

# The Environmental Fiduciary

*The Case for Incorporating Environmental Factors  
into Investment Management Policies*

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# ACKNOWLEDGMENTS

*The Environmental Fiduciary* could not have been produced without the generous support of the

## **Richard & Rhoda Goldman Fund**

The Rose Foundation also gratefully acknowledges the enabling support of the

### **Compton Foundation Jessie Smith Noyes Foundation Andrew Norman Foundation As You Sow Foundation**

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The Rose Foundation gratefully acknowledges the contributions of the following people who encouraged us in the production of this report and reviewed advance drafts of *The Environmental Fiduciary*. All views expressed in the paper are solely the views of the authors and the Rose Foundation, and may not necessarily reflect the opinions of all reviewers.

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The **Rose Foundation for Communities and the Environment** is a grantmaking public charity dedicated to nurturing positive intersections between the environment, the economy, and communities. In addition to the Environmental Fiduciary Project, the Foundation is active in promoting renewable energy and supports a variety of environmental, economic development, and consumer projects. Visit the Foundation at [www.rosefdm.org](http://www.rosefdm.org).



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# The Environmental Fiduciary

## *The Case for Incorporating Environmental Factors into Investment Management Policies*

### EXECUTIVE SUMMARY



In this report, we show that fiduciaries who manage funds for institutional investors such as pension funds, foundations, and charitable trusts should incorporate environmental factors into their portfolio management policies. We show how a corporation's ability to profit from environmental innovations and prepare for future environmental risks and exposures can have a significant impact on corporate earnings potential, cash flow and growth opportunities. Consequently, we argue that fiduciaries for institutional investors should institute financially sound policies to encourage strong corporate environmental performance in the corporations held in their portfolios. The report:

- Reviews the significant body of evidence, both academic and anecdotal, which illustrates that strong environmental performance often has a positive influence on financial performance.
- Explores the potentially significant risks of environmental mismanagement, as well as macro-economic environmental factors—such as global climate change—that threaten portfolio value regardless of investment style or objective.
- Illustrates how the law allows fiduciaries to consider environmental factors in portfolio management, and in some particular instances may actually require them to do so.
- Argues that fiduciaries of pension funds, foundations, and charitable trusts should encourage good environmental performance in corporations owned in institutional portfolios through specific portfolio management policies.
- Outlines a set of recommendations to help fiduciaries control their portfolio's environmental risk and unlock hidden environmental value.

The report is divided into four chapters: *The Environment As Value Driver*, *Academic Perspectives*, *The Legal Landscape*, and *Recommendations*. These chapters are reviewed briefly below.

#### **CHAPTER ONE: THE ENVIRONMENT AS A VALUE DRIVER**

*The Environment as a Value Driver* chapter outlines the business case for unlocking environmental value and avoiding environmental risk with a series of

examples illustrating some of the tremendous savings that have flowed from concerted efforts by large corporations to reduce their environmental footprint. This chapter also outlines examples in which environmental liabilities and hidden risks have depressed earnings and shareholder value.

## Environmentally-Driven Benefits

Below are some examples of benefits that have accrued to corporations from environmentally driven innovation. While some of the companies profiled have been recognized as leaders in environmental innovation and are often found in socially screened portfolios, others may be regarded as controversial. However, in our view, the fact that the management of these more controversial companies implemented sweeping programs to capture and unlock environmental value underscores management's recognition of the financial value of the environmental improvements. For example:

- **DuPont**—The Wilmington, Delaware-based chemical company has embraced Six Sigma, a resource and productivity management program focusing on productivity improvements, environmental waste and emissions reductions, and health and safety improvements. For calendar year 2000, Six Sigma programs saved DuPont almost \$400 million.
- **ST Microelectronics**—The Geneva, Switzerland-based technology manufacturer reported that the sum total of its environmental and sustainability polices are projected to save \$900 million between 1994 and 2010. In the year 2000, ST Microelectronics saved \$38 million in energy costs and \$8 million in water costs.
- **IBM**—The Armonk, New York-based computer company's overall environmental program saved IBM an estimated \$193 million in 2000 through recycling and reusable packaging initiatives; chemical use and waste reduction; and energy, water, and material conservation. During that same year, IBM's Asset Recovery Centers processed 51,304 metric tons of manufacturing scrap, IBM-owned obsolete machines, and customer-returned equipment. After processing, only 3.22% of what the centers received was sent to landfill.

- **Baxter International**—The Deerfield, Illinois-based medical products maker has saved \$46 million in the past five years through its eco-efficiency programs, which include reducing water usage, packaging, waste generation, and toxic air emissions; as well as recycling materials and improving energy efficiency.

Furthermore, in *The Environment as a Value Driver* we discuss those instances where corporations have successfully entered the market niche created by emerging environmental concerns. Fiduciaries should direct investment managers to look for investing opportunities in well-managed companies poised to become market leaders in such areas as organic foods, health and sustainability, renewable energy, alternative fuels, and emerging environmental technologies.

## Environmentally-Driven Risk

Also in *The Environment as a Value Driver* we show that just as environmentally driven innovation can improve shareholder value, environmentally driven liabilities and risks can depress shareholder value. Investors face the risk of unexpected drops in earnings due to fines, penalties, and cleanup costs due to violation of environmental laws, increased costs due to changes in environmental regulation, and greater-than-expected costs due to understated or undisclosed liabilities. For example:

- **Smithfield Foods**—The world's largest pork producer, based in Smithfield, Virginia, violated federal environmental laws by dumping hog waste into a tributary of Chesapeake Bay, was subsequently sued by the federal government, and was fined \$12.6 million in 1997, decreasing earnings by \$0.32 per share.
- **US Liquids**—The discovery that US Liquids' Detroit, Michigan facility allegedly had been illegally dumping cancer-causing hazardous waste into the sewer system prompted a 58% drop in

US Liquids' stock price in one week, and a 111% drop in annual income in 1999. This drastic decline prompted a securities class action and a derivatives action brought by shareholders against the company; both actions are still pending.

## Competitive Advantage

In addition, as new environmental regulations are passed, corporations face costs associated with coming into compliance. *The Environment as a Value Driver* profiles instances where forward-thinking management can gain competitive advantage over industry peers when the regulatory framework changes, providing advantageous opportunities for prepared investors.

For example, in March 2000, Innovest Strategic Value Advisors, a corporate environmental rating group based in New York City, released a report, "**The Forest Products Industry North American Report: Hidden Risks and Value Potential for Strategic Investors.**" The report assigned environmental rankings to seventeen pulp and paper companies and found that some corporations had achieved competitive advantage by engaging in forward-thinking compliance strategies. For example:

- **Weyerhaeuser**—The report found that as of February 2000, the Tacoma, Washington-based forest products company's costs to bring all its plants into compliance with the Cluster Rule (a group of new federal air and water pollution regulations) was predicted to be approximately \$80 million in additional capital expenditures—about 0.7% of Weyerhaeuser's total revenue for fiscal year 1998.
- **Georgia Pacific**—In contrast, this Atlanta, Georgia-based forest products company faced much greater exposure to new costs driven by the Cluster Rule. The Innovest report indicated that as of February 2000, Georgia Pacific's costs to bring all its plants into compliance with the Cluster Rule were predicted to be between \$500 and \$550

million. This represented a full 4% of Georgia Pacific's revenue in fiscal year 1998.

In their report "**Pure Profit: The Financial Implications of Environmental Performance,**" authors Robert Repetto and Duncan Austin of the World Resources Institute, a Washington, DC-based environmental research group, found similar results. Both studies suggest that this type of analysis could play an important role in educating investment decisions.

## Material Environmental Disclosure

Finally, *The Environment as a Value Driver* examines how poor disclosure or lack of disclosure of environmental liabilities can depress shareholder value. When corporations understate or do not disclose environmental liabilities, investors are hampered in their ability to assess future earnings growth and shareholder value. Worse, when liabilities are ultimately disclosed, not only does the true cost of the liability drive down corporate value, but trust is eroded, and management may have difficulty attracting capital. In this way, undisclosed environmental liabilities create a double drag on shareholder value and should be of special concern to fiduciaries. Two government agency reports indicate that lack of adequate disclosure poses a significant problem for investors. For example:

- Securities and Exchange Commission (SEC) Regulation S-K Item 103 requires disclosure of material financial issues, including potential monetary sanctions imposed by a governmental authority greater than \$100,000 or legal proceedings where claims may exceed 10% of a company's value. However, a 1998 U.S. Environmental Protection Agency (EPA) study found that **74% of companies failed to report environmentally-related governmental enforcement proceedings** that could result in governmental monetary sanctions greater than \$100,000.

- A 1993 General Accounting Office (GAO) office study entitled “**Environmental Liability: Property and Casualty Insurer Disclosure of Environmental Liabilities**” found that insurance companies significantly underreported federal toxic cleanup liabilities. Potential reasons for this underreporting were a corresponding lack of information provided by their insured companies and a non-aggregation of claims by the companies—leading to a determination of non-materiality, even though the sum of the claims might be significant.

## CHAPTER TWO: ACADEMIC PERSPECTIVES

In our chapter on *Academic Perspectives*, we move from specific business examples to an overall review of the academic literature examining the relationship between environmental and financial performance. This area has been a focus of tremendous academic attention. Over the last ten years, many of the most widely respected studies have found strong positive linkages. *Academic Perspectives* reviews studies such as the following:

- In the 2001 Moskowitz Prize-winning study by Glen Dowell, Stuart Hart, and Bernard Yeung entitled “**Do Corporate Global Environmental Standards Create or Destroy Market Value?**” published in *Management Science*, the authors found that those firms adopting a single, stringent, global environmental standard had much higher market value than those firms defaulting to less stringent or poorly enforced host country standards. They concluded that developing countries that use lax environmental regulations to attract foreign investment may end up attracting poorer quality, and perhaps less competitive, firms.
- In their study “**Does It Really Pay to Be Green? An Empirical Study of Firm Environmental**

**and Financial Performance**” published in the *Journal of Industrial Ecology* in the fall of 2000, Andrew King and Michael Lenox also found an association between environmental and financial performance. The study analyzed 606 U.S. manufacturing firms over the time period 1987 through 1996.

- The 2001 Moskowitz Prize honorable mention went to Bernell Stone, John Guerard, Jr., Mustafa Gultekin, and Greg Adams for their paper entitled “**Socially Responsible Investment Screening: Strong Evidence of No Significant Cost for Actively Managed Portfolios.**” After reviewing quarterly returns for an average of 1,334 stocks for twelve years, and then screening out the worst social and environmental actors, the authors found that there was no significant cost to social and environmental screening, even when controlling for beta (risk), dividend yield, growth, and corporation size. Because the authors ran the environmental data separately, the results also show in particular that there is no significant cost to screening out just the worst environmental actors in a large portfolio of stocks.

## CHAPTER THREE: THE LEGAL LANDSCAPE

Fiduciaries acting to improve environmental performance will find themselves on strong legal ground. *The Legal Landscape* chapter explores the legal interrelationship between environmental issues and fiduciary duties. The analysis starts by documenting the statutory basis and case law permitting the consideration of social and environmental issues in making portfolio management decisions. More importantly, however, *the analysis demonstrates that in some circumstances fiduciaries are actually under a legal obligation to consider environmental issues and, in some cases, to act on them.*

The legal analysis next explores the continuing evolution in definition of the *Duty of Prudence*, and



how its interpretation has changed over time to reflect the realities of fiduciary decision-making processes and the experiences of financial market professionals.

After establishing working definitions of what is permissible—a legal floor on which fiduciaries stand—the analysis explores the extent of fiduciaries’ legal reach, and considers specific instances where environmental considerations may move beyond simply permissible and into the realm of the legally mandated.

- ***Duty to Diversify***—In some circumstances, this duty imposes on fiduciaries the need to consider environmental impacts. The report discusses how environmental diversification can help minimize risk in today’s volatile energy markets, and how universal ownership of highly diversified portfolios may imply a duty to consider the interplay between different parts of a large portfolio and the environmental consequences of otherwise externalized costs.
- ***Duty to Monitor***—This overarching requirement challenges fiduciaries to be actively involved in reviewing the environmental performance of their funds’ investments—even those under passive management, such as index funds. Furthermore, the Duty to Monitor challenges fiduciaries to act affirmatively to improve their investments’ environmental performance through careful proxy voting and other strategies.
- ***Duty of Obedience***—Some fiduciaries may be compelled to consider environmental issues because of their funds’ goals and objectives. While this duty typically arises in the context of foundations and other mission-based organizations, this chapter explains how considerations of environmental duty may also apply to pension funds.

## CHAPTER FOUR: RECOMMENDATIONS TO UNLOCK ENVIRONMENTAL VALUE

Fortunately for investors, the pathway toward unlocking environmental value has been blazed by a generation of institutional investors engaging in concerted efforts to improve corporate governance. The *Recommendations to Unlock Environmental Value* chapter shows fiduciaries how to seize the environmental initiative by applying the tried-and-true techniques of constructive engagement, active voting of proxies, and strategically targeted investment.

Several large institutional investors have begun to embrace initiatives encouraging forward environmental thinking in the companies they own. In some cases, these initiatives have become legal mandates. For example, the United Kingdom recently made it a matter of law that pension plans are required to disclose the extent to which they consider social, environmental, and ethical considerations in voting proxies. In the U.S., the decision of California Public Employee Retirement System (CalPERS) to apply environmental, labor, and human-rights standards to their emerging markets portfolio has been widely hailed as a bellwether of this same trend.

### Action Steps

*The Environmental Fiduciary* concludes with action steps that fiduciaries can and should take to protect their portfolios and maximize shareholder value. Recommendations include:

- ***Demand SEC Enforcement of Material Environmental Disclosure***—Fiduciaries should urge the SEC to vigorously enforce existing disclosure law (Regulation S-K). Fiduciaries also should urge the SEC to incorporate into regulation new standards developed by the American Society of Testing and Materials that specify procedures for quantifying environmental risk and tightening disclosure loopholes. This step will allow shareholders to

identify environmental liabilities, help protect investment value, and identify opportunities for proactive dialogue with companies around potential areas of environmental improvement.

- ***Encourage Companies to Use Standardized Reporting Formats***—Fiduciaries should encourage companies to adhere to standardized environmental reporting systems such as the *CERES Reporting Requirements* or the *Global Reporting Initiative Guidelines*. With adequate reporting, institutional investment managers will be able to get the information they need to encourage strong environmental performance and to spot problems early on.
- ***Create an Environmental Watch List***—A cost-effective way to improve environmental perfor-

mance is to create an *Environmental Watch List* targeting companies whose value would be significantly enhanced by improved environmental performance. As large and influential shareholders, institutional investors can derive long-term financial gains by actively engaging with corporations to encourage proactive environmental management. The \$149 billion CalPERS has seen tremendous success with a very similar program designed to encourage good corporate governance.

- ***Capture Environmental Growth***—The report provides practical advice for fiduciaries seeking prudent opportunities to overweight investments in top environmental performers and capture the growth potential of emerging environmentally beneficial technologies such as renewable energy.

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# INTRODUCTION



Over the last several years, a tremendous number of academic, government, and non-governmental organization (NGO) studies have looked at the relationship between corporate environmental and financial performance. The studies have employed a broad range of methodologies and have examined the ecological/financial interface from a variety of perspectives. Many of these studies were conducted with the active collaboration of industry leaders. Collectively, these studies support only one conclusion—“going green” seldom hurts, and in many cases improving environmental performance provides a measurable boost to profitability and shareholder value, especially over the long term.

But the evidence is more than academic. The positive nature of environmental/financial linkages has also been documented through hard-won business experience. Honed by this experience and the academic process, the metrics of measuring the financial impacts of environmental performance have become more robust, and the data more precise. These improved metrics allow analysts to recognize the strictly financial benefits of improving corporate environmental performance. As a result, environmental analysis is now another financial tool available to optimize portfolio management and shareholder value.

This paper profiles the academic literature and provides an overview of the tremendous cost savings, new markets, and competitive advantage enjoyed by companies that have accurately forecast the emerging shape of the new industrial landscape and recognized the role that environmental performance can play as a value driver. While we recognize that long-term sustainability cannot be achieved without incorporating human rights, labor, and other social factors, analysis of the integration of these factors with environmental performance is beyond the scope of this paper. Readers interested in more information about comprehensively integrating broad social factors into corporate planning may want to consult with the Global Reporting Initiative (GRI). Visit [www.globalreporting.org](http://www.globalreporting.org) for full details.

Investors wanting to seize the environmental opportunity can be guided by the rich history of shareholder activism pioneered by religious investors over a century ago. From these roots, as the

growth of pension funds and other institutional investors in the 1900s dramatically changed the structure of equity ownership in the United States and globally, fiduciaries began to develop a set of proactive strategies for improving portfolio performance. At various stages, these strategies tugged at prevalent definitions of fiduciary responsibility, and in some cases spurred redefinition of prudent fiduciary behavior. In more recent years, much of the institutional investor debate around improving financial performance has crystallized in efforts to improve corporate governance. Fiduciaries now employ widely recognized tools to increase board independence, demand auditor independence, and limit excessive executive compensation based on their belief that these actions will improve shareholder value.

The \$149 billion California Public Employee Retirement System (CalPERS)<sup>1</sup> has seen tremendous success with a program designed to encourage good

corporate governance. CalPERS staff engage managers and directors of corporations that have been flagged as economic underperformers and also suffer from serious corporate governance problems.

The effect of CalPERS's corporate governance engagement is overwhelmingly positive. Wilshire Associates, a Santa Monica, California-based independent investment advisory company and CalPERS pension consultant, studied the performance of ninety-five companies targeted in CalPERS's corporate governance work over a twelve-year period. Results indicated that while the stock of these companies trailed the Standard & Poor's 500 Index during the five-year period prior to action by CalPERS, the same stocks outperformed the index in the five years following CalPERS activity, adding approximately \$150 million annually in returns to the fund. This kind of increase in corporate valuation due to activities targeting corporate governance has come to be known as "the CalPERS effect."<sup>2</sup>

We believe that we are once again on the cusp of redefining the responsibilities of a prudent fiduciary—this time to recognize that improving environmental performance is a primary pathway to increasing shareholder value. This paper will trace the evolving legal interpretations of fiduciary responsibility and examine the legal basis for incorporating environmental analysis into portfolio management.

*The Environmental Fiduciary* presents the evidence—academic, business, and legal—supporting our conclusion that fiduciaries now have the opportunity, and an affirmative duty, to incorporate environmental performance into the considerations which guide their portfolio management decisions.

Although this step may be regarded by some as radical, the fact remains that *none of the actions we propose are new*. Requests for clearer, more uniform presentations of environmental data; engagement

with environmental underperformers designed to improve corporate environmental management; and taking environmental opportunity into account in formulating investment strategies—all walk the same path that has been used by prudent fiduciaries for decades. We follow in the footprints of such institutional investment leaders as CalPERS, which recently began to employ environmental and labor standards to guide approximately \$2 billion in emerging market investments. CalPERS chose to apply environmental and human-rights standards because there is strong evidence linking environmental quality and human rights to more stable markets and increased profitability.<sup>3</sup>

While the analysis presented in this paper is largely limited to environmental factors, we believe that the same type of analysis and response strategies we suggest related to environmental portfolio management could be broadly applied to labor, human rights, and other social issues. Our hope in publishing this paper is to support the growing dialogue among fiduciaries and analysts about how to realize corporate value in today's global economy.

We welcome and value your comments and feedback.

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#### NOTES

<sup>1</sup> As of 30 April 2002, according to CalPERS, [www.calpers.ca.gov/invest/asset/asset.htm](http://www.calpers.ca.gov/invest/asset/asset.htm).

<sup>2</sup> [www.calpers.ca.gov/about/factglan/corpgov/corpgov.pdf](http://www.calpers.ca.gov/about/factglan/corpgov/corpgov.pdf).

<sup>3</sup> Robert Collier, "Pension Fund Tightens Foreign Stock Rules," *San Francisco Chronicle*, 14 November 2000.

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## CHAPTER I

# THE ENVIRONMENT AS A VALUE DRIVER

### *How Environmental Issues Impact Corporate Financial Performance*



A broad array of tools, measuring systems, and systems of analysis may be employed in evaluating a company's investment value. For example, to ascertain the value of a company relative to its peers in an industry sector and to the rest of the market, a comprehensive analysis might start with a review of a company's financial statements, profitability ratios, earnings potential, growth opportunities, and quality of management.

But one factor, environmental performance, is often overlooked. Yet a corporation's ability to profitably face environmental challenges and prepare for future environmental risks and exposures can have a significant impact on its earnings, cash flow, and balance sheet. Ostensibly similar companies in the same industrial sector may respond very differently to environmental challenges and opportunities. Environmentally driven innovation can lead to cost savings and lower compliance costs, and can create new efficiencies, thus improving corporate competitive posture. Conversely, environmental liabilities, if left unchecked, can significantly depress profitability, earnings, and shareholder value.

In short, environmental issues can be significant "value drivers"—issues with implications that can significantly affect financial results. Without examining these value drivers, analysts cannot accurately incorporate the benefits of environmental innovation or the risks from environmental exposures into their corporate evaluations. Fiduciaries who rely on such incomplete analysis may expose themselves and their funds to potentially significant risk.

## ENVIRONMENTAL BENEFITS

Environmentally driven innovation can save corporations money and create competitive advantage for environmental leaders as resources are conserved and new technologies are implemented. For example, energy efficiency can reduce energy purchas-

ing costs. Source reduction and recycling of waste material or old products can substantially reduce material and disposal costs. Redesigning manufacturing processes to reduce the amount of materials used can lead to various related efficiencies and also may reduce purchasing costs. And marketing to the growing demand for "green" consumer goods can expand corporate market share and franchise.

Overall, there are substantial financial benefits that can accrue to corporations with aggressive environmental programs—and these benefits are passed along to shareholders in the form of increased earnings and corporate value. Investors who do not take these gains into account when assessing corporate value are missing an important part of their evaluation.

Fortunately, encouraged by both business leaders and the work of NGOs such as the Coalition for

Environmentally Responsible Economies (CERES) and the World Resources Institute, there is a growing trend among corporations to comprehensively track, measure, and report on the financial savings achieved from recycling, process changes, energy efficiency, and other environmental initiatives. These comprehensive environmental reporting programs allow management and shareholders to identify and quantify the financial benefit achieved from environmental programs. For a detailed description of CERES's reporting guidelines, please see Chapter 4, *Recommendations to Unlock Environmental Value*.

This chapter of *The Environmental Fiduciary* by no means represents a complete survey of all the corporations that conduct these kinds of evaluations. Nor does it answer questions related to the fundamental value of unexploited natural resources to present society or to future generations. Rather, our goal is to provide a few examples to illustrate the kind of financial advantages enjoyed by corporations that aggressively sought to become environmental performance leaders, and documented their increased profitability and value in communications with their shareholders and the general public.

While some of the companies profiled have been recognized as leaders in environmental innovation and are often found in socially screened portfolios, others may be regarded as more controversial. However, in our view, the fact that the management of these more controversial companies implemented sweeping programs to capture and unlock environmental value underscores management's recognition of the financial value of the environmental improvements. Following is a small sampling of environmentally driven cost savings in the areas of energy efficiency, recycling, manufacturing changes, and other environmental initiatives.

## Examples of Multimillion Dollar Savings from Overarching Corporate Environmental Initiatives

- ChevronTexaco**—In 1991, prior to its merger with Texaco, the San Francisco, California-based integrated oil company Chevron began tracking its energy consumption levels. By focusing on energy efficiency, as well as other waste minimization and environmental risk control measures, Chevron (now ChevronTexaco) saved \$1.55 billion from 1991 to 2000.<sup>4</sup>
- ST Microelectronics**—The Geneva, Switzerland-based technology manufacturer reported that the sum total of its environmental and sustainability polices are projected to save \$900 million between 1994 and 2010.<sup>5</sup> In the year 2000, ST Microelectronics saved \$38 million in energy costs and \$8 million in water costs.<sup>6</sup>
- DuPont**—The Wilmington, Delaware-based chemical company has embraced the Six Sigma program, an approach to resource and productivity management. For calendar year 2000, the Six Sigma program saved DuPont almost \$400 million. According to DuPont, the Six Sigma projects are focused on productivity improvements and, in many cases, safety and health improvements and reductions in environmental waste and emissions.<sup>7</sup>

Here are just a few examples of how Six Sigma programs have helped DuPont save money by reducing its environmental footprint:

At its herbicide production plant in Camacari, Brazil, a change in manufacturing processes saves DuPont \$1 million per year. The DuPont team discovered that process modifications

*By focusing on energy efficiency, as well as other waste minimization and environmental risk control measures, Chevron (now ChevronTexaco) saved \$1.55 billion from 1991 to 2000.*



could reduce and sometimes eliminate the generation of highly toxic chemical by-products. DuPont accrued savings by reducing use of raw materials and eliminating the need for waste disposal and environmental containment.<sup>8</sup>

At a plant site in the city of Suzhou, in the People's Republic of China, DuPont significantly reduced electricity consumption—and thereby carbon dioxide emissions—while reducing costs by \$448,000.<sup>9</sup>

At DuPont's plant in Wilmington, Delaware, thirty separate energy conservation projects have resulted in a 50% reduction of the energy used in the manufacture of VespeL. Related cost savings exceed \$200,000 per year.<sup>10</sup>

- Baxter International**—The Deerfield, Illinois-based medical products maker Baxter International completes a Sustainability Report every year that tabulates how much money the company has saved through its eco-efficiency programs. These programs include reducing water usage, packaging, nonhazardous waste generation, regulated waste generation, and air toxics; recycling materials; and improving energy efficiency. According to its Sustainability Report, environmental initiatives saved Baxter \$12 million out of a net income of \$740 million in the year 2000, accounting for a full 1.6% of Baxter International's net income. In previous years, Baxter tabulated similar savings—\$11 million for the year 1999, \$7 million in 1998, and \$16 million in 1997.
- IBM** — The Armonk, New York-based computer manufacturer saved \$193 million in 2000 through its environmental program. The program focuses on recycling; reduction of waste and chemical

use; energy, material, and water conservation; reusable packaging initiatives; and process improvements designed to reduce pollution.<sup>11</sup> In addition, IBM operates nine Asset Recovery Centers around the world. In 2000, these Asset Recovery Centers processed 51,304 metric tons of manufacturing scrap, IBM-owned end-of-life machines, and customer-returned equipment. Only 3.22% of the material received by the centers went to landfill.<sup>12</sup> (As consumers and NGOs worldwide increase pressure on large companies to accept post-consumer responsibility for their products through "Take It Back" campaigns, IBM's Asset Recovery Centers could help strengthen IBM's market position while other firms figure out how to play catch-up.)

## Energy Efficiency Lowers Costs

All businesses require some sort of energy. In 2001, tremendous price spikes in California and elsewhere underscored the importance of energy efficiency and

*According to the EPA, by engaging in the EPA's ENERGY STAR program designed to help businesses achieve energy efficiency, U.S. businesses could save over \$25 billion per year.*

strategic energy management in reducing operating and production costs and increasing profits. Corporations committed to energy efficiency programs have achieved considerable cost savings. According to the EPA, by engaging in the EPA's ENERGY STAR program designed to help businesses achieve energy efficiency, U.S. businesses could save over \$25 billion per year.<sup>13</sup>

Below are a few examples of the improvement that increased energy efficiency can make on a corporation's bottom line.

- Marathon**—The Houston, Texas-based integrated oil company Marathon Oil Corporation saves \$4 million annually from reduced energy costs attained by following the EPA's Green Lights program, now incorporated into the larger ENERGY STAR.<sup>14</sup>

- **Deutsche Telekom**—Europe’s largest telecommunications company, the Bonn, Germany–based Deutsche Telekom, reduced energy consumption expenditures from DM 593 million in 1995 to DM 452 million in 2000. According to data published by Deutsche Telekom, the reductions in energy consumption stemmed from a wide range of measures taken in the branch offices (for example, improvement in the electricity supply conversion efficiency and reduced energy consumption in the air conditioning systems) and also from building conversions.<sup>15</sup> Reducing energy consumption carried the additional benefit of reducing Deutsche Telekom’s carbon dioxide emissions from 2.51 to 1.59 million tons per year during the same five-year period.<sup>16</sup>

*According to Nestle’s Environmental Progress Report 2000, between 1991 and 1999 packaging material savings amounted to 165,000 tons and CHF 300 million (approximately U.S. \$191 million).*

through the sale of by-products created during power generation.

Here’s how the TVA turned their particular “straw” into gold: In the past, the TVA had simply shipped its air pollution control by-products straight to a landfill. But today TVA generates revenue of \$3 million to \$3.5 million per year from the sale of synthetic gypsum, fly ash, bottom ash, and boiler slag—all by-products of the power-generating process. The materials are used to create wallboard, or are used in the production of concrete and other abrasives. The TVA also estimates that it saved at least \$5 million each year by avoiding the cost of handling the by-products and by deferring the development of new disposal capacity.<sup>18</sup>

## Recycling and Source Reduction Reduces Purchasing Costs

There’s little argument that recycling cuts down on waste and conserves natural resources, but the cost-effectiveness of recycling has historically been open to some debate. However, examination shows that many companies have realized enormous cost savings and, in some cases, opened new markets through recycling material and old products. Below are just a few examples of how recycling material and reducing consumption of raw material has saved money and improved profits.

- **Deutsche Telekom** saved between DM 4 million and DM 5 million by recycling and reusing raw materials in its cabling sector.<sup>17</sup>
- **The Tennessee Valley Authority** is a wholly owned government subsidiary and the nation’s largest public power company, based in Knoxville, Tennessee. The TVA has found a way to generate approximately \$8 million extra a year

- **Nestle**—The Vevey, Switzerland-based food company has substantially reduced its usage of packaging material and achieved commensurate savings. According to Nestle’s Environmental Progress Report 2000, between 1991 and 1999 packaging material savings amounted to 165,000 tons and CHF 300 million (approximately U.S. \$191 million).<sup>19, 20</sup>

- **The Southern California Gas Company’s Energy Resource Center**—The Downey, CA Southern California Gas Company’s Energy Resource Center, a business center devoted to helping businesses find energy-efficient solutions to their energy needs, was built at about 31% lower cost using recycled materials. An older Southern California Gas Company building was deconstructed and 62% of the material recovered was used in construction of the new building. Ultimately, the cost of the Energy Resource Center was \$6.8 million. According to Southern California Gas, if the center had been built according to conventional construction methods, the cost would have been \$9.7 million.<sup>21</sup>

## More Efficient Manufacturing Processes Lead to Operational Savings and Less Waste

Manufacturing goods requires raw materials and resources, most of which are acquired at some cost. But it is often possible to reduce these costs by re-designing products and production methods to require fewer raw materials, or to use less toxic alternatives, or to create less waste. Such moves can improve operating margins, lower capital expenses, and lead to higher profits. Below are just a few examples of process changes that were designed to curb environmental problems, but that also led to improvements in the bottom line.

- **ITT Industry**—In its Roanoke, Virginia, factory the diversified manufacturer has reported savings of \$500,000 a year because of an environmentally driven change in its manufacturing processes. The ITT factory formerly used an inert, nontoxic compressed gas called sulfur hexafluoride to test tubes used in the night-vision devices it makes for the military.<sup>22</sup> Predicting a tightening in the regulation of ozone-depleting gases, ITT switched from sulfur hexafluoride to nitrogen to test their products. Not only did nitrogen work just as well, it did not deplete the ozone and cost less to buy and handle.<sup>23</sup> It's worth noting that ITT made the process change based on a *prediction* of tighter environmental regulations. Management did not wait to play catch-up, but moved aggressively to combine reducing the company's environmental footprint with reducing operating expenses.
- **Corning**—The Corning, New York-based maker of optical fiber, cable, and photonic components, manufactures a superpure glass for use in the construction of computer chips. The manufacturing process formerly produced hydrochloric acid as a waste product. Because Corning executives were concerned that the state would soon tighten regulations on the emissions of hydrochloric acid, the company reconfigured its

manufacturing process to be chlorine free.<sup>24</sup> Corning has been monitoring the new glass samples for over a year and has discovered that they remain free of distortion, which means that the new glass is actually superior to the old chlorinated-base glass, which would have warped slightly during that same time period. Corning hopes that this higher-quality glass will be more desirable to customers and therefore help Corning gain market share. Like ITT, recognizing that pending regulations would force a change anyway, Corning moved early and found a way to meet the new standards *and* create a better product.

- **Textron**—The Providence, Rhode Island-based parent company of Cessna airplanes and Bell helicopters saved \$100,000 in its helicopter unit by revamping its waste treatment system.<sup>25</sup> Bell discovered that magnesium hydroxide, a pure white powder that Bell used for electroplating, was moving through its processes partially unused and was emitted as sludge. After conducting tests, Bell found that it could pump the sludge back into its electroplating process three to four times before it needed to be dumped. As a result, Bell dumped less sludge and bought less magnesium hydroxide, and thereby saved a considerable expense.
- **Baxter International**—The Deerfield, Illinois-based medical products maker Baxter International is saving \$35,000 a year at its Vienna, Austria, facility due to the introduction of a recycling operation. Baxter International was spending about \$70,000 a year to incinerate protein by-products of its plasma-processing operation. In 2000, Baxter International implemented a project to recycle the protein by-products of the treated plasma into renewable energy and fertilizer. The cost of recycling the protein by-products is only \$35,000 a year, as opposed to the \$70,000 a year that Baxter had been spending to dispose of the proteins.<sup>26</sup> This is just one example of the many individual steps that led Baxter to report

environmentally-related savings of \$12 million in 2000.

## Strategically Targeted “Green” Investments Can Boost Portfolio Value

The growth of emerging environmental technologies such as renewable energy, and concerns about health and the environment, have created a significant segment of the marketplace. Some of the most impressive growth has occurred in the sustainability niche. The Boulder, Colorado-based *Natural Business Journal* has coined a special term for the particular segment of the market that seeks out “green” goods and products: the *Lifestyles of Health and Sustainability Market*, or LOHAS for short. The LOHAS market is made up of diverse industries that contribute to five basic areas of consumer activism and concern: sustainable economy, health and wellness, personal development, alternative medicine, and ecological lifestyles. According to the *Natural Business Journal*, these segments represent an estimated \$227 billion U.S. market and a \$546 billion market worldwide.<sup>27</sup>

To be sure, simply investing in environmentally sustainable growth does not ensure success any more than success is guaranteed in any other investment sector. However, innovative corporations that combine business savvy with an understanding of environmentally driven growth opportunities have often done much better than their more traditional peers. Fiduciaries would do well to instruct investment managers not to ignore this growing segment of the marketplace. A few successful examples are discussed below.

### Organic Foods

One of the areas with the most explosive growth in the “green” marketplace has been organically grown food. According to the Organic Trade Association, the Greenfield, Massachusetts-based trade association representing the organic food production industry in Canada, the United States, and Mexico, retail sales of organic products have grown steadily over the past ten years, showing annual growth of 20–24% per year. Sales in the industry have grown to \$9.35 billion by 2001 and are projected to be nearly \$20 billion by 2005.<sup>28</sup>

*According to Michael Mullen, a company spokesperson for Heinz North America, “The organic sector is growing in grocery stores about 7% a year. That is double the rate of any other category in the grocery store business.”*

- **Whole Foods**—The Austin, Texas-based natural and organic foods retailer Whole Foods operates over 130 supermarket-sized stores in 23 states. Its revenues grew from \$119 million in 1992 to \$2.2 billion in 2001. Profits have grown from just \$3 million to \$67 million in that same time frame. The stock price has more than quadrupled.<sup>29</sup>

- **Hain Celestial Group**—H. J. Heinz acquired 19.5% of the Hain Celestial Group, a food company based in Uniondale, New York. Hain Celestial sells about 1,500 food products spanning a number of product lines, including kosher, medically directed (sugar-free or low-salt), and natural and organic foods. Hain Celestial Group sales have grown from \$15 million in 1994 to \$412 million in 2001. Net income has grown from zero to \$23.6 million in the same time period. The stock price has increased from a high of \$5.38 in June 1994 to a high of \$16 on May 22, 2002.<sup>30</sup> According to Michael Mullen, a company spokesperson for Heinz North America, “The organic sector is growing in grocery stores about 7% a year. That is double the rate of any other category in the grocery store business.”<sup>31</sup>

Other large food companies such as Dole of Westlake Village, California, ConAgra of Omaha, Nebraska, and Archer Daniels Midland of Decatur, Illinois, have also cashed in on the same trend by creating or acquiring organic brands.

### **Renewable Energy**

Renewable energy is a significant and growing investment opportunity. Recent events, such as San Francisco's passage of a citizen initiative mandating the issuance of \$100 million in bonds to fund solar and wind power projects, may forecast explosive growth in the solar energy market. The trend toward a renewable portfolio standard for power generation has been adopted by twelve states, including Texas, Minnesota, Pennsylvania, and Nevada, which have already established standards mandating increased use of renewable energy. These standards ramp up over time, creating progressively greater demand for renewables. Similar legislation is pending in California and at the federal level.

- **Wind Power**—The European Wind Energy Association has projected that between 2002 and 2010, electricity generated by windmills in Europe will increase from 8,000 to 60,000 megawatts—an increase of over 700%.<sup>32</sup> The European Union, where over 45,000 people are already employed in the wind industry, is the world leader in manufacturing and globally exporting wind generation equipment.<sup>33</sup> While the U.S. wind industry is behind the European industry's pace, over \$3 billion in U.S. wind power investments are expected in the next several years.<sup>34</sup>
- **Solar Power**—Solar energy development in the U.S. is also on the upswing. For example, the Newark, Delaware-based Astro Power has seen annual revenues grow from \$16.6 million in 1997 to \$69.5 million in 2001—an average annual revenue growth of 83% over the last five years. During that same period, share price grew from \$9.63 to \$40.43. And further growth may be expected. In 2001,

Astro Power signed construction agreements with several national U.S. homebuilding firms and a distribution agreement with Home Depot, the world's largest home improvement retailer.<sup>35</sup>

### **Socially Responsible Investing**

Many socially concerned investors incorporate environmental factors into their portfolio management. However, very few restrict their analysis to environmental factors, and it is beyond the scope of this paper to isolate the influence of purely environmental factors in driving the value of socially oriented portfolios. In many cases, investors use a double or triple bottom line analysis, where economic, environmental, and social factors may all be considered. According to the Social Investment Forum, nearly one out of every eight dollars under professional management in the U.S. today is involved in some form of socially responsible investing.<sup>36</sup> While the term "socially responsible investing" is often linked with highly publicized divestment campaigns, such as South Africa in the 1980s or the current push for divestment of tobacco stocks, it actually encompasses three sets of specific investing practices: *screening*, *shareholder advocacy*, and *community investing*.

**Screening** is the practice of excluding or under/overweighting corporations in a portfolio because of their social and environmental records. Generally, the social screening process is layered onto financial analysis. In other words, companies are first evaluated in accordance with traditional financial yardsticks. Then, an additional layer of analysis related to specific social concerns is performed. One recognized style (negative screening) is to avoid investing in "sin stocks" such as defense, tobacco, or certain resource extraction industries. Alternatively, some social investors practice a "best in class" approach, where companies with high social ratings are sought in virtually all industry sectors.

*Shareholder Advocacy* refers to proactive steps that investors take as stockholders, including dialoguing with companies on issues of concern as well as filing or cofiling shareholder resolutions, and voting proxies related to social issues. In many cases, shareholder activists purchase positions in companies that would otherwise not pass their social screens for the express purpose of filing shareholder resolutions or otherwise participating in shareholder campaigns.

*Community Investing* is the process of investing in financial institutions or direct financial instruments that target and serve economically disadvantaged communities. Techniques include low interest loans, microloans, business training, and other targeted economic development initiatives.

Socially responsible investing has been growing faster than the traditional investing marketplace. From 1999 to 2001, the growth rate for socially screened portfolio assets was more than one and a half times that of all professionally managed assets in the United States, despite an extended market downturn.<sup>37</sup> Total assets of socially screened portfolios under management in the U.S. grew by 36% from \$1.49 trillion in 1999 to \$2.03 trillion in 2001.<sup>38</sup> In comparison, the total assets of all investment portfolios under management in the U.S. grew by 22%, from \$16.3 trillion in 1999 to \$19.9 trillion in 2001.<sup>39</sup> Of the \$2.03 trillion in socially screened assets, \$1.87 trillion is invested in separate accounts managed for institutional clients and individual investors, and \$153 billion is in screened mutual funds.<sup>40</sup>

**TABLE 1. Mutual Funds with Strong Environmental Screens and 10 Year Performance History vs. Benchmark through 5/31/02<sup>41</sup>**

<b>Domestic Equity Funds</b>	<b>Style</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Benchmark (10 Year)</b>
Ariel Appreciation	Mid Cap Value	11.93%	16.73%	14.84%	14.69% Russell 2000 Value Index <sup>42</sup>
Ariel Fund	Small Cap Value	16.24%	16.18%	14.33%	14.69% Russell 2000 Value Index
Parnassus Fund	Small to Mid Cap Contrarian	11.20%	9.66%	12.74%	11.91% Lipper Multi Cap Value Index <sup>43</sup>
Domini Social Equity Fund	Large Cap Index	-6.23%	6.01%	11.81%	12.09% S&P 500 <sup>44</sup>
Calvert Social Equity (A)	Large Cap Blend	7.69%	9.90%	10.07%	12.09% S&P 500
<b>Balanced Funds</b>	<b>Style</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Benchmark (10 Year)</b>
Pax World Balanced Fund	Balanced: Value/Short Term	1.82%	9.72%	9.98%	9.20% Lipper Balanced Index
Green Century Balanced Fund	Balanced: Value/Short Term	13.38%	8.56%	8.84%	9.20% Lipper Balanced Index
Smith Barney Concert Social Awareness	Balanced: Value/Intermediate Term	-3.29%	6.11%	8.82%	9.20% Lipper Balanced Index
Calvert Social Balanced (A)	Balanced: Value-GARP/Intermediate Term	-1.89%	4.40%	7.15%	9.20% Lipper Balanced Index
<b>Fixed Income Funds</b>	<b>Style</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>	<b>Benchmark (10 Year)</b>
Calvert Social Bond (A)	Long Term	7.34%	7.33%	7.02%	7.44% Lehman Aggregate <sup>45</sup> Bond Index

**SOCIALLY RESPONSIBLE MUTUAL FUNDS:** As previously noted, it is beyond the scope of this paper to separate out the influence of purely environmental factors in influencing the profitability of socially screened mutual funds. However, several of the most established funds that employ strong environmental screens have ten-year performance histories that track, or exceed, their benchmarks. (See table on previous page.) For a more detailed overview, visit [www.socialfunds.com](http://www.socialfunds.com) or the individual websites of each of these funds.

## ENVIRONMENTAL RISKS

In addition to finding competitive advantage achieved by corporate environmental innovation, investment managers need to examine several key areas where environmental factors pose risks to a corporation's market value. Investors face the risk of unexpected drops in earnings due to fines, penalties, and cleanup costs following violation of environmental laws; increased costs due to changes in environmental regulation; and greater-than-expected costs due to understated or undisclosed liabilities

Bottom line—if these environmental risks are not accounted for in corporate valuation, the analysis will miss vital information about the company's true value. On a number of occasions this lack of accounting for environmental risks has led to a significant and sudden loss of corporate value—taking shareholders, investment managers, and fiduciaries alike by surprise.

### Loss of Shareholder Value Due to Violation of Environmental Laws

**US Liquids—Alleged illegal and improper disposal of hazardous waste led to a plant shutdown, collapse in shareholder value, an extensive drop in earnings, and expensive litigation.**

Alleged large-scale violations of environmental law created a crisis for US Liquids, the Houston,

Texas-based company in the business of collecting, treating, and disposing of liquid waste. The crisis induced a massive sell-off of US Liquids stock, resulting in a 58% drop in US Liquids' stock price over the course of one week and a 111% drop in annual income. This drastic decline prompted a securities class action and a derivatives action brought by shareholders against the company. Both are still pending.

As the dog days of a Detroit summer wound down in 1999, agents from the FBI and the EPA raided US Liquids' plant in Detroit, Michigan. According to a news account printed in the *Detroit Free Press*, employees had contacted authorities and reported in sworn affidavits that the company had been illegally dumping hazardous waste into Detroit sewers and landfills. Additionally, the *Detroit Free Press* reported that "employees said that the plant provided fake water samples to a laboratory for testing and gave samples of plain sand and dirt to the landfills for testing, instead of samples of the hazardous materials that they were actually dumping."<sup>46</sup>

As a result of the federal raid, trading of US Liquids stock was suspended on August 25, 1999, and resumed on August 31, 1999. But the suspension only served to delay the inevitable shareholder backlash. By the end of August 31, the day the stock resumed trading, the price of a US Liquid share had fallen 58%, dropping to \$7.50 from \$17.75 at the start of the session.<sup>47</sup>

In response to the dramatic drop in share price, two lawsuits were filed on behalf of shareholders alleging violation of federal securities laws. The complaints alleged that the company violated laws by "issuing materially false and misleading statements and/or by omitting to disclose material facts required to be disclosed."<sup>48</sup>

During the federal investigation of the plant, investigators discovered PCBs (polychlorinated biphenyls) in some waste products at the site. As a consequence, the solid-waste portion of the US Liquids plant was shut down for cleanup for five

months. During that time, the company continued to report earnings losses. To put the losses in context, in December 1998 (prior to the discovery of massive environmental mismanagement), US Liquids had reported annual net income of \$10.8 million. By December 1999, just following the incident, yearly net income was reported as a loss of \$1.2 million. By December 2000, net income had sunk to a loss of \$25.4 million.<sup>49</sup>

According to a business brief in the *Houston Chronicle*, US Liquids warned investors on February 1, 2000, that its earnings would be hurt in part by greater-than-expected costs of the PCB cleanup at its plant in Detroit.<sup>50</sup> On March 30, 2000, US Liquids stated in its annual report to the SEC (form 10K405), that the incident could have an adverse impact on its earnings.

Our Detroit, Michigan facility is under investigation by the EPA and the Federal Bureau of Investigation for possible violations of the Clean Water Act, RCRA, and federal wire and mail fraud statutes. The imposition of a substantial fine or penalty against the facility could have a material adverse effect on our business, results of operations, and financial condition.

**Smithfield Foods—The world’s largest hog and pork producer violated federal environmental laws, costing shareholders \$12.6 million in earnings and decreasing net income by 20%.**

On August 8, 1997, Smithfield Foods, the Smithfield, Virginia-based meat and food processor, was fined \$12.6 million, the largest fine ever imposed under the Clean Water Act. In *United States of America v. Smithfield Foods, Inc. et al.*, a federal judge for the United States District Court for the Eastern District of Virginia imposed the million-dollar civil penalty on Smithfield Foods and its Smithfield Packing and Gwaltney subsidiaries. The decision was upheld on appeal to the Fourth Circuit, and the Supreme Court declined to review the case.

The court found that, in violation of federal environmental law, the Smithfield Foods hog-slaughtering operation in Smithfield, Virginia, re-

peatedly discharged wastewater from its hog slaughtering operations with illegally high phosphorous effluent levels into the Pagan River, which runs through Virginia and empties into the Chesapeake Bay. According to a news account in the *Richmond Times-Dispatch*, “during the case the federal government argued that Smithfield single-handedly frustrated attempts to clean up the Pagan River.”<sup>51</sup> The same news account also reported that, according to the federal government, “the meatpacker skimped on equipment at its wastewater treatment plant, understaffed it, and didn’t adequately train or supervise what little environmental staff it had.”<sup>52</sup>

The \$12.6 million fine in civil penalties was reflected as a “nonrecurring” charge on Smithfield Foods’ income statement as part of its annual report for fiscal year 1998. According to the Smithfield Foods annual report, net income for fiscal year 1998 was \$53.4 million, or \$1.34 per diluted share. Excluding the \$12.6 million fine, Smithfield Foods reported that net income would have been \$66 million or \$1.66 per diluted share.<sup>53</sup>

In other words, because of Smithfield’s lack of regard for federal environmental requirements, Smithfield Foods shareholders saw their company’s earnings decrease by \$12.6 million or \$0.32 a share. Smithfield Foods’ environmental misdeeds not only brought damage to Virginia’s waterways and communities, but also cost the company 20% of its 1998 net income.

## **Loss of Shareholder Value Due to Lack of Preparation for Environmental Regulation**

As new environmental regulations are passed, corporations face costs associated with coming into compliance. The regulations are generally viewed as a constraint, and many fiduciaries and analysts assume these regulatory constraints will generally affect most companies in a given industrial sector the same way. This is a dangerously shortsighted assumption. Existing or pending government regu-



lations can have a profound impact on some companies within an industry sector but only negligible impact on other companies in the same sector. While arbitrary factors—such as where a particular company’s facilities are located—clearly play some role, the evidence suggests that nimble management with an aggressive approach toward environmental compliance can often save money and carve out competitive advantage by being prepared to meet or exceed new performance standards.

The financial impact of a corporation’s ability to comply with environmental laws and to stay ahead of them should be considered by equity analysts. In addition to encouraging analysts to provide this kind of information, investors and fiduciaries might find it profitable to encourage corporations they own to meet new environmental problems, and the regulations designed to curtail them, head-on.

### **Forecasting Regulatory Impact**

In their report “Pure Profit: The Financial Implications of Environmental Performance,” Robert Repetto and Duncan Austin of the World Resources Institute, the Washington, DC environmental research group, explored the impact of known impending environmental regulations on the capital expenditures and future earnings of thirteen leading publicly listed companies in the U.S. pulp and paper industry. Due to agreements with the specific companies and trade associations that participated in the study, all company names were masked in the final report.

One of the most important aspects of this study is that it was forward looking. While most other studies to date had looked at the impact of past environmental events on profitability and shareholder value, *Pure Profit* was designed to forecast the impacts of pending regulations. This creates the potential for analysts to include these impacts in

earnings forecasts and other measures designed to predict where a company is headed relative to its peers—providing a more accurate forecast and a more reliable basis for investment decisions.

Overall, the authors found that of the thirteen paper companies studied, some faced a larger array of potentially costly environmental issues and,

*One company in the study group stood to gain as much as 3% in market value because it had already complied with pending regulations.*

therefore, much more environmental risk than their competitors. That is, aggregate financial exposure to all the pending environmental regulations could cost some companies in the study as much as 10% of their market value. However, one company in the study group stood to gain as much as 3% in market value because

it had already complied with pending regulations and would not be affected due to its specific positioning within the industry.

The authors reviewed the impact that a pending anti-smog regulation would have on the corporations in the pulp and paper industry. The new rule would apply to major emission sources in a twenty-two-state region along the Eastern Seaboard facing difficulties in attaining federal air quality standards.

The rule had a varying financial impact on the different pulp and paper companies studied. For example, one company, in addition to having a high number of plants in the affected area, also had a high level of nitrogen oxide emissions per ton of output. According to the report, this company faced compliance costs of up to 8% of the company’s market value to meet the new anti-smog rule. However, another company in the region had a very low level of nitrogen oxides emissions—less than half the industry average. The study attributed this to a variety of factors including product mix, fuel source, and mill technology. Due to its low nitrogen oxides emissions, the second company only faced potential compliance costs of, at worst, 1% of its market value. At best, the second company stood to gain market value due to the competitive advantage the new smog rules would create. This type

of information could be absolutely crucial to investment decisions, yet is often omitted in current reporting and analysis.

### **Forecasting Compliance Costs and Value**

In March 2000, Innovest Strategic Value Advisors, a corporate environmental rating group based in New York City, released a report that found similar uneven expenses for compliance with pending regulations among forest products companies. The report, entitled “The Forest Products Industry North American Report: Hidden Risks and Value Potential for Strategic Investors,” assigned environmental rankings to seventeen pulp and paper companies and found that some corporations achieved competitive advantage by having engaged in forward-thinking compliance strategies.

The Innovest study focused on another major regulatory requirement: the “Cluster Rule,” published in the Federal Register in April 1998 and so called because the rule is a cluster of air and water regulations designed to reduce emissions. Like *Pure Profit*, the Innovest report forecast that the seventeen pulp and paper companies had quite different exposure to this rule depending on the extent to which each had *already* implemented measures to reduce air and water emissions. For example, the report found that:

- As of February 2000, the cost to Tacoma, Washington-based forest products company Weyerhaeuser to bring all its plants into compliance with the Cluster Rule were predicted to be approximately \$80 million in additional capital expenditures—about 0.7% of Weyerhaeuser’s total revenue for fiscal year 1998.
- In contrast, Georgia Pacific, the Atlanta, Georgia-based forest products company, had high exposure to the Cluster Rule. The Innovest report indicated that as of February 2000, Georgia

Pacific’s costs to bring all its plants into compliance with the Cluster Rule were predicted to be between \$500 million and \$550 million. This represented a full 4% of Georgia Pacific’s revenue in fiscal year 1998.

While recognizing that standard accounting practices for the estimation of the collective financial impact of future regulatory requirements have yet to be developed, we point out that here, as elsewhere, the metrics of forecasting environmental impacts are improving and are worthy of investor attention.

### **Threat to Shareholder Value Due to Inadequate Disclosure of Environmental Liabilities**

Poor disclosure or lack of disclosure of environmental liabilities undercuts risk analysis and can threaten shareholder value. When corporations understate or

*74% of companies failed to report in their 10-Ks cases where environmentally related legal proceedings could result in governmental monetary sanctions over \$100,000.*

do not disclose environmental liabilities, investors are hampered in their ability to assess future earnings growth and shareholder value. Worse yet, when liabilities are ultimately disclosed, not only does the true cost of the liability drive down corporate value, but trust is eroded and management may have difficulty attracting capital. In this way, undisclosed environmental liabilities create a double drag on shareholder value

and should be of special concern to fiduciaries. Two government agency reports indicate that lack of adequate disclosure poses a problem for investors.

In 1998, the EPA’s Office of Enforcement and Compliance Assurance completed a study that found that 74% of companies failed to report in their 10-Ks cases where environmentally related legal proceedings could result in governmental monetary sanctions over \$100,000. This is in flagrant violation of the law<sup>54</sup> and clearly leaves investors at a distinct

disadvantage because they cannot otherwise fully assess a corporation's assets and liabilities.

The EPA study, "Guidance on Distributing the Notice of SEC Registrants' Duty to Disclose Environmental Legal Proceedings in EPA Enforcement Actions," found that only 26% of civil and adminis-

trative proceedings involving penalties were correctly disclosed in the company 10-K reports. Even worse, only 16% of proceedings involving court-ordered Supplemental Environmental Projects (SEPs) and just 4% of proceedings involving Resource Conservation and Recovery Act (RCRA)

## SEC Regulation S-K

### *A Blueprint for Material Environmental Disclosure*

**Regulation S-K Item 101:** SEC registrants (corporations) must disclose the "material" effects that compliance with federal, state, and local environmental laws regulating the discharge of materials into the environment will have on earnings, capital expenditures, and the competitive position of the company and its subsidiaries.

The U.S. Supreme Court has held that information is "material" if there is a substantial likelihood that a reasonable investor would find the availability of the information to significantly alter the total mix of information available in the decision-making process.

**Regulation S-K Item 103:** Corporations registered with the SEC must disclose administrative or judicial proceedings to which they are a party that arise under federal, state, or local provisions that have the primary purpose of protecting the environment if they are known to be contemplated by a government authority, such as the EPA. Additionally, corporations registered with the SEC must disclose proceedings that meet *any* of the following conditions:

- **Materiality**—If the proceeding is material to the business or financial condition of the company, it must be disclosed. (See above for definition of "material.")
- **Legal Proceedings**—If the proceeding primarily involves a claim for damages, potential monetary sanctions, capital expenditures, deferred charges, or charges to income for which the amount involved, exclusive of interest and costs, exceeds 10% of the current assets of the corporation and its subsidiaries on a consolidated basis, it must be disclosed. The costs of penalties, injunctive relief, and supplemental environmental projects ordered in EPA enforcement proceedings or environmentally based citizen suits should be considered when determining if this reporting threshold has been met.
- **Monetary Sanctions**—If a governmental authority is party to the legal proceeding and the SEC-registered corporation has a reasonable belief that the proceeding will result, or has resulted in, monetary sanctions of \$100,000 or more, the legal proceeding must be disclosed.

**Regulation S-K Item 303 (Management's Discussion and Analysis of Financial Condition and Results of Operations)**—Management is required to disclose environmental contingencies that may reasonably have a material impact on net sales, revenue, or income from continuing operations.

*Source: U.S. EPA Enforcement Alert, Volume 4, Number 3, Office of Regulatory Enforcement, October 2001.*

corrective actions were correctly disclosed. Investors who relied on these inaccurate 10-Ks for an assessment of pending liabilities were left in the dark.<sup>55</sup>

Following the release of this study, the EPA Office of Regulatory Enforcement and Compliance Assurance issued an Enforcement Alert newsletter notifying companies of their obligation to comply with the law. The EPA has also begun notifying specific companies of their duty to disclose legal proceedings pursuant to Regulation S-K when enforcement action is initiated by the EPA itself. However, this is only a first step toward ensuring that corporations provide investors with a full accounting of environmental liabilities.

In 1993, a few years before the EPA study, the General Accounting Office (GAO) had already flagged the problem in a report entitled “Environmental Liability: Property and Casualty Insurer Disclosure of Environmental Liabilities,” which found that insurance industry disclosure of Superfund toxic cleanup liabilities was very poor and put investors at risk. The report reviewed the annual reports of the top sixteen publicly held property and casualty insurance companies. Only two of the sixteen disclosed dollar amounts related to environmental claims in their annual reports for 1990, and only three of the sixteen made this disclosure for 1991. However, five of the same insurance companies in 1990 and eight in 1991 had stated that they were involved in potentially costly litigation over environmental claims that might have had a negative financial impact on the company. Upon further inquiry by the SEC, several more firms disclosed environmental costs and expenses related to the claims.

The GAO report identified two potential structural reasons for this underreporting:

1. The insurance companies claimed that they could not estimate the incurred environmental claims costs or limitation expenses because “uncertainties” prevented the companies from estimating

or reporting these liabilities. These “uncertainties” were due to evolving judicial interpretations of, and inconsistent conclusions about, legal liability for environmental cleanup.

2. SEC rules required that each claim only needed to be reported if it individually exceeded 10% of the company’s assets. Unless all claims against a company were voluntarily aggregated together, a company might avoid disclosure even if the sum of claims exceeded 10% of the company’s assets.

In the report, the GAO summarized the problem:

At present, no one claim in litigation may be material to any one company. The SEC regulation requiring that material legal proceedings be disclosed applies to one claim or set of related claims for damages that exceed 10% of a company’s assets. A set of related environmental claims would be those claims associated with the same physical property or site and/or the same pollution event. However, the ultimate cleanup costs associated with thousands of pollution claims, coupled with costs to litigate the coverage issues, could be significant to individual insurance companies as well as to the property and casualty insurance industry as a whole.<sup>56</sup>

## CONCLUSION

As the previous examples show, companies that move aggressively to reduce their environmental footprint or increase top line growth by capturing new “green” markets may reap significant benefits in reduced costs and/or increased profit and shareholder value. But the evidence is more than anecdotal. As the next chapter *Academic Perspectives* shows, environmentally driven value can be systemic and may be experienced across a variety of industrial sectors and documented by a wide range of analytical techniques.

## NOTES

- 4 Timothy A. Nelson, ChevronTexaco Corporate Energy Coordinator, personal communication, 13 November 2001.
- 5 Frank Dixon, Managing Director of Innovest, presentation to the Rose Foundation, 10 July 2001.
- 6 Giuliano Boccaletti, Corporate Environment Support Group at ST Microelectronics, personal communication, 14 November 2001.
- 7 *DuPont Global Progress Report 2000*, <http://www.dupont.com/corp/social/SHE/usa/us5.html>.
- 8 2001 Sustainable Growth Excellence Awards, published by DuPont, and Dawn G. Rittenhouse, investor relations at DuPont, personal communication, 12 December 2001.
- 9 *DuPont Global Progress Report 2000*, <http://www.dupont.com/corp/social/SHE/usa/us5.html>. Also, Leslie A. Cormier, public relations at DuPont, personal communication, 28 November 2001.
- 10 2001 Sustainable Growth Excellence Awards, published by DuPont, and Dawn G. Rittenhouse, investor relations at DuPont, personal communications, 12 December 2001.
- 11 *IBM Environment and Well-Being Progress Report 2000*, <http://www.ibm.com/ibm/environment/>, p. 16.
- 12 *Ibid.*
- 13 EPA's Energy Star program provides participating businesses with information, analytical tools, and benchmarking tools needed to implement effective energy management initiatives. Energy Star can help facilitate energy management at both the facility and corporate levels and can assist companies in making the connection between improved energy efficiency and increased profitability. For more information visit [www.epa.gov](http://www.epa.gov).
- 14 Innovest Power Point Presentation by Frank Dixon, Managing Director, presented to the Rose Foundation, July 10, 2001.
- 15 Company data supplied by Deutsche Telekom.
- 16 *Ibid.*
- 17 Frank Dixon, Managing Director of Innovest, presentation to the Rose Foundation, 10 July 2001.
- 18 Gilbert D. Francis, media specialist at TVA, personal communication, 19 December 2001, and Claudia H. Deutsch, "Together At Last: Cutting Pollution and Making Money," *New York Times*, 9 September 2001.
- 19 *Nestle Environment Progress Report 2000*, p 8.
- 20 Currency conversion averaged end-of-year 1991 rate of 1.4355 Swiss francs per dollar with 1999 of 1.5692. [www.cnn.com](http://www.cnn.com) and [www.djnr.com](http://www.djnr.com).
- 21 [http://www.socalgas.com/business/resource\\_center/erc\\_home.shtml](http://www.socalgas.com/business/resource_center/erc_home.shtml) and conversation with Holly Tucker of ERC, 24 May 2002.
- 22 Claudia H. Deutsch, "Together at Last: Cutting Pollution And Making Money," *New York Times*, 9 September 2001.
- 23 *Ibid.*
- 24 *Ibid.*
- 25 *Ibid.*
- 26 *Ibid.* and Tanya Tyska, Baxter International's Corporate Communications Director, personal correspondence, 16 November 2001.
- 27 <http://www.naturalbusiness.com/research.html>.
- 28 Conversation with Barbara Haumann, Senior Writer at the OTA, 24 May 2002 and [www.ota.com](http://www.ota.com).
- 29 Hoover's Online, [www.hoovers.com](http://www.hoovers.com).
- 30 *Ibid.*
- 31 Conversation with Michael Mullen, company spokesman, 19 March 2001.
- 32 <http://www.evea.org/src/europe.htm>.
- 33 Soren Krohn, "Danish Wind Turbines: An Industrial Success Story," [www.windpower.org](http://www.windpower.org), February 2002.
- 34 American Wind Energy Association, *Global Wind Energy Markets Report* (2001).
- 35 Astro Power 2001 Annual Report.
- 36 Social Investment Forum, *2001 Report on Socially Responsible Investing Trends in the United States*, p. 2.
- 37 *Ibid.*, p. 3.
- 38 *Ibid.*, p. 3.
- 39 *Ibid.*, p. 9.
- 40 *Ibid.*
- 41 [www.socialfunds.com](http://www.socialfunds.com)
- 42 Data provided by Russell.
- 43 Data provided by Lipper.
- 44 Data provided by Standard & Poor's.
- 45 Data provided by Kathy Park, Lehman Brothers Fixed Income Index Group.
- 46 Tina Lam and Maryann George, "Toxic Waste Dumping Suspected," *Detroit Free Press*, 26 August 1999.
- 47 "Shareholders Sue US Liquids, Alleging Securities Law Violations," *Dow Jones Business News*, 5 September 1999.
- 48 "US Liquids Shares Suffer Major Loss," *Houston Chronicle*, 1 September 1999.
- 49 Hoover's Online, [www.hoovers.com](http://www.hoovers.com).
- 50 "US Liquids Shares Suffer Major Loss," *Houston Chronicle*, 1 September 1999.
- 51 Bob Piazza and Rex Springston, "Smithfield Is Fined \$12.6 Million," *The Richmond Times Dispatch*, 9 August 1997.
- 52 *Ibid.*
- 53 Smithfield Foods 10-K, filed with the SEC May 1998.

<sup>54</sup> Regulation S-K Instruction 5(c) to Item 103.

<sup>55</sup> U.S. EPA, March 2001 presentation to the American Bar Association Conference on Environmental Law, p. 14.

<sup>56</sup> GAO, *Environmental Liability: Property & Casualty Insurers' Disclosure of Environmental Liabilities* (1993), p. 8.

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## CHAPTER II

# ACADEMIC PERSPECTIVES

### *An Overview of Academic Literature Examining the Environmental/Financial Performance Link*



As evidenced in Chapter 1, *The Environment as a Value Driver*, many companies have found that prudent environmental performance investments can lower costs or improve efficiency, resulting in a net financial gain. Many corporations are just beginning to tabulate gains from such environmental initiatives. Others, such as Baxter International and Interface Carpet, have developed extensive company-wide environmental accounting systems to track gains and costs due to environmental initiatives.

However, company-by-company anecdotes alone, although illustrating successful achievements in maximizing environmental value by some of the largest corporations in the world, do not answer the conventional notion that environmental initiatives can be extremely expensive to implement and therefore can create a drag on profitability. Fortunately, some of our day's leading members of the academic and business community have examined the impact of environmental initiatives on corporate profitability on a larger scale. Consequently, there are a variety of academic studies, published in academic journals and business press alike, that review measures of corporate financial performance and correlate that to corporate environmental performance. Similar to the business examples examined in the previous chapter, most of the studies do not attempt to evaluate the intrinsic value of unexploited natural resources, but instead focus on the profitability of corporate environmental policies and practices.

Over one hundred such studies have been released in the past twenty years; forty have been published in the last five years. The studies range in their sophistication, techniques, models, and metrics used to explore the correlation between environmental and financial performance. These empirical approaches can be roughly divided into three categories: **regression studies**, **event studies**, and **portfolio comparisons**.

Despite the different approaches taken, the majority of academic studies indicate that companies that do better environmentally also do better financially. In fact, because a wealth of analytical approaches have reached essentially the same conclusion—that improving environmental performance

may help the bottom line and almost certainly won't hurt it—fiduciaries can reasonably expect that encouraging their investments to “green up” will pay off, especially over the long term. As we will explore in Chapter 3, *Legal Perspectives*, this reasonable expectation of increased profitability has been the basis for sweeping and highly successful shareholder initiatives such as CalPERS' widely hailed corporate governance program.

In its May 2000 report, “Green Dividends? The Relationship Between Firms' Environmental Performance and Financial Performance,” the EPA's Office of Cooperative Environmental Management reviewed more than twenty-five of the major studies that examined the correlation between environ-

mental and financial performance. After considering the evidence, the authors wrote:

A significant body of academic research relates measures of corporate environmental performance to measures of financial performance. The most striking aspect of this research is that most of it shows a moderate positive relationship between the two kinds of performance—regardless of the variables used to represent each kind of performance, the technique used to analyze the relationship, or the date of the study.<sup>57</sup>

## REGRESSION STUDIES

Regression studies use multivariable regression to analyze the effect of environmental performance on financial performance. Measures of environmental performance include levels of emissions, number of oil spills, quality of environmental management in place, water usage, and extent of pollution liability. These measurements are then correlated to generally accepted measurements of financial performance such as total shareholder returns, return on equity, return on assets, and ratio of market price to book value.

### ***Do Corporate Global Environmental Standards Create or Destroy Market Value?***

In 2001, Glen Dowell, Stuart Hart, and Bernard Yeung won the Moskowitz Prize for their study, “Do Corporate Global Environmental Standards Create or Destroy Market Value?”, published in *Management Science* in August 2000.<sup>58</sup>

**KEY FINDING:** The authors found that those firms adopting a single, stringent, global environmental standard had much higher market value than those firms defaulting to less stringent or poorly enforced host country standards. They concluded that developing countries that use lax environmental regula-

tions to attract foreign direct investment may end up attracting poorer quality, and perhaps less competitive, firms.<sup>59</sup>

**METHODOLOGY:** To conduct the study, the authors reviewed the market value of eighty-nine U.S.-based multinational enterprises (MNEs) over the years 1994 through 1997. The market values of the corporations were determined by Tobin’s q, which is a sophisticated way of measuring how much a firm is trading over its book value.<sup>60</sup> (Corporations with a higher Tobin’s q are deemed by the market to be more valuable than those with a low Tobin’s q.)

The eighty-nine-firm data set included those MNEs that adopted a single, stringent, global environmental standard (fifty-nine companies), those that complied only with local environmental standards (thirty companies), and those that adopted U.S. standards (eighteen companies). The corporations in the study were chosen because they were part of the S&P

500, because they were involved in manufacturing and mining (heavily polluting industries), and because they had production operations in countries with GDP per capita below \$8,000.

### ***A Resource-Based Perspective on Corporate Environmental Performance and Profitability***

In 1998, Michael Russo and Paul Fouts received the Moskowitz Prize for their study, “A Resource-Based Perspective on Corporate Environmental Performance and Profitability.”

**KEY FINDING:** The authors found a significant positive correlation between financial returns and environmental rankings based on criteria like emissions, environmental performance, and level of compliance.

**METHODOLOGY:** Russo and Fouts reviewed and correlated the environmental and financial perfor-

*A significant body of academic research relates measures of corporate environmental performance to measures of financial performance. Most of it shows a moderate positive relationship between the two kinds of performance.*



mance of 243 firms over the two-year period 1991 and 1992. Environmental performance was measured by the environmental rating each firm had received from the Franklin Research and Development Corporation (now Trillium Asset Management). These ratings were based on criteria including compliance records, emissions, ability to reduce waste and emissions, environmental liabilities, and initiative to go beyond industry peers in establishing pollution-prevention technologies and measures.

Financial performance was measured as a company's return on assets. The authors chose a number of control variables, including industry concentration, firm growth rate (measured as a firm's annual change in sales), firm size, capital intensity (measured as the ratio of assets to sales), and industry growth rate.

The authors found that environmental performance and return on assets are positively linked, and that industry growth moderates this relationship, with returns on environmental performance higher for high-growth industries.

### ***Does It Really Pay to Be Green? An Empirical Study of Firm Environmental and Financial Performance***

In their study, "Does It Really Pay to Be Green? An Empirical Study of Firm Environmental and Financial Performance," published in the *Journal of Industrial Ecology* in the fall of 2000, Andrew King and Michael Lenox also found an association between environmental and financial performance. The study analyzed 606 U.S. manufacturing firms over the time period 1987 through 1996.

**KEY FINDING:** The authors found that lower overall total pollution emissions were associated with superior financial performance.

**METHODOLOGY:** In their study, the authors used Tobin's  $q$  as a measure of financial performance. The authors combined facility data from Dun and

Bradstreet and corporate data from Standard & Poor's Compustat database with the EPA's Toxic Release Inventory Database, which tracks emissions of over two hundred toxic chemicals from U.S. manufacturing firms.<sup>61</sup>

The authors reported finding "strong evidence" that firms in cleaner industries had higher market valuations. However, King and Lenox noted that given their modeling, they were unable to determine why the association existed. That is, while documenting *association*, they could not prove *causation*. Specifically, they were unable to determine whether the correlation between cleaner industries and environmental performance was due to innovation of the firms, whether more profitable firms spent more on pollution control technologies, or whether other firm-specific attributes or strategies lay under the relationship between environmental and financial performance.

### ***Does it Pay to be Green? An Empirical Examination of the Relationship Between Emission Reduction and Firm Performance***

In 1994, Stuart Hart and Gautam Ahuja reviewed the financial and environmental performance of 127 companies from the Standard and Poor's 500 Index in their study, "Does It Pay to Be Green? An Empirical Examination of the Relationship between Pollution Prevention and Firm Performance." A revised version of the study was published in *Business Strategy and the Environment* in 1996 as "Does It Pay to Be Green? An Empirical Examination of the Relationship between Emission Reduction and Firm Performance." The study was limited to firms involved in manufacturing, mining, and production because the main research variable, emissions reduction, was most salient relevant to these types of companies.

**KEY FINDING:** The study's principal finding was that reductions in emissions corresponded to improved operating performance the following year, and that these improvements were realized as financial gains after two years.

*METHODOLOGY:* Environmental performance was derived from the Corporate Environmental Profile produced by the Investor Responsibility Research Center's (IRRC), which provided a summary of the reported emissions of selected pollutants from domestic manufacturing facilities owned by each company and its subsidiaries. Emissions were tabulated by an Emissions Efficiency Index, which was the ratio of reported emissions in pounds to the company's revenues in the thousands of dollars. The authors tracked emissions reductions of these firms by computing the change in reported emissions between 1988 and 1989.

Operating and financial performance was measured by return on sales, return on assets, and return on equity. Data was collected for the years 1989 through 1992. The authors controlled for advertising intensity, capital intensity, leverage, and research and development intensity so that financial performance could be examined in relation to emissions reduction.

Significantly, the authors found that emissions reduction enhanced financial performance two years following the reduction. They also found that emissions reduction enhanced operating performance in the year following the reduction. Finally, the authors found that emissions reduction enhanced the operating and financial performance more for firms with high emissions levels than for firms with low emissions levels.

Interpreting these results illustrates the complexities inherent in this field. For example, the results could indicate that reduction in levels of emissions has the potential to spur future superior financial performance. However, the results could also indicate that the correlation occurs because corporations divest "dirty operations." Better financial performance could occur because there are lower compliance and regulatory costs, or because management in these corporations may have a superior ability to address environmental problems relative to their industry peers. A follow-up study to examine these questions would be useful.

## PORTFOLIO COMPARISON STUDIES

In addition to correlating a firm's financial and environmental performance, there are a host of studies that compare and contrast "green" and "non-green" portfolios. That is, portfolios of companies with superior environmental performance are compared to similarly constructed portfolios that lack stellar environmental performance.

### ***Socially Responsible Investment Screening: Strong Evidence of No Significant Cost for Actively Managed Portfolios***

The 2001 Moskowitz prize runner-up was a paper authored by Bernell Stone, John Guerard, Jr., Mustafa Gultekin, and Greg Adams entitled "Socially Responsible Investment Screening: Strong Evidence of No Significant Cost for Actively Managed Portfolios."

*KEY FINDING:* After reviewing quarterly returns for an average of 1,334 stocks for thirteen years and then screening out the worst social and environmental actors, the authors found that there was no significant cost to social and environmental screening, even when controlling for beta (risk), dividend yield, growth, and corporation size. Because the authors ran the environmental data separately, the results also show in particular that there is no significant cost to screening out just the worst environmental actors in a large portfolio of stocks.

*METHODOLOGY:* In discrete and separate data runs, the authors screened out corporations involved in alcohol, tobacco, gambling, the nuclear industry; those companies that were bad environmental actors; and companies that derived more than 2% of their revenues from defense products. The social and environmental data was supplied by the Boston, Massachusetts-based social research firm Kinder, Lydenberg, and Domini (KLD, creators of the Domini Social Index).

The authors then compared aggregate quarterly returns over the thirteen-year period for each screened group of stocks to the control group of 1334. The authors concluded that there was no significant cost to social and environmental screening.

Of special note to this paper is the data run on the environmental screen. To test if screening out poor environmental actors would create a drag on profitability, 53 stocks were removed from the starting universe of 1,334 stocks because they were bad environmental actors. This created a second, “greener” universe of 1,281 stocks. Aggregate quarterly returns for the entire group were compared to aggregate quarterly returns for the environmentally screened group, and no significant difference in aggregate returns was found over the thirteen-year period.

This study is truly remarkable because the authors, using an extremely sophisticated mathematical assignment program to create twenty distinct portfolios, were able to control for size, beta, growth, and dividend yield so that any difference in quarterly return could not be attributed to these external factors. Previous to this elaborate mechanism for control, the return differences in screened and unscreened portfolios were often attributed to differences in portfolio makeup—with the screened portfolios assumed to be holding higher-growth, smaller, more volatile companies.

For example, the five- and ten-year returns of the S&P 500 Index are often compared to the returns of the Domini Social Equity Index, a diversified index of 400 large company stocks designed to be a socially responsible version of the S&P 500 Index. Despite the fact that the Domini Social Equity Index is meant to be similar to the S&P 500, the companies in the Domini Social Equity Index tend to be smaller, more volatile, and higher-growth. Hence, differences in return between the two indexes are often attributed to these factors, not simply to the fact that the Domini Social Equity Index represents a universe of stocks screened for social and environmental factors. Consequently, this study, “Socially Responsible

Investment Screening: Strong Evidence of No Significant Cost for Actively Managed Portfolios,” represents a breakthrough for investors who want to invest in a socially responsible manner but also want to steer clear of smaller, volatile, high-growth companies.

Finally, and of marked significance to equity analysts who use fundamental data such as earnings, sales, cash flow, and book value to predict future returns of securities, the authors tested a return-forecasting model on the two universes of stocks and found no statistically significant difference in the forecast returns. The return-forecasting model, developed by Guerard, Gultekin, and Adams, incorporates eight fundamental measures frequently used by value investors, including earnings over price, sales over price, and book value over price, as well as a consensus earnings forecast derived from the Institutional Brokers Estimate System. The model has been previously tested and found to predict portfolio performance with a high degree of accuracy.<sup>62</sup> The fact that screening out bad environmental actors did not significantly alter the forecast returns between the screened and unscreened universes should give value investors a high degree of comfort and confidence that social and environmental screening will not impede portfolio returns and, more importantly, that the forecasting tools that value investors might use to construct and monitor their portfolios will work for both screened and unscreened portfolios.

### ***Environmental and Financial Performance: Are They Related?***

In 1995, the IRRRC released a landmark study entitled “Environmental and Financial Performance: Are They Related?,” conducted by Mark Cohen, Scott Fenn, and Jonathan Naimon.

*KEY FINDING:* Overall, the authors concluded that “investors who choose the environmental leaders in an industry-balanced portfolio were found to do as well, and sometimes better, than those choosing the environmental laggards in each industry.”

TABLE 2. “High-Polluting” and “Low-Polluting” Characteristics

Environmental Characteristic	Low-Polluting Group (Number of Firms)	High-Polluting Group (Number of Firms)
Litigation	189	104
Superfund Sites	230	186
Number of Fines	239	194
Dollars of Fines	238	194
Toxic Releases	240	173
Number of Oil Spills	117	32
Volume of Oil Spilled	129	35
Number of Chemical Spills	197	109
Volume of Chemical Spills	203	112

*METHODOLOGY:* Drawing from companies in the S&P 500, the authors created nine pairs of portfolios, each pair based on one particular aspect of environmental performance: litigation, Superfund sites, number of fines, dollars of fines, toxic releases, number of oil spills, volume of oil spilled, number of chemical spills, and volume of chemical spills. Each pair included a “high-polluting” and a “low-polluting” portfolio.

Table 2, above, lays out how this was done.

The high- and low-polluting portfolios were designed to mirror each other based on industry type. For example, each portfolio had representation from the pulp and paper industry, the oil and gas industry, and so on. The purpose of the mirroring by industry type was twofold:

1. The approach was designed to control for the level of polluting activity inherent in specific industrial processes.
2. The approach controlled for the market risk inherent in different industries.

The authors then tracked the financial performance of the firms using five different measurements of financial performance:

- Return on equity
- Total return to shareholders adjusting for risk

- Total return to shareholders without adjusting for risk
- Return on assets adjusting the book value of total assets for depreciation
- Return on assets without adjusting the book value of total assets for depreciation

The authors tracked the results for three time periods: 1987–1989, 1990, and 1991.

In each of these areas the authors drew a conclusion. For example, under “oil spills,” the authors found that return on assets and return on equity were generally lower for the high-oil-spill portfolio. In another example, the authors found that the financial performance of firms that report a small number of Superfund National Priority List sites had higher returns on a risk-adjusted basis than those that reported a large number of Superfund sites.

### ***The Eco-Efficiency Anomaly***

Similar results were found by Herbert Blank and Michael Carty of QED International, a New York-based financial research firm, in their working paper entitled “The Eco-Efficiency Anomaly.”

*KEY FINDING:* Blank and Carty concluded that equity portfolios composed of stocks with good environmental ratings are likely to outperform the stock

market while controlling for some macroeconomic trends.

*METHODOLOGY:* The authors compared the performance of several stock portfolios made up of corporations that had superior environmental ratings to the performance of those that had average or poor environmental ratings.

To construct the portfolios, the authors relied on environmental ratings from Innovest Strategic Value Advisors, which provides environmental ratings on companies based on eco-efficiency according to their proprietary ranking system, EcoValue '21. Within each industry, Innovest uses EcoValue '21 to rank companies from best to worst using a list of sixty-two variables. The best companies receive a rating equal to 6, or AAA; the worst companies receive a rating of 0, or CCC.

Table 3, below, outlines some of the criteria used in Innovest's environmental ratings assessment.

The stock portfolios reviewed simply consisted of those companies that Innovest had reviewed and ranked. In 1996, Innovest ranked 184 companies; in 1997, Innovest ranked 190 companies; in 1998, Innovest ranked 342 companies; and by year-end 1999, Innovest had ranked 490 companies in sixteen industry sectors.

In the QED study, the authors computed the returns of equally weighted portfolios. The first portfolio consisted of firms to which Innovest had given

the highest environmental ratings (a rating of 5 or 6). The second portfolio consisted of the total universe of all the companies Innovest had rated (all companies, including the top-rated companies).

The authors discovered that the portfolio of stocks with the highest environmental rating outperformed the whole universe of stocks that Innovest rated. Over the four-year period, the portfolio of companies holding the top environmental ratings returned 12.37% annually versus 8.85% for all stocks rated, a difference of 353 basis points per year.

The QED study was significant because it showed that corporations with sound environmental management systems generally have superior stock market performance. However, it is important to note that the universe of stocks ranked by Innovest is not randomly selected. Especially in 1996 and 1997, the companies ranked by Innovest were primarily high environmental impact firms.

## EVENT STUDIES

An event study reviews the impact of environmental events, such as oil and chemical spills, and public reporting of a company's levels of emissions (Toxic Release Inventory, or TRI) to determine whether these singular events have an impact on a company's stock price.

**TABLE 3. Innovest Environmental Ratings Assessment**

Category	Areas of Review
Historic Liability	Superfund and other hazardous waste sites, pending litigation
Operations	Toxic emissions, supply chain management issues, hazardous waste disposal, other product liabilities
Management Systems	Corporate governance capability, environmental management systems, environmental audit and accounting capacity, supply chain management, training capacity and intensity, and generic environmental protocols
Corporate Eco-Efficiency	Energy efficiency, raw material use, product life-cycle durability, and recyclability
Strategic Environmental Profit Opportunities	Corporation's ability to profit from environmentally driven industry and market trends

### ***Environmental Disclosures, Regulatory Costs, and Changes in Firm Value***

In their study “Environmental Disclosures, Regulatory Costs, and Changes in Firm Value,” published in volume 18 of the *Journal of Accounting and Economics*, authors W. G. Blacconiere and D. M. Patten reviewed the financial impact of the Bhopal incident. Approximately 4,000 people died and 200,000 were injured when a chemical accident at the Union Carbide plant in Bhopal, India, released a deadly poisonous gas.

**KEY FINDING:** The authors found that the market value of Union Carbide’s common stock price fell approximately \$1 billion, or 28% within five trading days following the leak, and that the stock price of Union Carbide suffered a sustained drop in returns over one month after the accident. Moreover, the authors found that the market tends to judge guilt by association—the accident pulled down the stock prices of 47 chemical firms for at least ten days afterward.

### ***The Impact of Environmental Management on Firm Performance***

Robert Klassen and Curtis McLaughlin expanded the study of the impact of environmental events on firm market value by reviewing events and their effects at a number of firms over distinct time periods in their 1996 study “The Impact of Environmental Management on Firm Performance,” published in *Management Science*.<sup>63</sup>

**KEY FINDING:** The authors concluded that environmental performance, through both market gains and cost savings affects firm financial performance.

**METHODOLOGY:** The authors assessed the impact of environmental crisis (such as oil, chemical, or gas spills) on the share price of a set of companies. When reviewing the impact of negative environmental events, the sample period was limited to two years, 1989–1990. There were 22 observations at 16 firms.

The authors also reviewed the impact of positive environmental events (such as recognition of superior environmental performance by environmental advocacy organizations and government bodies) on firm market value by reviewing 110 such events at 82 firms over the 1985–1991 time period.

The authors attempted to control for other firm-specific events that could affect stock price, such as earnings reports. And they did not use data from firms experiencing more than one event. The authors discovered that the average negative environmental crisis had a market valuation of –\$390 million, equal to a loss of \$0.70 a share, and that major spills have significant costs attached to cleanup and settlement of related legal suits. Furthermore, the authors found that the average market valuation of the environmental awards was \$80.5 million, or a gain of approximately \$0.37 per share.

## **CONCLUSION**

In conclusion, most of the recent academic literature agrees that environmental performance tends to correlate positively with various measurements of financial success such as profitability and shareholder value. Depending on the design of the study, industry sectors reviewed, variables controlled, and the specific goal of the study itself, *the correlations ranged from no negative impact related to the application of environmental standards to very strong indications that environmental performance can be a significant value driver.* It’s important to recognize that almost all of the studies quickly caution that correlation does not necessarily imply causality. That is, environmental improvements alone will not necessarily drive improved profits or a positive market reaction. In many cases, the studies pose new research questions even as they shed light on the correlations studied. Certainly this is a field that is ripe for further scholarship. In particular, there is a need for detailed, multiyear case studies that examine the long-term impact of environmental performance issues on

shareholder value, as well as studies to address the intrinsic value of unexploited natural resources to future generations.

However, we find it highly significant that some of the United States' finest academic, business, and government thinkers have found that most evidence points toward a close association between environmental performance and the financial bottom line. At the very least, there is almost universal agreement that the investment in environmental improvement has no worse than a neutral effect. Virtually none of the current, credible, peer-reviewed studies conclude that good environmental policies and programs are an unworthy investment.

#### NOTES

<sup>57</sup> Office of Cooperative Environmental Management, U.S. EPA, *Green Dividends? The Relationship Between Firms' Environmental Performance and Financial Performance* (May 2000), p. 8.

<sup>58</sup> The Moskowitz Prize is awarded annually by the Social Investment Forum to authors of scholarly work for outstanding research on socially responsible investing. The criteria for the prize includes appropri-

ateness and rigor of quantitative methods. The prize winner is selected by a jury of scholars and investment professionals.

<sup>59</sup> The authors attribute their finding to three possible scenarios: 1) The market may simply value those corporations with less negative environmental liabilities and risks. 2) Adopting more stringent environmental standards might actually prove to be more profitable than defaulting to local environmental standards because of reduced liabilities and realization of environmental efficiencies. 3) Firms that are poorly managed and less competitive (therefore less profitable) may tend to adopt lower environmental standards.

<sup>60</sup> Tobin's  $q$  is calculated by the following equation:

$$\frac{\text{Firm equity value} + \text{book value of long term debt} + \text{net current liabilities}}{\text{book value of inventory} + \text{net value of physical plant and equipment}}$$

<sup>61</sup> According to the study, facilities must complete annual toxic release inventory (TRI) reports if they manufacture or process 25,000 pounds (or about 11,340 kilograms), use more than 10,000 pounds of any listed chemical during a calendar year, and have ten or more full-time employees.

<sup>62</sup> J.B. Guerard, Jr., M Gultekin, and B.K. Stone, "The Role of Fundamental Data and Analysts' Earnings Breadth, Forecasts, and Revisions in Creation of Efficient Portfolios," in *Research in Finance*, edited by A. Chen. JAI Press, 1997, pp. 69-91, and J.B. Guerard, Jr., "Is There a Cost to Being Socially Responsible in Investing?" *Journal of Forecasting* 16 (1997), 475-490.

<sup>63</sup> Volume 24, issue 8, 1199-1213.





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## CHAPTER III

# THE LEGAL LANDSCAPE

### *Considering Environmental Performance in Investment Management Is Not Only Permissible; in Some Cases It May Be Required*



Whenever a trustee makes an investment decision with respect to the funds under his or her responsibility, it is done in the context of legally binding “fiduciary duties.” These duties, established under state and federal law, define the parameters of legally permissible conduct. They also identify certain required actions. In this way, they serve as a legal floor and ceiling: that is, certain actions *must* be taken, while other actions *may* be taken.

From the start, it’s important to distinguish between the responsibilities inherent in day-to-day fund management from overall fiduciary duty. In many cases, especially in large funds, fiduciaries have delegated a considerable degree of authority to those who manage their fund’s assets. Fund managers may be held to stringent standards and expected to meet applicable performance benchmarks. In many cases, this encourages investment managers to take a relatively short-term view of investment performance. However, we believe that in addition to requiring this type of performance from their fund managers, fiduciaries of large, permanent funds such as pension funds or charitable endowments must also maintain a long-term view, because overall fiduciary concern must extend to the future viability of the fund, not simply its present returns.

The first two chapters of this paper have reviewed business and academic evidence that environmental performance can be a strong corporate value driver—especially if measured over the longer term. The *Legal Landscape* builds on this foundation to explore instances where financial considerations dictate that a prudent fiduciary should affirmatively consider environmental issues as an integral part of portfolio management. However, because the metrics of measuring the financial impacts of environmental management are still emerging, we recognize that the financial case for environmental portfolio management may not always be clear or easy to identify. There are also instances where, because of issues related to their fund’s mission, or in instances where traditional financial considerations are equal, it may be important to consider environmental issues from a non-financial standpoint. For

these reasons, we also review the extensive body of court rulings, publications, and statements by legal scholars asserting that consideration of environmental factors for non-financial reasons is also permissible and prudent.

Although we believe that it may be possible to extrapolate conclusions about fiduciary duty beyond the bounds of our analysis, the following discussion is limited to private pension funds, public pension funds, and nonprofit entities. Private pension funds are governed by standards set in the federal Employee Retirement Income Security Act (ERISA). While public pension funds look to ERISA for guidance, they are ultimately controlled by standards set in state law. Thus, there can be variations in fiduciary duty from state to state. Although it’s beyond the scope of this paper to examine each state’s standards in detail, we outline relevant por-

tions California and New York law because those two states are home to some of our nation's largest pension funds and foundations. In some cases we point to instances where state standards may specifically allow fiduciaries to consider environmental considerations in portfolio management. For example, Connecticut State law asserts that public pension fund fiduciaries may consider the environmental implications of investments, including decisions related to individual securities or types of securities.<sup>64</sup> In other words, basic ERISA principles (which provide a guiding standard if not a strictly binding one) clearly allow consideration of environmental factors. State law may contain more specific prescriptions related to the permissibility of environmental considerations.

Fiduciaries of nonprofit organizations are bound by slightly different standards. In the majority of states, nonprofit endowment management is guided by standards set in the Uniform Management of Institutional Funds Act (UMIFA). In general terms, this guidance sets what is commonly called the "business care" standard, requiring that good-faith decisions be made on a reasonable basis with a rational belief that the decision is in the best interest of the corporation—allowing fiduciaries greater discretion in portfolio management than ERISA or typical state pension plan fiduciary laws. Because ERISA generally presents a higher standard than UMIFA, we believe that our analysis of fiduciary obligations under ERISA also holds true for charitable foundations guided by UMIFA.

In short, like many public pension funds and other institutions, we use ERISA as the gold standard in examining fiduciaries' rights and obligations to consider environmental factors in portfolio management. Because the overarching ERISA guidance is generally more restrictive than other applicable standards, we conclude that if environmental considerations are allowed under ERISA, then they are quite likely allowed under the less restrictive standards.

In *Overview of Fiduciaries' Legal Obligations*, we review basic fiduciary law and the well-established

conclusion that fiduciaries may consider social and environmental issues. This conclusion has gained widespread acceptance, as best illustrated by a recent publication from the international financial and commercial law firm of Baker & McKenzie on the role of social issues in public pension fund investment decisions.<sup>65</sup>

In *Evolving Interpretations of the Duty of Prudence*, the analysis explores the changing definition of the Duty of Prudence and how it has evolved over time to reflect the realities of fiduciary decision-making and understandings of the market.

In *The Duty to Diversify*, we explore the Duty to Diversify and how this duty imposes on fiduciaries the need to consider environmental impacts.

In *The Duty to Monitor*, the analysis discusses the Duty to Monitor and the challenges it poses to fiduciaries to be actively involved in screening fund investments.

In *The Duty of Obedience*, we examine fiduciary responsibility to consider environmental issues because of a fund's particular goals and objectives. This chapter may be of particular interest to charitable trusts and foundations.

In *Summarizing the Arguments*, the analysis summarizes the typical criticisms of incorporating environmental issues into investment decisions and explains how those arguments fail.

## OVERVIEW OF FIDUCIARIES' LEGAL OBLIGATIONS

*Including Environmental Considerations in Investment Management Decisions Is Consistent with the Duties of Loyalty and Prudence*

While the exact language defining the duty of loyalty varies from state to state and from state law to the federal law, the underlying standard applied to pensions is that *fiduciaries must act solely in the interest of plan participants and beneficiaries and for the exclusive purpose of providing plan benefits*.<sup>66</sup> While this standard is very high and requires the fiduciary to

act in the utmost good faith toward the beneficiary in all matters connected with the trust,<sup>67</sup> trustees are entitled to the presumption that they have met this standard and the burden is upon an objecting beneficiary to show a bad-faith exercise of the fiduciary's powers.<sup>68</sup>

In the case of nonprofit entities, the duty of loyalty is to their tax-exempt mission, rather than a specific pool of individuals. Therefore, as we discuss in detail later in this chapter under *The Duty of Obedience*, charitable foundation trustees must consider whether their decisions further, or at least do not hinder, their fund's charitable purpose. Therefore, the environmental performance of portfolio companies has obvious implications for foundations with environmental missions. This same type of analysis can be extrapolated across the spectrum of charitable interest. For example, a foundation with a social or human-rights mission might consider the implications of a portfolio company's labor or human-rights record.

The language defining the duty of prudence is similarly varied, but can be summarized as requiring fiduciaries to discharge their duties with the care, skill, prudence, and diligence under the prevailing circumstances that a prudent investor—acting in a like capacity and familiar with these matters—would use in the conduct of an enterprise of a like character and with like aims. Furthermore, management decisions respecting individual assets and courses of action must be evaluated not in isolation, but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust.

We believe the metrics of measuring environmental performance (profiled in Chapter I, *The Environment as a Value Driver*) have become so robust, and the academic evidence documenting environmental/financial correlations (profiled in Chapter II,

*Academic Perspectives*) has become so persuasive, that integrating environmental considerations into portfolio management must now be considered consistent with this basic definition of prudence.

## **Fiduciaries Must Fully Inquire into the Facts Surrounding a Shareholder Resolution and Treat Proxies as Assets**

The relationship of fiduciary duties to environmental issues is of primary importance in considering shareholder resolutions and proxy voting.

According to the Department of Labor, "the fiduciary act of managing plan assets which are shares of corporate stock...includes the voting of proxies appurtenant to those shares of stock."<sup>69</sup> More

*A fiduciary who "fails to vote, or casts a vote without considering the impact of the question, or votes blindly with management" will violate the rule of prudence.*

recently, SEC Chairman Harvey Pitt expressed agreement with this conclusion in a different context by stating "an investment advisor must exercise its responsibility to vote the shares of its client in a manner that is consistent with...its fiduciary duties under state and federal law to act in the best interests of its clients."<sup>70</sup> A few courts have addressed this issue and have supported this conclusion.<sup>71</sup> This conclusion is also well-supported by

other authorities that have concluded, "as in the case of any right or privilege entrusted him, his decision whether and how to deal with the right to vote becomes an expression of the trust he serves. He must exercise reasonable care in deciding these questions."<sup>72</sup> Thus, a fiduciary who "fails to vote, or casts a vote without considering the impact of the question, or votes blindly with management" will violate the rule of prudence.<sup>73</sup> Furthermore, the duty of prudence includes a duty of inquiry into the relevant facts and circumstances surrounding the investment decision.<sup>74</sup>

These standards take on particular significance with respect to shareholder resolutions regarding

environmental issues. If, for example, the pension fund owns shares in Albertson's, the Gap, or Home Depot, and shareholders have proposed an environmental resolution such as adoption of the CERES Principles and reporting guidelines, the trustees must ensure that they vote the fund's shares in accordance with the duty of inquiry. Consequently, the duty of prudence requires a fiduciary to investigate the facts and circumstances relevant to the fundamental question raised by the resolution (that is, will joining international business leaders in a dialogue designed to improve environmental performance, and accepting assistance in identifying and tabulating environmental improvements, be likely to enhance productivity, competitive advantage, and value?). It would be inappropriate to give only a cursory look at such an important question. Furthermore, in order to protect against any legal challenges, it would be wise to provide documentation of the information considered and evidence that it was incorporated into the decision-making process.

In terms of this specific example, we believe that fiduciaries who fail to make meaningful inquiry into resolutions related to enhanced environmental reporting and dialogue may do so at their peril, since these resolutions are designed to improve long-term environmental performance and a great weight of evidence suggests that improved environmental performance can lead to improved shareholder value.

### **Fiduciaries May Engage in Shareholder Activism on Environmental Issues**

In addition to considering environmental issues in general portfolio management decisions, such as buy/sell/hold, asset allocation, style, and proxy voting, there are also proactive steps that a fiduciary can take to maximize shareholder value through improving environmental performance, such as engaging in dialogue about issues where the fund believes that operational or management changes

could lead to increased value. It is clear that under many circumstances, pension funds and foundations can engage in this type of shareholder activism. The Department of Labor, which enforces ERISA, has stated through its regulations that

activities intended to monitor or influence the management of corporations in which the plan owns stock is consistent with a fiduciary's obligations under ERISA where the responsible fiduciary concludes that there is a *reasonable expectation* that such monitoring or communication with management, by the plan alone or together with other shareholders, is *likely* to enhance the value of the plan's investment in the corporation, *after taking into account the costs involved.*<sup>75</sup>

This statement is very important because the Department of Labor is recognizing the fact that there is a legitimate role for pension funds in taking steps to increase the value of a particular company. That is, institutional trustees need not sit on the sidelines and hope that the companies that they own do the right thing. Rather, it is completely appropriate to try and influence the management of the company when such activities seem likely to increase the value of the company. In fact, several public pension funds such as CalPERS and the New York City Retirement Funds have developed several cost-effective strategies for maximizing value through active engagement. These strategies are discussed in Chapter 4, *Recommendations*.

The department goes on to further explain its opinion, and expresses the conclusion that "such a reasonable expectation may exist in various circumstances; for example, where plan investments in corporate stock are held as long-term investments or where a plan may not be able to easily dispose such an investment."<sup>76</sup> The department also stated its belief that

this standard would not be different for portfolios designed to match the performance of market indexes (sometimes referred to as 'index funds'). In such funds, the investments are of-

ten held on a long-term basis and the prudent exercise of proxy voting rights or other forms of corporate monitoring or communication may be the only method available for attempting to enhance the value of the portfolio.<sup>77</sup>

This statement is significant because it provides for an active role in an otherwise passive investment strategy. Although the department's purview is limited to pension funds, we believe that charitable trustees face a similar standard.

The question remains what occasions are likely to increase the value of a corporation.<sup>78</sup> The department has identified the state of incorporation as an issue that is likely to affect the value of the plan's investment in the corporation.<sup>79</sup> The SEC has also identified issues that are likely to affect the value of a company. For example, the SEC chief economist found that on average, when a company adopts a "poison pill plan in the midst of takeover speculation" the company's stock declines 2.4% net of market;<sup>80</sup> and found an average net-of-market stock return of -1.31% for all types of anti-takeover amendments.<sup>81</sup>

While the SEC has not looked directly at environmental issues, the previous chapter of this paper showed that in most cases there was a positive relationship between environmental performance and financial performance.

The box on page 34 contains an example of how the Connecticut Retirement Plans and Trust Funds interpreted the financial significance of one of our day's most pressing environmental issues: global climate change.

Based on the growing wealth of data describing the positive nature of the environmental/financial nexus, it's reasonable to believe that attempts to influence the environmental practices of a company could enhance the long-term value of the fund's investment in the corporation and would be consistent with the fiduciary duties of the trustees. Also, as illustrated by the Connecticut Retirement Plans resolution, global climate change represents a significant financial risk that would be imprudent to

ignore. In fact, as a matter of preventative practice in light of the strong link between environmental and financial performance, it may be wise to engage in some level of environmental shareholder activism in an effort to both increase share and company value, and mitigate identifiable risk factors.

### **It Is Also Permissible for Fiduciaries to Consider Non-financial, Collateral Benefits**

Even in cases where the financial implications of environmental performance are unclear, or if a fiduciary is concerned that considering environmental performance would violate ERISA's exclusive benefits rule and/or involve non-financial considerations, fiduciaries who want to look at environmental or social factors are still on strong legal ground.

The exclusive benefits rule and the duty of prudence have been consistently interpreted to mean that other considerations (such as social and environmental issues) can be incorporated into the decision-making process so long as those considerations do not supersede customary financial considerations. That is, environmental considerations violate neither the requirement to act in the beneficiaries' best interests nor the mandate to make prudent investment decisions if they are properly incorporated into the decision-making process.

In 1998, the Department of Labor, which administers the Employee Retirement Income Security Act (ERISA), "expressed the view that the fiduciary standards of chapters 403 and 404 do not preclude consideration of collateral benefits, such as those offered by a 'socially-responsible' fund, in a fiduciary's evaluation of a particular investment opportunity." Nevertheless, fiduciaries must not subordinate the interests of plan members or beneficiaries to those other considerations. Or, as the Department of Labor explained in what has become known as the Calvert Letter, a "decision to make an investment, or to designate an investment alternative, may not

## Resolution submitted by the Connecticut Retirement Plans and Trust Funds

### **GREENHOUSE GASES EMISSIONS**

#### **WHEREAS:**

The Environmental Protection Agency has stated that electricity generation is responsible for 40% of man-made carbon dioxide, the leading greenhouse gas (GHG), as well as 25% of nitrous oxides, 67% of sulfur dioxide, and 34% of mercury emitted annually nationwide. (2000)

The Intergovernmental Panel on Climate Change has found “new and stronger evidence that most of the warming observed over the last fifty years is attributed to human activity.” (2001)

Growing evidence indicates that environmental damage from fossil fuel burning will be major and worldwide. Threats include (IPCC, 2001):

- increases, in some geographic areas, in droughts, floods, landslides, intense storms, heat waves, and incidences of waterborne (cholera) and vector-borne diseases (malaria);
- widespread increase in the risk of floods inundating the homes of tens of millions of people, resulting in an increased drowning, disease, and, in developing countries, hunger and malnutrition; and
- irreversible damage to vulnerable ecosystems, with increased risk of extinction of some more vulnerable species and a loss of biodiversity.

In July 2001, 178 nations signed the Bonn agreement, requiring industrialized nations to reduce greenhouse emissions to 5.2% less than 1990 levels, by 2008. (*Wall Street Journal*, 7/24/01)

Companies with top-rated environmental records are faring significantly better financially than those with worse records. From 1997–2000, they had 3.53% higher annual returns on investment than a broader universe of companies and 7.80% higher annual returns than companies with low-rated environmental records. (QED International, 2001) Between 1998–2000, “the stock price of the more environmentally friendly top half outperformed the bottom half by...17.2% in U.S. petroleum and 12.4% in U.S. electric utilities. (*Barrons*, 8/6/01)

A growing number of companies are conducting an inventory of their GHG emissions, implementing emissions reduction projects and targets, and trading GHG emission reductions.

We believe that good stewardship of our resources requires that we reduce polluting emissions when possible and prudent.

**RESOLVED:** That the Board of Directors of American Electric Power report (at reasonable cost and omitting proprietary information) to shareholders on the GHG emissions from our company’s own operations and services, including (a) an inventory of all GHG emissions from all worldwide operations, (b) actions taken to date to reduce GHG emissions, and (c) plans to further reduce GHG emissions.<sup>82</sup>

be influenced by non-economic factors unless the investment ultimately chosen for the plan, when judged solely on the basis of its economic value, would be equal to or superior to alternative available investments.<sup>83</sup> Thus, while the previous chapter of this paper explained how environmental performance is a relevant financial factor in investment analysis, it is clear that environmental issues are appropriate to consider even if one regards them as nonfinancial considerations.

The courts share this view as well. In *Withers v. Teachers' Retirement System*, the court concluded that so long as trustees have firm and reasonable grounds for concluding that their actions will be in the best interest of the beneficiaries, and so long as their primary motivation is the interests of the beneficiaries, their actions are consistent with the exclusive purposes rule.<sup>84</sup>

In *Withers*, retired New York City teachers sued their retirement board, claiming that the board had breached their fiduciary duties when they used trust assets to buy \$860 million of highly speculative and unmarketable New York City bonds in order to keep New York financially afloat. In 1975, New York City, the source of 62% of the Retirement System's income, was allegedly on the verge of bankruptcy. In an effort to resolve the crisis, city and state officials asked the Retirement System board to purchase hundreds of millions of city bonds. The board agreed and the suit followed. The retired teachers argued, inter alia, that the board violated its duty of loyalty in making their investment decision with the objective of rescuing the city rather than enhancing the soundness of the fund.

The court decided that the board had not violated its duty for a number of reasons. First, the testimony of the members of the board convinced the court that "the predominant concern of the trustees was the effect that a bankrupt city would have on the solvency of their own retirement fund." That is, to the extent that the trustees considered the city's needs, it was only to consider how it would directly impact the Retirement System. Related to this issue was

the question of whether it was reasonable to believe that New York would go bankrupt and whether the purchase of the city bonds would secure the solvency of Retirement System fund. The court concluded that the board had "firm grounds" for concluding that their action was necessary. In particular, the board relied on the information and opinions provided by experts within their own staff as well as experts from the city and state. In addition, the board members reviewed the information on their own and formed their own "intensive independent analysis."

While the Calvert Letter and the *Withers* case were decided on the basis of federal law, those decisions have significant influence over state standards. For example, CalPERS has indicated that it turns to federal standards "for guidance."<sup>85</sup> In fact, CalPERS has relied heavily on ERISA law to justify its corporate governance campaign.<sup>86</sup>

The appropriateness of considering collateral benefits has also been advocated by the international financial and commercial law firm Baker & McKenzie. In a lecture to the California County Employee Retirement System board members, members of the firm concluded that

retirement boards' consideration of social policy goals, collateral to the economic criteria, is permissible...if boards meet their fiduciary duties. If the social investment's rate of return is similar to the return on a similar type of investment that does not possess the social objective sought, then it appears that public employee retirement system boards can make the social investment. Similarly, if the return on an investment is likely to be impaired, then the decision to divest can be made even if consideration is given to non-economic social factors.<sup>87</sup>

What these and other authorities consistently point out is that *incorporating what have traditionally been regarded as nonfinancial considerations into an investment decision is consistent with the duty of prudence when those allegedly nonfinancial considerations actually will lead to a better financial decision.*

For example, in *Board of Trustees v. Mayor of Baltimore*,<sup>88</sup> the city adopted two ordinances that required the city retirement systems to divest their holdings in companies doing business with Namibia and South Africa. The trustees sued the mayor, arguing that the ordinances would compel them to breach their duties of loyalty and prudence. The court, however, concluded that the ordinances' requirement that the trustees consider social issues in addition to financial criteria was in fact consistent with those duties. Specifically, the court, relying in part on the highly respected authorities Professors Austin Scott, then Dane Professor of Law Emeritus of Harvard University, and William Fratcher, R. B. Price Distinguished Professor of Law Emeritus of the University of Missouri, pointed out that "just as the directors (of a for-profit corporation) may conclude that charitable contributions are in the corporation's long-term interests, so too a trustee 'may well believe that a corporation that has a proper sense of social obligation is more likely to be successful in the long run.'"<sup>89</sup>

Finally, it is important to note that the Department of Labor contemplated activism related to non-financial criteria. The department expressly stated that

other issues may include such matters as consideration of the appropriateness of executive compensation, the corporation's policy regarding mergers and acquisitions, the extent of debt financing and capitalization, the nature of long-term business plans, the corporation's investment in training to develop its work force, other workplace practices, and financial and non-financial measures of corporate performance.<sup>90</sup>

Therefore, regardless of whether one characterizes environmental issues as financial or non-financial, fiduciaries are on strong legal ground when they incorporate environmental issues into portfolio management. In fact, as a matter of preventative law, a fiduciary would be better positioned to defend a legal challenge to an investment or invest-

ment management decision if he or she incorporated relevant environmental information into the investment decision, considering the role of environmental issues as value drivers or risk factors in the industry sector in question, and considering the specific environmental performance of the corporation being evaluated in relation to appropriate industry sector benchmarks. As with other parts of our analysis, although the commentary and case law is generally directed at pension funds, we believe the conclusions are equally valid for charitable foundations and other nonprofit entities.

## EVOLVING INTERPRETATIONS OF THE DUTY OF PRUDENCE

*The Prudent Man/Investor Rule Is Designed to Be General and Flexible to Adapt to the Changes That Occur Over Time in the Financial World*

In examining the structure of fiduciary duties, worthwhile perspective is gained by stepping back and looking at how interpretations of the duty of prudence have evolved. As with many other questions of legal interpretation, the legal understanding of fiduciary duties is not static. Rather, the concepts evolved in response to changes in society and the financial community. It is evident that the judicial and statutory standards often mesh imperfectly with the realities of the contemporary marketplace. A prime example of this is found in the history of the "prudent man" rule. The prudent man rule underwent significant changes from the mid-1970s through the early 1990s in response to changes in the financial world that began in the 1950s. Then, during those roughly fifteen years from the mid-1970s to the early 1990s, the law went through a period of active criticism, experimentation, and reinterpretation to catch up with the actual needs of fiduciaries. This chapter provides a brief history of the dynamic evolution of the duty of prudence and highlights the steps that reduced the disparity between the law and reality. We believe that we are



again seeing the evolution of the interpretation of fiduciary prudence—this time to recognize the positive value of incorporating environmental and social factors into portfolio management.

In the latter half of the nineteenth century and the first half of the twentieth century, courts held that the prudent man rule “necessarily excludes all speculation, all investments for an uncertain and doubtful rise in the market.”<sup>91</sup> Under that standard, trustees could only concern themselves with the preservation of the corpus and obtaining a reasonable income. In other words, bonds reigned supreme and courts barred investments in common stocks as an impermissible delegation of responsibility to

corporate officers. At this time, most states had lists specifying legally permissible investments.<sup>92</sup>

Beginning in the 1950s, completely separate from what was happening in the courts and legislatures, financial and economic theories regarding investments began to mature. The result was the development of modern portfolio theory under which “an investor would endeavor to construct a portfolio that contained assets yielding the lowest level of risk for a given rate of return or, alternatively, a portfolio yielding the highest rate of return for a given level of risk.” This risk minimization would be achieved through diversification in which “the individual asset can be evaluated only in the context of the whole portfolio because, though the asset may be highly speculative and volatile by itself, it may reduce the risk of the overall portfolio because it reacts to events differently than other assets in the portfolio.”<sup>94</sup>

By the middle of the 1970s, this theory had been widely accepted by financial professionals.<sup>95</sup> What was so startling about this development was its disparity with trust law. Under the law there were whole classes of investments that were deemed speculative and therefore legally unacceptable. In contrast, the best financial theories of the time contended that an individual asset was not speculative per se, but must be evaluated in the context of the whole portfolio.

This dissonance led to conflicts between what many regarded as intelligent and prudent investment strategies for trustees, especially during a period of high inflation, and the legal standards imposed by legislatures and judges. The result was criticism from both the legal and financial realms.

From 1976 through 1986, the prudent man rule came under repeated and increasingly powerful criticism. The disapproval came from legal scholars like John Langbein and Richard Posner and prominent business attorneys like Austin Fleming and Bevis Longstreth. These commentators were critical of the conservative and limiting prudent man rule that “deter[red] conscientious trustees from doing

### A Historical View of Prudence

1869—New York Court of Appeals rejected any investment by fiduciaries in common stock, deeming such investments speculative and an improper delegation of the performance of the trust to directors of the company.

Among the investments and practices prohibited as speculative in the nineteenth century were:

- Purchase of securities on margin
- Purchase of real property for resale
- Venture capital

The following investments were considered questionable, but in most cases were held by the courts to be speculative (and therefore prohibited):

- Precious metals
- Collectibles
- Deep discount bonds
- Options
- Futures
- Selling securities short
- Repurchase agreements
- Securities lending
- Currency hedging
- Second mortgages<sup>93</sup>

the best investment job they are capable of.<sup>96</sup> They pointed out that the rule completely failed to recognize or leave room for the insights offered by modern portfolio theory. They argued that, for all intents and purposes, the law of trusts remained in the nineteenth century and was unduly restricting the discretion of trustees, compelling trustees to keep losing investments for far too long, failing to preserve the purchasing power of the trust principal, and leading to underdiversified portfolios.<sup>97</sup> Other critics drew attention to the fact that the rule completely prohibited certain investments and classes of investments, prohibited delegation of all but ministerial duties, discouraged new investment products and techniques, and approved certain investments without inquiry.<sup>98</sup>

The federal government responded to these criticisms relatively quickly, and just three years after the first legal criticisms of the standard were published in 1976, the Department of Labor incorporated the modern portfolio theory into the ERISA standard of prudence.<sup>99</sup> The states were slower to respond; it was not until 1986 that California became the first state to amend its statute. By 1991, twelve states in all had modified their statutes.<sup>100</sup>

The slowest to respond were the American Law Institute, which adopted the prudent investor rule in the Restatement (Third) of Trusts, and the National Conference of Commissioners on Uniform State Law, which adopted the Uniform Prudent Investor Act (UPIA) in 1994. By January 1, 1998, twenty-six states had either adopted the UPIA or incorporated its principles into their own statutes.<sup>101</sup>

Despite its slow response, the American Law Institute may have best stated the need to have a flexible understanding of prudence.

The prudent investor project was undertaken with a clear recognition that trust investment law should reflect and accommodate current knowl-

edge and concepts in the financial community. While seeking to incorporate the lessons of modern experience and research, a scrupulous effort was made to avoid either endorsing or excluding particular theories of economics or investment. In addition, an important objective in drafting the prudent investor rule was to preserve the flexibility necessary for the incorporation of future learning and developments.... The rules are designed to be general and flexible enough to adapt to the changes that may occur over time in the financial world.<sup>102</sup>

This conclusion is also shared authoritatively by the courts. For example, a U.S. federal court stated that the definition of “prudent” behavior is “an

evolving concept that is given meaning by the facts and circumstances of each case.”<sup>103, 104</sup>

Today, we find ourselves in a similar place as in the 1970s; the financial world has learned that good environmental performance can drive better financial performance, and it is time to have that lesson reflected in interpretations of the prudent investor rule. A failure to consider and act on environmentally related information

is not prudent in the financial sense of the word and should not be considered prudent in the legal sense of the word.

*A failure to consider and act on environmentally related information is not prudent in the financial sense of the word and should not be considered prudent in the legal sense of the word.*

## THE DUTY TO DIVERSIFY

### *Applying Environmental Issues to Questions of Diversification Can Help a Fiduciary Meet the Duty to Diversify Plan Assets*

As a subduty of the duty of prudence, trustees acting in a fiduciary capacity have a duty to diversify the trust assets. An example of language expressing this duty is: “the prudent investor standard requires a trustee . . . to diversify assets unless the trustee reasonably determines that it is in the inter-

ests of the beneficiaries not to diversify.”<sup>105</sup> What is also evident from this rule is that the obligation to diversify is ultimately subject to the prudent investor rule—prudence is more important than strict adherence to diversification.

The Restatement (Third) of Trusts explains that diversification is required to reduce, as far as possible, the risk of a portfolio that is not compensated by greater market return.<sup>106</sup> This is based on the finding of modern portfolio theory that, since different investments react differently to events affecting the economy, an investment can reduce risk if it reacts differently to events than do the other investments in the portfolio.<sup>107</sup>

## The Argument for Environmental Diversity

All assets do not react to events in the same way. Therefore, in reaction to a given event, some investments may go up and others may go down. However, many fund managers do not consider environmental factors in assessing portfolio diversity. The following example shows how environmental diversity in a utility portfolio could become a significant stabilizing factor.

Consider recent U.S. and international developments related to air pollution emissions. Despite the United States’ holdout, the European Union, Japan, and other industrialized nations recently ratified the Kyoto Protocols, an international treaty designed to reduce greenhouse gas emissions. As a result, we can reasonably expect to see individual nations imposing tighter environmental regulations on a variety of emissions sources—including electricity production, a leading source of greenhouse gasses. In the U.S., the Supreme Court recently ruled that the Clean Air Act does not permit the EPA to consider implementation costs in setting national ambient air quality standards. Rather, the EPA is required to set the standards based on information about the effects of pollutants on public health.<sup>108</sup> Although critics of the Bush Administration’s new

“Clear Skies” plan contend that its voluntary nature will undercut EPA enforcement of established Clean Air Act standards, states such as California are continuing to set aggressive air quality regulatory standards. For example, California just set particulate emissions standards that exceed federal standards by 20–33%. Consequently, diesel engine manufacturers and others wishing to sell motor vehicles, power generators, and farm and construction equipment in California—the world’s fifth largest economy—will have to meet tighter emissions standards, regardless of federal enforcement.<sup>109</sup>

The underlying trend is unmistakable. Both internationally and in the U.S., we may expect to see more stringent regulation of air pollution emissions. Let’s examine the impact this trend will have on electricity production. Over 50% of the world’s energy is supplied by coal or oil. Bucking international trends to reduce coal consumption in favor of cleaner-burning natural gas, coal consumption in the U.S. has been on the increase—much of it due to increased burning of cheap coal in old power plants.<sup>110</sup> So if a fund owns utility stocks, and the companies held in the fund rely primarily on old, dirty, coal-based generators, then emerging regulations designed to reduce either greenhouse gas or smog-forming emissions will effect all of the fund’s utility stocks the same way because the “dirty” utilities’ costs will go up, negatively effecting the bottom line. If, however, the fund has an environmentally diversified utility portfolio with coal and oil balanced by natural gas, solar, and wind, then increased costs on the coal side could be offset by increased profits from the gas, wind, and solar generation companies that would prosper in a tighter regulatory climate.

Therefore, investors seeking a competitive advantage in the utility sector might do well to consider the benefits of environmental diversification. We believe this same analysis could apply to many industrial sectors.

In California, the duty to diversify must also be interpreted in accordance with the state constitution.

The California Constitution states that:

“The members of the retirement board of a public pension or retirement system shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, *unless under the circumstances it is clearly not prudent to do so.*”<sup>111</sup>

This language has been used to oppose divestment and social screening initiatives on the premise that screening out particular companies or industries reduces the number of investment choices and thereby leads to underdiversification. That is, without the possibility of maximizing diversification, return cannot be maximized nor can risk be effectively hedged.

But the critics are ignoring the last part of the constitutional mandate—a careful consideration of the specific circumstances that must educate a prudent decision to buy, sell, hold, or engage.<sup>112</sup>

First, assuming that the California Constitution does adopt a maximum diversification standard, that standard is clearly subordinated to the duty of prudence. That is, there are occasions where it would be imprudent to blindly maximize diversification. A prime example of such an occasion arises with tobacco divestment. When the CalPERS board considered the subject of tobacco divestment, the CalPERS staff concluded that the board should not divest, in part because of the duty to diversify.<sup>113</sup> However, the CalPERS board rejected this conclusion because the board predicted that tobacco company litigation awards and settlements would impede tobacco company return on investments. Thus, the board reasoned, divestment would potentially improve CalPERS’ earnings.<sup>114</sup> In this instance, the CalPERS board recognized that the true goal of diversification is not maximum diversification or maximum return, but prudent diversification and return.

As cited earlier, prudence “is an evolving concept that is given meaning by the facts and circumstances of each case.”<sup>115</sup> At work in this language is the concept that strict rules of diversification do not supersede prudence. That is, what is most important is to be sure that, given the particulars of the specific investment management question, the status of the fund, the needs of the beneficiaries, the relevant industrial sector(s), and the state of the economy, a prudent decision is made.

While environmental, ethical, or social considerations are sometimes viewed as a hindrance to investment management, it is equally possible to argue the converse. Optimizing a portfolio for environmental considerations can enhance diversity and broaden investment opportunity. In a paper addressing Canadian pension fund issues, Gil Yaron of the Canadian Shareholder Association for Research and Education, quoting the Manitoba Law Reform Commission, pointed out that “[a] policy of diversification might just as easily encourage investment of a percentage of assets in socially or ethically desirable

*“A policy of diversification might just as easily encourage investment of a percentage of assets in socially or ethically desirable investments whose characteristics differ from the other securities in a portfolio...”*

investments whose characteristics differ from the other securities in a portfolio...”<sup>116</sup> For example, without raising the issue of energy sustainability and alternative sources, would pension funds or foundations ever consider investing in the large number of small companies that are engaged in the business of alternative sources of energy? By adding those companies to the list of potential investments, a trustee may actually increase the pool of investment candidates and better meet his or her duty to diversify the plan’s assets.

Considering an investment’s status in terms of complying with environmental standards (thereby avoiding fines and legal costs), using resources more efficiently (thereby saving on materials and waste disposal costs), and integration of low-environmental-impact technologies should become part of the

diversification analysis. To do otherwise ignores quantifiable risks.

## The Implications of Universal Ownership

Most large funds today exhibit at least some of the characteristics of universal ownership—that is, due to the size of the fund and participation in passive investment strategies such as indexes, the fund more or less owns the universe of marketable securities.<sup>117</sup> But diversifying so broadly has an unintended and ironic consequence: fiduciaries increase the chances that an externality of one investment is the internal-ity of another.

For example, look again the utility investment scenario described earlier, this time considering the impact of air pollution on public health. Public health would generally be considered an externality of the utility because it is not a cost that would customarily be incorporated into any business decisions. A fiduciary might initially argue that it is unnecessary to consider the consequences of air pollution caused by the coal-fired power plants in the fund's utility portfolio because those costs are external to power plants in which the fund is invested. However, if the fund is a universal owner (that is, broadly invested throughout the universe of marketable securities), it probably also invests in health insurance stocks. Those same health insurance companies are going to face increased payouts to people whose health is negatively affected by air pollution.<sup>118</sup> This may be passed on to employers, including a universal owner's portfolio companies, in the form of higher premiums. In the case of a pension fund, such as CalPERS, where the fund also administers beneficiaries' health plans, these costs could be directly absorbed by the fund. In either case, all that's happened is the costs of air pollution have been shifted from one portion of the fund's portfolio or operations to another.

While a comprehensive integrated analysis of these kinds of cross effects would be complex, we

believe it's a problem worth grappling with. In the short term, however, it's clear that the dissonance stemming from our power generation/health cost example could be profitably reduced through an environmentally diversified portfolio, which would have some of its utility assets in natural gas, wind, or solar—capturing the market demand for increased electricity generation and the competitive advantage of avoiding foreseeable regulatory costs on the utility side, while reducing costs for the health insurance companies. Such diversification may also begin to reduce the macroeconomic risks related to global climate change.

## THE DUTY TO MONITOR

*Because Fiduciaries are under a Duty to Monitor Investments, They Should Review Holdings for Environmental Performance*

In addition to the duties of prudence, loyalty, and diversity, there are additional duties that arise under fiduciary law. One of these duties is the duty to monitor. Essentially, the duty to monitor requires fiduciaries to investigate the performance of their equity holdings regardless whether they are indexed or actively managed. This duty was extensively explored in 1995 by Richard H. Koppes, the then Deputy Executive Officer and General Counsel of CalPERS, and Maureen L. Reilly, the then Senior Staff Counsel (Supervisor) for CalPERS, in a law review article entitled "An Ounce of Prevention: Meeting the Fiduciary Duty to Monitor an Index Fund through Relationship Investing."<sup>119</sup> CalPERS has used this law review article for years to provide a legal justification for its corporate governance campaign. In 1995, CalPERS referred to it as the legal foundation for its policy statement on corporate governance, "Why Corporate Governance Today? A Policy Statement."<sup>120, 121</sup> The law review article was most recently cited to provide a legal basis for the CalPERS Global Proxy Voting Principles, published on March 19, 2001.

The following is based on the arguments set forth by Koppes and Reilly in their law review article.

As indicated by the Restatement (Third) of Trusts and case law, the courts have already found a duty to monitor inherent in the duty of prudence as well as in the nature of active investment strategies.<sup>122</sup> This duty is intended to ensure that fiduciaries make the proper effort to keep informed of the character and nature of the fund's active investments and to meet their obligations to maintain and increase the value of the trust corpus.

But does the duty to monitor extend to passive investments such as index funds? We believe the answer is yes. The Department of Labor, which enforces ERISA, assumes that fiduciaries monitor and filter indexes for the express purpose of divesting significantly poor performers.<sup>123</sup> That is, there is an assumption that fiduciaries are reviewing pertinent information regarding the stocks that compose the indexes they participate in, and making affirmative decisions to optimize their holdings within the context of the index strategy.

This type of management, however, runs counter to the "efficient market" theory. The basic assumption made by this theory is that the securities market is an efficient market; that is, "the prices of goods sold in that market fully reflect all available information about those goods."<sup>124</sup> This theory of efficiency assumes that one cannot "beat the market" because to do so would require the investor to discover information about companies that is not generally known. Efficiency theory concludes that this is impossible to achieve because by the time the investor has discovered the information, the price of the stock has already changed to reflect that new information. Therefore stock picking has been deemed unwise and it has been generally assumed that a court would conclude that index funds are prudent.

But the efficiency theory can also be interpreted as a disincentive to actively reviewing information about various securities. Reviewing such information may not be seen as cost effective (and therefore

not in keeping with the fiduciary's duty to minimize costs) because in an efficient market the value of a stock will already reflect such information. Put differently, there is a potential for contradiction in interpretation between prevailing fiduciary conduct guidance (Third Restatement, et al.) and prevailing market dynamics theory.

In part, recognition of this contradiction has been played out through heavy criticism of the efficient market theory. As we point out in the opening chapters of this paper, environmental practices and positioning have been shown to significantly affect operating costs, profit margins, and competitive advantage. But in many instances, there has been a time lag between the identification of a particular environmental/financial interplay and the reaction of the "efficient market." In other words, fiduciaries who rely only on market efficiency to capture environmental values are, more often than not, leaving some of their beneficiaries' chips on the table.

The Third Restatement also criticizes the efficiency theory, observing that modern research indicates "some inefficiencies remain, even in the most efficient of markets," and that the theory "cannot be expected to be altogether efficient in impounding relevant information."<sup>125</sup>

Other criticisms abound as well. For example, Stanford University economist Mordecai Kurz has determined that market prices respond to a "rational belief equilibrium," which results in the mispricing of publicly traded shares.<sup>126</sup>

Recently, Martin Dickson in the *Financial Times* discussed how stock market bubbles, like the recent internet boom where share prices diverged greatly from fundamental value over a significant period, "pose an obvious challenge to the theory."<sup>127</sup>

In light of these criticisms, a pension fund's reliance on efficiency theory to ensure that they are prudently conducting their oversight of the portfolio may be misplaced.

For example, if challenged to do so, a court may not be inclined to find simple reliance on efficiency theory to be prudent and may conclude that the

trustees have breached their fiduciary duties. Such a conclusion would find support in the Department of Labor assumption that indexes are monitored and filtered for the express purpose of divesting significantly poor performers.<sup>128</sup> For that matter, the Department may also be encouraged or pressed to put into effect its assumption.

Of perhaps greater concern, if Department standards or a governing state's statutes are amended to require filtering or monitoring of indexed funds, the courts have indicated that the new standard would impose a continuing duty applied to prior investment decisions.<sup>129</sup>

This potential legal burden and lack of clear direction from the courts creates an incentive for fiduciaries to ensure that they are acting in accordance with their duty of prudence. By virtue of modern portfolio theory, a form of insurance may be found in pursuing some degree of active management strategies and, inherent in that, heightened monitoring.

Under modern portfolio theory, "decisions respecting individual assets and courses of action must be evaluated not in isolation, but in the context of the trust portfolio as a whole and as a part of an overall investment strategy."<sup>130</sup> This principle is useful as insurance because it means that a failure to monitor and screen an index fund would not be evaluated in isolation but in the context of other actions taken by the fiduciaries that balance that failure. Active strategies reasonably intended to increase the value of other investments would be the kind of actions that would offset the index failure.

For example, a pension fund or foundation could review its holdings, selecting a subset of companies with poor environmental records relative to their industry peers. Similar to many funds' long-standing practice of active engagement on corporate governance issues, the fund could then approach the poor performers to discuss the companies' plans for environmental improvement. Exerting such pressure would be based on the reasonable assumption

that it would be likely to improve the value of the companies and consequently the value of the pension fund's assets. Many funds, such as CalPERS, already conduct very similar programs related to improving corporate governance. Including environmental considerations in this type of program could be a very cost-effective way of ensuring that the duty to monitor has been fully respected.

## THE DUTY OF OBEDIENCE

*The Duty of Obedience Requires Fiduciaries to Consider Whether an Investment Decision Would Further, or at the Least, Not Hinder, the Fulfillment of the Fund's Purposes*

An additional duty that is imposed on fiduciaries is the duty of obedience. This duty requires the fiduciary to make sure the organization is obedient to its mission. The Third Restatement makes reference to this duty in chapter 227, which reads:

The trustee is under a duty to the beneficiary to invest and manage the funds of the trust as a prudent investor would, in light of the *purposes*, terms, distribution requirements, and other circumstances of the trust.<sup>131</sup>

It goes on to state that "[t]he duty of care requires the trustee to exercise reasonable effort and diligence in making and monitoring investments for the trust, *with attention to the trust's objectives*."<sup>132</sup>

## Charitable Foundations, Endowments, and Other Nonprofits

In addition to these authorities, there is legal commentary on this subject in the area of nonprofit corporations and the obligation of those organizations to be loyal to their missions.<sup>133</sup> Because of the specialized nature of their missions and the obligations imposed by their charitable status, foundations, charitable trusts, endowments, and other nonprofits must be exceptionally vigilant in remaining obedient to their mission.

In “On Being True to Your Mission: Social Investments for Endowments,” W. B. McKeown, an attorney specializing in tax-exempt organizations, concluded:

This duty may actually require directors of charitable corporations, when making investment decisions, to consider whether the decision in question would further, or at the least, not hinder, the fulfillment of those charitable purposes.<sup>134</sup>

These considerations may include the composition of the portfolio and response to shareholder initiatives related to subjects close to the institution’s charitable purpose, and could serve to encourage proactive dialogue with investments that lag behind industry benchmarks related to the institution’s field of charitable endeavor. Many nonprofit entities do not currently engage in this type of analysis, nor do they have policies in place that maximize this aspect of employing their assets to further their charitable mission. Since, in most states, the conduct of nonprofits is regulated by the attorney general, we believe that a failure to consider these issues could potentially invite investigation by state authorities.

## Public Pension Funds

Beyond the obvious implications for nonprofits, and the general applicability of the duty of obedience to fiduciary relationships and its presence in state statutes, the duty of obedience is also specifically applied to pension funds through the ERISA regulations. These regulations state that a fiduciary must determine that “the particular investment or investment course of action is reasonably designed...to further the purposes of the plan.”<sup>135</sup>

While a pension fund trustee may not be under an obligation identical to that of a nonprofit corporation director or a charitable trust fiduciary, the

prudent investor rule expressly requires pension fiduciaries to invest and manage the trust funds in light of the purposes of the trust. Perhaps more importantly, ERISA requires that investment related decisions “further the purposes of the plan.”<sup>136</sup>

Therefore, in order to document compliance with the governing laws, it is necessary for a fiduciary to provide evidence that he or she has considered the investment decision in light of the purposes of the pension fund. Since a purpose of a pension fund is to provide for its beneficiaries’ retirement, this responsibility could include consideration of macro-

economic factors, such as global climate change, that may affect the markets in which the funds are invested or the state as a whole.

In some cases, a pension fund’s mission statement might contain an authoritative declaration of the pension fund’s goals and obligations in this regard.

For example, state statute in New York requires public pension fund investments to “benefit the overall economic health of the state of New York.”<sup>137</sup> Overall economic health, especially over the long term, depends on a variety of factors including the sustainable use of resources, clean air and water, and macroeconomic factors such as global warming. As a consequence, we argue that New York pension funds have an obligation to demonstrate that they have considered these issues.

Even in the absence of the kind of explicit legal mandate found in New York, looking at a fund’s mission in a macroeconomic context may still be required. As the vice chair of CalPERS’s Investment Committee, Sean Harrigan stated in a recent address:

It is clear to us at CalPERS, however, that the present and future financial health of our trust fund is inextricably linked to the economic health of California. Beyond the obvious micro-economic analysis that is required to make spe-

*Because of the specialized nature of their missions and the obligations imposed by their charitable status, foundations, charitable trusts, endowments, and other nonprofits must be exceptionally vigilant in remaining obedient to their mission.*



cific investment decisions, isn't it also necessary for us, as prudent fiduciaries, to simultaneously consider macroeconomic conditions? I believe the answer to this question is a resounding yes! It is also necessary to consider the macroeconomic implications of our investments. *In other words, it is not just acceptable to consider what are referred to as the collateral economic benefits of any investment, it would be imprudent not to include such considerations in the investment decision process.*<sup>138</sup>

As pointed out by the Boston, Massachusetts-based Coalition for Environmentally Responsible Economies (CERES) in a new publication entitled "Value at Risk: Climate Change and the Future of Governance," global climate change presents one of the most serious challenges facing institutional investors and corporate directors in the twenty-first century. As the report notes, the U.S. Department of Energy estimates that "over the last fifteen years, the world has already suffered nearly \$1 trillion in economic losses due to 'natural' disasters, roughly three-quarters of which were directly weather- and climate-related."<sup>139</sup>

The CERES report notes that these findings have been corroborated by several other authorities, including Swiss Re, Credit Suisse, and Deutsche Bank.<sup>140</sup> Pressure to respond to global climate change concerns will increase even further in future years. For example, the Carbon Disclosure Project, a consortium of institutional investors with over \$4 trillion in assets and sponsored by the Philanthropic Collaborative of Rockefeller Philanthropy Advisors, has formally asked the world's 500 largest companies to report information on their greenhouse gas releases. Information collected will be made public in 2003, and may be expected to spark widespread analysis of risk and emissions reduction opportunity, and potentially considerable shareholder activity.<sup>141</sup>

Of course, in addition to economic impacts, irreversible changes in global climate or other major

environmental problems may also pose significant public health threats. While it's beyond the scope of this paper to profile the proven links between pollution and public health, the weight of evidence linking environmental pollution to public health problems might encourage future fund trustees to

*It is not just acceptable to consider what are referred to as the collateral economic benefits of any investment, it would be imprudent not to include such considerations in the investment decision process.*

revisit bedrock assumptions about how to best achieve retirement security goals. CalPERS has stated, "Our mission is to advance the financial and health security for all who participate in the System."<sup>142</sup>

To be sure, the context of the debate that led to this mission statement makes it clear that the board was limiting their consideration of health security to issues such as health care plans and insurance, and did not intend

to consider broader health security questions. But the question may be worthy of further consideration. Health security is impacted by pollution and global warming, and CalPERS invests in many enterprises that generate significant amounts of pollution or contribute to global climate change. In the context of the climate change example, CalPERS might do well to consider encouraging the fossil fuel industry to more aggressively control greenhouse gas emissions, and might also consider the benefits of financially targeted investments in companies engaged in the development of alternative fuels and renewable energy, such as biomass ethanol, fuel cells, or solar power.

In summary, the law is clear that investment-related decisions must further the purposes of the pension plan or nonprofit. Consequently, if the purposes of the foundation, charitable trust, or pension plan implicate environmental sustainability and/or health, the fiduciaries must ensure that their investment-related decisions further issues of environmental sustainability and health. Furthermore, it's clear that consideration of broad macroeconomic factors, such as global climate change, is within the purview of any prudent fiduciary. In practice, we believe

that most fiduciaries are currently vulnerable to challenges in these areas.

## SUMMARIZING THE LEGAL ARGUMENTS

There are three arguments typically posed by those skeptical about the relationship between environmental issues and fiduciary duties:

***Criticism A: Incorporating environmental issues violates the duties of loyalty and prudence because the issues do not benefit the beneficiaries.***

Critics typically claim that environmental issues are not relevant to fiduciary concerns because they involve benefits to third parties. However, under both federal and state law, it is clear that, so long as the environmental or social issues do not supersede the financial issues, it is appropriate to consider them. This, of course, assumes that the particular environmental issue has absolutely no financial component.

***Criticism B: Environmental issues are nonfinancial issues.***

While acknowledging that it is sometimes difficult to quantify the precise financial impact of environmental factors, there is a tremendous body of evidence illustrating that environmental issues can have very real financial dimensions. In many cases, there is strong evidence that good environmental performance translates to good financial perfor-

mance and consequently creates value for the investor. In other instances, environmental liabilities have had a disastrous impact on profitability and shareholder value.

***Criticism C: Incorporating environmental issues violates the duty to diversify because it limits the number of potential investments.***

A general misconception of socially responsible investment practices is the assumption that taking social considerations into account requires divesting from a multitude of companies—a violation of the duty to diversify because it reduces the number of potential investment options available to the fund. Although convenient, this argument ignores the facts. According to the Social Investment Forum, over half of the \$2.34 trillion dollars invested socially in the U.S. are not screened.<sup>143</sup> Rather, investors actively use their proxies to further socially oriented objectives. In fact, broad divestment would considerably hinder these investors' social goals, since they would lose their basis for engagement as shareholder owners.

We believe that incorporating environmental issues into investment management may actually promote more prudent diversification and may increase the number of potential investments in two ways: first, it provides avenues for diversification that may currently be overlooked; and second, it suggests prudent steps to improve the performance of existing investments (thereby providing opportunities to work with and maintain existing holdings rather than simply dropping underperformers).

## NOTES

- <sup>64</sup> Conn. Gen. Stat. § 3-13d(a) (2002).
- <sup>65</sup> Virginia L. Gibson, Bonnie K. Levitt, and Karine H. Cargo, *Overview of Social Investments and Fiduciary Responsibility of County Employee Retirement System Board Members In California*, 16 November 2000 (on file with author).
- <sup>66</sup> Cal. Const. Art. XVI, § 17(b); Cal. Gov't Code §§ 31595 and 53216.6; Cal. Prob. Code §§ 16002 and 16004; NY CLS Retire & SS § 177(9)(b); ERISA § 404(a)(1)(A); 29 U.S.C. § 1104(a)(1)(A); *Donovan v. Bierwirth*, 680 F.2d 263, 271 (2d Cir. 1982).
- <sup>67</sup> *Overell v Overell*, 78 Cal. 251, 248 p 310 (1926); *Stack v Welder*, 137 Cal. 647, 31 P.2d 426 (1934).
- <sup>68</sup> *Estate of Nicholas*, 177 Cal. App. 3d 1071, 1087 (1986).
- <sup>69</sup> Letter from Department to Helmuth Fandl, Chairman of the Retirement Board of Avon Products, Inc. (Feb. 23, 1988) ("Avon Letter") at 393; 59 Fed. Reg. 38860.
- <sup>70</sup> Letter from Harvey Pitt to John Higgins, President of Ram Trust Services (February 12, 2002).
- <sup>71</sup> *Mudd v. Lanier*, 247 Ala. 363, 24 So.2d 550 (1946); *Tapper v. Boston Chamber of Commerce*, 235 Mass. 209, 219, 126 N.E. 262 (1920).
- <sup>72</sup> Restatement (Third) Trusts (Prudent Investor Rule) § 227 cmt. d quoting Sommer, Longstreth and Loomis, "Corporate Social Responsibility Panel: The Role of the SEC," 28 *The Business Lawyer* 215, 219 (March, 1973) (remarks of Mr. Longstreth). III *Scott on Trusts*, § 193.1 (W. Fratcher 4th ed. 1988) (powers with respect to voting shares are subject to fiduciary duties).
- <sup>73</sup> Ball Signals Continued Commitment to Proxy Voting Issues at Department, 17 *Pens. & Ben. Rep. (BNA)* 207 (Jan. 29, 1980) (statement of David George Ball, then Assistant Secretary of Labor for Pension and Welfare Benefits Administration).
- <sup>74</sup> 29 C.F.R. 2550.404a-1(b); Cal. Prob. Code § 16047.
- <sup>75</sup> 29 C.F.R. § 2509.94-2(3) (emphasis added).
- <sup>76</sup> *Ibid.*
- <sup>77</sup> 59 Fed. Reg. 38860, 38862.
- <sup>78</sup> "Likely" is synonymous with "probable." *Hoy v. Tornich*, 250 P. 565, 568 (Cal. 1926). "Likely" is not synonymous with "probable" but has practically the same meaning. *Graham v. Joseph H. Bauland Co.*, 89 N.Y.S. 595, 598, 97 App.Div. 141. "Likely" and "foreseeable" environmental impact, for which the National Environmental Policy Act requires federal agencies to prepare an Environmental Impact Statement, is impact that is sufficiently likely to occur that a person of ordinary prudence would take it into account when reaching a decision. *Sierra Club v. Marsh*, 976 F.2d 763 (1st Cir. 1992).
- <sup>79</sup> Avon Letter at 393.
- <sup>80</sup> Office Of The Chief Economist, Securities And Exchange Commission, *The Effects Of Poison Pills On The Wealth Of Target Shareholders 2* (Oct. 23, 1986), reprinted in *Corporate Takeovers (Part 2): Hearings Before the House Subcomm. on Telecommunications, Consumer Protection and Finance of the Comm. on Energy and Commerce, 99th Cong., 1st Sess.* 690, 697–703 (1985).
- <sup>81</sup> Office Of The Chief Economist, Securities and Exchange Commission, *Shark Repellents and Stock Prices: The Effects of Antitakeover Amendments—Since 1980* (1985), reprinted in *Corporate Takeovers (Part 2), Hearings Before the House Subcomm. on Telecommunications, Consumer Protection and Finance of the Comm. on Energy and Commerce, 99th Cong., 1st Sess.* at 604.
- <sup>82</sup> Shareholder Resolution submitted by the Honorable Denise L. Nappier, Treasurer of the State of Connecticut, on behalf of the Connecticut Retirement Plans & Trust Funds to American Electric Power Company, Inc. (November 5, 2001).
- <sup>83</sup> Letter from Department to William M. Tartikoff, Senior Vice President and General Counsel of Calvert Group Ltd. (May 28, 1998) ("Calvert Letter").
- <sup>84</sup> 447 F. Supp. 1248 (S.D.N.Y. 1978), *aff'd mem.* 595 F.2d 1210 (2d Cir 1979).
- <sup>85</sup> CalPERS, "Why Corporate Governance Today? A Policy Statement," (1995).
- <sup>86</sup> *Ibid.*
- <sup>87</sup> Gibson, et al. (see footnote 65).
- <sup>88</sup> 317 Md. 72, 562 A.2d 720 (1989).
- <sup>89</sup> *Ibid* at 106–107, 737.
- <sup>90</sup> 29 C.F.R. § 2509.94–2(3) (emphasis added).
- <sup>91</sup> *King v. Talbot*, 40 N.Y. 76 (1869).
- <sup>92</sup> Martin D. Begleiter, *Does the Prudent Investor Need the Uniform Prudent Investor Act—An Empirical Study of Trust Investment Practices*, 51 *Me. L. Rev.* 27, 32–33 (1999).
- <sup>93</sup> Begleiter, n.49. Citing Edward C. Halbach, Jr., *Trust Investment Law in the Third Restatement*, 77 *Iowa Law Review* 1151 (1992); Thomas O. Burton, Patton G. Lochridge and David B. Young, *Risk Management for Corporate Fiduciaries* (1997); Robert A. Levy, Note, *The Prudent Investor Rule: Theories and Evidence*, 1994 *Geo. Mason Law Review*; and John H. Martin, *A Preface to the Prudent Investor Rule*, 132 *TR. & EST.* 42 (Nov. 1993).
- <sup>94</sup> Begleiter at 34–36.
- <sup>95</sup> Begleiter at 36.
- <sup>96</sup> Austin Fleming, *Prudent Investments: The Varying Standards of Prudence*, 12 *Real Prop., Prob. & Tr. J.* 247 (1977).
- <sup>97</sup> Begleiter at 38–42.
- <sup>98</sup> Begleiter at 54.
- <sup>99</sup> 29 C.F.R. § 2550.404a-1.
- <sup>100</sup> Begleiter at 43.
- <sup>101</sup> Begleiter at 53 and 68.
- <sup>102</sup> Restatement (Third) of Trusts § 227.

- <sup>103</sup> *Donovan v. Walton*, 609 F.Supp. 1221, 1241 (D.C. Fla.1985), affirmed *Brock v. Walton*, 794 F.2d 586 (11th Cir. 1986) at 586.
- <sup>104</sup> The concept of an evolving concept of prudence is also reflected in recent amendments to British regulations. The U.K. recently adopted a regulation that obligates all pension funds to disclose the extent to which they consider social, environmental, or ethical criteria in the selection, retention, and realization of investments and any policies directing the exercise of the rights (including voting rights) attached to investments. [The Occupational Pension Schemes (Investment, and Assignment, Forfeiture, Bankruptcy etc.) Amendment Regulations 1999, S.I. 1999/1849. (Brought into force July 3, 2000 pursuant to s.35 of the 1995 Pensions Act)]. This change is explicit recognition that it is prudent to examine social, environmental, and ethical criteria.
- <sup>105</sup> N.Y. Est. Powers & Trusts § 11-2.3(3)(C).
- <sup>106</sup> Restatement (Third) of Trusts. § 227, cmt. e.
- <sup>107</sup> Restatement (Third) of Trusts. § 227, cmt. g.
- <sup>108</sup> *Whitman v. American Trucking Associations, Inc.*, 531 U.S. 457 (2001).
- <sup>109</sup> Jane Kay, *San Francisco Chronicle*, 21 June 2002.
- <sup>110</sup> Worldwatch Institute, *State of the World 2001*, p. 89.
- <sup>111</sup> Cal Const, Art XVI § 17(d) (emphasis added).
- <sup>112</sup> By engage, we refer to the practice of dialogue between shareholders and management about operational or management policies, which may lead to increased profitability.
- <sup>113</sup> CalPERS Investment Comm. Staff, *Financial Distress Divestment Policy* (Oct. 16, 2000).
- <sup>114</sup> Gibson at 15.
- <sup>115</sup> *Donovan v. Walton*, 609 F.Supp. 1221, 1241 (D.C. Fla.1985), affirmed *Brock v. Walton*, 794 F.2d 586 (11 th Cir. 1986) at 586.
- <sup>116</sup> Yaron, *The Responsible Pension Trustee* (1993) at 47 quoting Manitoba Law Reform Commission, *Ethical Investments by Trustees* (1993) at 35.
- <sup>117</sup> James P. Hawley & Andrew T. Williams, *The Rise of Fiduciary Capitalism: How Institutional Investors Can Make Corporate America More Democratic* Philadelphia: University of Pennsylvania Press.
- <sup>118</sup> While it is beyond the scope of this paper to discuss the range of human health problems associated with environmental pollution, and the various studies conducted by government and academia to assess the associated medical costs, the American Lung Association has estimated that particulate pollution from sources such as coal-fired power plants and diesel engines causes bronchitis, costing the U.S. over \$3 billion annually. *Dollars & Cents*, 1995.
- <sup>119</sup> Richard H. Koppes and Maureen L. Reilly, *An Ounce of Prevention: Meeting the Fiduciary Duty to Monitor an Index Fund Through Relationship Investing*, 20 Iowa J. Corp. L. 414, 441-442 (1995).
- <sup>120</sup> In 1989 CalPERS initially adopted its corporate governance campaign. It is interesting to briefly highlight how CalPERS adopted its cutting edge strategy described as “to aggressively exert the shareholder’s ownership rights in a manner so that the factors leading to the under-performance are corrected.” In its policy statement “Why Corporate Governance?” CalPERS gave its justification for the strategy. As the core basis for this justification it cited former SEC Chairman David S. Ruder, who said:
- As corporate shareholders, institutional investors can play a beneficial role in seeking to influence corporate actions. Their attention to the way that corporations manage their business can have a beneficial effect on corporate goals and operations. By participating in corporate governance in an effort to improve management, institutional investors can also provide stability to the marketplace and improve accountability by corporate managers.
- What is most striking about this argument is how there was such a dearth of legal support for the policy at the time of its adoption. Given the extensive legal justification for adopting an active environmental stand that is presented in this analysis, any fiduciary should feel much more secure in their decision to follow our recommendations than CalPERS trustees did in their 1989 leap of faith in adopting the corporate governance strategy.
- <sup>121</sup> According to CalPERS, “the [corporate governance] movement may best be described as the prudent exercise of ownership rights, toward the goal of increased share value.” (CalPERS, *Why Corporate Governance Today? A Policy Statement* (1995), p. 1.) As has been established in other portions of this paper, the environmental performance of a company has been shown to have a direct relationship to its share value, and considering environmental issues in investment decisions (that is, the exercise of ownership rights) is prudent. Therefore, given CalPERS’s definition, environmental issues are actually corporate governance issues.
- <sup>122</sup> *Donovan v. Cunningham*, 716 F.2d 1455, 1474 (5th Cir. 1983), cert. denied, 467 U.S. 1251 (1984); *Buccino v. Continental Assurance Co.*, 578 F. Supp. 1518, 1521 (S.D.N.Y. 1983); *Katsarow v. Cody*, 744 F.2d 270, 276 (2d Cir. 1984); *Public Service Co. of Colo. v. Chase Manhattan Bank*, 577 F. Supp. 92, 104 (S.D.N.Y. 1983); *Citizens and Southern Nat’l Bank v. Haskins*, 327 S.E.2d 192, 197 (Ga. 1985). See also Cal. Prob. Code § 16047(a) (Uniform Prudent Investor Act) Law Revision Commission Comments “The duty of care requires the trustee to exercise reasonable effort and diligence in making and *monitoring* investments for the trust, with attention to the trust’s objectives” (emphasis added). Cmt d.
- <sup>123</sup> 44 Fed. Reg. 37,224 (1979).
- <sup>124</sup> Jonathan R. Macey, *An Introduction To Modern Financial Theory* 36 (1991). Begleiter 37.
- <sup>125</sup> Restatement (Third) Trusts. § 227 Gen. Notes to cmts. e-h.

- <sup>126</sup> Mordecai Kurz, "Asset Prices with Rational Beliefs" (Working Paper, Stanford University, Oct. 1992), cited in Horace W. Brock, Ch. II: A Quantum Leap in Our Understanding of Financial Markets, in Forecast and Risk Assessment, at Ch. II n. 4 (Feb. 1993) (on file with authors). Koppes 441-442.
- <sup>127</sup> Martin Dickson, "Companies and Finance UK," *The Financial Times*, 30 December 2000.
- <sup>128</sup> 44 Fed. Reg. 37,224 (1979).
- <sup>129</sup> *Pension Benefit Guar. Corp. v. Greene*, 570 F. Supp. 1483 (W.D. Pa. 1983) and *Morissey v. Curran*, 567 F.2d 546 (2d Cir. 1977).
- <sup>130</sup> Cal. Prob. Code § 16047(b) (California Uniform Prudent Investor Act); see also 29 C.F.R. § 2550.404a-1 (ERISA standard).
- <sup>131</sup> Restatement (Third) of Trusts. § 227 (emphasis added). See also, Cal. Prob. Code § 16047(a) (Uniform Prudent Investor Act) and N.Y. Est. Powers & Trusts § 11-2.3 (Prudent Investor Act).
- <sup>132</sup> Restatement (Third) of Trusts. § 227 cmts. d and e (1992) (emphasis added).
- <sup>133</sup> See, W.B. McKeown, "On Being True to Your Mission: Social Investments for Endowments." *The Journal of Investing*, Winter, 1997; Lewis D. Solomon, Karen C. Coe., 66 UMKC L. Rev. 213, "Social Investments By Nonprofit Corporations And Charitable Trusts: a Legal and Business Primer for Foundation Managers and Other Nonprofit Fiduciaries," Winter, 1997.
- <sup>134</sup> McKeown at 75.
- <sup>135</sup> 29 CFR 2550.404a-1(b)(2)(i) (emphasis added).
- <sup>136</sup> 29 CFR 2550.404a-1(b)(2)(i) (emphasis added).
- <sup>137</sup> NY CLS Retire & SS § 177(9)(c).
- <sup>138</sup> Sean Harrington, Vice Chairman, CalPERS Investment Committee. "Economically Targeted Investments: Doing Well and Doing Good." Paper presented to the Canadian Labor and Business Centre, 16 January 2002.
- <sup>139</sup> CERES, *Value at Risk: Climate Change and the Future of Governance* (2002), p. 8.
- <sup>140</sup> *Ibid.*, p. 9. See also the proceedings of the Swiss Re meeting on the Business Risks of Greenhouse Gas Emissions and Climate Change, Center for Global Dialogue, October 2001.
- <sup>141</sup> Socialfunds.com, "Institutional Investors Press Largest Companies to Disclose Greenhouse Gas Emissions, 31 May 2002.
- <sup>142</sup> <http://www.calpers.ca.gov/about/mission/mission.htm> [21 May 2001], (emphasis added).
- <sup>143</sup> Social Investment Forum, *2001 Report on Social Investing Trends in the United States*, p.4.



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CHAPTER IV  
**RECOMMENDATIONS**  
*To Unlock Environmental Value*



The previous three chapters of this paper have reviewed the business, academic, and legal evidence suggesting that fiduciaries should consider environmental performance as a key value driver. But the purpose of consideration is to encourage educated action. Fortunately, investors wanting to maximize environmental value can be guided by the rich history of shareholder activism that was pioneered by religious investors over a century ago and honed by institutional investors, such as CalPERS and TIAA CREF, who have developed widely accepted strategies to improve financial performance by improving the quality of corporate governance.

The goal of *The Environmental Fiduciary* is to encourage fiduciaries to recognize that considering the financial implications of environmental performance is part of prudent stewardship. Issues of universal ownership and obedience to mission also come into play—the latter is particularly important for charitable foundations.

There is a broad range of tools at fiduciaries' disposal to increase shareholder value by encouraging improvements in corporate environmental performance. These tools include:

- Requesting clearer, more uniform presentations of environmental data from companies.
- Urging the SEC and other regulatory agencies to enforce, and strengthen, existing environmental disclosure regulations.
- Engaging environmental underperformers in dialogue designed to improve corporate environmental management.
- Incorporating environmental opportunity into investment strategies.

### **Recommendations Extend to Both Active and Passively-Managed Funds**

As noted in Chapter 3, *Legal Landscape*, the duty to monitor encompasses the entire range of investments under a fiduciary's control. This includes index funds or other passive investments. Therefore, fiduciaries should adopt a posture that communicates the desire for good environmental performance to the management of all of their investments. In the case of passively managed portfolios (such

as indexes), voting proxies in support of shareholder resolutions calling for greater environmental disclosure is a cost-effective means of encouraging companies to improve their environmental performance. Actively managed portfolios, by their very nature, deserve greater levels of scrutiny and engagement beyond insistence on material environmental liability disclosure and the basic exercise of proxy voting rights. The following chapter discusses these strategies, and others, in detail.

## General Recommendations for Recognizing the Value and Prudence of Environmental Stewardship

- Fiduciaries need to recognize that considering environmental performance issues is allowable and prudent on both financial and social grounds. In cases where there are clear financial-performance or universal-ownership issues, the duties of prudence may warrant the consideration of environmental performance.
- Fiduciaries must recognize that the duty to monitor extends beyond active investments to encompass passive investments as well. Since environmental performance has been demonstrated to be a key value driver in many industry sectors, fiduciaries should ensure that they have systems in place to monitor environmental performance in both active and passive portfolios.
- Fiduciaries, especially those acting as trustees over charitable endowments, must consider whether investment decisions might further, or at least not hinder, their fund's mission. For example, charitable foundations with environmental missions need to consider how their investment management strategies impact their core mission and justification for charitable status.

## UNIFORM, TRANSPARENT ENVIRONMENTAL DISCLOSURE

What is hidden from shareholders can be a source of significant risk. There are two avenues of disclosure available: voluntary and mandatory. For their own protection, fiduciaries need to address both areas.

### Encourage Voluntary Disclosure of Environmental Performance

Fiduciaries should encourage their portfolio managers to request that the corporations in which they invest track and disclose their environmental performance. Coalitions of NGOs, investors, and businesses such as CERES or the Global Reporting Initiative (GRI) provide a well-tested framework for identifying and reporting corporate environmental vision, management, and performance. The reporting suggested by these NGOs is voluntary but comprehensive, and serves the interests of the investing community, and it often helps provide a basis for

determining the financial ramifications of environmental issues.

### *CERES Environmental Reporting Requirements*

CERES has a long history of working with corporations to help them develop and improve a culture of environmental stewardship. As a demonstration of commitment to environmental stewardship, corporations are asked to endorse the CERES Principles, a set of overarching environmental sustainability goals. To guide companies in identifying strategies to implement the broad goals expressed in the principles, CERES has created an environmental reporting form called the *CERES Reporting Requirements for Endorsing Companies*. (See box on page 53 for summary.) More than fifty major companies, including Bank of America, Bethlehem Steel, Coca Cola USA, Ford Motor Company, General Motors Corp., Nike, and Sunoco, have pledged to uphold the CERES Principles and to complete the CERES Reporting Requirements. Fiduciaries should encourage their portfolio man-



## **CERES Reporting Requirements**

### *A Model for Comprehensive Environmental Reporting*

#### **Articulate Corporate Vision and Strategy** (including):

- Overview of environmental policies, governance structure, and management systems
- Articulation of the corporate vision for sustainability

#### **Outline Policies, Organization, and Management Systems** (including):

- Specific environmental policies and programs in place, any recent revisions, key personnel responsible for implementation, and geographic scope of the policies
- Chain of command regarding implementation of environmental policies
- Research devoted to the development of environmental technology
- Costs of environmental programs (management costs, resource use, waste disposal, permitting, monitoring, training, auditing, insurance)
- Scope and frequency of environmental audits, and health and safety audits of corporate facilities and processes
- Policies and approaches to working with corporate stakeholders such as employees, investors, suppliers, customers, local authorities, local communities, public interest groups, and nongovernmental organizations
- Emergency response procedures for hazardous materials

#### **Measure Environmental Performance** (including):

- Amount and types of energy used, plus a review of energy conservation programs and energy audit procedures
- Amount and type of materials used, conserved, and recycled
- Amount and type of emissions, effluents, and waste generated (hazardous and nonhazardous)
- Accidental releases of emissions
- Environmental performance of major suppliers
- Major environmental issues and impacts associated with the use of the corporation's principal products and services (including disposal of products where applicable)
- Amount of land owned, leased, or managed by the corporation, changes in habitat due to operations, and plans for eventual restoration and cleanup
- Record of compliance with applicable international, national, state, and local environmental laws including number and nature of penalties incurred and number of consent decrees

*This summary was compiled from the CERES Reporting Requirements for Endorsing Companies. For a full description and a copy of CERES Reporting Form, visit [http://www.ceres.org/reporting/01\\_reporting\\_requirements.doc](http://www.ceres.org/reporting/01_reporting_requirements.doc)*

agers to request that the corporations in which they invest not only adopt the CERES Principles but also disclose and track their environmental performance by completing the CERES Reporting Requirements for Endorsing Companies.

As outlined in the box on the previous page, the CERES Reports are among the most comprehensive, standardized public records of corporate environmental performance currently released by corporations themselves. CERES Reports benefit shareholders because management is required to articulate an environmental vision for the company, outline environmental programs and management structures to implement that vision, and assess environmental performance on an annual basis. This assessment of environmental performance is conducted by tracking and reporting emissions, energy use, water use, and raw material consumption; the environmental record of major suppliers; and any environmental problems and violations the corporation may have incurred. By completing the CERES reporting requirements, liabilities are clearly identified and avenues toward environmental improvements are illuminated. The information also provides a basis for tabulating value added by environmental activities.

### ***The Global Reporting Initiative***

Fiduciaries wanting standardized information on a broad range of social and financial issues should request that corporations in their portfolios make a report consistent with the GRI Guidelines. Convened in part by CERES in partnership with the United Nations Environment Programme, GRI was established in late 1997 with the mission of developing globally applicable guidelines for reporting corporate financial, environmental, and social performance (including human-rights and labor issues).

Similar to CERES, the Global Reporting Initiative directs corporations to complete a GRI Report, much like the CERES Report. However, the environmental disclosure directives in a GRI Report are less com-

prehensive and ask for less detail than a CERES Report. Like CERES, GRI helps management articulate a vision for sustainability, develop programs and management structures to implement that vision, and report annually on progress toward that vision by filling out a GRI Report tracking corporate social, environmental, and financial performance. Visit [www.globalreporting.org](http://www.globalreporting.org) for details.

### **Encourage Tabulation of Savings Due to Environmental Initiatives**

In addition to requesting that portfolio companies disclose and track their environmental performance, fiduciaries should direct their portfolio managers to request that corporations tabulate savings due to environmental initiatives. As indicated by the specific examples in Chapter I, *The Environment as Value Driver*, there are significant opportunities for cost reduction, ongoing efficiencies, and revenue through recycling, energy efficiency programs, improved manufacturing processes, and strategically targeted green investments.

#### ***Recycling***

Corporations such as Baxter International and IBM have saved millions of dollars through recycling initiatives. Savings have been achieved because manufacturing materials are recovered and recycled instead of purchased outright. Moreover, disposal and waste removal costs are significantly lowered. Institutional investors should ask corporations for a report on recycling initiatives and savings achieved.

#### ***Energy Efficiency***

Increasing energy efficiency during operations and production processes reduces energy purchasing costs. Corporations should be encouraged to take advantage of programs such as EPA's Energy Star to explore how their facilities' energy efficiency could be improved. Institutional investors should

request that corporations tabulate savings due to energy efficiency programs.

### ***Manufacturing Processes***

Redesigning manufacturing processes to reduce the amount or toxicity of materials used can reduce operating expenses. The Six Sigma program adopted by DuPont has given rise to several examples of the types of savings that can occur when companies redesign their products and their production methods to require fewer raw materials, employ less toxic alternatives, or create less waste. Institutional investors should encourage corporations to tabulate savings due to a reduction in consumption of material and implementation of environmentally sound manufacturing processes.

### **Recommendations for Uniform, Transparent Environmental Reporting**

- In order to reduce monitoring costs and provide adequate environmental performance information, fiduciaries should encourage companies to adhere to standardized environmental disclosure systems such as the CERES Reporting Requirements or the GRI Guidelines.
- Fiduciaries should urge companies to endorse the CERES Principles and support proxy votes asking companies to become CERES signatories.
- Fiduciaries should direct fund managers to ask for specific reports on cost savings achievable through energy efficiency, recycling, and process changes.

### **Press the SEC to Aggressively Enforce Material Environmental Disclosure Regulations**

The CERES and GRI reporting guidelines represent real progress toward codifying a standardized framework for quantifying environmental performance, sustainability, and liabilities across the spectrum of marketable securities. However, it is vital for fiduciaries to recognize that such standards are still only *voluntary*. Although investors can strongly encourage companies to move toward using these standardized reporting systems, many of the companies that might reap the greatest financial benefit from environmental improvement are able to avoid voluntary standards and guidelines.

As pointed out in the previous discussion in Chapter 1 on *Environmental Risk*, many companies fail to disclose financially material environmental conditions to their shareholders. To reiterate the facts:

Although SEC Regulation S-K Item 103 requires disclosure of material financial issues, including legal proceedings involving a governmental authority with a likelihood of a monetary sanction greater than \$100,000, a 1998 EPA study found that that 74% of companies which had been sanctioned or were likely to be sanctioned due to such proceedings failed to report this fact in their 10-Ks.

A study entitled “Environmental Liabilities: Property and Casualty Insurer Disclosure of Environmental Liabilities (RCED-93-108)” by the General Accounting Office (GAO) in 1993, found that insurance companies significantly underreported federal toxic cleanup liabilities. The GAO speculated that this underreporting “may reflect piecemeal accounting of individual claims by large insured corporations to evade reporting requirements” even if the *total* of all the claims would have exceeded reporting thresholds.

Because merely encouraging companies to begin to utilize voluntary standardized environmental reporting formats won’t highlight problems corpo-

rations are deliberately or inadvertently hiding, fiduciaries should encourage vigorous enforcement of existing mandatory disclosure standards. Enforcement of material financial disclosure by publicly traded companies is primarily the job of the SEC, and is spelled out in SEC Regulation S-K (Please see the *Environmental Risk* section in Chapter I for a description of Regulation S-K). Accurate reporting of environmental risks and liabilities will not occur until the SEC makes enforcement of environmental disclosure a priority. Without such full and accurate disclosure, investors will not be able to accurately assess the value of the equities in their portfolios.

Moreover, the fact that many companies fail to disclose financially material environmental conditions to their shareholders may stem from confusion about how to estimate environmental liability, hindering a determination of materiality. Because of this, fiduciaries should urge the SEC to end confusion about interpreting the materiality reporting

threshold for environmental liabilities by encouraging the SEC to adopt the specific guidelines for estimating and reporting environmental risk developed by the widely-respected West Conshohocken, Pennsylvania-based American Society for Testing and Materials (ASTM). Encouraged by the insurance industry and produced after a long and arduous process involving a large representation of industry groups, these (currently voluntary) guidelines lay out specific methodology for the reporting of environmental risks and liabilities. (See box below for description of the guidelines.)

Overall, the new ASTM guidelines provide corporations with specific tools and standardized methods to estimate and report their liabilities. The guidelines help to close one of the biggest loopholes in environmental reporting today—piecemeal accounting of environmental liabilities—and to show companies how they *can* estimate and report environmental liabilities despite uncertainty. The use of

## **ASTM Guidelines for Estimating and Reporting Environmental Liabilities**

### ***Standard Guide for Estimating Monetary Costs and Liabilities for Environmental Matters—E 2137-01***

This guideline shows corporations how to appropriately estimate the costs and liabilities of environmental matters such as compliance with environmental laws, response actions, defense and legal fees, and damages arising from ecological damage, property damage, business interruption, and tort claims. The guidelines describe four known cost estimation methods and how to use them. The four methods are:

- expected value
- most likely value
- range of values
- known minimum value

The guideline describes the conditions under which each should be used, the type of uncertainties that each method creates, and how to document the process properly.

### ***Standard Guide for Disclosure of Environmental Liabilities—E 2173-01***

The Standard Guide for Disclosure of Environmental Liabilities establishes the conditions warranting disclosure and *instructs corporations to aggregate all environmental liabilities* and report them in the company 10-K. It is intended to accompany Generally Accepted Risk Principals (GARP).

this standardized methodology will allow side-by-side comparison of different companies' liabilities and costs in the same industry sector.

In either case, the responsibility to enforce financially material environmental disclosure falls squarely on the shoulders of the SEC. One of the most important steps fiduciaries can take to protect their portfolios is to encourage the SEC to make enforcement of environmental disclosure a priority. (See recommendations in box below.)

### **Recommendations to Demand SEC Enforcement of Material Environmental Liability Disclosure**

- Fiduciaries should encourage the SEC to vigorously and systematically review its registrants' patterns of compliance with SEC-mandated environmental disclosure requirements (Regulation S-K) and to take appropriate enforcement action and punitive action when these requirements are violated.
- Fiduciaries should encourage the EPA to report legal proceedings, corrective actions, and enforcement actions in a usable format to the SEC and to the public on a consistent basis (as they currently do with public Toxic Release Inventory data).
- Fiduciaries should encourage the SEC to incorporate into regulation the now-voluntary ASTM guidelines as a prescribed way to calculate the liabilities that must be reported under Regulation S-K. This would codify a standard framework to efficiently communicate environmental liability information to the markets.
- Fiduciaries should encourage the SEC to allocate additional enforcement resources specifically to ensure that companies comply adequately with environmental disclosure requirements.

## **PROACTIVE ENGAGEMENT WITH MANAGEMENT**

After becoming better educated about environmental performance and its financial implications through the disclosure steps outlined above, fiduciaries should proactively engage with companies to encourage best practices in environmental management. This type of engagement usually starts with a review of strategic and cost-effective opportunities for environmental improvement, followed by a variety of processes such as dialoguing, proxy voting, and targeting specific underperformers for special attention.

In fact, the \$149 billion California Public Employee Retirement System (CalPERS) has enjoyed tremendous success with a very similar program designed to encourage good corporate governance. CalPERS staff engage managers and directors of corporations that have been flagged as economic underperformers and also have corporate governance problems such as permitting "insiders" to remain on audit committees. CalPERS's program has been so effective in improving shareholder value through positive engagement that analysts coined a new term to describe it—the "CalPERS effect."

As suggested by the evidence presented in Chapter 1, *The Environment as a Value Driver* and Chapter 2, *Academic Perspectives*, fiduciaries who similarly engage corporations on environmental performance may also have a reasonable expectation of increasing shareholder value.

Moreover, as indicated in Chapter 3, *The Legal Landscape*, proactive engagement with management may not only be appropriate from a financial perspective, but in some cases from a policy or legal perspective. All fiduciaries of funds with environmental or health-related missions, particularly trustees of charitable foundations or other nonprofits, must ensure that their portfolio management decisions help further, or at least do not hinder, their fund's mission.

## Review Fund Mission to Inform Engagement Strategy

To design an appropriate proactive engagement strategy, fiduciaries should commission a report that carefully examines their fund's chartering documents, mission statement, and other overarching policy statements to determine if the purposes of the foundation, trust, or pension plan imply environmental sustainability or health. The report should review the extent to which current portfolio management takes these issues into account and recommend ways to integrate their fund's mission with portfolio management. The report and recommendations can serve as a way to ensure that portfolio management decisions (including proxy voting) take issues of environmental sustainability and health into account. Status of implementation should be reviewed annually.

## Assess Overall Portfolio Environmental Performance and Target Engagement Strategies

To implement a proactive engagement strategy, large institutional investors should contract with knowledgeable consultants to receive environmental reports on investments under management. As a matter of course, large institutional portfolio managers already consult outside sources of information in addition to conducting their own research and interviewing corporate management. Because environmental risks and benefits can have a substantial impact on corporate value and because current disclosure from many corporations is not up to par, large institutional investors should also contract with consultants who specialize in reviewing corporate environmental and social performance.

In addition to benefiting active investment management, judicious use of environmental performance analysis could also be a very cost-effective tool for managing environmental performance of passive investments. It can also educate engagement

strategies with environmental underperformers, as outlined later in this chapter.

There are currently a number of established, well-respected organizations that advise institutional investors on the environmental performance of corporations held in their portfolios. Many of these firms offer a range of services including analysis, advice on shareholder resolutions, proxy voting services, and investment screening. While the Rose Foundation makes no endorsement of specific consultants and recognizes that different funds may have widely varying needs, we present five options:

### ***Investor Responsibility Research Center*** ([www.irrc.org](http://www.irrc.org))

The Investor Responsibility Research Center (IRRC) provides research, software products, and consulting services to institutional investors on corporate governance, proxy voting, and social and environmental issues. IRRC also offers a number of profiling and screening services for institutional investors and fund managers who wish to screen portfolios or apply various types of investing guidelines.

IRRC's environmental screening services are informed by its *Corporate Environmental Profiles Database* of over 1,800 companies. The database is derived from EPA and SEC data, company surveys, and other news and information sources such as Lexis Nexis. It includes information on Superfund sites, hazardous waste corrective actions, minerals management, and oil and chemical spills, as well as corporate compliance with environmental laws.

IRRC provides institutional investors with comprehensive previews of each season's upcoming shareholder proposals on environmental and other issues at U.S. companies, as well as regular updates of proposal status and thorough background reports through its Social Issues Service. IRRC's Corporate Governance Service advises clients on corporate governance matters at U.S. corporations, and abroad through its Global Shareholder Service.

### ***Institutional Shareholder Services***

([www.issproxy.com](http://www.issproxy.com))

Institutional Shareholder Services (ISS) provides proxy voting, corporate governance services, and social investment research services to institutional investors. ISS serves more than 950 institutional and corporate clients by analyzing proxy votes and shareholder resolutions, and issuing voting recommendations for over 20,000 U.S. and non-U.S. shareholder meetings each year. ISS also manages the operational end of proxy voting for institutional clients, and provides an annual preview of pending proxy votes.

Through its independent subdivision called Social Investment Research Service (SIRS), ISS offers portfolio services on environmental issues as well as over twenty other performance categories and can assist institutional investors in implementing various kinds of screens, including environmental screens, on existing portfolios. ISS's screening is based on in-depth research available on the ISS's web-based service, *TrustSimon.com*, a database which provides information on all U.S. corporations and tracks their performance on the twenty-plus environmental and social issues.

### ***Innovest Strategic Value Advisors***

([www.innovestgroup.com](http://www.innovestgroup.com))

Innovest Strategic Value Advisors is an investment research firm specializing in environmental issues. Innovest currently has approximately \$450 million under direct subadvisement and provides custom research and portfolio analysis to institutional investors and fund managers. Innovest has developed the *EcoValue '21* ranking system. *EcoValue '21* reviews sixty different aspects of corporate environmental performance and corporate environmental management systems. For example, in a recent study of twenty-nine pharmaceutical companies in the U.S., Europe, and Japan, Innovest reports that companies that scored well on *EcoValue '21* returned 17% better returns than the environmental laggards during the period May 2001–May 2002.<sup>144</sup>

In addition, Innovest offers research and management services for institutional investors, such as:

- Customized analyses of individual clients' equity and/or debt portfolios, designed to highlight both investment risks and opportunities driven by environmentally sustainable options.
- In-depth environmental reports on high-risk industry sectors such as petroleum, chemicals, and forest products.
- Advice on how to create environmentally enhanced index and actively managed stock funds (recent funds have been launched with Dreyfus/Mellon Capital management as well as ABN-AMRO).
- Competitive benchmarking on corporate eco-efficiency and sustainability performance.

### ***KLD Research and Analytics Inc.***

([www.kld.com](http://www.kld.com))

KLD Research and Analytics Inc. provides investment research and consulting services to institutional investors. KLD works from its proprietary database, *Socrates*, which includes environmental and other issue-related data on over 1,600 companies. *Socrates* contains detailed profiles of large cap U.S. companies and annotated issue reports for U.S. and international companies, as well as information on pending shareholder resolutions.

In addition, KLD provides consulting services to help institutional investors develop and implement social and environmental investing policies and screening guidelines. KLD also offers screening services for existing portfolios or buy-lists for clients with very specialized investing concerns. Once a screen is in place, KLD has developed a program that can be directly integrated into trading or portfolio auditing systems to insure compliance with screening restrictions on every transaction.

**SRI World Group**

([www.sriworld.com](http://www.sriworld.com) and [www.iShareowner.com](http://www.iShareowner.com))

SRI World Group provides research reports and consulting services to institutions and advisors that are evaluating social, environmental, and corporate governance criteria as part of their investment process. SRI World Group provides clients worldwide with independent evaluations of investment options, along with analysis and data on financial performance and fiduciary responsibility, and addresses the most common questions fiduciaries ask about sustainable and responsible investment strategies.

SRI World Group's research reports provide foundations, endowments, and pension funds with detailed, objective information about financial returns, market trends, and changes in regulations. Its newly released publication "Sustainable & Responsible Investment Strategies: A Guide for Fiduciaries and Institutional Investors" is a comprehensive manual for institutional investors. This guide outlines terms

and strategies for sustainable and responsible investing, defines fiduciary responsibilities, and reviews the financial performance of sustainable and responsible investments.

More information about SRI World Group's products and services is available from their website [www.iShareowner.com](http://www.iShareowner.com), which also provides a wealth of free information such as daily news, corporate social research, community investing profiles, and a directory of services for institutional investors. (See recommendations below left.)

### **Actively Engage with Environmental Underperformers through Dialogue and Proxy Voting**

After identifying corporate environmental laggards, institutional investment managers should apply the same techniques they already use in encouraging improvements in corporate governance to encourage better environmental performance.

Fiduciaries should direct portfolio managers to:

- Evaluate the environmental performance of companies in their funds.
- Dialogue with environmental underperformers.
- Vote for shareholder resolutions designed to improve environmental performance.
- File shareholder resolutions designed to improve environmental performance.

### **Evaluate a Company's Commitment to Environmental Performance**

To evaluate corporate commitment to environmental performance, fiduciaries should direct portfolio managers to use the same standards used to evaluate corporate governance to appraise corporate commitment to environmental performance. Effective yardsticks may include the presence (or lack) of directors with independent environmental sustainability perspectives, a board-level committee charged with environmental performance oversight,

### **Recommendations for Developing Engagement Strategies**

- Consider contracting with specialized environmental analysts to help target cost-effective environmental engagement strategies.
- Utilize easily accessible resources such as the annual proxy season previews published by ISS ([www.issproxy.com](http://www.issproxy.com)), Interfaith Center on Corporate Responsibility ([www.iccr.org](http://www.iccr.org)), or Domini Social Investments ([www.domini.com](http://www.domini.com)) to help focus engagement strategies.
- Commission a report which would review foundation, charitable trust or pension plan chartering documents, mission statement, and other overarching goals and make recommendations on how to integrate them into portfolio management strategy.



and the quality and credibility of environmental performance data.

### ***Dialogue with Environmental Underperformers***

Engaging management in dialogue about ways to improve shareholder value is one of the most effective means available for investors to influence a company's financial performance. Fiduciaries should instruct portfolio managers to broaden discussion of financial issues with top management to include environmental management problems, and ask for written plans of remedial action.

Because many instances of dialogue between shareholders and corporate management are quite private, it is difficult to quantify the amount of dialogue undertaken between investors and corporations about governance or financial performance issues. But, as Amy Domini, founder of Domini Social Investments, points out in her new book, *Socially Responsible Investing: Making a Difference and Making Money*, "direct communication with companies' management teams helps both sides to find reasonable first steps for addressing issues."<sup>145</sup> One partial measure of the potential for positive outcomes stemming from dialogue between shareholders and management might be inferred from the number of shareholder resolutions that are proposed, but later withdrawn. According to information compiled by the Social Investment Forum, almost 30% of the 261 socially oriented shareholder resolutions filed in 2001 were withdrawn before a vote.<sup>146</sup> In many of these cases, the resolution helped catalyze a dialogue that proved fruitful enough that the filers no longer needed to pursue the more formal and argumentative strategy.

### ***Vote for Shareholder Resolutions Designed to Improve Environmental Performance***

As noted above, hundreds of shareholder resolutions are filed each year. Although there is a common perception linking shareholder resolutions to highly publicized divestment campaigns, such as

South Africa or tobacco, in 2001 over one hundred shareholder resolutions sought improvement in corporate environmental practices related to energy, climate change, or genetically modified organisms, or encouraged companies to move toward CERES-style environmental reporting.<sup>147</sup> Many shareholder resolutions speak to fundamental corporate governance issues that are, themselves, topics of significant concern to institutional investors. In addition to raising purely financial issues, these resolutions may also provide companies with an important barometer of societal acceptance of corporate policies. These may, in turn, help forecast consumer response. Some resolutions receive considerable support, and have been credited with catalyzing significant changes in company policy. For example, shareholder resolutions calling on Home Depot to stop selling old-growth lumber played an important role in that company's decision to phase out their distribution of old-growth lumber. Almost all of the fifty plus corporations that have endorsed the CERES Principles did so after their shareholders demonstrated significant support for endorsing CERES.

In fact, *voting proxies to improve environmental performance may be the most cost-effective step that fiduciaries can take to unlock the environmental value of their portfolios. Nonprofit organizations or charitable foundations with environmental missions should particularly consider the implications of environmental shareholder resolutions—both from a financial standpoint and from the standpoint of their legal mandate to be obedient to their mission.*

There are many resources available to help fiduciaries stay abreast of current proxy battles on environmental issues initiated by other active investors. The Shareholder Action Network, Institutional Shareholder Services, the Interfaith Center on Corporate Responsibility, the Center for Working Capital, and the Foundation Partnership on Corporate Responsibility can all provide up-to-date information on current proxy battles on environmental issues. Publications such as the Interfaith Center on Corporate Responsibility's *Proxy Resolutions Book*,

the AFL-CIO's *Key Votes Survey*, ISS' *Proxy Voting Manual*, and the Domini Social Investments *Proxy Voting Guidelines* can provide sources of independent analysis. There are also several websites, such as [www.socialfunds.com](http://www.socialfunds.com), [www.shareholderaction.org](http://www.shareholderaction.org), [www.domini.com](http://www.domini.com), and [www.citizensfunds.com](http://www.citizensfunds.com), that are excellent and cost-effective resources.

### ***File Shareholder Resolutions Designed to Improve Environmental Performance***

Of course, institutional fiduciaries do not need to wait for environmental or social activists to define

issues of environmental profit and loss. In the event that corporate management is not responsive to requests for remedial action to correct environmental problems, institutional investment managers, as shareowners, may file shareholder resolutions that instruct management to address environmental problems at hand. Again, this is a familiar technique to many institutional investors, but is generally underutilized in encouraging environmental improvement.

Fiduciaries can look to no less of an authority than the SEC itself for assistance in filing shareholder

## **Recommendations for Voting Proxies and Filing Shareholder Resolutions**

- Proxies are assets. Fiduciaries should recognize that the duty to monitor includes the responsibility to act affirmatively to improve performance, even on passively managed investments such as index funds. Fiduciaries should recognize the value of shareholder engagement around the need to improve environmental performance, and the value of voting proxies in favor of measures designed to improve environmental performance.
- Fiduciaries should direct their investment managers or voting services to support environmental reporting resolutions and other initiatives designed to improve environmental performance and value. Absent such specific instructions, most fund managers generally, if rather blindly, vote with company management and reject this important avenue toward improved performance.
- Fiduciaries should review various web sites for up-to-date information on proxy contests and shareholder resolutions. These include [www.socialfunds.com](http://www.socialfunds.com), [www.shareholderaction.org](http://www.shareholderaction.org), [www.issproxy.com](http://www.issproxy.com), [www.iccr.org](http://www.iccr.org), or [www.citizensfunds.com](http://www.citizensfunds.com)

### **Special Recommendation for Foundations and Charitable Trusts**

Because of their missions and the obligations imposed by their charitable status, foundations, charitable trusts, and other nonprofits whose missions encompass environmental goals, must be exceptionally vigilant in remaining obedient to their mission as they manage their portfolios. An environmental foundation has a special burden to inquire into the circumstances around an environmental shareholder resolution and must consider how judiciously voting its proxies might further its charitable mission.

For example, if a foundation has a grantmaking focus encompassing environmental issues, it should review the approximately 100 environmental shareholder resolutions filed each year to see if it owns any of the companies being targeted for environmental improvement. More specifically, if a foundation is concerned with biodiversity, it should direct its investment managers to examine resolutions involving a company's use of genetically modified organisms. Members of the Foundation Partnership on Corporate Responsibility can serve as excellent resources for fiduciaries wanting more information about environmental shareholder resolutions ([www.foundationpartnership.org](http://www.foundationpartnership.org))

resolutions. In astonishingly user-friendly language, the SEC website explains Rule 14a-8, including how to draft resolutions, submit them, and win SEC approval. For text of the rule, visit the SEC's website ([www.sec.gov](http://www.sec.gov)). (See recommendations in box on page 62.)

### ***Target Specific Environmental Underperformers for Special Attention***

Some large institutional investors target a short list of underperforming companies for special attention. For example, as previously mentioned, as part of their widely-hailed corporate governance program, CalPERS annually identifies a short "watch list" of companies in need of improvement. CalPERS then uses its leverage as a major shareholder to recommend specific steps to improve the quality of governance (and profitability). By publicly targeting these companies, CalPERS has had a considerable degree of success in strengthening corporate governance and increasing shareholder value.

The effect of CalPERS's corporate governance engagement has been quantified. Wilshire Associates, the Santa Monica, California-based independent investment advisory company and CalPERS pension consultant, studied the performance of ninety-five companies targeted in CalPERS's corporate governance work over a twelve-year period. Results indicated that while the stock of these companies trailed the Standard & Poor's 500 Index during the five-year period prior to action by CalPERS, the same stocks outperformed the index in the five years following CalPERS activity, adding approximately \$150 million annually in returns to the fund—the "CalPERS Effect".

Institutional investors should follow this lead and create their own "watch list" of corporate environmental laggards. Fiduciaries should then direct their investment managers to propose specific steps that could lead toward improvements in environmental management. Additionally, institutional investors should create a "clean and green" list of corporations that have outstanding environmental performance

and enjoy strong financial performance as a result.

This carrot-and-stick approach not only offers the potential for direct results with the companies targeted, but also garners considerable publicity and can be a cost-effective way to send a message to the entire universe of investments in a large portfolio about the kind of environmental performance that is desired. The ripple effect of this kind of signaling can shape market trends and encourage proactive environmental management even among potential investments.

### **Recommendations for Specifically Targeted Engagement**

- As appropriate to a particular company, fiduciaries should direct investment managers to support elevating environmental and sustainability issues to the board level by supporting the election of independent directors and the creation of board-level environmental committees.
- As appropriate to a particular company, fiduciaries should direct investment managers to ask for a report outlining potential increases in market share from taking environmental initiatives or launching environmentally oriented product lines.

Large institutional fiduciaries should consider:

- Placing environmental underperformers on an environmental watch list that will receive direct attention designed to improve environmental performance.
- Publicizing a "clean and green" list of companies that have shown significant environmental improvement or that have documented increased value through well-run environmental management programs.

## STRATEGICALLY TARGETED INVESTMENT

The growth of emerging environmental technologies such as renewable energy, and concerns about health and the environment, have stimulated a significant segment of the marketplace. For example, according to the Social Investment Forum, \$2.34 trillion—or nearly one out of every eight dollars under professional management in the U.S. today—is involved in some form of socially responsible investing.<sup>148</sup> And according to the *Natural Business Journal*, which tracks the burgeoning “lifestyles of health and sustainability” market, these segments represent an estimated \$227 billion U.S. market and a \$546 billion market worldwide.<sup>149</sup>

While simply investing in environmentally sustainable growth does not ensure success any more than success is guaranteed in any other investment sector, environmentally driven fiduciaries would do well to instruct investment managers not to ignore this growing segment of the marketplace.

Specific state constitutional requirements may also require fiduciaries to consider environmental performance as part of the investment decision-making process. For example, as pointed out in Chapter 3, *Legal Landscape*, in California the state constitution requires fiduciaries to recognize that diversity is subordinate to prudence. A blind pursuit of diversity that lowered overall portfolio value, and/or increased risk through an unprofitable investment concentration in environmental underperformers (such as a utility portfolio comprised of entirely of coal- and oil-fired power plants), might violate that mandate. Finally, fiduciaries whose funds are in a position of universal ownership should recognize the potential interplay between different elements of their portfolio. This has crucial implications for overall investment and investment management strategies.

While it is beyond the scope of this paper to offer specific investment advice, the following recommendations are designed to offer a framework to approach environmental investment considerations. (See recommendations in box on page 65.)

## Recommendations for Investing in Environmental Value

- Seek strategic opportunities to overweight investment toward top environmental performers. Several large cap indexes, such as the Domini Social Index, that include the best environmental performers have performed favorably in comparison to their benchmark, the S&P 500, over the last ten years. Other indexes with environmental screens, such as the new KLD-NASDAQ Index, offer the opportunity to participate passively in broad sectors of the market. As evidenced by many of the academic studies reviewed in Chapter 2, it is also possible to construct individualized “green” portfolios while controlling for beta, growth, size, and dividend yield. Many of the socially responsible mutual funds (Domini, Citizens, Calvert, Parnassus, Ariel and others) also offer positive and/or negative environmental screens and a variety of investment styles and objectives. Several of these funds also compare favorably to standard benchmarks. Visit [www.socialfunds.com](http://www.socialfunds.com) for comprehensive environmental and social mutual fund performance and comparative evaluation.
- While maintaining discipline as to factors such as style and sector weightings, consider reducing risk by underweighting companies with the worst environmental records, especially those companies that have rejected past efforts at shareholder engagement on environmental performance issues.
- Instruct small cap or venture fund managers to capture the growth potential of emerging environmental technologies such as renewable energy.
- Consider community investing. For example, it is possible to enjoy market rates on federally insured deposits placed at community development financial institutions.

### Special Recommendation for Larger Funds and Foundations

- If the fund or foundation has a venture capital portfolio, consider *financially targeted investments* that are consistent with the fund’s investment policy and meet acceptable risk/return criteria while also supporting development that directly benefits the communities where fund beneficiaries live, or is in harmony with the foundation’s core mission. For example, investing in the development of high-growth renewable electricity generation opportunities (as opposed to Enron-style speculative partnerships) could provide good returns, plus clean air and stable utility rates.

### Special Recommendations for Foundations, Charitable Trusts and other Nonprofits

- Charitable organizations can maintain broad portfolio diversity while underweighting specific companies or industry sectors that pose significant conflicts with their core charitable missions and purpose for tax-exempt incorporation.
- Charitable organizations can apply a *mission-related investing strategy*, where a portion of their endowment is invested in securities related to their core mission. For example, a foundation interested in the development of sustainable energy might look toward investing in solar or wind power, or fuel cell development—thereby positioning the foundation to capture the explosive growth projected in these sectors while also reducing global warming and protecting habitat that is currently threatened by fossil fuel production.

NOTES

<sup>144</sup> Innovest press release, 27 June 2002.

<sup>145</sup> Amy Domini, *Socially Responsible Investing: Making a Difference and Making Money* (Chicago, Illinois: Dearborn Trade, 2001) p xvii.

<sup>146</sup> Social Investment Forum, *2001 Report on Socially Responsible Investing Trends in the United States*, p 16.

<sup>147</sup> Ibid.

<sup>148</sup> Ibid.

<sup>149</sup> <http://www.naturalbusiness.com/research.html>.

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## CHAPTER V

# GETTING STARTED



This paper and its recommendations for fiduciary action are intended to serve a wide range of need. For example, small foundations may have considerably different investment strategies and certainly far fewer investment management resources than large public pension funds. Consequently, not all of these recommendations may be appropriate for all fiduciaries or funds. But in moving forward toward realizing environmental value, fiduciaries may want to consider the following suggestions.

***1) Remember that none of the action steps we propose are new.***

There is a rich history of shareholder activism that was pioneered by religious investors over a century ago. From these roots, as the growth of pension funds, faith-related institutions, and other institutional investors in the twentieth century dramatically changed the structure of equity ownership in the U.S. and globally, fiduciaries began to develop a set of proactive strategies for improving portfolio performance. At various stages, these strategies tugged at prevalent definitions of fiduciary responsibility, and, in some cases, spurred redefinition of prudent fiduciary behavior. In more recent years, much of the institutional investor debate about improving financial performance has crystallized around efforts to improve corporate governance, and many large public pension funds, religious institutions, and charitable entities employ widely-recognized tools to improve the quality of corporate governance based on their belief that it will improve shareholder value.

Requests for clearer, more uniform presentations of environmental data; engagement with environmental underperformers designed to improve corporate environmental management performance; taking environmental opportunity into account in formulating investment strategies—all walk the same path that has been used by prudent fiducia-

ries for decades. In fact, we follow in the footprints of such institutional investment leaders as CalPERS, a leader in shareholder activism around corporate governance which recently began to employ environmental and labor standards to guide over \$2 billion in emerging market investments. CalPERS chose to apply environmental and labor standards because there is strong evidence linking environmental quality and human rights to more stable markets and increased profitability. And CalPERS is not alone. Public pension funds in many states including California, New York and Connecticut; networks of investors such as the \$110 billion Interfaith Center on Corporate Responsibility; and charitable foundations such as Nathan Cummings, Jessie Smith Noyes, and the Educational Foundation of America all have active programs that seek to improve the value of their investments through engagement related to environmental and social issues.

***2) Note that many funds, especially large public pension funds, already have well-established and successful programs designed to improve corporate governance or to work with underperforming companies.***

It could be far more efficient to incorporate environmental analysis into an existing investment management program than to develop a stand-alone environmental analysis process.

**3) Let your fund's mission be its guide.**

Focus your fund's analysis and engagement strategies on one key aspect of environmental performance that resonates with your fund's core mission.

*This advice is especially applicable to environmental foundations.*

**4) Remember that sustainable change occurs slowly.**

Many trustees, particularly in the foundation community, have not been actively involved in investment management. Before suggesting any changes in your fund's investment management policies, *organize a workshop* involving trustees and investment managers. A sample workshop might include the following presentations to your board:

- Current investment management strategies and procedures
- Data supporting the environmental/financial link
- Fiduciary obligations
- Proxy voting and engagement strategies
- Environmental investment opportunities

If you are interested in working with the Rose Foundation to tailor a specific presentation, please contact the foundation at [rosefdn@earthlink.net](mailto:rosefdn@earthlink.net) or (510) 658-0702.



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# Selected Bibliography



- Barth, Mary and Maureen F. McNichols. "Estimation and Market Valuation of Environmental Liabilities Relating to Superfund Sites," *Journal of Accounting Research* 32 (1994): 177–208.
- Belsie, Laurent. "Seeing Green from Being Green," *The Christian Science Monitor*, 7 February 2000.
- Begleiter, Martin D., *Does the Prudent Investor Need the Uniform Prudent Investor Act—An Empirical Study of Trust Investment Practices*, 51 Me. L. Rev. 27 (1999).
- Blaconiere, W. G. and D. M. Patten. "Environmental Disclosures, Regulatory Costs, and Changes in Firm Value," *Journal of Accounting and Economics* 18 (1994): 357–77.
- Blank, Howard and C. Michael Carty. "The Eco-Efficiency Anomaly" (working paper), New York: QED International Inc., 2002.
- Camejo, Peter. *Why Socially Responsible Investing Outperforms*. Concord, CA: The Camejo Group, 2000.
- Clough, Richard Read. "Impact of an Environmental Screen on Portfolio Performance: A Comparative Analysis of S&P 500 Stock Returns" (working paper), Raleigh-Durham, N.C.: Nicholas School of the Environment, Duke University, 1997.
- Cohen, Mark, Scott Fenn, and Jonathan Naimon. *Environmental and Financial Performance: Are They Related?* Washington, D.C.: Investors Responsibility Research Center, 1995.
- Earle, Ralph. *The Emerging Relationship between Environmental Performance and Shareholder Wealth*. Concord, Mass: The Assabet Group, 2000.
- Environmental Capital Markets Committee. *Green Dividends? The Relationship between Firms' Environmental Performance and Financial Performance* (report to the National Advisory Council for Environmental Policy and Technology). Washington, D.C.: The U.S. Environmental Protection Agency, Office of Cooperative Environmental Management, 2000.
- Feldman, Stanley, Peter Soyka and Paul Ameer. *Does Improving a Firm's Environmental Management System and Environmental Performance Result in a Higher Stock Price?* Fairfax, Va.: IF Kaiser International, 1996.
- Franco, Nicholas C. "Corporate Environmental Disclosure: Opportunities to Harness Market Forces to Improve Corporate Environmental Performance." Paper presented at the American Bar Association, Section on Environment, Energy, and Resources, Conference on Environmental Law, Keystone, Colo., March 2001.
- Friends of the Earth, Citizen Action, and The Sierra Club. "Viacom, Inc.—A Hidden Legacy of Hazardous Waste." Washington, D.C.: Friends of the Earth, Citizen Action, and the Sierra Club, 1997.
- Fung, Archon, Tessa Hebb, and Joel Rogers. *Working Capital*. Ithaca, N.Y.: Cornell University Press, 2001.
- Garber, Steven and James K. Hammitt. "Risk Premiums for Environmental Liability: Does Superfund Increase the Cost of Capital?" *Journal of Environmental Economics and Management* 36 (1998): 93–94.
- Gentry, Bradford S., and Lisa O. Fernandez. *Valuing the Environment: How Fortune 500 CFOs and Analysts Measure Corporate Performance*. New York: United Nations Development Programme, Office of Development Studies, 1997.
- Gibson, Virginia L., Bonnie K. Levitt, and Karine H. Cargo, *Overview of Social Investments and Fiduciary Responsibility of County Employee Retirement System Board Members In California*, November 16, 2000 (on file with author).
- Guerard, John B., Jr. "Is There a Cost to Being Socially Responsible in Investing?" *Journal of Forecasting* 16 (1997): 475–90.
- Guerard, John B., Jr. "Additional Evidence on the Cost of Being Socially Responsible in Investing," *The Journal of Investing* 6, no. 4 (1997): 31–36.
- Hamilton, James T. "Pollution as News Media: Media and Stock Market Reactions to the Toxics Release Inventory Data," *Journal of Environmental Economics and Management* 28 (1998): 98–113.
- Hart, Stuart and G. Ahuja. "Does It Pay to Be Green? An Empirical Examination of the Relationship between Emission Reduction and Firm Performance," *Business Strategy and the Environment* 5 (1996): 30–37.
- Hart, Stuart, Glen Dowell, and Bernard Yeung. "Do Corporate Global Environmental Standards Create or Destroy Market Value?" *Management Science* 46, no. 8 (2000): 1059–74.

- Hawken, Paul, Amory Lovins, and L. Hunter Lovins. *Natural Capitalism*. New York: Little Brown and Company, 1999.
- Innovest Strategic Value Advisors, Inc. *The Forest Products Industry North American Report: Hidden Risks and Value Potential for Strategic Investors*. New York: Innovest Strategic Value Advisors, Inc., 2000.
- Innovest Strategic Value Advisors, Inc. *Value at Risk: Climate Change and the Future of Governance*. Boston, Mass.: Coalition for Environmentally Responsible Economies, 2002.
- Jaffe, Adam B., Steven R. Peterson, Paul R. Portney, and Robert Stavins. "Environmental Regulation and the Competitiveness of U.S. Manufacturing. What Does the Evidence Tell Us?" *Journal of Economic Literature* 32 (1995): 132-63.
- Klassen, Robert D. and Curtis P. McLaughlin. "The Impact of Environmental Management on Firm Performance," *Management Science* 42, no. 8 (1996): 1199-1213.
- Konar, Shameek and Mark Cohen. "Information As Regulation: The Effect of Community Right-to-Know Laws on Toxic Emissions," *Journal of Environmental Economics and Management* 32, (1997): 109-124.
- Koppes, Richard H. and Maureen L. Reilly, *An Ounce of Prevention: Meeting the Fiduciary Duty to Monitor an Index Fund Through Relationship Investing*, 20 Iowa J. Corp. L. 414 (1995).
- Kurtz, Lloyd and Dan DiBartolomeo. "Socially Screened Portfolios: An Attribution Analysis of Relative Performance," *The Journal of Investing* 5, no. 3 (1996): 35-41.
- Lewis, Sanford. *The Investor's Right to Know Less: A Case Study of Environmental Reporting to Shareholders by Phelps Dodge, Incorporated*. Pittsburgh, Pa.: The United Steelworkers of America, 1998.
- Mansley, Mark. *Socially Responsible Investment: A Guide for Pension Funds and Institutional Investors*. Suffolk, U.K.: Short Run Press Ltd, 2000.
- Mavrinac, Sarah and Tony Siesfeld. *Measures That Matter: An Exploratory Investigation of Investors' Information Needs and Value Priorities*. Cambridge, Mass.: Cap Gemini Ernst and Young Center for Business Innovation, 1998.
- McKeown, W.B., *On Being True to Your Mission: Social Investments for Endowments*. The Journal of Investing, Winter, 1997.
- Nelson, Jane, Peter Zollinger, and Alok Singh. *The Power to Change: Mobilising Board Leadership to Deliver Sustainable Value to Markets and Society*. London: The International Business Leaders Forum and Sustainability Ltd, 2001.
- Nichols, Mark. "Research Shows Efficiency of Eco-Efficiency." *Environmental Finance*, June 2001.
- Petzinger, Thomas "Business Achieves Greatest Efficiencies When at Its Greenest," *The Wall Street Journal*, 11 July 1997.
- Pollan, Michael. "The Organic-Industrial Complex," *The New York Times Magazine*, 13 May 2001.
- Reed, Donald. *Green Shareholder Value: Hype or Hit?* Washington, D.C.: World Resources Institute, 1998.
- Repetto, Robert and Duncan Austin. *Pure Profit: The Financial Implications of Environmental Performance*. Washington, D.C.: World Resources Institute, 2000.
- Repetto, Robert and Duncan Austin. *Coming Clean: Corporate Disclosure of Financially Significant Environmental Risks*. Washington, D.C.: World Resources Institute, 2000.
- Restatement (Third) Trusts (Prudent Investor Rule) § 227.
- Smith, M. "Shareholder Activism by Institutional Investors: Evidence from CalPERS," *Journal of Finance* 51 (1996): 227-52.
- Solomon, Lewis D. and Karen C. Coe., *Social Investments By Nonprofit Corporations And Charitable Trusts: A Legal and Business Primer for Foundation Managers and Other Nonprofit Fiduciaries*, 66 UMKC L. Rev. 213 (1997).
- SRI World Group, Inc. *Sustainable and Responsible Investment Strategies: A Guide for Fiduciaries and Institutional Investors*. Brattleboro, Vt.: SRI World Group, Inc., 2001.
- Stone, Bernell K., John B. Guerard, Jr., Mustafa N. Gultekin, and Greg Adams. "Socially Responsible Investment Screening: Strong Evidence of No Significant Cost for Actively Managed Portfolios," *Journal of Investing* (forthcoming).
- Sustainability Ltd. *Buried Treasure: Uncovering the Business Case for Corporate Sustainability*. London: Sustainability Ltd, 2001.
- Viederman, Stephen. "Addressing Obstacles to Social Investing" presented at the Triple Bottom Line Simulation Conference May 2001.
- Williams, Cynthia. "The Securities and Exchange Commission and Corporate Social Transparency," *Harvard Law Review* 112 (1999): 1197-1311.

TABLE 4. Academic Studies Reviewed

REGRESSION STUDIES		
Authors	Title/Publication	Methodology/Key Finding
Dowell, Hart, and Yeung	<p>TITLE: <b>Do Corporate Global Environmental Standards Create or Destroy Market Value?</b></p> <p>PUBLICATION: <i>Management Science</i> 46 (2000): 1059–74.</p>	<p>METHODOLOGY: Reviewed market value (using Tobin’s Q) of 89 US-based multinational enterprises over the years 1994 through 1997.</p> <p>KEY FINDING: Found that corporations adopting a single global environmental standard had a higher market value than firms defaulting to less stringent or poorly enforced host country standards.</p>
Russo and Fouts	<p>TITLE: <b>A Resource-Based Perspective on Corporate Environmental Performance and Profitability</b></p> <p>PUBLICATION: <i>Academy of Management Journal</i> 40, no. 3 (1997): 534–59.</p>	<p>METHODOLOGY: Reviewed and correlated the environmental and financial performance of 243 firms over the two-year period 1991–1992 using “return on assets” as financial measurement and environmental ratings provided by Trillium Asset Management.</p> <p>KEY FINDING: Found a significant positive correlation between various financial returns and environmental rankings.</p>
King and Lenox	<p>TITLE: <b>Does It Really Pay to Be Green? An Empirical Study of Firm Environmental and Financial Performance</b></p> <p>PUBLICATION: <i>Journal of Industrial Ecology</i> 5, no. 1: 105–16.</p>	<p>METHODOLOGY: Reviewed market valuation (as measured by Tobin’s Q) of 606 U.S. manufacturing firms and correlated it to emissions data derived from EPA’s Toxic Release Inventory Database from 1987 through 1996.</p> <p>KEY FINDING: Lower overall total pollution emissions were associated with superior financial performance</p>
Hart and Ahuja	<p>TITLE: <b>Does It Pay to Be Green? An Empirical Examination of the Relationship between Emission Reduction and Firm Performance</b></p> <p>PUBLICATION: <i>Business Strategy and the Environment</i> 5(1996): 30–37.</p>	<p>METHODOLOGY: Tracked emissions reduction for 127 companies by computing the change in reported emissions between the years 1988 and 1989. Operating and financial performance was measured by return on sales, return on assets, and return on equity.</p> <p>KEY FINDING: Emissions reduction enhanced operating performance in the year following the reduction. Emissions reduction enhanced operating and financial performance more for firms with high emissions levels than for firms with low emissions levels.</p>

TABLE 4, CONTINUED

PORTFOLIO COMPARISON STUDIES		
Authors	Title/Publication	Methodology/Key Finding
Stone, Guerard, Gultekin, and Adams	TITLE: <b>Socially Responsible Investment Screening: Strong Evidence of No Significant Cost for Actively Managed Portfolios</b>  PUBLICATION: <i>Journal of Investing</i> (forthcoming).	METHODOLOGY: Reviewed quarterly returns for 1,334 stocks for thirteen years. Using a mathematical assignment program to create twenty distinct portfolios, the authors were able to control for size, beta, growth, and dividend yield.  KEY FINDING: The authors found that there was no significant cost to social and environmental screening, even when controlling for beta, dividend yield, growth and corporation size.
Cohen, Fenn, and Naimon	TITLE: <b>Environmental and Financial Performance Are They Related?</b>  PUBLICATION: Published by the Investor Responsibility Resource Center (1995).	METHODOLOGY: Sets of portfolios similar in industry sector composition were created. One group of portfolios was comprised of corporations with high pollution rates. A contrasting group of similar portfolios were comprised of corporations with low pollution rates. Sets were created to examine different types of pollution rates such as number oil spills, chemical spills, Superfund sites, etc. Financial performance assessments of the firms were performed using five different measurements of financial performance such as return on equity, return on assets, and total shareholder return. Overall performance of each portfolio was tracked for three separate time periods.  KEY FINDING: Environmental leaders in an industry-balanced portfolio were found to do as well as, and sometimes better than, environmental laggards in each industry.
Blank and Carty	TITLE: <b>The Eco-Efficiency Anomaly</b>  PUBLICATION: Forthcoming	METHODOLOGY: Compared financial performance of several stock portfolios made up of corporations that had superior environmental ratings to those that had average or poor ratings as determined by Innovest Strategic Advisors.  KEY FINDING: Equity portfolios comprised of stocks with good environmental ratings are likely to outperform the stock market while controlling for some macro-economic trends.
EVENT STUDIES		
Blacconiere and Patton	TITLE: <b>Environmental Disclosures, Regulatory Costs, and Changes in Firm Value</b>  PUBLICATION: <i>Journal of Accounting and Economics</i> 18 (1994): 357–377.	METHODOLOGY: Assessed the direct impact of the Bhopal, India chemical release on Union Carbide's stock price, and the effect of the accident on the stocks of other chemical firms.  KEY FINDING: Following a deadly accident causing release of poisonous gas in Bhopal, India, which killed 4,000 people, the stock price of Union Carbide suffered a sustained downturn over one month after the accident. Stock prices of 47 chemical firms were down at least 10 days after the accident.
Klassen and McLaughlin	TITLE: <b>The Impact of Environmental Management on Firm Performance</b>  PUBLICATION: <i>Management Science</i> 42, no. 8 (1996): 1199–1214.	METHODOLOGY: Assessed the impact of negative environmental events such as oil, chemical, or gas spills on share price of 22 firms over two years, 1989 and 1990. Assessed the impact of positive environmental events such as recognition of superior environmental performance on share price for 96 firms over the 1985–1991 time period.  KEY FINDING: Environmental performance affects firm financial performance, through both market gains and cost savings.

TABLE 4, CONTINUED

FORECASTING STUDIES		
Authors	Title/Publication	Methodology/Key Finding
Austin and Repetto	<p>TITLE: <b>Pure Profit: The Financial Implications of Environmental Performance</b></p> <p>PUBLICATION: The World Resources Institute</p>	<p>METHODOLOGY: Using economic forecasting and scenario-building methodologies, potential financial impact of a range of environmental regulations was forecast for 13 pulp and paper companies.</p> <p>KEY FINDING: Some firms face a financial impact from environmental issues adding up to as much 10% of market value in the most extreme case. Some firms are effectively hedged against environmental risk and in fact stand to gain as much as 3% in market value due to the competitive advantage they gain by their environmental positioning.</p>
Innovest Strategic Value Advisors	<p>TITLE: <b>The Forest Products Industry North American Report: Hidden Risks and Value Potential for Strategic Investors</b></p> <p>PUBLICATION: Innovest Strategic Value Advisors</p>	<p>METHODOLOGY: Innovest's EcoValue '21 environmental rating methodology was used to assess the relative environmental performance of the twelve S&amp;P 500 companies and five TSE 100 companies classified under Paper and Forest Products. The rating model analyzes over 60 different aspects of environmental risk, opportunity, and management, then derives a rating ranging from AAA to CCC that is intended to project future stock market performance.</p> <p>KEY FINDING: Innovest Strategic Value Advisors project that investor returns can be substantially improved by investing in companies with superior environmental ratings.</p>
LITERATURE REVIEW		
Environmental Capital Markets Committee of the Environmental Protection Agency	<p>TITLE: <b>Green Dividends? The Relationship between Firms' Environmental Performance and Financial Performance</b></p> <p>PUBLICATION: The U.S. Environmental Protection Agency, Office of Cooperative Environmental Management</p>	<p>METHODOLOGY: Reviewed more than 25 of the major studies that examine the correlation between environmental and financial performance.</p> <p>KEY FINDING: Most studies show a moderate positive relationship between environmental and financial performance.</p>

