to nation-building. To nurture the development of selected strategic industries in Malaysia with the aim of pursuing the nation's long-term economic interests.
Palestine	Palestine Investment Fund	2003	To strengthen the local economy through strategic investments while maximizing long-run returns for the fund's ultimate shareholder—the people of Palestine.
United Arab Emirates (UAE)	Mubadala	2002	To facilitate the diversification of Abu Dhabi's economy, focusing on managing long-term, capital-intensive investments that deliver strong financial returns and tangible social benefits for the Emirate.

Source: World Bank Data (taken from publicly available sources and fund disclosures).[49]

The ability to focus on long-range investments is particularly important in the context of sustainable investment. The very nature of sustainable investment suggests a long-term view of economic activity impacts. And practically, many investments one could characterize as contributing to sustainability are long-term, illiquid investments, such as infrastructure projects. Having outlined some of the advantages sovereign investors bring to sustainable investment, the following Part describes how sovereigns operationalize these advantages in designing sustainable investment strategies.

[49] Alan Gelb et al., *Sovereign Wealth Funds and Long-Term Development Finance: Risks and Opportunities* 6, tbl.2 (The World Bank, Policy Research Working Paper No. 6776, 2014).

III. SOVEREIGN SUSTAINABLE INVESTMENT STRATEGIES

A robust SDG investment program will require government involvement in two key roles. First, many governments invest in both public and private markets. SWFs, as a primary example of this role, have trillions in assets under management and invest broadly across public and private equity markets, debt markets, and real estate.[50] Some sovereign funds will also invest in local, national, and regional infrastructure projects which directly address SDGs.[51]

Second, governments sometimes function as brokers by originating or helping sell projects to private investors. This is a role already played by development banks, including the World Bank, which initiated an ambitious "billions to trillions" project in 2015.[52] As described in more detail below, sovereigns play this role through dedicated SIFs, a relatively new form of development entity that is especially well suited to invest in and support sustainable projects.

A. Buying in Public and Private Markets

Despite only recent significant media and scholarly attention, SWFs have been in existence for decades or, depending on one's definition, for centuries. The concept of using natural resource wealth as a store and creator of value for public needs dates back to the United States Land Ordinance Act of 1787.[53] As the United States admitted new states and expanded westward, legislators devised a land grant system whereby a portion of each township would be reserved in trust for the support of local

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[50] Claire Milhench, *Global Sovereign Fund Assets Jump to $7.45 Trillion: Preqin*, REUTERS (Apr. 12, 2018), https://perma.cc/NPP7-CKDM.

[51] *Id.*

[52] As stated by World Bank Group President Jim Yong Kim,

> Official development assistance, which stands today at about $135 billion a year, is a cornerstone of financing, especially in the poorest and most fragile countries. Now we have a responsibility to find new ways to leverage such generosity to crowd in private sector funding. We also must stop illicit financial flows and increase domestic resource mobilization. These measures will allow us to leverage the billions of dollars in official development assistance to trillions in investment of all kinds, whether public or private, national or global.

Jim Yong Kim, World Bank Grp. President, Billions to Trillions: Ideas to Actions, Address at the Third International Conference on Financing for Development (July 13, 2015). Recent research by the Overseas Development Institute casts some doubt on the success of such efforts to date, however: "Experience to date suggests a reality check is required to calibrate the policy debate and temper expectations and bridge the current disconnection between policy rhetoric and the operational reality: 'billions to billions' might be a more plausible goal." SAMANTHA ATTRIDGE & LARS ENGEN, OVERSEAS DEV. INST., BLENDED FINANCE IN THE POOREST COUNTRIES: THE NEED FOR A BETTER APPROACH 32 (2019).

[53] Ordinance of 1787: The Northwest Territorial Government art. III(2018); ALEXANDRA USHER ET AL., CTR. ON EDUC. POL'Y, PUBLIC SCHOOLS AND THE ORIGINAL FEDERAL LAND GRANT PROGRAM: A BACKGROUND PAPER FROM THE CENTER ON EDUCATION POLICY 2 (2011)(explaining the United States Land Ordinance Act of 1787 as emphasizing the need for public school development).

schools.[54] As originally envisioned, a central tract of land would house a school, although states could also use the land as a resource that could be sold or used for resource extraction and sale.[55] Many states quickly converted their trust lands into cash, sold off mineral or timber rights to the land, or otherwise disposed of the trust lands to fund basic governmental services, including public education.[56] But other states, particularly in the West, preserved large tracts of trust lands and use them to this day to support state budgets or to preserve wealth for future generations.[57] The largest of these permanent trust funds, the Texas Permanent School Fund, has $46.7 billion in assets under management.[58]

More modern SWFs typically derive from different political-economic imperatives than funding a particular governmental spending priority, but the design of the modern structure is the same: the government sets aside commodity or trade revenue wealth to smooth budgets, increase returns on currency reserves, or help fund government services for present and future generations.[59] SWFs command a vast amount of capital, with nearly eight trillion dollars in assets under management, more than private equity funds and hedge funds combined, with an even

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[54] THOMAS DONALDSON, THE PUBLIC DOMAIN, ITS HISTORY, WITH STATISTICS 223, 226 (1884).

[55] MILTON A. PEARL ET AL., LAND GRANTS TO STATES 13–14 (1970).

[56] DONALDSON, *supra* note 54, at 22–23.

[57] *See generally*, M Nicolas J. Firzli & Joshua M. Franzel, *Non-Federal Sovereign Wealth Funds in the United States and Canada: Public Asset Accumulation and Investment in Developed Economies*, 52 REVENUE ANALYSE FINANCIERE 6, 7–8 (2014), *available at* https://perma.cc/Q66B-9LH4 (showing permanent funds created for states).

[58] TEX. PERMANENT SCH. FUND, COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR THE FISCAL YEAR ENDING AUGUST 31, 2020, at 5 (2020). The history of the Texas Permanent School Fund differs from many of the other states and reflects Texas' unique entry into the union. As part of the agreement to enter the union, the Republic of Texas gave up claims to lands that now form part of New Mexico, Colorado, and Oklahoma in exchange for ten million dollars. In 1854, the Texas Legislature used two million dollars from these settlement funds to create the Special School Fund. However, throughout its long history, proceeds from the fund have not been used exclusively for the benefit of schools:

> Although the original purpose of the Special School Fund had been to provide the state with a public school system, almost as soon as it established the fund, the legislature began to seek ways to use it for purposes other than educational. First, railroad stock was purchased by the principal to encourage railroad construction in Texas. Second, the legislature used the money to build state prisons. The Civil War in 1861 initiated the largest raid on the Special School Fund, as the Confederate state of Texas used the highly negotiable United States Treasury Bonds to purchase weapons for the Confederacy in the international arms markets of London and Paris. Fortunately for the fund the Civil War ended before the bonds were exhausted. At the end of the war, unsettled economic conditions and the occupation of the state by federal troops made public school issues a matter of secondary importance.

Michael E. McClellan, *Permanent School Fund*, *in* HANDBOOK OF TEXAS (Tex. St. Hist. Ass'n 1995). In 1876, however, the legislature took steps to restrict the use of the fund to preserve it for the use of schools only, renaming it the Permanent School Fund "and plac[ing] strict guidelines on the fund's investment." *Id.*

[59] INT'L WORKING GROUP OF SOVEREIGN WEALTH FUNDS, *supra* note 21, at 12–13.

greater difference if SWF capital is removed from the count of private equity and hedge fund assets.[60]

Government funds play a variety of functions in a national economy, but all can be characterized as performing two types of risk mitigation functions. Some funds function as long-term risk mitigators: they help manage long-term risks by, among other things, providing funds to buttress governmental obligations (such as pension payments) or to ensure intergenerational equity. Other funds help to manage short-term risks, such as exchange rate risks and short-term budget stresses.

Within these two broad categories, government funds may be categorized by their specific purpose, or rather, the specific type of risk they are intended to mitigate. The IMF, for example, offers a categorization of five types of SWFs based on their objectives:

> (i) *stabilization funds*, where the primary objective is to insulate the budget and the economy against commodity (usually oil) price swings; (ii) *savings funds* . . . which aim to convert nonrenewable assets into a more diversified portfolio of assets and mitigate the effects of Dutch disease; (iii) *reserve investment corporations*, whose assets are often still counted as reserve assets, and are established to increase the return on reserves; (iv) *development* [or strategic investment] *funds*, which typically help fund socio-economic projects or promote industrial policies that might raise a country's potential output growth; and (v) *contingent pension reserve funds*, which provide (from sources other than individual pension contributions) for contingent unspecified pension liabilities on the government's balance sheet.[61]

More recently, the Global SWF aligned government investment funds in four categories: 1) central bank reserve funds, 2) stabilization funds, 3) savings funds, and 4) development or strategic investment funds.[62] Many governments will have more than one of these types of funds, as shown in the table below:

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[60] Orinola Gbadebo-Smith, *The Wealth of Nations: Investment Strategies of Sovereign Wealth Funds*, TOPTAL, https://perma.cc/XYZ4-MCVH (last visited Nov. 3, 2021); Adam Putz, *What Is a Sovereign Wealth Fund?*, PITCHBOOK (Jan. 23, 2019), https://perma.cc/266R-SG6J; ELLIOT HENTOV & ALEXANDER PETROV, HOW DO SOVEREIGN WEALTH FUNDS INVEST? LESS AND LESS CONTRARIAN 3 (2020).

[61] INT'L MONETARY FUND, SOVEREIGN WEALTH FUNDS—A WORK AGENDA 5 (2008). Ping and Chao's categorization of sovereign funds has five similar types of funds: 1) stabilizing funds, which "stabilize national income across different periods and reduce the impact of accidental income fluctuations over economy and fiscal budget;" 2) offsetting funds, which "assist the central bank to channel forex reserves, intervene in the forex market and absorb excessive liquidity;" 3) savings funds, which "stabilize national wealth across generations and save up for future generations;" 4) preventative funds, which "prevent national social or economic crisis and promote . . . smooth socioeconomic development;" and 5) SIFs, which "support national development strategy, optimize asset allocation globally, nurture world-class businesses and better serve national interest in international economic activities." XIE PING & CHEN CHAO, THE THEORETICAL LOGIC OF SOVEREIGN WEALTH FUNDS (2009).

[62] GLOBAL SOVEREIGN WEALTH FUND, 2021 ANNUAL REPORT 7 (2021).

Table 2: Categorization of Sovereign Funds

Selected Country	Central Bank	Stabilization Fund	Savings Fund	Development Fund
Bahrain	●		●	●
Chile	●	●	●	
China	●	●	●	●
Ghana	●	●	●	●
Hong Kong	●	●	●	
Kazakhstan	●	●	●	●
Kuwait	●	●	●	
Malaysia	●		●	●
Mongolia	●	●	●	●
Nigeria	●	●	●	●
Norway	●	●	●	
Oman	●		●	●
Panama	●	●	●	-
Qatar	●		●	●
Russia	●	●	●	●
Saudi Arabia	●	●	●	●
Singapore	●		●	●
South Korea	●		●	-
UAE – Abu Dhabi	●		●	●
UAE – Dubai	●			●

Source: *Global SWF* analysis, Jan. 2021[63]

Each of these categorizations presents a type of risk to be mitigated, whether a budgetary risk, an exchange rate risk that may negatively impact a country's exports, a political risk related to intergenerational equity, or a political risk associated with globalization, such as a risk that a country will not develop a modern economic system and workforce that will allow it to compete successfully in a global marketplace.

These categorizations highlight important differences in how funds are governed and how they invest. The nature of the risk the fund is designed to mitigate also dictates the kinds of investments the fund can make. Liabilities drive investment practices. For example, a fund designed to "sterilize" foreign capital flows so that they do not affect currency exchange rates will need to invest in assets denominated in the currency of the jurisdiction from which the capital flows, essentially balancing out sales in a particular currency with purchases in that same currency.[64] Funds designed to help develop a country's economy or transfer wealth across generations can take a long view and hold illiquid

[63] *Id.* at 34.

[64] Lucio Sarno & Mark P. Taylor, *Official Intervention in the Foreign Exchange Market: Is It Effective and, If So, How Does It Work?*, 39 J. ECON. LIT. 839, 841–42 (2001).

assets less desirable to other funds.[65] Funds designed to respond to short-term crises must hold cash, cash equivalents, or other highly liquid assets that can be easily converted into cash.[66] Holding publicly-traded securities in large quantities might create significant losses both for the fund and other investors if a fund were forced to make a massive emergency sale.

Most government investors, such as SWFs, spend the majority of their capital outside their home jurisdictions.[67] This happens for several reasons, including that a primary purpose of government investment (and indeed, one of the primary political and economic purposes of SWFs) is to mitigate some of the impacts on currency exchange rates from massive selling of domestic assets (such as commodities like oil and gas) in exchange for foreign currency.[68] Government funds can help equalize these flows and their currency impacts by purchasing assets denominated in these foreign currencies.

Perhaps even more importantly, however, government funds will invest in foreign markets because they lack sufficient profitable domestic investments (or the return on such investments would be significantly lower than foreign investments if the fund were to invest substantial resources in local firms).[69] For government funds of any significant size, this is almost certain to be the case, especially where the size of the fund is relatively large with respect to the size of the domestic markets; SWFs will typically have foreign portfolios with extensive foreign holdings.[70] According to estimates by the IE Foundation and España Exportación e Inversiones (ICEX), SWFs and other sovereign-linked funds own approximately 8% of all listed equities worldwide.[71] In Europe, Norway's

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[65] *See* RAJIV SHARMA, SOVEREIGN WEALTH FUNDS INVESTMENT IN SUSTAINABLE DEVELOPMENT SECTORS 2 (2017) ("Pension reserve funds, savings funds or reserve investment funds . . . may have longer term liabilities and more flexibility to invest in illiquid, more risky longer term assets.").

[66] *Sovereign Wealth Funds*, CFA STUDY GUIDE (Aug. 21, 2020), https://perma.cc/LTG2-TT3V.

[67] *See* Veljko Fotak et al., *A Financial Force to be Reckoned With? An Overview of Sovereign Wealth Funds* 18 (Econ. Corp. Governance Inst., Finance Working Paper No. 476/2016, 2016).

[68] ECONOMICS OF SOVEREIGN WEALTH FUNDS: ISSUES FOR POLICYMAKERS 22 (Udaibir S. Das et al. eds., 2010).

[69] For a discussion of some of the risks of domestic investment, *see* Alan Gelb et al., *Sovereign Wealth Funds and Domestic Investment in Resource-Rich Countries: Love Me, or Love Me Not?* ECON. PREMISE, 2014, at 1, 2 (noting the risks of "lack of government capacity for project selection, appraisal, design and implementation; weak governance and regulatory frameworks; and lack of coordination among government entities, as well as political economy issues"). Domestic investment also raises accountability issues when it is done at concessionary rates, as such investments "would greatly complicate the accountability of the fund because its management could no longer be benchmarked on financial returns." *Id.* at 4.

[70] *Id.* at 1.

[71] IE FOUND. & ICEX, SOVEREIGN WEALTH FUNDS 2017, at 66 (Javier Capapé & Javier Santiso eds., 2017).

Government Pension Fund Global (GPFG) alone owns approximately 2.5% of all European-listed stocks.[72]

1. Sovereign Wealth Fund Investment in Sustainable Portfolios

Sovereigns engage in sustainability investment through a variety of entities and mechanisms. In some cases, sovereigns may create specialized state-owned enterprises to manage sectors of a sustainability program. This is often the case when sovereigns engage in large-scale projects that require special-purpose entities, such as the SIFs described in Part III.B. below, to oversee the development or operation of a project.[73] For investments that do not involve direct, controlling ownership, sovereigns will often create general investment vehicles such as SWFs.[74]

Sustainability and climate change are not considered niche interests of a narrow group of shareholders but instead are widely recognized as key investment concerns for government-linked investors, including public pension funds, SWFs, and SIFs. Note, however, that the objective of this interest is, for SWFs at least, typically profit maximization. For example, Norges Bank Investment Management (NBIM), which manages Norway's $1 trillion GPFG, expresses its focus on sustainability and climate change as an economic and fiduciary imperative.[75] For the NBIM, climate change is a crucial risk factor, and it has created a set of expectations for its portfolio companies with respect to climate risk management:

> The point of departure for our climate change expectations is our long-term financial objective of safeguarding the fund's assets. Climate change issues, including physical impacts and regulatory and technological responses, may give rise to risks and opportunities for companies. How companies manage

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[72] NORGES BANK INV. MGMT., GOVERNMENT PENSION FUND GLOBAL: ANNUAL REPORT 2018, at 28 (2018).

[73] *See generally The Rise of the State-Owned Enterprise*, TRANSLATEMEDIA (Feb. 13, 2015), https://perma.cc/Y4UX-LKVL (describing how state-owned enterprises are able to undertake riskier projects such as infrastructure, given the lack of financial accountability).

[74] *See* JÜRGEN BRAUNSTEIN, SOVEREIGN WEALTH FUNDS: THE EMERGENCE OF STATE OWNED FINANCIAL POWER BROKERS 50, 58, 74 (Aug. 18, 2009) (savings and stabilization SWFs are characterized as portfolio investments, which, unlike direct investments, only establish a claim on an asset for the purpose of realizing some return); Paul Rose, *Sovereign Wealth Funds: Active or Passive Investors?*, YALE L. J., 2008, at 104, 105 ("[SWF]s intentionally structure their transactions so that they do not acquire a controlling interest in the portfolio firm.").

[75] *See The Fund's Market Value*, NORGES BANK INV. MGMT., https://perma.cc/LHW6-T9HG (last visited Oct. 25, 2021) (calculating the market value of the investment fund at over eleven trillion Norwegian Krone which converts to over one trillion United States Dollars); NORGES BANK INV. MGMT., *supra* note 72, at 71 (stating that the NBIM "expect boards to understand how their companies impact on the environment and society, set their own priorities and report on the results").

> transition and physical risks and opportunities, may drive long-term returns for us as a shareholder.[76]

As described above, government funds have incentives to manage climate, environmental, ecological, and related health risks and can do so in part through managing equity investments. Recognizing these risks, a consortium of SWFs has joined together in producing a set of best practices that focus on "mitigate[ing] the effects of climate change"; these principles are outlined in "The One Planet Sovereign Wealth Fund Framework" summarized in Table 3.[77]

Table 3. One Planet SWF Framework

Principle	Subprinciples
PRINCIPLE 1: ALIGNMENT Build climate change considerations, which are aligned with the SWFs' investment horizons, into decision-making.	**Principle 1.1** SWFs recognize that climate change will have an impact on financial markets.
	Principle 1.2 Due to their long-term investment horizon and diverse investment portfolios, SWFs recognize that climate change presents financial risks and opportunities that should be incorporated into the investment framework.
	Principle 1.3 In accordance with their respective mandates, SWFs should report on their approach to climate change.
PRINCIPLE 2: OWNERSHIP Encourage companies to address material climate change issues in their governance, business strategy and planning, risk management, and public reporting to promote value creation.	**Principle 2.1** SWFs expect company boards to understand the consequences of their business practices for climate emissions and to set clear priorities for the company to address relevant climate change issues.
	Principle 2.2 SWFs expect companies to plan for relevant climate scenarios and incorporate material climate risks in their strategic planning, risk management and reporting.
	Principle 2.3 SWFs encourage public disclosure by companies to understand how climate change may affect their future performance and what actions they are taking.
	Principle 2.4 SWFs should encourage the development and adoption of agreed standards and methods that promote the disclosure of material climate-related data.

[76] NORGES BANK INV. MGMT., CLIMATE CHANGE STRATEGY: EXPECTATIONS TOWARDS COMPANIES 1 (2019).

[77] ONE PLANET SUMMIT SOVEREIGN WEALTH FUNDS, THE ONE PLANET SOVEREIGN WEALTH FUND FRAMEWORK (2018).

PRINCIPLE 3: INTEGRATION SWFs should integrate the consideration of climate change-related risks and opportunities into investment management to improve the resilience of long-term investment portfolios.	**Principle 3.1** SWFs should identify, assess and manage portfolio risks generated by the expected transition to a low-emissions economy and from the potential physical impacts of climate change.
	Principle 3.2 SWFs can draw on and develop analytical tools to inform portfolio allocation and investment decisions.
	Principle 3.3 SWFs should consider investment opportunities that arise from the global effort to address climate change.
	Principle 3.4 SWFs should consider approaches to reducing portfolio exposure to climate-related risks.
	Principle 3.5 SWFs can promote research on issues related to the financial implications of climate change.

Norway's GPFG, as the world's largest SWF, has been a leader in weaving sustainability into its investment decision-making, as described above.[78] However, tension often results as funds focus on financial incentives for divestment or investment while also recognizing what might be termed "ethical" objectives in fund investment. A fund such as Norway's may face political pressure to invest or divest according to societal norms, which may not always be related to profit maximization.[79] These political views take expression in the GPFG's ethical investment guidelines.[80] The guidelines include two major features: 1) exclusion of companies from the portfolio on the basis of their manufacture of certain products, and 2) exclusion from the portfolio on the basis of certain conduct.[81] The product exclusions include, among other things, "weapons that violate fundamental humanitarian principles through their normal use" and tobacco products.[82] Conduct exclusions include:

> a) serious or systematic human rights violations, such as murder, torture, deprivation of liberty, forced labor and the worst forms of child labor
>
> b) serious violations of the rights of individuals in situations of war or conflict

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78 NORGES BANK INV. MGMT., *supra* note 76.

79 Camilla Bakken Øvald et al., *The Norwegian Petroleum Fund as Institutionalized Self-Restraint*, *in* GREAT POLICY SUCCESSES 244, 245 (Mallory E. Compton & Paul T Hart eds., 2019).

80 GUIDELINES FOR OBSERVATION AND EXCLUSION FROM THE GOVERNMENT PENSION FUND GLOBAL, NORWAY MINISTRY OF FINANCE 1 (2019).

81 *Id.* at 2–3.

82 NORGES BANK INV. MGMT., RESPONSIBLE INVESTMENT: GOVERNMENT PENSION FUND GLOBAL 2017, at 83 (2017).

> c) severe environmental damage
>
> d) acts or omissions that on an aggregate company level lead to unacceptable greenhouse gas emissions
>
> e) gross corruption
>
> f) other particularly serious violations of fundamental ethical norms.[83]

A number of well-known international companies are or have been excluded from the portfolio on these bases, including Airbus, Boeing, Freeport-McMoRan, and many others.[84] In all, over 150 companies are excluded from the GPFG portfolio, with product exclusions accounting for 70% of the total exclusions and conduct exclusions accounting for about 30%.[85]

Besides the tool of exclusion (and almost certainly more importantly than exclusion), some large government investors have been using their market power to convince companies to engage on sustainability issues. Although not a SWF, the California Public Employees Retirement System (CalPERS) has been a pioneer in this effort for decades and provides an important example of government investor focus on sustainability.[86] CalPERS has produced a set of "Investment Beliefs" as a signal to portfolio companies and others of its commitments.[87] Investment Belief 4 states that "[l]ong-term value creation requires effective management of three forms of capital: financial, physical and human."[88] This belief drives

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[83] GUIDELINES FOR OBSERVATION AND EXCLUSION FROM THE GOVERNMENT PENSION FUND GLOBAL, *supra* note 80, at 3.

[84] *Observation and Exclusion of Companies*, NORGES BANK INV. MGMT., https://perma.cc/RRF8-YTB3 (last visited Oct. 5, 2021). Walmart was placed on the list of excluded companies in 2006 because it "contradicts internationally recognised human rights and labour rights standards, both through its suppliers in a number of countries in Asia, Africa and Latin America, and in its own operations." RECOMMENDATION OF 15 NOVEMBER 2005, COUNCIL ON ETHICS FOR THE NORWEGIAN GOVERNMENT PENSION FUND (2006), https://perma.cc/BU8D-F6AS. However, Walmart was taken off the exclusions list in 2019 after the Council on Ethics "reviewed the GPFG's exclusion of Walmart and concluded that the grounds therefor [sic] no longer exist." *Recommendation to Revoke the Exclusion of Walmart Inc and Wal-Mart de Mexico S.A.B. de C.V from Investment by the Government Pension Fund Global (GPFG)*, COUNCIL ON ETHICS FOR THE NORWEGIAN GOV. PENSION FUND 1 (May 8, 2019), https://perma.cc/5JSK-FXML.

[85] *Observation and Exclusion of Companies*, *supra* note 84.

[86] *Ahead of Historic SDGs Summit, UNEP and CalPERS Call for Policy Overhaul to Align Institutional Investment with Sustainable Development*, U.N. ENV'T PROGRAMME (Sept. 15, 2015), https://perma.cc/9AWT-U8DW.

[87] CALPERS, CALPERS BELIEFS: OUR VIEWS GUIDING US INTO THE FUTURE 3 (2015).

[88] *Id.* at 6. CalPERS states that the way to achieve long-term value creation is through leveraging governance: "Governance is the primary tool to align interests between CalPERS and managers of its capital, including investee companies and external managers. Strong governance, along with effective management of environmental and human capital factors, increases the likelihood that companies will perform over the long-term and manage risk effectively." *Id.*

their corporate engagement policies, which seek to engage corporations in four key areas:

- "Governance practices, including but not limited to the alignment of interests
- Risk management practices
- Human capital practices, including but not limited to fair labor practices, health and safety, responsible contracting, and diversity
- Environmental practices, including but not limited to climate change and natural resource availability."[89]

The GPFG also has a sophisticated corporate engagement program. Like CalPERS, the GPFG considers the importance of governance on long-term growth, with a view that "[i]n delivering a long-term return, we are dependent on sustainable growth, well-functioning markets and good corporate governance."[90] As an indication of the extent of the GPFG's engagement efforts, its 2018 "Responsible Investment" report notes that the GPFG "participated in two international initiatives, met regulators in nine markets, and responded to 13 public consultations. [GPFG] voted at 11,287 shareholder meetings, held 3,256 meetings with companies, and analyzed the reporting of 2,256 companies."[91]

As noted above, the GPFG, like CalPERS, has created a set of expectations for companies that focuses directly on climate change: "Boards [of portfolio companies] should integrate relevant climate change challenges and opportunities in their business management, such as investment planning, risk management, and reporting. They should ensure that responsibilities are clearly defined within the organization and effectively guide, monitor, and review the company's management in these efforts."[92] Norway's efforts are the exception, however, and not typical practice for government funds.

Sovereign funds, like other large institutional investors, may not integrate climate risks in their investment decision-making for a number of reasons. The U.N. Environment Programme's Resources and Markets Branch identifies several factors that impede SWF engagement on climate issues.[93] The first and most important reason is the difficulty of reconciling "[t]he apparent conflict between the fiduciary mandate of preserving and growing national wealth through financial returns and the consideration of climate change as a non-financial factor."[94] For funds such as Norway's, climate-related issues are seen as financial risks, not as social issues. Because the risks may be difficult to identify and value,

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89 *Id.*

90 NORGES BANK INV. MGMT., *supra* note 72, at 13.

91 *Id.* at 11.

92 NORGES BANK INV. MGMT., *supra* note 76, at 3.

93 U.N. ENV'T PROGRAMME, FINANCING SUSTAINABLE DEVELOPMENT: THE ROLE OF SOVEREIGN WEALTH FUNDS FOR GREEN INVESTMENT 8–9 (Working Paper, 2017).

94 *Id.* at 8.

however, some funds do not treat them as financial factors even though it seems highly likely that climate issues will impact financial returns. Related to this concern are worries about the performance of green portfolios, including "doubts about the performance of certain green indexes, and the idea of losing out financially as a result of divesting from oil and gas companies."[95]

CalPERS provides a clear example of how funds often struggle with questions of divestment and financial performance. Like the GPFG, CalPERS excludes certain companies from its portfolio based on ESG policies.[96] Unlike the GPFG, however, CalPERS does not provide a detailed rationale for its exclusions and does not publicly disclose its list of excluded companies.[97] As of the end of 2018, only twenty-two companies were reportedly on the exclusion list, although "the list is not static and can change throughout the year."[98]

In 2001, CalPERS' began to divest from companies producing tobacco products.[99] A study by CALPERs' investment consultant, Wilshire Associates, determined that the $345.6 billion fund lost $3.581 billion in investment gains from its divestment decision.[100] Notably, however, CalPERS divestment program has yielded some gains after tobacco was excluded, with a modest "0.2% return between the first quarter of 2008 and June 30[, 2018]."[101] When the issue of reinvesting in tobacco stocks was recently raised by investment committee member Jason Perez, a California police sergeant, and two other committee members, the proposal was voted down by the thirteen-member committee.[102] In part, the decision to not reinvest was based on recent downturns in tobacco stock prices, which the CalPERS investment consultant determined would have resulted in losses of around $500 million from the beginning of 2017 to the end of the second quarter of 2018 had CalPERS maintained its tobacco investments.[103]

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95 *Id.* at 9.

96 Randy Diamond, *CalPERS Decision to Divest from Tobacco Is Costly*, CHIEF INV. OFFICER (Dec. 12, 2018), https://perma.cc/99HE-CT8C.

97 *Id.*

98 *Id.* (citing Megan White, a CalPERS spokeswoman).

99 *Id.*

100 *Id.*

101 *Id.* Wilshire estimated a return of $592 million during that period. *Id.*

102 Randy Diamond, *CalPERS Investment Committee Rejects Tobacco Reinvestment Again*, CHIEF INV. OFFICER (Apr. 9, 2019), https://perma.cc/C6GM-U9CW. The debate, it seems, was primarily financially oriented. Perez stated, "I don't smoke, but my charge isn't to worry about people's health, it's about making sure the fund is making the returns that it is supposed to . . . . If it's legal and it's no way connected to terrorism and it's profitable, we should be in it." *Id.* Investment Committee member Theresa Taylor argued, however, that "[w]e are currently losing money on tobacco, [if CalPERS had reinvested]. I don't see any point in buying in at this point." *Id.* Perez rebutted that "the big tobacco companies are just waiting for [President] Trump to make weed legal and they're going to start jumping into that stuff." *Id.*

103 *Id.*

The U.N. also notes that sovereigns often do not have national sustainable development policies, and some societies lack demand for greener portfolios, which creates legitimacy concerns for a sovereign considering policies that are significantly out of step with societal interests and preferences.[104] Finally, establishing an investment program like CalPERS or the GPFG takes substantial investment, and some sovereigns are wary of making such an investment if they are unsure of the returns on the investment.[105] But like the GPFG, many funds are finding that accounting for negative externalities leads to improved performance of the fund and long-term profit maximization.[106] In theory, as discussed above, governments should also benefit from reduced negative externalities that would ordinarily be absorbed over the ensuing years and decades.

B. Sovereigns as Brokers and Cornerstone Investors

In addition to providing billions in capital through sustainability-oriented SWF portfolio investment, achieving the U.N.'s SDGs will require participating nations to invest extensively and directly in sustainable projects. The scope and scale of the SDGs are so vast that governments must harness the power of capital markets and allow private financial incentives to drive the expansion of sustainable development markets.

Governments must create conditions that will foster the development of investible projects so that there is an adequate supply of projects to meet the SDGs. Regulators are only now beginning to develop the monitoring and disclosure structures that will spur and sustain green finance.[107] Providing regulatory support for green finance, such as by developing green bond regulatory structures, will also generate increased demand for green projects by helping generate trust and accountability in sustainable investment markets.

Considering the problems of both supply and demand, it is the former that presents the greatest challenge. For potential SDG project investors generally, it is not a lack of capital that keeps them from investing in such projects but a lack of investible projects that meet the investors' criteria for sustainable investment. The demand for green bonds, for example, dramatically outstrips supply.[108] In part, this may be due to higher costs

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104 U.N. ENV'T PROGRAMME, *supra* note 93, at 9.

105 *Id.* at 8–9.

106 This is supported by recent empirical research on sustainable investing. *See* Soh Young In et al., *supra* note 16 (finding that a carbon efficient-minus-inefficient portfolio would generate positive abnormal returns since 2010 "and an investment strategy of 'long carbon-efficient firms and short carbon-inefficient firms' would earn abnormal returns of 3.5–5.4% per year").

107 DOUGLAS BEAL ET AL., NARROWING THE SDG INVESTMENT GAP: THE IMPERATIVE FOR DEVELOPMENT FINANCE INSTITUTIONS 1–3 (2018).

108 CLIMATE BONDS INITIATIVE, GREEN BOND EUROPEAN INVESTOR SURVEY 18 (2019).

associated with green projects,[109] but is perhaps more closely linked to the lack of defined sustainability-linked regulatory structures.[110]

As a sovereign fund, SIFs' long-term focus affords them an advantage in the pursuit of many SDG projects. As suggested above, many institutional investors may hesitate to invest in infrastructure investments, for example, because such investments lack the liquidity and shorter-term time horizon that might fit the investment within the investors' risk parameters.[111] While this means that government investors often face reduced competition for such deals (presumably decreasing the price for such deals and increasing the returns for the sovereigns), the lack of investors creates another problem: some otherwise value-creating deals might not make it to market because of a recognized lack of potential buyers, thereby reducing deal opportunities for sovereigns.[112] The problem, then, is not a lack of available funds to invest. Indeed, in a low-interest-rate market, such as has been held in effect by central banks around the world since the Financial Crisis, the market in sustainable investment opportunities could be expected to offer an excess of opportunities.[113] This is not the case, however, as the number of investible deals is much smaller than the willing and available capital.

Boston Consulting Group (BCG) identified two primary reasons for this mismatch.[114] First, "private investors have limited visibility into potential [infrastructure] projects" and may not be aware of scalable, large-impact projects awaiting sufficient capital.[115] Second, "many high-impact projects require creative structuring, including government

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109 K. Thomas Liaw, *Survey of Green Bond Pricing and Investment Performance*, 13 J. RISK & FIN. MGMT. 1, 1 (2020) (noting that "[t]he certification, independent verification, and ongoing reporting add costs to green bond issuance in the short run").

110 CLIMATE BONDS INITIATIVE, *supra* note 108. Regulatory factors that could assist in facilitating a greater supply include "standardisation of green bond definitions [and] consistency of reporting," among other things. *Id.* These regulatory efforts are discussed in Part IV.B.

111 BEAL ET AL., *supra* note 107, at 3–4.

112 Clark and Monk explain:

> The comparative advantage SDFs [have] over traditional financial institutions is their ability to realize investment returns from proprietary knowledge of local opportunities, privileged access to those opportunities, and trusted relationships with other investors, public or private. As such, despite the dual objectives of these funds, many SDFs have been remarkably successful at generating financial returns. Examples of top performing SDFs include Singapore's Temasek, which has generated a 40-year total shareholder return (TSR) of 18%; Malaysia's Khazanah Nasional Berhad ('Khazanah'), which has a 10-year internal rate of return (IRR) of 13%; South Africa's Public Investment Corporation (PIC) has a 10-year IRR of 16%; and Palestine's Investment Fund (PIF) has had a 10-year IRR of 10.3%.

Clark & Monk, *supra* note 25, at 2.

113 A Boston Consulting Group report quotes an investor for a major insurance company as stating that "[t]he banks and insurance companies have identified infrastructure project finance as a place to get better yields than the public bond markets, . . . [s]o there is a flood of capital chasing deals right now." BEAL ET AL., *supra* note 107, at 3.

114 *Id.*

115 *Id.*

funding or first-loss capital from [development finance institutions (DFIs)] and development banks, in order to be attractive to private investors."[116] However, "such deal structuring remains the exception rather than the rule."[117]

"[T]o accelerate the flow of private capital into SDG-advancing projects,"[118] BCG offers a series of proposals directed to DFIs, including specialized development banks that are typically controlled by national governments,[119] and multilateral development banks such as the World Bank, the European Bank for Reconstruction and Development, the Inter-American Development Bank Group, and the Asian Development Bank.[120] Among other things, BCG proposes that DFIs identify projects with potential scalability, starting with those which "could offer greater development impact if more investment were brought in or if complementary skills, such as the supply chain expertise of large corporations, were brought to the table."[121] DFIs must develop relationships with institutional investors and private equity firms, discover what frictions have impeded their participation in SDG deals, and work with them in structuring deals that will be attractive to them.

While development banks have helped and will continue to help in this role, deeper-pocketed sovereigns are also beginning to play a similar function. As Halland et al. have noted, SIFs often step into this structuring role with the kind of creative structures needed to fill the investment gap:

> [I]f public finance within the fund is used to increase the risk-adjusted rate of return for private investors, an SIF may leverage private funds that invest in relatively high-risk regions or projects, yet need finance with low-risk premiums. Typical instruments for this are first-loss equity and capped return. First-loss equity means that the public sector investors take equity stakes in an SIF with a first-loss position, thereby increasing the number of projects within the SIF that can fail before the private sector investors lose money. In a capped-return arrangement, the government's return on the capital investment is capped, allowing co-investors access to higher upsides on their investments.[122]

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116 *Id.*

117 *Id.*

118 *Id.*

119 *Development Finance Institutions (DFIs)*, EUROPEAN DEV. FIN INST., https://perma.cc/B5RL-DY6A (last visited Oct. 27, 2019).

120 *Multilateral Development Banks*, U.S. DEP'T TREASURY, https://perma.cc/C3C4-FU4Y, (last visited Dec. 1, 2021).

121 BEAL ET AL., *supra* note 107, at 3.

122 HÅVARD HALLAND ET AL., STRATEGIC INVESTMENT FUNDS: OPPORTUNITIES AND CHALLENGES 16–17 (World Bank, Policy Research Working Paper No. 7851, 2016). They provide an example of a first-loss arrangement with the European Fund for Southeast Europe (EFSE):

> The EFSE operates as a market enabler, facilitator, and risk taker as well as an innovator and incubator for new financial products. Donor or public capital constitutes

The U.N. has also recognized the need for promoting private capital investment in SDG deals. The U.N. believes that sovereigns can help fill this gap by developing their own objectives for achieving the SDGs, identifying how different types of investments can help achieve those goals, and recognizing the role investment promotion agencies—which can include government investors, and particularly SIFs—can play in helping to source and fund SDG deals.[123] Like BCG, the U.N. Conference on Trade and Development has identified a process whereby public investors can leverage private investment in SDGs. The suggestions include ranking and selecting individual projects according to promotability and desirability for the country, working with government partners to build a pipeline of projects, identifying individual companies that are likely to be interested in investing in these projects, building relationships with potential financing partners, promoting projects "both in the traditional manner of investor-targeting and by engaging institutional investors and finance partners," and "provid[ing] regular feedback to the various stakeholders in the design, packaging, promotion and facilitation of . . . projects to enhance location competitiveness, improve promotional effectiveness, and continue building a marketable portfolio of potential projects."[124]

In performing these functions, sovereign investment vehicles like SIFs are acting as deal originators and brokers in the sustainable investment market. Guided by multilateral development banks, the legal structures, entity choices, and investment strategies of government investors suggest that they see themselves as competing with private equity and venture capital firms for investment partners. As described in the next Part, governments often create a double-bottom-line entity, a SIF, which operates like a public benefit corporation in that the entity has both a profit motive and a defined social objective. However, when seeking co-investment capital, SIFs generally do not ask their co-investors to forgo any potential profit. Instead, they assume that the market will demand profit maximization and structure their transactions accordingly. Governments are thus absorbing risk (and sometimes losses) to support sustainable projects while operating within a wealth-maximizing market for capital.

> the first-loss tranche— that is, the tranche to be used first in the event of losses. [International Financial Institutions] invest in the mezzanine tranche, private investors in the senior tranche. Because of its investment structure, the EFSE is able to provide access to long-term finance at market conditions to qualified investors. To undertake an investment, different sources of funds representing different risk-level tranches are pooled into a single source of financing for the EFSE. For the investment portfolio in each country, the proportion of the different risk tranches contributing to the total amount of pooled funds remains intact. Hence, donors and other investors hold a specific share of the pooled funds in the amount of their original nominal contribution to the EFSE.

Id. at 17.

123 U.N. CONFERENCE ON TRADE & DEVELOPMENT, *supra* note 23, at xi.

124 *Id.* at xii.

1. The Development of Strategic Investment Funds

Sovereigns typically execute development strategies through dedicated investment funds. About thirty SIFs have been created around the world since 2000.[125] As summarized by Inderst, SIFs are characterized by:

- "state ownership;
- domestic investment (fully or predominately);
- catalyzing private capital ("crowding in")"; and
- multiple objectives.[126]

Along with financial returns, other objectives include, among other things: "economic growth, employment; social progress (for example, housing, health and education facilities); development of strategic industries (for example, transport, energy, technology, [natural] resources); green, sustainable, or climate change investments; capital market development; competitiveness, external trade."[127]

The World Bank similarly defines SIFs as "special purpose investment vehicles backed by governments or other public institutions and that seek to invest in, and mobilize commercial capital to, sectors and regions where private investors would otherwise not invest or invest to a limited extent."[128] SIFs act as intermediaries that ideally operate at arm's length from their sponsor government.[129] "By capitalizing on their public

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[125] HALLAND ET AL., *supra* note 122, at 9.

[126] Georg Inderst, *Strategic Investment Funds: Different Animals to Deal With*, INV. PENSIONS EUR. (Sept. 2016), https://perma.cc/6F5D-TCFG.

[127] *Id.*

[128] WORLD BANK GRP., STRATEGIC INVESTMENT FUNDS: ESTABLISHMENT AND OPERATIONS 19 (forthcoming 2022). According to the World Bank, SIFs exhibit each of the following characteristics, which helps to distinguish them from other types of government funds: SIFs:

> a) Are initiated by, and fully or partly capitalized, by one or more governments, or by quasi sovereign entities (e.g. government-owned global or regional development finance institutions);
>
> b) Invest primarily in unlisted assets—either domestically or thematically—to achieve financial returns as well as the fulfilment of a policy objective ("double bottom line"); the latter is sometimes referred to as the pursuit of economic returns;
>
> c) Aim to mobilize commercial co-investment at the fund and/or project level;
>
> d) Provide long-term patient capital, primarily as equity, but also quasi-equity and debt;
>
> e) Operate as professional fund managers on behalf of their investors, targeting commercial financial returns;
>
> f) Are established as pools of assets (or funds) through a variety of legal structures, such as investment company, trust, statutory corporation or a limited partnership.

Id.

[129] *Id.*

and private sector linkages, SIFs act as specialized intermediaries for governments that seek to finance sectors which are underserved by private finance."[130]

SIFs offer unique advantages as investors and as co-investors. SIFs are not bound by profit maximization legal rules or norms.[131] Thus, they are able to absorb risks and even losses that other market participants would not be willing to accept.[132] Because they are implicitly backed by the government, SIFs may present favorable credit risk profiles compared to many private investors.[133] Sovereigns may improve the overall risk profile of the project, such as through the first-loss structuring model described above.[134] SDG deals that otherwise would not have been possible may be packaged and priced so that other investors are willing to participate.[135]

SIFs may also receive favorable tax treatment, which can enhance the profitability of investments and make possible otherwise unprofitable investments. Tax advantages already help sustain many sustainability-linked local government bond issuances in the United States, for example.[136]

Finally, having a SIF (particularly an experienced, sophisticated fund) as part of an investment consortium can provide important signals about deal quality. For example, SIFs can provide a project with transactional legitimacy by providing an enhanced assurance that the project will be seen to completion. In part, this legitimacy is linked to a sovereign's ability to reduce regulatory frictions that may otherwise impede a project.[137] This is likely to be especially true with respect to deals involving domestic infrastructure, which often have significant permitting and other regulatory costs. Although government investors may also introduce certain risks, they provide stability and an implicit

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130 *Id.*

131 *See id.* at 55–57 (explaining the legal framework of a SIF which varies by laws used to establish the SIF along with private agreements relevant to the operation of the SIF and the public laws in the jurisdiction in which it operates).

132 This is not to suggest that government investment efforts, for example, are not run professionally and to maximize returns; SWFs and SIFs are typically managed by professional money managers who operate under standard governance models. Some funds are designed to maximize wealth and invest on a purely commercial basis. Other funds, however, have a mandate to invest to allow for both fund and public good benefits, also known as a "double-bottom-line" mandate. *See* HALLAND ET AL., *supra* note 122, at 13, 16–17.

133 *Id.* at 16.

134 *Id.* at 16–17.

135 "An SIF capitalized with government borrowing will have the option of using the spread between the expected risk-adjusted return of the fund's investments and the cost of borrowing, to provide favorably priced credit or return enhancement to attract private investors, thereby increasing the multiplier." *Id.* at 18.

136 *See* Mattia Landoni, *Tax Distortions and Bond Issue Pricing*, 129 J. FIN. ECON. 382, 382–83 (2018) (describing how taxes act as a subsidy for municipal bond offerings).

137 Paul Rose, *The Political and Governance Risks of Sovereign Wealth*, 4 ANNALS CORP. GOVERNANCE 147, 175, 178 (2019).

sovereign guarantee that will put other investors and counterparties at ease.[138]

The goal of a SIF is to crowd in capital on commercial, profit-maximizing terms. As Clark and Monk explain, this crowding-in function benefits not only green markets, generally, but also can contribute to the performance of the SIF itself: "[SIFs] participating in emerging domestic industries reap greater financial and developmental returns when private and public investors (of other nations) also commit capital to those industries. For example, if [a SIF] can credibly display commercial acumen, it can syndicate local deals with investors who might have sought opportunities elsewhere."[139]

For many of these funds, they will be operated as "public capital multipliers," meaning that they are designed not only to invest themselves (often in sustainable investments) but also to crowd in investment from private investors.[140] The "public capital multiplier" is defined as the ratio of total investment to public funds invested in a certain project and can be calculated at the fund level and at the project investment level.[141] The two calculations can then be combined to produce a "total or overall multiplier," with the total investment volume divided by the amount of public capital.[142] Halland et al. provide the following estimates of public capital multipliers for prominent SIFs (Table 4):[143]

Table 4. Select SIF Private Capital Multipliers

Fund	Year	Capitalization	Fund Multiplier	Investment Multiplier	Total Multiplier
EFSI	2015	€21 billion	1x	6.7x	6.7x
Marguerite	2010	€710 million	1x	11.8x	11.8x
GEEREF	2008	€112 million	2x	35.8x	~71x
ISIF	2014	€7.6 billion	1x	2.4x	~2.4
PAIDF	2007	$625 million	4.2	4	16.7x
PINAI	2012	$625 million	25x	Unknown	~25x
MMIF	2008	$408 million	5x	10.3	51.7x
FONSIS	2016	€28 million	1x	9.6x	9.6x
PBCE	2012	€230 million	3x	~6x	~19x

Although still fairly new, SIFs are already showing themselves to be an important force in generating and sustaining SDG-focused deals and

138 *See* discussion *infra* Part V.A.

139 Clark & Monk, *supra* note 25, at 11.

140 HALLAND ET AL., *supra* note 122, at 14–15.

141 *Id.*

142 *Id.* at 15.

143 *Id.* The listed SIFs include: European Fund for Strategic Investments (EFSI); Fonds Souverain d'Investissements Stratégiques (FONSIS); Global Energy Efficiency and Renewable Energy Fund (GEEREF); Ireland SIF (ISIF); Philippine Investment Alliance for Infrastructure (PINAI); 2020 European Fund for Energy, Climate Change, and Infrastructure (Marguerite); Macquarie Mexico Infrastructure Fund (MMIF); Pan-African Infrastructure Development Fund (PAIDF); Europe 2020 Project Bond Initiative (PBCE). *Id.*

are doing so by marshaling private capital at high multiples.[144] As described in the following Part, this success depends on a SIF structure that provides co-investors with a reliable commitment that the SIF will operate to maximize and protect co-investors' risk-adjusted returns.

2. The Legal and Governance Structure of Strategic Investment Funds

Sovereigns seeking to serve as originators of deals must provide credible legal and governance arrangements in order to capitalize on the natural advantages discussed above. These include arrangements that "provide incentives for the SIF's board and management to pursue shareholders' objectives, and facilitate the monitoring of performance by shareholders and owners."[145] SIFs and other sovereign entities also benefit from insulation between the sovereign and the fund managers so that the fund may avoid corruption and politicization.[146] In addition, "[t]ransparent and timely reporting of accounting information, and strong external audit systems, help increase the market credibility of an SIF, particularly when the fund engages in [public-private partnerships]."[147]

Sovereigns increasingly use SIFs to catalyze sustainable investment. SIFs tend to come in two varieties: public capital funds,[148] which are set up and funded through the government itself, or "mixed capital SIFs," which are "initiated and funded by a public entity but also includ[e] investment by commercial entities," such as large institutional investors and other sovereign investors.[149] Sovereigns creating SIFs must consider the legal framework for both the SIF itself (the choice of legal form at the "entity" level), as well as for any project that the SIF may originate (the choice of legal form at the "project" level).

The type of funding will typically determine both the choice of entity for the fund as well as the domicile and choice of law provisions. A sovereign will usually create a public capital SIF through specific legislation that will create a bespoke fund with specialized funding, investment, withdrawal, and governance mechanisms.[150] Tailored legal frameworks for SIFs trying to raise investment capital for public works projects, such as infrastructure development, may worry other investors for several reasons, however. SIF-specific law may leave gaps in the legal and regulatory framework that generate risk and uncertainty, unlike

144 *Id.* at 19.

145 *Id.*

146 *Id.* at 20.

147 *Id.* at 19.

148 Public capital SIFs are more fully defined as "SIFs that are fully capitalized by a government or other public entity, such as a multilateral development bank (MDB) or development finance institution (DFI). Within this category, public capital SIFs that are wholly capitalized and managed by a single government are sometimes referred to as 'sovereign development funds.'" WORLD BANK GRP., *supra* note 128, at 20.

149 *Id.* at 14.

150 *Id.* at 58–59.

"more robust and tested commercial law."[151] SIF-specific legislation highlights the status of the entity as a non-private, sovereign-controlled entity, which may also create risk in the minds of other investors of the SIF's independence.[152] Furthermore, a SIF that is not subject to standard "commercial law may also be more at risk of creating an unlevel playing field between private players operating in the market and the SIF."[153] This is because the sovereign, as the sole shareholder in the SIF, may "exercise full discretion over the SIF's organizational and governance set up" and operations, whereas "SIFs that fully comply with corporate [or other entity] law are at least subject to the same legal framework as any other for-profit investor."[154]

Because a mixed-capital SIF is designed to catalyze investment from other investors, sovereigns will typically create the fund using common, commercial structures that tend to replicate profit-maximizing private equity and venture capital funds.[155] The legal structure of the SIF itself is designed to give confidence to other investors that the SIF will be managed independently and under normal, commercial norms. As with a private equity investment scheme, for example, a SIF may create a private placement memorandum, a fund investors' agreement, and an investment management agreement, all of which define the rights of the investors and the responsibilities of managers in market-based terms that private investors expect in standard, private, profit-maximizing transactions.[156]

As noted earlier, commercially-oriented investors, such as an infrastructure-oriented private equity fund or a large institutional investor seeking to expand its sustainable investment portfolio, may find particular advantages in dealing with SIFs. Some of these benefits arise from the ability of SIFs to leverage their status as state-affiliated entities. In the World Bank's study on SIF development and operation, a case study describes the motivations of Meridiam, a large infrastructure private equity fund, in partnering with SIFs in African infrastructure and sustainable development projects.[157] Meridiam notes several advantages that SIFs bring to the fund as a co-investor or lead investor.[158] Investors depend on a pipeline of investible projects, and investors such as Meridiam may enter into pipeline-sharing arrangements with SIFs; Meridiam entered into such an agreement with Senegal's Fonds Souverain d'Investissements Stratégiques.[159]

SIFs can also help increase the probability of success for early-stage development projects, as sovereigns best know their domestic

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151 *Id.* at 57.
152 *Id.*
153 *Id.*
154 *Id.*
155 *Id.*at 67.
156 *Id.* at 76.
157 *Id.* at 260.
158 *Id.* at 260–61.
159 *Id.* at 260.

infrastructure needs. And, because "[t]he pathway from agenda to project execution . . . is often lengthy and unpredictable," SIFs are well positioned to use "their privileged access to government [officials to] advocate for projects backed jointly by them and infrastructure funds to be prioritized in the national agenda."[160] Investors may also receive reputational benefits from partnering with a SIF as "[a] partnership with a SIF can highlight the infrastructure fund's long-term commitment to the country and sector, and solidify the private fund's standing as a serious counterpart (for instance when it comes to negotiating offtake agreements with utilities)."[161] SIFs may also help introduce co-investors to other capital providers and deal sources, such as banks and national development institutions.[162]

SIFs seeking capital from other investors also offer standard, private-equity-like dispute resolution mechanisms in their contractual arrangements. SIFs will often make use of fund investors agreements and investment management agreements that are set up under private equity investment agreement norms; these agreements will typically include provisions that provide for arbitration with a standard arbitral seat (such as London, Paris, Singapore, Hong Kong, or Geneva) and a standard arbitral institution to manage the proceedings (such as The London Court of International Arbitration, International Chamber of Commerce, the Singapore International Arbitration Centre, the Hong Kong International Arbitration Centre, the International Centre for Settlement of Investment Disputes, or the International Centre for Dispute Resolution/American Arbitration Association).[163]

By structuring themselves according to private investment standards and norms, SIFs (and in particular, mixed-capital SIFs, which are most likely to seek private co-investors) provide a credible commitment to wealth-maximizing private investors. By reducing transaction costs and, in some cases, absorbing deal risks, SIFs will play a key role in developing pipelines of investible SDG-linked deals. However, as described in Part IV, governments can also support sustainable markets by developing regulatory frameworks that support not just sovereign-linked deals, but all sustainable market transactions.

IV. OTHER SOVEREIGN MARKET DEVELOPMENT STRATEGIES

In addition to direct investment schemes, governments support sustainable markets in at least two other ways. First, the government may directly fund green projects through debt arrangements such as green bond issuances.[164] Both national and subnational governments are

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160 *Id.*

161 *Id.* at 261.

162 *Id.*

163 *Id.* at 76–77.

164 CLIMATE BONDS INITIATIVE, GREEN BONDS: THE STATE OF THE MARKET 2018, at 2 (2019).

leading issuers of green bonds and climate bonds, which help fund a wide variety of SDG projects.[165] Second, governments impact the achievement of the SDGs in their role as regulators.[166] By helping to create the right market conditions for sustainable finance, providing workable definitions, developing flexible and robust legal frameworks, and eliminating transactional frictions, governments will be able to support issuing, investing, and brokering activities that drive the market in sustainable finance.

A. Bond Offerings

As the green bond market began to operate at scale in 2012, development banks provided much of the initial funding to catalyze the market and to demonstrate the viability of green bonds.[167] Green financing has grown considerably in recent years; sustainable debt issuances totaled $465 billion globally in 2019, an increase of 78% from the $261.4 billion offered in 2018.[168]

In recent years, sovereigns and local governments have made up an increasingly large percentage of the market[169] (though local governments often lead sovereigns in their pursuit of green projects).[170] Early sovereign green bond issuers included France (January 2017), Fiji (November 2017), and Nigeria and Poland (December 2017), with the Climate Bonds Initiative (CBI) marking 2017 as "the year of the sovereign."[171] This momentum continued into 2018, with issuances by Belgium, Indonesia, Lithuania, Ireland, and Seychelles.[172] In 2019, sovereigns continued to issue bonds at an increasing pace (Table 5), and development banks and subnational governments were also active issuers (Table 6 and Table 7, respectively).[173]

Table 5. Sovereign Green Bond Issuances 2019

Issuer	Amount Issued	Currency

165 *Id.* at 3.

166 *Id.* at 22.

167 *Id.* at 20–21.

168 Bloomberg NEF, *Sustainable Debt Sees Record Issuance at $465Bn in 2019, Up 78% From 2018*, BLOOMBERG (Jan. 8, 2020), https://perma.cc/896F-DQ9D.

169 The Climate Bonds Initiative notes in its 2018 report, however, that issuances by local governments were smaller in 2018 than in 2017, in part because of a shift by local governments to sustainability projects. Under the Climate Bonds Initiative definitions, a project may only be considered "green" if it is "specifically linked to climate-change mitigation and adaptation & resilience." CLIMATE BONDS INITIATIVE, *supra* note 164 at 23. Typically, such projects are directly linked to certain SDGs, including SDGs 6, 7, 9, 11, 13, 14, and 15. *Id.*

170 "Local governments – cities, municipalities, regions, states and provinces – are generally early-stage green bond adopters in their respective domestic markets and typically continue to issue on a regular basis. This demonstrates their commitment and awareness, and helps to achieve their country's climate and energy efficiency goals." *Id.* at 21.

171 CLIMATE BONDS INITIATIVE, SOVEREIGN GREEN BONDS BRIEFING 2 (2018).

172 CLIMATE BONDS INITIATIVE, *supra* note 108, at 11, 16.

173 Climate Bonds Initiative Data, Aug. 15, 2019 (on file with author).

Export-Import Bank of Korea	33,800,000	USD
Federal Government of Nigeria	15,000,000,000	NGN
Republic of Chile	861,000,000	EUR
Republic of Chile	1,418,000,000	USD
Republic of France	2,471,000,000	EUR
Republic of France	1,737,000,000	EUR
Republic of Indonesia	2,000,000,000	USD
Republic of Poland	2,000,000,000	EUR

Table 6. Development Bank Green Bond Issuances 2019

Issuer	Amount Issued	Currency
Asian Development Bank	1,000,000,000	SEK
Asian Development Bank	1,000,000,000	AUD
African Development Bank	1,250,000,000	SEK
European Bank for Reconstruction and Development	28,580,000,000	HUF
European Bank for Reconstruction and Development	2,500,000,000	SEK
European Bank for Reconstruction and Development	816,000,000	EUR
European Investment Bank	3,000,000,000	DKK
European Investment Bank	400,000,000	AUD
European Investment Bank	1,000,000,000	PLN
European Investment Bank	500,000,000	EUR
International Finance Corporation	35,000,000,000	COP
International Finance Corporation	131,000,000	EUR
Nordic Investment Bank	2,000,000,000	SEK
World Bank (IBRD)	500,000,000	USD

World Bank (IBRD)	27,000,000	GBP
World Bank (IBRD)	200,000,000	AUD
World Bank (IBRD)	250,000,000	EUR

Table 7. Select Subnational Government Green Bond Issuances 2019

Issuer	Amount Issued	Currency
Societe du Grand Paris	1,000,000,000	EUR
California Pollution Control Finance Authority	117,200,000	USD
Canton of Basel Stadt	100,380,000	CHF
Canton of Basel Stadt	200,000,000	CHF
City and County of San Francisco	157,310,000	USD
CPPIB	1,000,000,000	EUR
Illinois Finance Authority	450,000,000	USD
Indiana Finance Authority	266,740,000	USD
Iowa Finance Authority	215,990,000	USD
Province of Ontario	950,000,000	CAD
Province of Quebec	800,000,000	CAD
Queensland Treasury Corporation	1,250,000,000	AUD
Region Skane	700,000,000	SEK
Region Skane	300,000,000	SEK
Societe du Grand Paris	2,000,000,000	EUR
State of Connecticut	250,000,000	USD
Stockholms Lans Landsting	1,000,000,000	SEK
Stockholms Lans Landsting	1,000,000,000	SEK

The cost of green bond issuance tends to be higher than traditional bonds because of the need to verify investments as "green" or sustainable.[174] Notwithstanding these costs, CBI identifies numerous advantages for sovereigns issuing green and sustainability-linked bonds.

[174] JOHN CHIANG, GROWING THE U.S. GREEN BOND MARKET 17 (2017).

A green bond can signal a "sustainable, low-carbon growth" strategy and will typically promote internal collaboration between government agencies (usually treasury and sustainability departments).[175] Green bonds also help sovereigns broaden and deepen their investor base. CBI notes that in Poland's green bond issuance, for example, green investors accounted for "61% of the investor pool, almost none of which had previously invested in sovereign bonds from Poland."[176] A deeper pool of investors may increase demand for other kinds of sovereign debt, and higher demand for green bonds can also result in better prices for government issuers.[177]

Governments can also use a green bond issuance to signal a sustainability agenda and reinforce a country's reputation on sustainability matters. Nigeria, for instance, used its "green bond to show a commitment to a more diversified economy and the future development of low-carbon sectors."[178] Issuing green bonds can be part of a larger strategy to develop a domestic green finance market by defining a regulatory and process path that may encourage other issuances and a deeper, more liquid market, and help to de-risk an economy by encouraging private sector investments in low-carbon and climate-resilient infrastructure projects.[179]

CBI also notes that sovereign green bonds may be structured to provide tax benefits and subsidies that can crowd in private investments in certain sectors that governments have identified as priorities in their SDG program.[180] Issuances may also help make investors aware of other green project pipelines. Finally, green bond issuances can help to signal international leadership on sustainability. And in countries with underdeveloped bond markets, a green bond program can put pressure on regulators and self-regulatory organizations to engage in broader bond market reform.[181]

In operating as green bond issuers, sovereigns are subject to the wealth-maximization imperatives of the capital markets. To test this assertion, researchers have investigated whether the growth in sovereign-issued green bonds is driven by a willingness of investors to sacrifice returns. While Martin and Moser observe managers and investors trading off wealth for "societal benefits" in an experimental setting,[182] Larcker and Watts find that in practice, investors appear to wealth-maximize.[183] Using a matched set of similar green and non-green

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175 CLIMATE BONDS INITIATIVE, *supra* note 171.

176 *Id.* at 3.

177 *Id.*

178 *Id.*

179 *Id.*

180 *Id.*

181 *Id.*

182 Patrick R. Martin & Donald V. Moser, *Managers' Green Investment Disclosures and Investors' Reaction*, J. ACCT. & ECON., 2015, at 1, 11.

183 David F. Larcker & Edward M. Watts, *Where's the Greenium?*, J. ACCT. & ECON., 2020, at 1, 2.

municipal securities offerings, Larcker and Watts examine differences in pricing to determine "whether investors are willing to forgo pecuniary benefits to invest in environmentally friendly projects."[184] They do not find a difference in pricing—a so-called "greenium," or green premium, sacrificed by investors to participate in green offerings—but instead find results which "strongly suggest that United States municipal investors are entirely unwilling to sacrifice returns to invest in green securities."[185]

Sovereigns are expected to continue pushing into green debt markets and recharacterizing some traditional sovereign debt issuances as green bond issuances when possible.[186] As described below, this push will be augmented by the development of regulatory structures that reduce the cost of green bond issuances for sovereign issuers, subnational issuers, development banks, and private issuers.

B. Building Green Finance Regulatory Structures

As this Article has shown, the development of green and sustainable finance has operated within, and not despite, a profit-maximizing market orientation.[187] Investors are typically unwilling (and in many cases not legally permitted) to sacrifice returns to invest in sustainable assets.[188] As a result, governmental regulators and self-regulatory organizations are developing standards that assume profit maximization. Rather than ask investors to sacrifice returns to invest in sustainable assets, they are filling regulatory and contractual gaps[189] by developing default standards and processes to lower the cost of issuance and improve green investment verification and disclosure standards.[190] This Part will describe the development of green bond regulation, although the principles and structures described here may also be applied to other forms of sustainable investment.

The development of sustainable investment markets has been aided by the creation of standards for projects that are identified and, in some

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184 *Id.* at 21.

185 *Id.* They note that the "pattern is robust to perceived differences in liquidity or institutional ownership" and "that greenwashing by issuers is unlikely to be responsible for [the] findings." *Id.*

186 CLIMATE BONDS INITIATIVE, *supra* note 171, at 4 (noting that "[n]ot all eligible expenditures may be included in a first green bond. Once a green bond framework is set up, most issuers return to market, revealing the benefits of labelling the issuance as 'green'").

187 *See* discussion *supra* Part III.B.2.

188 Larcker and Watts' study findings reflect practitioners' views. *See supra* note 183, at 2–4, 14–15, 21 (discussing the securities involved implicating securities law). For example, California Treasurer John Chiang's office surveyed green bond investors, and they "unanimously said their firms would not accept a lower yield for a green bond." CHIANG, *supra* note 174, at 14.

189 Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L. J. 87, 87–88 (1989).

190 *See* CLIMATE BONDS INITIATIVE, *supra* note 171, at 3 (noting how governments are able to promote price advantages and visibility).

cases, third-party certified as "green."[191] The standards are the result of the collective efforts by development banks, the United Nations, and independent certification organizations such as CBI.[192] Recently several governments have begun to provide specific standards for green bond issuances as well.[193]

The size and scope of the green bond market is inevitably bounded by the definitions applied to the term "green." For the International Capital Market Association, a green bond is defined through the Green Bond Principles (GBP), which describe green bonds as "any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects . . . and which are aligned with the four core components of the GBP."[194] The four components of the GBP include:

"1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting."[195]

The Use of Proceeds component requires that green bonds "provide clear environmental benefits, which will be assessed and, where feasible, quantified by the issuer."[196] The determination of environmental benefit is linked to the Green Project categories; the list of GBP-eligible "Green Projects," set out in Table 8, is intended to be "indicative [and] captures the most commonly used types of projects supported by or expected to be supported by the Green Bond market."[197]

Table 8. Green Bond Principles: Green Project Categories

Category	Examples
Renewable energy	Energy production, transmission, appliances and products
Energy efficiency	New and refurbished buildings, energy storage, district heating, smart grids, appliances and products
Pollution prevention and control	Reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/emission-efficient waste to energy

191 *See id.* at 4 (describing processes of issuing a green bond).

192 *See* Shitiz Chaudhary, *Look for the Green Bond Label? The State of Green Bond Certification*, CONSERVATION FIN. NETWORK (Mar. 16, 2020), https://perma.cc/DK9Y-3E2X (describing how the International Capital Market Association and the CBI have provided standards that helped the market).

193 *See* Abdeali Saherwala, *As Green Bonds Grow More Popular, It's Time for Clearer Standards*, GREENBIZ (Aug. 17, 2021), https://perma.cc/MW22-Y2DD (pointing out that India and China have been developing their own standards).

194 INT'L CAPITAL MKTS. ASS'N, GREEN BOND PRINCIPLES: VOLUNTARY PROCESS GUIDELINES FOR ISSUING GREEN BONDS 3 (2018).

195 *Id.*

196 *Id.*

197 *Id.*

Environmentally sustainable management of living natural resources and land use	Environmentally sustainable agriculture; environmentally sustainable animal husbandry; climate smart farm inputs such as biological crop protection or drip-irrigation; environmentally sustainable fishery and aquaculture; environmentally-sustainable forestry, including afforestation or reforestation, and preservation or restoration of natural landscapes
Terrestrial and aquatic biodiversity conservation	Protection of coastal, marine and watershed environments
Clean transportation	Electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions
Sustainable water and wastewater management	Sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation
Climate change adaptation	Information support systems, such as climate observation and early warning systems
Eco-efficient and/or circular economy adapted products, production technologies and processes	Development and introduction of environmentally sustainable products, with an eco-label or environmental certification, resource-efficient packaging and distribution
Green buildings	Construction meeting regional, national or internationally recognized standards or certifications

The second component of the GBP, Process for Project Evaluation and Selection, requires issuers to provide disclosures to investors that communicate "the environmental sustainability objectives" of the project, "the process by which the issuer determines how the projects fit within the eligible Green Projects categories," and "the related eligibility criteria, including, if applicable, exclusion criteria or any other process applied to identify and manage potentially material environmental and social risks associated with the projects."[198] The GBP recommend but do not require that the issuer's selection process include "an external review."[199]

The third component, Management of Proceeds, requires issuers to "credit[] to a sub-account" the net proceeds of the green bond, which can

198 *Id.* at 4.
199 *Id.*

then be "tracked by the issuer in an appropriate manner, and attested to by the issuer in a formal internal process linked to the issuer's lending and investment operations for Green Projects."[200] The GBP encourages, but again does not require, that the management of the proceeds be supplemented by external audits "to verify the internal tracking method and the allocation of funds from the Green Bond proceeds."[201] This auditor could be the same external reviewer that provided guidance on project evaluation and selection.

The fourth component, Reporting, requires green bond issuers to "make, and keep, readily available up to date information on the use of proceeds to be renewed annually until full allocation, and on a timely basis in case of material developments."[202] The issuer should also provide an annual report that lists the projects funded by the bond proceeds and "a brief description of the projects and the amounts allocated, and their expected impact."[203] This reporting function may also be buttressed by recent international efforts to standardize financial disclosures related to climate change through the Financial Stability Board's Task Force on Climate-related Financial Disclosures.[204]

The first-mover governments that have begun to regulate green bonds have tended to follow the same basic model set out by the GBP: defining bonds, defining green projects, requiring disclosure, and providing for third-party accreditation or verification. Several examples of national green bond regulatory frameworks are set out in Table 9 below.[205]

Table 9. Select Green Bond Regulatory Frameworks

	Nigeria	**China**	**EU**
Green Bond Definition	any type of debt instrument, the proceeds of which would be exclusively applied to finance or refinance in	bonds issued by financial institutions in accordance with law, with the funds raised to support the	any type of listed or unlisted bond or capital market debt instrument issued by a European or

200 *Id.* at 5.

201 *Id.*

202 *Id.*

203 *Id.*

204 FIN. STABILITY BOARD, TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES, FINAL REPORT: RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES 2 (2017).

205 FED. MINISTRY OF ENV'T OF THE REPUBLIC OF NIGERIA, GREEN BOND FRAMEWORK, 4, 6–9 (2017); Alex Oche, *Comparative Analyses of Green Bond Regimes in Nigeria and China*, 11 J. SUSTAINABLE DEV. L. & POL'Y 160, 176–80 (2020); WEIHUI DAL ET AL., ROADMAP FOR CHINA: GREEN BOND GUIDELINES FOR THE NEXT STAGE OF MARKET GROWTH 8, 10, 13–15, 18, 22 (2016); TECHNICAL EXPERT GRP. ON SUSTAINABLE FIN., REPORT ON EU GREEN BOND STANDARD 13, 27–31 (2019); TECHNICAL EXPERT GRP. ON SUSTAINABLE FIN., USABILITY GUIDE: EU GREEN BOND STANDARD 14–16 (2020).

	part or in full new and/or existing projects that have positive environmental impact	green industry and repay the principal and interest according to the agreement.	international issuer that is aligned with the EU-GBS
Green Projects Definition	Renewable and sustainable energy Clean transportation Sustainable water management Climate change adaptation Energy efficiency Sustainable waste management Sustainable land use Biodiversity conservation Green buildings (Commercial Real Estate Development) Any other categories as may be approved by the Commission from time to time	Energy Saving Pollution Prevention and Control Resource Conservation and Recycling Clean Transportation Clean Energy Ecological Protection and Climate Change Adaption	Contributing substantially to at least one of the following: climate change mitigation; climate change adaptation; sustainable use and protection of water and marine resources; transition to a circular economy, waste prevention and recycling; pollution prevention and control; and protection of healthy ecosystems, while not significantly harming any of the other objectives and complying with the minimum social safeguards
Reporting	The issuer must provide an annual report describing the projects and assets to which proceeds have	The PBoC requires issuers to disclose the use of proceeds on a quarterly basis. The	An Allocation Report with a statement of alignment with the EU-GBS, allocated amounts to

	been allocated, with disclosure of the percentage of proceeds that have been allocated to different eligible sectors and project types and to financing and refinancing, discussion of the expected impact of the project and assets, and qualitative and, where feasible, quantitative performance indicators. The issuer must also publish an assessment report issued by an independent verifier, and conduct and report annual follow-up assessments of the green projects and associated environmental benefits.	issuer must also provide an annual report and audited report on the use of proceeds in the previous year before April 30 of each year. The issuer is encouraged, but not required, to publicly disclose an annual assessment report issued by an independent verifier, and to conduct "continuous follow-up evaluation" on the use of proceeds and the bonds' environmental benefits.	Green Projects at least on sector level, and geographical distribution of Green Projects. An Impact Report with a description of the Green Projects, the Environmental Objective pursued by the Green Projects, a breakdown of Green Projects by the nature of what is being financed, the share of financing, and refinancing, and metrics about the projects' environmental impacts (with information on the methodology and assumptions used to evaluate the Green Projects impacts).
Verification	Independent verification must be issued by a professional certification authority or person approved or	Institutions are encouraged, but not required, to submit independent assessments or certification	Verification of the "green" nature of the issuance must be obtained from accredited verifiers.

	recognized by the Commission.	opinions from bond verifiers.	

The goal of these efforts is to enhance transparency and trust in green bond issuances. Regulators build these structures in recognition of the legal imperatives that apply to most investors and particularly for institutional investors that have fiduciary obligations to the individuals for whom they invest: investors are generally not willing to sacrifice profits to invest in sustainable assets. As a result, regulatory structures must make sustainable investments as competitive as possible with other types of investments vying for capital in the market.

Much work in this area remains to be done. To this point, the United States and many other jurisdictions have primarily relied on industry self-regulation, such as through the Green Bond Principles, to support the market for green bond issuances.[206] However, some observers have argued that the market would develop more rapidly and sustainably if more governments themselves provided regulatory structures that defined green instruments and projects, specified disclosure standards, and set out verifier standards and conflict-of-interest regulations.[207]

V. RISKS IN SOVEREIGN INTERVENTION IN SUSTAINABLE INVESTMENT MARKETS

Government intervention holds both promise and peril for sustainable investment markets. As discussed to this point, the promise lies in the ability of sovereigns to absorb risk in sustainable projects, directly finance climate de-risking strategies through green bond issuances, and mitigate risks in sustainable markets by creating gap-filling regulatory structures. However, governmental interventions in capital markets also introduce significant risks. The general topic of market failures and government interventions is widely addressed in the economics literature and continues to be a source of debate.[208] The debate

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206 Echo Kaixi Wang, *Financing Green: Reforming Green Bond Regulation in the United States*, 12 BROOK. J. CORP. FIN. & COM. L. 467, 469 (2018).

207 *See, e.g.*, Cristina Banahan, *The Bond Villains of Green Investment: Why an Unregulated Securities Market Needs Government to Lay Down the Law*, 43 VT. L. REV. 841, 864–67 (2019) (proposing the creation of a Green Standards Committee in order to increase the legitimacy of the American green bond market in the eyes of investors, stakeholders, and regulators; this committee would be responsible for oversight, monitoring, and independent review of any ethical concerns that might arise from the emerging green bond market); Wang, *supra note* 206, at 486. Park suggests a hybrid public/private regulatory structure as an alternative to solely relying on governmental regulation. *See* Stephen Kim Park, *Investors as Regulators: Green Bonds and the Governance Challenges of the Sustainable Finance Revolution*, 54 STAN. J. INT'L L. 1, 38–39 (2018).

208 *See, e.g.*, CLIFFORD WINSTON, GOVERNMENT FAILURE VERSUS MARKET FAILURE: MICROECONOMICS POLICY RESEARCH AND GOVERNMENT PERFORMANCE 1–3, 11, 13–14, 73, 75, 79–81, 89–90, 97–98 (2006) (examining risks of government intervention in response to real or perceived market failures by studying the unintended consequences of past government policies through a cost-benefit analysis lens).

will not be resolved here, and the challenge in crafting government policies to catalyze investment—without adversely impacting private sector efforts—is readily acknowledged.

Aside from the risks sovereign investment poses to markets, it also introduces both domestic and international political risks. Domestic sovereign investment creates the risk of patronage and corruption, as projects may be shifted in ways that secure and benefit political allies. Structural and procedural independence of the investment decision-making bodies is key to managing these risks, and a large body of literature has developed to help governments appropriately structure sovereign investment vehicles.[209]

Sovereign investors also present risks to other governments, in part because they cannot be expected to automatically behave like other investors. As this Article has argued, sovereigns should be expected to take into account externalities in a way that other investors may not; that fact alone suggests differences in investment behavior that other governments should not only anticipate but welcome. It is often assumed, particularly in the United States, that the purpose of private investment in capital markets is to maximize financial returns. But how does this "capitalist logic" apply to sovereign investors?[210] Another way of asking this question is, what is it that sovereign investors seek to maximize?

A. What Do Sovereigns Seek to Maximize? The Risks of Sovereign Intervention in Markets

Despite the profit-maximizing behavior of SWFs, sovereigns do not always operate in purely profit-maximizing ways when intervening in private markets. It is perhaps better to say that sovereign funds in general are designed to maximize public goods, through long-term-profit-maximizing investment by SWFs in private markets or through a blended finance model, with both profit- and socially-oriented objectives, in the case of SIFs. There is an inevitable tension with wealth-maximizing actors when governments use sovereign investment as a direct mechanism to maximize public goods.

Numerous possible goods or values might be prioritized by sovereigns. Consider three possibilities (though no doubt others could be evaluated): economic welfare, political liberty, and happiness. As a preliminary matter, it may seem that these concepts are so tightly linked that the pursuit of one is the pursuit of all. But as suggested in the United States Declaration of Independence, these concepts operate as independent rights; they may also sometimes compete directly with one

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[209] *See, e.g.*, Clark & Monk, *supra* note 25, at 3, 10, 14; Gelb et al., *supra* note 69, at 3, 10, 15–18, 23; Adam D. Dixon & Ashby H. B. Monk, *The Design and Governance of Sovereign Wealth Funds: Principles & Practices for Resource Revenue Management*, 2011, at 1, 4, 8–9, 11–12.

[210] Lawrence Summers, *Funds That Shake Capitalist Logic*, FIN. TIMES (July 29, 2007), https://perma.cc/2C4B-Y8Z7.

another.[211] When these goods are in competition, governments may determine tradeoffs based on cultural and societal preferences. The Affordable Care Act,[212] for example, was intended to provide health care to more Americans at lower costs.[213] However, opponents cast the insurance mandate as a threat to liberty.[214] Governments must make

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[211] While it is true, for example, that those with more money are generally happier than those with less, social scientists have also observed that happiness does not increase with income. *See* HELEN JOHNS & PAUL ORMEROD, HAPPINESS, ECONOMICS AND PUBLIC POLICY 28–30 (2007) (demonstrating a negligible rise in happiness at a diminishing rate as income increases). This suggests that once basic financial security has been reached, more money will not bring more happiness. According to one review of the extensive literature, there is no correlation between happiness and increased leisure time, crime rates, declining infant mortality, increased longevity, unemployment, declining inequalities between the sexes, and public spending. Happiness is found to be correlated, however, with "stable family life, being married, financial security, health, having religious faith, feelings of living in a cohesive community where people can be trusted, and good governance." *Id.* at 33–34, 46. The authors note that there is often a disconnect between what people believe will bring them happiness and what actually produces happiness:

> In the standard model, people are assumed to obtain all relevant information about a given problem, and then to choose what is for them the best possible decision, the optimal choice. Decision-makers are, in the jargon of economics, 'fully rational'.
>
> If in general this were a true description of behaviour, then the value of much happiness research would be lost. Actual decisions would reliably reveal individuals' preferences. People appear to act as if they want more money, as if they want to consume more goods and services and so on. We would infer from this that having more money made them happier, regardless of the lack of correlation between income and spending and happiness levels measured by the responses of individuals in surveys. True preferences would be revealed by people's actions. By their deeds shall ye know them!
>
> Unfortunately, much of the empirical work in experimental economics over the past couple of decades suggests that we cannot always rely on the assumption that actual decisions and choices accurately reveal preferences. For example, preferences of individuals appear quite frequently to be intransitive. If I prefer product A to B and B to C, then transitive preferences imply that I will prefer A to C. But this is not always the case in practice.

Id. at 25.

[212] Patient Protection and Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (2010).

[213] The purposes of the Affordable Care Act include the following:

> - Make affordable health insurance available to more people. The law provides consumers with subsidies ('premium tax credits') that lower costs for households with incomes between 100% and 400% of the federal poverty level (FPL) . . .
> - Expand the Medicaid program to cover all adults with income below 138% of the FPL . . .
> - Support innovative medical care delivery methods designed to lower the costs of health care generally.

Affordable Care Act (ACA), HEALTHCARE.GOV, https://perma.cc/F3Q5-BRZU (last visited Nov. 25, 2021).

[214] *See, e.g.*, Andrew Napolitano, *Obamacare's Threats to Religious Freedom*, REASON (Jan. 16, 2014), https://perma.cc/4TV7-7JU6 ("If the government can tax you for fidelity to long held religious beliefs, then the Free Exercise Clause of the First Amendment is meaningless.").

constant decisions about how and when to put a thumb on the scale in favor of one political goal over another, such as when a government chooses to privilege security over liberty in the casual invasion of privacy suffered by airline travelers or when many state legislatures' chose individual liberty over general welfare following the United States Supreme Court's *Kelo*[215] decision by passing legislation affirming individual property rights against takings for public purposes.[216]

Of these three possible purposes for sovereign investment, it would seem difficult to imagine a sovereign fund focused, for example, on enhancing individual liberty or maximizing the happiness of citizens. This is not because governments do not deem such goals worthy of investment. Indeed, government services are often directed primarily at these goals. However, SWFs are generally focused on maximizing wealth for at least two connected reasons. The first is that sovereign funds are simply tools to accomplish larger policy goals, and it is the function of sovereign funds to provide resources that accomplish these goals. The more funds that are raised, the better able the fund is to support the policy goal. A sovereign fund may provide budgetary support that, among other things, allows for enhanced early childhood development spending, for example. In this sense, a sovereign fund is a simple piece of a complex public-good-creation strategy, but its role is expressly limited to a tightly-defined goal. It is typically not a multi-purpose tool but a tool designed with the singular goal of capital maximization.

A related (and very practical) reason for limiting the mandate of a sovereign fund to wealth maximization is that it serves a governance purpose in reducing agency costs. As a general principle of governance, as the scope of the action of the agent increases, the risk associated with the agency increases commensurately. This idea is unartfully expressed in the notion that agents need to be kept "on a short leash" that restricts their range of action and allows for closer monitoring. By focusing managers on a narrow goal of wealth maximization—which, with benchmarks, may already present a difficult goal to achieve—the fund sponsor may decrease the likelihood that the manager will pursue goals that may not be in the interest of the sponsor. Relatedly, the manager will typically have easily identifiable metrics by which their activity can be

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215 Kelo v. City of New London, 545 U.S. 469 (2005).

216 In *Kelo*, takings in connection with a property development were determined to qualify as a proper "'public use' within the meaning of the Takings Clause." *Id.* As described by one of the interest groups working to reform eminent domain laws following the *Kelo* decision,

> There probably has never been as sweeping a legislative response to a U.S. Supreme Court decision as the response to *Kelo*. Following the public outcry against *Kelo*, constitutional amendments and legislation at the federal, state and local levels were introduced in legislative bodies nationwide. In the five years since the decision, forty-three states have passed either constitutional amendments or statutes that have reformed eminent domain law to better protect private property rights.

Scott G. Bullock, *Five Years After Kelo: The Sweeping Backlash Against One of the Supreme Court's Most-Despised Decisions*, 1 GROVE CITY COLL. J. L. PUB POL'Y 99, 103–04 (2010).

evaluated, thereby reducing monitoring costs. For ease in administering the fund, it is generally advisable for the fund to have a relatively narrow mandate.

While maintaining principal control is crucial to reducing opportunities for corruption and poor management, tight governmental control of the sovereign investment function also produces political risks. A primary risk is the relocation of corruption up the agency chain (from investment manager to government supervisor of the manager). Investment vehicles may be used as mechanisms to reward political loyalists and punish political enemies. Providing governance structures that minimize such risks is essential. For SIFs, for example, Halland et al. note that professional independence is key to their effective function:

> At their best, SIFs are professional financial intermediaries, operating at arm's length from government, and are well placed to take advantage of their strategic position between the state and the market. Many are staffed with diaspora members recruited from global financial centres, and have networks that span domestic government ministries, as well as the domestic and international financial sector. In principle, they are in a position to arrange deals and act as local partners for foreign investors with limited knowledge of the domestic market, and to bring projects to market in a format appropriate for institutional investors.[217]

This positive view of the role of sovereign investment has largely held true as sovereign funds have proliferated and taken an increasingly important role in debt, equity, and alternative investment markets around the world. It is in the interests of sovereign funds to maintain a financial orientation—both in terms of political and economic interests—because transaction costs associated with sovereign investment activities will inevitably rise if counterparties cannot trust sovereign investors' financial orientation with respect to a particular co-investment.

Some transaction costs will inevitably be borne by sovereign funds in the form of bonding costs. Sovereigns must demonstrate a credible commitment to adhering to investment standards that signal financial orientation. No group has been more attuned to this concern than the International Forum of Sovereign Wealth Funds, which created a set of sovereign fund best practices known as the Santiago Principles.[218] The purpose of these principles was to reduce mistrust by recipient countries in the investment motivations of sovereign funds.[219] In a very plain way, the entirety of the Santiago Principles can be summed up as a transaction cost reduction mechanism, as informational asymmetries and mistrust lie at the root of many (if not most) transaction costs.

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217 Håvard Halland et al., *Mobilising Institutional Investor Capital for Climate-Aligned Development* 12–13 (OECD Dev. Pol'y Papers, Paper No. 35, 2021).

218 INT'L WORKING GRP. OF SOVEREIGN WEALTH FUNDS, *supra* note 21, at 7–9.

219 *See id.* at 3–6 (discussing the objectives and purpose of the twenty-four Santiago Principles and the International Working Group of SWs).

Some costs are also spread out in other ways, such as through national security-oriented investment policies that can impose significant transaction costs on sustainable investment activities. In fact, in recent years, these costs have risen significantly through increased reviews of foreign investments. The UNCTAD tracks investment policy changes across the G20 and other jurisdictions and notes a recent uptick in measures relating to national security with G20 members "preoccupied with threats to their essential security interests associated with foreign investment and ownership of companies established in their territory."[220] France, Germany, Italy, the United States, and the European Union recently passed enhanced foreign investment review measures, and China, South Africa, the United Kingdom, and Japan are in various stages of reviewing or amending their foreign investment rules.[221] The revised regulations have tended to broaden the scope of transactions that are subject to review, "in particular to include assets that provide the acquirer access to sensitive personal data and advanced technology," as well as lower thresholds for review, such that smaller investments and stakes will now trigger foreign investment review procedures.[222]

This leads to a sobering conclusion: while sovereigns have a significant role to play in facilitating and leading sustainable investment, other governments are often responding to these activities with trepidation and suspicion, which translates into enhanced regulatory burdens and costs. This is particularly the case when investments implicate a host country's critical infrastructure, such as a country's utilities grids. Mitigating risks to critical infrastructure systems may require creative ownership structures, limitations on information passed on to sovereign investment partners, and, at the project level, substantial private sector investment that reduces sovereign investor involvement and perceived sovereign investor risk.

B. Applying Multilateral Development Banks Governance Standards to Mitigate Market Risks of Sovereign Investment

While best practices and foreign investment rules help to regulate some of the political risks associated with sovereign investment, intra-governmental regulations and discipline is required to regulate potentially negative markets impacts. In designing these rules, sovereigns should look to the work of multilateral development banks (MDBs), which have played a key role in providing support, both in terms of theoretical heft and operational expertise, to governments in justifying and developing effective private-sector interventions. In a 2012

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220 ORG. FOR ECON. CO-OPERATION & DEV. & U.N. CONF. ON TRADE & DEV., TWENTY-FIRST REPORT ON G20 INVESTMENT MEASURES 2 (June 24, 2019).

221 *Id.*

222 *Id.* at 3.

publication, a working group of MDBs[223] agreed upon a set of principles to "help MDBs to support the private sector in a way that is sustainable and ensures additionality of their operations."[224] More particularly, the principles help the MDBs "guide the effective and efficient use of resources . . . in pursuing their mandates and development goals, to ensure that private sector operations ('PSO') occupy the appropriate space relative to commercial finance, and to ensure that such operations maximize impact, and serve to reinforce rather than replace markets."[225] The five core principles identified by the working group are "1. Additionality 2. Crowding-in [of private capital] 3. Commercial sustainability 4. Reinforcing markets 5. Promoting high standards."[226] All of these principles arguably apply with equal force to governmental sustainable market development strategies.

The first core principle, "[a]dditionality is central to the engagement of MDBs with the private sector," as "[a]ll MDBs apply the concept of additionality to their private sector operations" to determine whether a particular intervention is appropriate. [227] The concept is straightforward: interventions should make an additional contribution "beyond what is available, or that is otherwise absent from the market, and should not crowd out the private sector."[228] Additionality should deliver:

- "financing that is not provided by the market
- risk mitigation and/or risk sharing
- improved project design
- better development outcomes
- [ESG] standards."[229]

The concept of crowding-in, discussed in earlier Parts, suggests a catalyzation of market development and the mobilization of private sector resources.[230] The MDB Principles to Support Sustainable Private Sector Operations state that the principle encourages MDBs to "[l]imit[] the

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223 The group included the African Development Bank, Asian Development Bank, Colonial Development Corporation, Deutsche Investitions- und Entwicklungsgesellschaft, European Bank for Reconstruction and Development, European Development Finance Institutions, European Investment Bank, Inter-American Development Bank, International Development Group, Inter-American Investment Corporation, International Finance Corporation, Multilateral Investment Fund, Norfund, Oesterreichische Entwicklungsbank, and the World Bank. EUR. BANK FOR RECONSTRUCTION AND DEV., MULTILATERAL DEVELOPMENT BANK PRINCIPLES TO SUPPORT SUSTAINABLE PRIVATE SECTOR OPERATIONS 2 n.2 (2012)[hereinafter MDB PRINCIPLES].

224 *Id.* at 1.

225 *Id.* at 2.

226 *Id.*

227 INT'L FIN. CORP. ET AL., MULTILATERAL DEVELOPMENT BANKS' HARMONIZED FRAMEWORK FOR ADDITIONALITY IN PRIVATE SECTOR OPERATIONS 6 (2018).

228 MDB PRINCIPLES, *supra* note 223, at 3.

229 *Id.*

230 *Id.*

share of MDB involvement in any given project . . . so as to make room for other sources of finance, notably from the private sector."[231] MDBs should also syndicate transactions (in other words, operate through a group of multiple lenders or financing entities), "which both draws in private sector finance and provides market-tests for pricing and commercial viability."[232] To further support private sector investment, MDBs should "[u]tiliz[e] guarantees, insurance, and other risk sharing instruments to . . . mitigate[e] perceived political and credit risk for private financiers and sponsors, thereby leveraging the use of MDB resources."[233] Finally, "[d]emonstration effects from early MDB support for transactions can promote replication or participation by the private sector."[234]

Commercial sustainability refers to a commercial and investment orientation of a development bank providing financing in the private sector.[235] Under this approach, "MDBs[']support of the private sector and the impact achieved by each operation should be sustainable, both during and after their involvement," to ensure the support "contribute[s] to the commercial viability of their clients."[236] Project-level commercial viability requires a development bank to consider the long-term viability of the enterprise and sector, use appropriate pricing that references markets where possible and takes into account the risk characteristics of the private sector borrower. Where market references are not available, "efforts should be made to ensure prices are reflective of risk, fully costed, and consistent with the development of market pricing."[237] The goal of the operation should be to enable the recipient to become commercially viable without further MDB support.

Implicit in this notion of sustainability is that development bank financing should not be concessionary. A concessionary investment is an investment that is expected to provide a below-market risk-adjusted rate of return.[238] In other words, a concessionary investment is an inherently wealth-sacrificing form of investment, and "[t]he concession is the economic equivalent of a donation or grant intended to produce a social return."[239] There may be social benefits created by a particular

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231 *Id.*

232 *Id.*

233 *Id.*

234 *Id.*

235 *See id.* at 3–4 (outlining the ways in which development banks can sustainably invest and contribute to the commercial viability of their clients).

236 *Id.* at 3.

237 *Id.* at 4.

238 *See, e.g.*, Paul Brest et al., *How Investors Can (and Can't) Create Social Value*, STANFORD SOC. INNOVATION REV. (Dec. 8, 2016), https://perma.cc/A8TV-2Z5S (evaluating when it may be necessary for value-aligned investors to achieve their goals through concessionary or non-concessionary investments).

239 *Id.*

> Whether an investment by a foundation is non-concessionary or concessionary is a question of its expected risk-adjusted return, and not whether the funds come from

investment decision—and indeed, the types of investments being made by SIFs are designed to have a double-bottom-line orientation—but the investment decision should nonetheless produce positive economic returns. Furthermore, a concessionary investment on the part of a SIF, for example, should serve to crowd in profit-maximizing investors.

"MDB assistance to the private sector should be structured to effectively and efficiently address market failures, and minimize the risk of disrupting or unduly distorting markets or crowding out private finance, including new entrants."[240] The MDB Principles refer to this as *reinforcing* markets, with the goal being to buttress an otherwise weak or inefficient market, as opposed to directly competing with a private market.[241] For example, if MDB financing is used alongside concessional resources, MDBs should "ensur[e] that a net subsidy to the project or enterprise is justified, e.g.[,] by a clear market or institutional failure or public policy goal that is best addressed through a subsidy."[242] Subsidies should also be "transparent and targeted, and structured to ensure the potential for market distortion is assessed and the subsidy is phased out once it is no longer justified."[243] MDBs should also avoid creating "rent-seeking opportunities," while also "[s]upporting 'level playing fields' by providing an equal opportunity for funding to qualified companies on a non-discriminatory basis."[244] MDBs are also encouraged to avoid "tilting a market in favour of a single or small group of actors."[245]

Finally, MDBs are encouraged "to promote adherence to high standards of conduct," both in the conduct of the MDBs themselves and in client firms.[246] The adoption of high standards is critical to ensure not only "the fulfilment of stakeholders' intentions but also to attract private investor participation and strengthen commercial sustainability."[247] The

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> the endowment or program budget, which is a matter of internal governance and accounting.
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> Socially-motivated concessionary investments have the potential to reduce an enterprise's cost of capital since, by definition, socially-neutral investors wouldn't invest on below-market terms. The potential upside of a concessionary investment is that it will enable the enterprise to produce more socially valuable outputs. Apart from the inevitable possibility of failure, the potential downsides are that the subsidy will not lead to improved social outcomes but merely redound to the benefit of other investors; or worse, that the subsidy will distort the markets in which the investee operates to the ultimate detriment of the investors' intended beneficiaries.

Id.

240 MDB PRINCIPLES, *supra* note 223, at 4.

241 *See id.* (offering suggestions to reinforce suffering markets while not stifling the involvement of private participants).

242 *Id.*

243 *Id.*

244 *Id.*

245 *Id.*

246 *Id.*

247 *Id.*

MDB Principles do not specify particular standards of conduct, but make reference to general standards of ESG, transparency, and integrity.[248]

The application of these MDB policies and concepts is seen in some governmental sustainability program strategies. SIFs, for example, are like MDBs in that they must decide how to allocate scarce resources, but do so in a way that will limit negative impacts on private markets. More generally, although SIFs may play an essential role in achieving the SDGs, they also introduce market risks. Sovereigns that invest in their own markets, particularly, may risk crowding out investment by private sources. The Ireland SIF, a strategic investment vehicle, applies three concepts to its investment program to help identify and mitigate such risks:

- *Additionality*, that is, the additional economic benefits to the gross value added /gross domestic product that are likely to arise as a result of an investment over and above what would have taken place anyway.

- *Displacement*, or a reduction in the additionality generated by an investment when measured at the level of the overall economy, due to a reduction in such benefits elsewhere in the economy.

- *Deadweight*, as when the economic benefits generated by an investment would have been achieved without such investment being made.[249]

Each government will need to craft its own policies for managing these risks, but the basic principles outlined by MDBs for successful market interventions provide a useful blueprint that should help to reduce the chances of negative and unintended impacts.

VI. CONCLUSION

Sovereigns are an especially large archetype of Hawley and Williams' "universal owner;" they have trillions of dollars at stake, whether directly invested or as a backstop for negative externalities.[250] As a result, sovereigns cannot avoid the harmful effects of poor governance and unsustainable business practices; sovereigns must help to develop

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[248] *Id.* at 5.

[249] HALLAND ET AL., *supra* note 122, at 14.

[250] *See* James Hawley & Andrew Williams, *The Emergence of Universal Owners: Some Implications of Institutional Equity Ownership*, 43 CHALLENGE 2000, at 43, 45 (explaining that public pension funds are a quintessential universal owner because their portfolios contain a broad cross-section of financial assets, aligning the pension funds' interests with the interests of the economy as a whole); James Hawley & Andrew Williams, *Universal Owners: Challenges and Opportunities*, 15 CORP. GOVERNANCE: AN INT'L REV. 415, 416 (2007) (giving examples of public retirement funds as institutional investors, which the authors argue should adopt a universal ownership mindset).

sustainable markets. As noted earlier, the vast economic need presented by climate change adaptation and mitigation is much greater than available public funding. Private investment managers do not lack funds to allocate to sustainable projects. What they lack are investible deals. In other words, sustainability finance does not face a capital supply problem so much as it faces an investible deal flow problem.

To remedy this problem, sovereigns are supporting and intervening in private markets to improve deal flow. As this Article has shown, they do this in several ways. In their traditional role as market regulators, governments are building off the work of self-regulatory organizations by developing labeling and disclosure standards that provide a foundation for more transparent and trustworthy sustainability markets. These efforts also include other institutional and regulatory structures that support sustainable deal market activity, such as the development of investor protection laws, regulatory bodies, and strong and dependable intermediaries. Along with this, sovereign funds can work with government regulators to identify and reduce regulatory frictions, including permitting and project review requirements. Sovereign funds and recipient country regulators can also work together to reduce frictions associated with foreign investment/national security reviews.

Of critical importance, however, will be direct investment efforts led by governments. In these efforts, other investors will invest not just directly in the infrastructure projects that satisfy SDG initiatives, but will also create strategic investment vehicles that other investors will rely on to access these investments. In other words, investors will be investing alongside a government fund in the same way that an investor might invest with a private equity fund. When the government takes on the role of the originator, it tends to offer profit-maximizing terms like those seen in the private investment context.