

Sustainability and Risk: Climate Change and Fiduciary Duty for the Twenty-First Century Trustee

WORKSHOP REPORT

**Harvard University
John F. Kennedy School of Government
September 23, 2004**

Workshop Co-Sponsors:



Ceres

Corporate Social Responsibility Initiative,
John F. Kennedy School of Government

Energy Technology Innovation Project, Belfer Center for Science
& International Affairs, John F. Kennedy School of Government



Foreword

To protect the value of pension investments, trustees concerned with important long-term issues like corporate governance are now considering the issue of climate risk. On September 23, 2004, Ceres and the Kennedy School of Government presented a unique workshop on this issue for pension fund trustees. Participants learned about their duties to address climate risk in their portfolios from a distinguished group of experts including Harvard faculty, attorneys, and corporate and pension fund leaders.

The workshop was part of an ongoing collaboration, and has already resulted in CalPERS and CalSTRS asking us to produce a similar workshop in California this spring. Ceres and the Kennedy School are well-positioned to work together on climate risk. Ceres has been raising awareness of this issue with investors for several years. The Corporate Social Responsibility Initiative views institutional investors as a key “game-changer” in shifting CSR to a more mainstream business issue, and the evolving role of the fiduciary is a key component of that shift. The Energy Technology Innovation Project’s work includes accelerating the development of advanced energy options to reduce air pollution and minimize emissions, and investors play a critical role in this process.

Workshop participants learned of the immense physical dangers posed by climate change, the investment risks of global warming, and proactive corporate responses to the threat. Attorneys discussed the legal responsibilities of fiduciaries to consider forward-looking material risks such as climate. Finally, participants learned from three state pension fund leaders who are already acting, and heard recommendations for fiduciaries who want to address climate risk.

Addressing climate risk will require lasting commitments from institutional investors, Wall Street, government and academia to become aware of the risk, study it, and engage with companies to minimize the effects. Fiduciary duty requires investors to become aware of climate risk, like any material risk with financial effects on corporations and investors.

For more information on climate risk and our other work, please visit www.ceres.org and www.ksg.harvard.edu. We hope to hear your ideas or reactions, and we look forward to your continued involvement in this process.

Mindy Lubber
President
Ceres

John Gerard Ruggie
Director
Center for Business and Government
Kennedy School of Government
Harvard University

John P. Holdren
Director, Program on Science, Technology, and Public Policy
Kennedy School of Government
Harvard University

Executive Summary

For many investors, especially those with fiduciary duties, climate change and its risk to investment portfolios are a new, complex, and rapidly changing challenge. On September 23, 2004, 43 participants convened for a unique workshop for pension fund trustees to explore the connections between fiduciary responsibility and the risks to investments posed by global climate change. Working with Harvard faculty, attorneys, pension fund leaders, and other experts, the trustees explored what they can do – consistent with their fiduciary duties – to address the financial risks and investment opportunities of climate change.

To explore the connection between climate change and the fiduciary's role, the meeting focused on answering five key questions:

- ◆ Is climate change a serious risk?
- ◆ Does climate change create economic and investment risks?
- ◆ If so, what steps can fiduciaries take to address that financial risk?
- ◆ Does a fiduciary have a legal right or responsibility to consider climate risk, or more importantly, to act based on knowledge of the risks?
- ◆ Are some pension funds acting, and if so, how?

After hearing from experts, workshop participants concluded that climate is a serious concern that presents risks and opportunities to investors. Fiduciaries have legal authority and may well have an obligation to address climate risk. Many pension funds are already acting to analyze the issue, raise awareness, encourage corporate disclosure, and press for improved corporate strategies to address climate risk. Much must be done to educate investors and others in the financial community about these risks, and to mobilize concern and action among investors and companies.

Supported with a generous grant from the Ford Foundation, the workshop was co-sponsored by:

- ◆ The Corporate Social Responsibility Initiative of the Kennedy School of Government at Harvard University
- ◆ The Energy Technology Innovation Project at the Belfer Center for Science and International Affairs of the Kennedy School of Government at Harvard University
- ◆ Ceres, a national coalition of investment funds and environmental groups, and Secretariat for the Investor Network on Climate Risk

Issues Summary

Is Climate Change a Serious Risk?

In briefing participants on the current status of the science of climate change, Professor John Holdren, Director of the Program on Science, Technology, and Public Policy at the Belfer Center for Science & International Affairs at the Kennedy School of Government at Harvard University, argued that climate change presents both immense dangers and possibilities for firms and investors. He said that climate change is:

The most dangerous of all the environmental problems caused by human activity, because climate is the 'envelope' within which all other human and environmental activities occur. Disruption of the envelope threatens humans and the environment on which we depend. The climate change problem is highly intractable because emissions of carbon dioxide – the dominant cause of climate disruption – come from fossil-fuel combustion, which currently supplies nearly 80 percent of civilization's energy. Fossil-fuel combustion technologies cannot be quickly or inexpensively changed or replaced, and most current policies and practices of governments, firms, consumers, and investors are either worsening the problem, or falling short of what is needed to address it.

Does Climate Change Create Economic and Investment Risks?

A panel of experts from leading investment and financial firms, moderated by Henry Lee, Director of the Environment and Natural Resources Program at the Belfer Center for Science and International Affairs of the Kennedy School of Government, expressed the view that climate change does pose a threat to investment portfolios, and that it also presents opportunities to earn higher rates of return by selecting a portfolio with "eco-efficient" firms that have responsible corporate environmental governance programs. The panel suggested that investors must consider not just the physical risks of climate change, but also the risks of regulation. The panel asserted that the probability that the United States would do nothing to regulate greenhouse-gas emissions in the next 10-15 years is extremely low, and this leads to regulatory and competitiveness risks for companies with large, unchecked, greenhouse-gas emissions.

The panel urged pension fund leaders to analyze climate risk and to earn higher rates of return by investing in screened portfolios or by pooling funds to invest in cleaner and more efficient technologies. The experts argued that if pension funds shifted their financial resources, Wall Street would follow their lead.

Are Corporations Acting To Address Climate Risk?

Former EPA Administrator William Reilly, President and CEO of Aqua International Partners, described how the corporate world is beginning to address climate change, driven by an increasing awareness of the science and of the potential impacts of climate change. According to Reilly, the impacts of climate change will probably be felt most strongly in the water sector, with many regions of the world already in crisis with respect to water availability. The evolution of climate policy, including the likely adoption of the Kyoto Protocol, is also driving changes in corporate attitudes on climate change. Reilly has witnessed these changes at three companies – Dupont, Conoco Phillips, and Royal Caribbean – where he sits on the board of directors.

What Are the Legal Duties, Responsibilities and Opportunities for Fiduciaries?

A distinguished panel of lawyers discussed the legal duties, responsibilities and opportunities for fiduciaries to consider climate risk. The panel concluded that fiduciaries not only were permitted to consider climate risk, but might also have an obligation to consider the issue and to act upon it. Actions that panelists recommended fiduciaries could take to manage climate risk include: asking fund managers to examine climate risk, redirecting money based on climate risk, engaging in dialogue with companies that they own, and voting proxies.

What Actions Pension Funds Are Taking To Address Climate Risk

Three leaders from state pension funds described the different actions they are taking to address climate risk, and their rationale for doing so. The trustees are:

- ◆ Actively engaging with companies through shareholder resolutions and dialogue,
- ◆ Revising proxy guidelines to reflect climate risk,
- ◆ Pressing the Securities and Exchange Commission to require disclosure of climate risk, and
- ◆ Seeking investment in companies that are proactively addressing climate change.

In all cases, the trustees believe they are exercising their fiduciary duties to protect the interests of the beneficiaries when they take action on climate change. These actions may also have collateral benefits for the beneficiaries.

What Actions Could Pension Funds Leaders Take To Address Climate Risk?

Doug Cogan of the Investor Responsibility Research Center recommended that plan sponsors:

- ◆ Assess Risks – By seeking expert advice, conducting risk assessments, and joining investor networks
- ◆ Promote Transparency – Disclose their own climate strategies and urge companies to do the same by issuing policy statements, seeking standardized emission accounting, voting proxies, and engaging companies in dialogue
- ◆ Invest in Solutions – By developing an integrated investment strategy, investing in energy efficiency and renewable energy, and supporting government caps or limits on emissions

Detailed Issues Summary

Science of Climate Change

John Holdren introduced participants to the science of climate change with a detailed briefing primarily based on the conclusions of the Intergovernmental Panel on Climate Change (IPCC), the worldwide scientific body commissioned by the United Nations to assess the state of science for policy makers. Holdren reviewed:

- ◆ What climate is and why it matters
- ◆ The evidence that climate is changing
- ◆ The evidence that humans are responsible
- ◆ Climate-change consequences of continued “business as usual” (BAU)
- ◆ Impacts of BAU climate change on human well-being
- ◆ What can be done to reduce the risks to society from climate change

What climate is and why it matters

Climate consists of averages and extremes of:

- ◆ Hot & cold
- ◆ Wet & dry
- ◆ Snow pack & snowmelt
- ◆ Winds & storm tracks
- ◆ Ocean currents & upwellings

It consists not only how much and where, but also when.

Climate is important to the functioning of the planet and all living things on it because it governs:

- ◆ Productivity of farms, forests, & fisheries
- ◆ Geography of disease
- ◆ Livability of cities in summer
- ◆ Damages from storms, floods, droughts, and wildfires
- ◆ The location and risk to property from the levels of the oceans
- ◆ Expenditures on engineered environments, such as dams, dikes, and port facilities
- ◆ Distribution & abundance of species

Evidence that Climate is Changing

The IPCC has collected vast amounts of evidence that the Earth’s climate is already changing.

First, the average temperature of the earth is rising:

- ◆ Increased $0.7\pm 0.2^{\circ}\text{C}$ in last 140 years (instrumental records)
- ◆ 19 of the 20 warmest years since 1860 have all occurred since 1980, the 11 warmest all since 1990
- ◆ 1998 was the warmest year in the instrumental record and probably the warmest in 1,000 years (tree rings, ice cores); 2002 was the second warmest
- ◆ The last 50 years appear to have been the warmest half century in 6,000 years (ice cores)
- ◆ Compilation of worldwide ocean-temperature measurements shows significant ocean warming between the mid-1950s and the mid-1990s

Second, observations over recent decades also show changes that are consistent with climate change:

- ◆ Evaporation & rainfall are increasing
- ◆ More of the rainfall is occurring in downpours
- ◆ Permafrost is melting
- ◆ Corals are bleaching
- ◆ Glaciers are retreating
- ◆ Sea ice is shrinking
- ◆ Sea level is rising
- ◆ Wildfires are increasing
- ◆ Storm & flood damages are soaring

Evidence that Humans are Responsible

According to Holdren, there is no scientific doubt that most of the indicated greenhouse gas increases and most of the observed changes in the climate are human-caused. The main natural and human phenomena that affect climate are known, and scientists have measured or estimated these phenomena, and then compared their relative effect on the climate. These comparisons indicate human emissions of greenhouse gases have created the biggest warming effect.

- ◆ Essentially all of the observed climate-change phenomena are consistent with the predictions of climate models for greenhouse-gas induced warming.
- ◆ No alternative “culprit” identified so far – no potential cause of climate change other than human emissions of greenhouse gases – yields this “fingerprint” match.
- ◆ A credible skeptic would need to explain both what the alternative cause of the observed changes is and how it could be that greenhouse gases are not having the effects that all current scientific understanding says they should have. (No skeptic has done either thing.)

Other evidence to support this view includes:

- ◆ The increases in atmospheric carbon dioxide (CO₂) and other globally mixed greenhouse gases have been accurately measured in real time for decades.
- ◆ Their atmospheric concentrations going back for centuries and millennia have been determined by analysis of air trapped in bubbles in Antarctic & Greenland ice.
- ◆ The main human sources of CO₂ – deforestation and fossil fuel burning – are quite well quantified. The observed CO₂ build-up in the atmosphere matches these human inputs, after subtraction of estimated rates of uptake in the oceans and northern forests.
- ◆ The ice-core data show that atmospheric CO₂ has not been above 300 parts per million (ppm) in the last 400,000 years (it’s over 370 ppm today) and that natural fluctuations in atmospheric CO₂ over the past 10,000 years have been only ±10 ppm (compared to the 90 ppm increase since the start of the Industrial Revolution).
- ◆ Carbon-14 analysis of tree rings back to 1800 confirms the fossil-fuel contribution to the atmospheric CO₂ burden in the last 200 years.

Consequences of Continuing the Current Path

The IPCC has examined in detail the possible consequences of continuing on a path of increasing greenhouse gas emissions and concentrations of those gases in the Earth's atmosphere. The scientific-consensus "best estimates" are that continuing "business-as-usual" greenhouse-gas emissions will lead to:

- ◆ Increases of 0.2–0.4°C per decade in global-average surface temperature, or 2–4°C warmer than now by 2100¹. Warming in the middle of continents could be 2–3 times greater. The earth would then be warmer than at any time in the last 160,000 years.
- ◆ Rise in sea levels of 20–100 cm higher than today (best estimate 50 cm).
- ◆ Major changes in climatic patterns, including storm tracks, distribution of precipitation and soil moisture, extremes of hot and cold.

Because of the pace and magnitude of the changes in climatic patterns and because society's interactions with the environment are attuned to the current climate, impacts on human well being will be far more negative than positive.

Impacts

Projected adverse impacts from these changes in the climate include:

- ◆ A general reduction in potential crop yields in most tropical and sub-tropical regions for most projected increases in temperature;
- ◆ A general reduction, with some variation, in potential crop yields in most regions in mid-latitudes for increases in average-annual temperature of more than a few degrees C;
- ◆ Decreased water availability for populations in many water-scarce regions, particularly in the sub-tropics;
- ◆ An increase in the number of people exposed to vector-borne diseases (e.g. malaria) and water-borne diseases (e.g. cholera) and an increase in heat-stress mortality;
- ◆ A widespread increase in the risk of flooding for many human settlements (tens of millions of inhabitants in settlements studied) from both increased heavy precipitation events and sea-level rise;
- ◆ Increased energy demand for space cooling due to higher summer temperatures.

Possible Benefits

Changes in the Earth's climate could produce some benefits, which include:

- ◆ Increased potential crop yields in some regions at mid-latitudes for increases in temperature of less than a few degrees C;
- ◆ A potential increase in global timber supply from appropriately managed forests;
- ◆ Increased water availability for populations in some water-scarce regions, e.g., in parts of South East Asia;
- ◆ Reduced winter mortality in mid- and high-latitudes;
- ◆ Reduced energy demand for space heating due to higher winter temperatures.

But, on balance, the negative changes will outweigh the positive ones.

Studies May Understate Impacts

Scientific research completed to date may understate the potential impacts of climate change for two reasons.

1. The full range of IPCC scenarios give a 1.4-5.8°C increase by 2100.

First, most studies of climate change impacts have focused on just a doubling of pre-industrial CO₂ (for the purpose of comparability among models). But under current business-as-usual projections, emissions will double around 2050, triple by 2100, and quadruple soon after. At these higher emission levels, there is more climate disruption, positive impacts are reversed, and negative ones become overwhelming. For example, quadrupling CO₂ would increase temperature by an average of 15-25°F and decrease soil moistures 50-60% in the mid-continent regions of the northern hemisphere--a disaster for agriculture.

Second, the climate system is not fully understood by scientists, and surprises are possible. Each of these surprises could drastically increase the severity of all expected impacts. Possible surprises include:

- ◆ Large increases in the frequency of highly destructive storms
- ◆ Drastic shifts in ocean current systems that control regional climates (e.g., Gulf stream / Western Europe)
- ◆ Multi-meter sea-level rise, over a period of centuries, from disintegration of West-Antarctic ice sheet
- ◆ Runaway greenhouse effect from decomposition of methane clathrates

Possible Actions to Reduce Global Warming

Holdren argued that society must reduce emissions of greenhouse gases to address climate change. Society might also choose to remove greenhouse gases from the atmosphere by growing more trees or phytoplankton, counteracting the effects of climate change through geotechnical engineering, adapting to climate change, or compensating the victims of climate change.

The best options for addressing climate change are ones that limit population growth, improve energy efficiency, and reduce greenhouse gas emissions. Policies could be put in place to drive technical options such as:

- ◆ Increased efficiency of energy end-use in buildings, transportation, & industry
- ◆ Transition to a lower-energy-intensity mix of economic activities
- ◆ Improved efficiency of conversion of fossil fuels to end-use energy forms
- ◆ Switching from coal and oil to natural gas
- ◆ Capturing and storing ("sequestering") carbon when fossil fuels are transformed or used
- ◆ Increased deployment of renewable and nuclear energy

Possible Emission Reduction Scenarios

The IPCC has examined possible emission scenarios, but governments have not agreed on a key factor – the appropriate overall level of concentrations of greenhouse gases in the atmosphere. The world is already committed to an increase of 0.5-0.6°C of increased temperature as a result of the concentrations of greenhouse gases already in the atmosphere. In the meantime, Holdren argued that starting to make emission reductions sooner rather than later was the most practical and cost-effective decision. Delaying reductions might ultimately prove to be expensive and might also rule out achieving lower concentrations of greenhouse gases in the atmosphere in the future. In effect, early action may function as an insurance policy against the possibility of extreme climate change.

Climate Risk For Investment Portfolios

A panel of experts from leading investment and financial firms, moderated by Henry Lee, Director of the Environment and Natural Resources Program at the Kennedy School, expressed the view that climate change does pose a threat to investment portfolios, and also presents opportunities to earn higher rates of return by selecting a carefully screened portfolio with “eco-efficient” firms that have responsible corporate environmental governance programs. The panel suggested that investors must consider not just the physical risks of climate change, but also the risks of greenhouse gas regulation. The probability that the United States would do nothing to regulate these emissions in the next 10–15 years is low, and this leads to regulatory risks for companies with significant emissions.

Moreover, the panel urged pension funds to analyze climate risk and to earn higher rates of return by investing in screened portfolios or pooling funds to invest in clean technologies. The experts argued that if pension funds shifted their financial resources, Wall Street would follow their lead.

Theodore Roosevelt IV, Managing Director of Lehman Brothers, said that government intervention was necessary to address climate change because government regulation would unleash the power of capital markets. According to Roosevelt, government should and will adopt policies such as limits or caps on greenhouse gas emissions with opportunities for emissions trading, incentives for conservation and efficiency, and possibly a global carbon tax that engages the developing countries through the L20 group. Regulation of greenhouse gases will allow capital markets to provide more investment funds, which will bring new clean energy technology on board faster.²

According to Roosevelt, financial markets will increasingly distinguish between forward-looking businesses, which will be rewarded with either higher price earnings ratios or better access to the capital markets, and those which are continuing with “business as usual” and will be punished with less favorable terms. He expressed concern about the competitiveness of the U.S. automobile manufacturers, for example, which are already losing market share to Japanese manufacturers with more efficient auto technologies, and could lose more with regulations of greenhouse gases.

With companies facing regulatory and competitive risks, pension funds could best address their fiduciary duty by assessing climate risk and thereby improving their investment performance.

Chris Walker, Managing Director of Swiss Re, outlined why the company considers climate change a significant business risk and opportunity, worthy not only of attention, but action. Swiss Re is concerned about the potential impact of climate change on its business, specifically its:

- ◆ **Property and casualty protection.** Swiss Re is concerned about impacts from increased flooding due to increased precipitation, rise in sea level and change of weather patterns, and the increase in frequency and severity of floods and storms. Worldwide economic losses due to natural disasters appear to be doubling every 10 years and will reach \$150 billion in the next decade, according to the U.N.
- ◆ **Life and health.** Climate could worsen morbidity and mortality rates by changing tropical disease vectors and increasing respiratory diseases and allergies.
- ◆ **Investments.** Insurance companies are large institutional investors, representing, for example, 25% of institutional investments in the U.K.
- ◆ **Products.** Swiss Re is developing new products, such as insurance for renewable energy or emissions trading, to help address climate risk.

2. The L20 are the leaders of member countries of the G-20, which includes the finance ministries and central banks of the European Union and 19 countries: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom and the United States.

Swiss Re is also concerned about climate change as a corporate governance issue. The rapid rise in shareholder action on climate risk is sending a loud and clear signal to management and boards of corporations that climate risk is an issue they must take seriously. As part of its Directors and Officers insurance, it is currently asking what companies are doing to address climate change.

Alan Brown, Group Chief Investment Officer of State Street Global Advisors, presented an analysis demonstrating that a portfolio with an environmental screen would outperform a portfolio without one. Specifically, the environmental portfolio produced an annual excess return of 6.31% (IR=1.25%) over the benchmark (S&P 500 Index). Based on this evidence, environmental factors appear to be a very significant risk factor.

According to Brown, a major advantage of an environmentally screened portfolio is that it can substantially decrease liabilities, which pension funds often ignore in examining their investment return. He urged pension funds to consider the magnitude of their liabilities when creating targets to beat, rather than simply comparing themselves to a proscribed set of benchmarks. Wall Street and investors often ignore off-balance sheet liabilities and risks, in part because they are hard to quantify. Specifically, he stated, "The risks born between portfolio and benchmark are to the third decimal point relative to the risks between benchmark and liabilities. Pension plans can afford to reflect their environmental preferences in their benchmark choices without materially impacting aggregate risk."

In response to trustees' concerns that plan sponsors have difficulty getting portfolio managers to look at this issue, Brown said that plan sponsors could choose a portfolio that is tilted to the environment and that fund managers were responding to increased interest in environmental and social issues as increasing amounts of money are directed towards environmental or social screens. On the other hand, he admitted that the long-term nature of climate change made it hard for fiduciaries and portfolio managers to address it because they were likely to be gone when the liabilities came due, in the form of compliance costs with climate regulations. Roosevelt urged investors to prod Wall Street to greater action by creating a sizeable pool for clean investment.

Corporations Act to Address Climate Risk

In a luncheon presentation, former EPA Administrator William Reilly, President and CEO of Aqua International Partners, outlined changing corporate attitudes on climate change. This change is driven by an increasing awareness of the science and of potential impacts. He anticipates that the impacts of climate change will be felt most strongly in the water sector, with many regions of the world already in crisis with respect to water availability. For example, citizens invaded and closed down a Coca-Cola plant in India to protest its withdrawal of excessive amounts of ground water in an area where the ground water table is dropping 12 to 15 feet per year. This increased the company's production costs and caused a 7% loss of market share – its largest in any established market.

The evolution of climate policy, including the likely adoption of the Kyoto Protocol, is also driving changing corporate attitudes on climate change. He described the change in corporate views by reviewing the actions of three companies on whose boards he sits – Dupont, Conoco Phillips, and Royal Caribbean. Specifically, they have taken the following actions:

Dupont

- ◆ Phased out chemicals that deplete the ozone layer ahead of legal requirements to do so
- ◆ Committed to reduce greenhouse gases, and achieved a 67 percent reduction from 1990 emissions
- ◆ Joined the Chicago Climate Exchange to trade CO₂
- ◆ Reduced its vulnerability to energy price volatility
- ◆ Committed to obtain 10 percent of its energy from renewable sources in 2010

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- ◆ Acquired Pioneer Seed Co.
 - ◆ Invested in water-efficient seeds and plants
 - ◆ Created a research priority of making plastics from cellulose

ConocoPhillips

- ◆ Committed to increase the availability of cleaner energy; increased gas as a proportion of product
- ◆ Fostered “sustainability thinking” and life cycle analysis
- ◆ Recognized the human contribution to climate change, and committed to develop greenhouse gas targets and to measure and report on five greenhouse gases beginning in 2004
- ◆ Pledged to participate in public policy and take actions to efficiently address climate change

Royal Caribbean

- ◆ Moved its reservations call center out of Florida after a series of severe storms shut the center down
- ◆ Committed to build gas turbines for several new ships
- ◆ Committed to install advanced wastewater treatment on all ships

Finally, Reilly suggested that action on climate change might be possible in a second Bush administration if it could be done in a way that allowed continued use of coal.

Legal Duties, Responsibilities and Opportunities for Fiduciaries

A panel of legal experts discussed the legal duties, responsibilities and opportunities for fiduciaries to consider climate risk. The panel concluded that fiduciaries not only had permission to consider climate risk, but might well also have an obligation to consider the issue and to act upon it. Actions that fiduciaries could engage in to manage climate risk included: asking fund managers to examine climate risk, redirecting money based on climate risk, dialoging with companies that they own and voting proxies.

Lonie Hassel, Attorney at Groom Law Group, outlined that fiduciaries have two primary duties to act that provided a broad opening for them to address climate risk. These duties are stated in the Employee Retirement Income Security Act (ERISA), as well as in the governing authority of most public pension plans. These duties are:

- ◆ **Exclusive Benefit Rule** – This requires fiduciaries to act solely in the interests of participants and beneficiaries for the exclusive purpose of providing benefits and defraying administrative costs. Climate risk could be harmful to beneficiaries.
- ◆ **Prudence Rule** – This requires a fiduciary to act with the “care, skill, prudence and diligence” of a similarly situated prudent individual, knowledgeable in such matters. The Prudence Rule requires the fiduciary to consider the facts and circumstances that the fiduciary knows or should know about a particular investment, such as portfolio diversification, liquidity needs, projected return, or opportunity for gain or loss offered by the investment. Climate risk could be one of the factors that a prudent investor would consider. Complying with this rule helps to demonstrate compliance with the Exclusive Benefit Rule.

Moreover, fiduciaries may consider the incidental or collateral benefits of investments, such as climate change, provided that their return or risk is equal or better.

These rules give trustees the ability to choose investments based on global warming concerns, to the extent that the concerns can be quantified in terms of investment risk or return. If these have not or cannot be quantified, fiduciaries can act through shareholder activism or proxy voting, if there is a reasonable expectation that the action is likely to

enhance the value of the investment. This may be particularly true where stocks are held as long-term investments or are not easily liquidated.

Peter Kinder, President of KLD Research & Analytics, Inc., argued that the Securities and Exchange Commission's Proxy Voting Guidelines require pension plan investment advisors and mutual funds to "monitor events" at corporations, including social and environmental factors. Thus, fiduciaries have an obligation to factor these into their investment decisions, particularly with respect to proxy voting. Through these guidelines, the SEC has now applied the same standards of fiduciary responsibility to proxy voting as they have to investment decisions. He also reviewed the original 1831 court case that established the Prudent Investor rule, and said that it was fundamentally conservative and allowed fiduciaries to consider a broad range of risks.

Kinder also presented a paper reviewing the legal precedent supporting this view, including an important case from the highest court in Maryland, the Court of Appeals. In a case regarding an effort to divest South African stocks, the court found that a trustee may consider social matters. The court specifically said, "Nevertheless, we do not believe that a trustee necessarily violates a duty of loyalty by considering the social consequences of investment decisions. If, as in this case, the costs of considering such consequences are de minimus, the trustee ordinarily will not have transgressed his duty."

He also noted that some analysts disagree with this position. For example, there is a fairly strong lobby against this position within the National Association of Commissioners on Uniform State Laws. The Uniform Prudent Investor Act specifically rejects the notion of social investing unless it provides at least commensurate returns. He concluded that with the powerful scientific evidence on climate change, fiduciaries are on strong grounds to consider these issues.

Beth Young, Attorney & Senior Research Associate at The Corporate Library, took the strong view that climate risk is a financial and economic risk issue, not simply an environmental or social one. She recommended two areas where fiduciaries can be active in addressing climate's economic risks.

First, fiduciaries should engage companies and service providers to improve the performance of companies that their funds already own. Trustees should look carefully at their proxy voting guidelines to see if they adequately reflect consideration of climate risk. They should also press those who vote their proxies to weigh qualitative information such as climate risk when making voting decisions, and to consider or convey information presented by the proponents of shareholder resolutions, not just management.

Second, fiduciaries can and should consider climate risk in valuing and setting price targets for stocks, and considering whether to buy or sell a particular stock. This might mean that an investor would not purchase a particular stock, such as ExxonMobil, because it may be overpriced because investors and the financial community are not properly discounting future cash flows to account for the costs of climate obligations that may occur five or ten years from now.

In discussion, participants expressed the view that climate risk obligates fiduciaries to act, and that Wall Street does a poor job of examining risks that are not on the balance sheet.

How Pension Funds are Already Acting

Three leaders from state pension funds described the actions they are taking to address climate risk, and their rationale for doing so. The trustees are:

- ◆ Actively engaging with companies through shareholder resolutions and dialogue,
- ◆ Revising proxy guidelines to reflect climate risk,
- ◆ Pressing the Securities and Exchange Commission to require disclosure of climate risk, and
- ◆ Seeking investment in environmentally proactive companies.

In all cases, the trustees believe they are exercising their fiduciary duties to protect the interests of the beneficiaries. These actions may also have collateral benefits for the beneficiaries. Actions by investors may also transform consideration of climate change by the corporate community more than action by government.

Connecticut

Howard Rifkin, Deputy Treasurer of the State of Connecticut, outlined several key steps that Connecticut took to improve its own governance of investment decisions before considering climate risk. In consultation with its advisory committee, Treasurer Denise Nappier adopted proxy voting guidelines and created a corporate governance or policy unit to develop proxy voting guidelines and oversee its approach to being a more active and engaged shareholder. Only after these changes were made did the state begin to vote its proxies and file shareholder resolutions. The Treasurer made these changes and then began evaluating climate risk in fulfillment of her fiduciary responsibility.

Connecticut's efforts have met with success in changing corporate approaches to climate change. In 2003, Treasurer Nappier filed a climate change resolution with American Electric Power (AEP). The resolution received 27% of the vote of shareholders. Connecticut refiled with AEP in 2004, and then withdrew its resolution when the company agreed to issue a special report to the shareholders on climate change. In agreeing to the report, the company made a revolutionary statement acknowledging the importance of climate change to investors. AEP said, "Power plants, owned and operated by AEP, emitted more carbon dioxide, sulfur dioxide, nitrogen oxide and mercury than the power plants of any other electric utility company in the United States. ...commitments to reduce carbon dioxide are emerging. And we believe it is important for shareholders to understand how the company may be affected by regulatory, competitive, legal, and physical impacts of climate change, and be aware of any costs associated with the company's actions and response."

AEP has since issued a strong report that begins analyzing the choices the company faces in light of probable climate regulations. The report quantifies the potential impacts of three possible scenarios that the company may face. The report reaches several key conclusions, including:

- ◆ **Emissions Policies Present Critical Economic Issues.** The report states, "Among the most significant economic drivers for coal-based generators are current and future environmental policies, particularly air quality policies and programs."
- ◆ **Carbon Dioxide Limits Likely.** "[M]andatory carbon constraints in the long-term appear probable" and "initial mandatory reductions of greenhouse gas emissions are likely in the next decade."
- ◆ **Emissions Limits Are Achievable.** "AEP could meet a reasonable constraint at significant but manageable costs – provided the program was efficiently designed."
- ◆ **Policy Uncertainty A Major Problem.** Current climate policy is uncertain, and "the central challenge the company faces is that of making decisions about large investments in long-lived assets in a setting of uncertain public policy and rapidly evolving technology."

Maine

Maine State Treasurer Dale McCormick described her experiences with climate risk. To learn about the issue, she attended the Institutional Investor Summit on Climate Risk in November 2003. To assist her in obtaining information critical to analyzing Maine's climate risk, she co-filed a climate resolution with ExxonMobil seeking a report from the company similar to the one that AEP prepared. At the 2004 annual shareholder meeting, she asked CEO Lee Raymond if the company had made any provision in its balance sheet for the potential costs of climate change. Raymond said they company had not because the costs were neither likely nor could the company estimate them. ExxonMobil opposed the resolution and the efforts of pension

funds and other shareholders to pressure the company to address climate change. However, the resolution received a reported vote of 8.8%.

McCormick and other pension fund leaders have also been pressing the Securities and Exchange Commission to clarify that companies must disclose climate risk as part of their financial statements. Specifically, companies should include a discussion of climate as part of the Management Discussion and Analysis (MD&A) section of their 10(k) reports, in which securities law requires them to discuss long term issues that pose a risk to the company. A requirement from the SEC would serve to standardize corporate disclosure of climate risk, and mean that investors do not have to seek this information from each individual company.

Vermont

Vermont State Treasurer Jeb Spaulding noted that he was a part of a pension fund board, and, unlike Treasurer Nappier of Connecticut, not the sole fiduciary for the pension fund. He has acted on climate risk in the interests of both the beneficiaries of the Vermont state plan and the citizens of Vermont.

He studied climate change and became convinced that climate risk was a serious concern, which could adversely affect the beneficiaries of Vermont's pension funds. Avoiding companies or sectors with a lot of climate risk, or encouraging companies to lower their risk, could help the beneficiaries of the fund. In addition, he pointed out that the pension benefits of teachers and state employees are dependent on a healthy local economy, which could be damaged if climate change adversely affects the ski industry and the maple industry. Thus, working to protect Vermont and the world from climate change damage provides collateral benefits to the plan beneficiaries.

Vermont decided to write clear proxy guidelines on a range of issues, in part because their fund managers were not voting their proxies consistently with Vermont's interests. Among other things, the revised proxy guidelines that are used by all three of the state's pension funds now ask Vermont fund managers to generally vote for shareholder proposals which do the following:

- ◆ Seek greater disclosure on a company's environmental practices and environmental risks and liabilities.
- ◆ Call for a reduction of greenhouse gases under a reasonable timeline.
- ◆ Seek an increased investment in renewable energy.
- ◆ Call on a company to establish a plan to reduce toxic emissions.

In addition, Treasurer Spaulding, in conjunction with six other pension fund trustees, has sent a letter to a group of investment managers asking how their firms evaluates climate risk, especially regulatory, valuation, and portfolio risk.

Treasurer Spaulding is also exploring whether state pension funds could allocate a small percentage of their large cap portfolio to invest in environmentally proactive companies, so that it could earn a higher rate of return.

During the ensuing discussion, several other pension fund representatives described actions that they are taking or plan to take.

Carolyn Widener, a Board Member of the California State Teachers' Retirement System (CalSTRS), pressed for a strong effort to educate trustees and others at pension funds about climate risk, as both the California Public Employees Retirement System (CalPERS) and her own organization are doing.

Winston Hickox of CalPERS made a strong case that policy makers are ignoring investors. As a former director of California's Environmental Protection Agency, he said that policy makers and investors should have a stronger partnership and could accomplish a great deal, especially with respect to key policies such as California's new emissions standards for automobiles.

Julie Gresham, Director of Corporate Governance at the New York State Office of the Comptroller, explained how Comptroller Alan Hevesi has filed and co-filed climate resolutions at several companies, including an oil and gas company, Devon Energy. The shareholders withdrew the resolution after the company agreed to issue a report on climate change.

Ms. Gresham also explained how the Comptroller had developed proxy guidelines on climate change and other issues. She also urged other pension funds to vote their proxies themselves, as New York does, or to carefully oversee how their fund managers or advisors cast the proxies.

Recommended Actions for Fiduciaries

Douglas Cogan, Deputy Director of the Social Issues Service at the Investor Responsibility Research Center (IRRC), urged fiduciaries to take specific actions to address climate risk. There is increasing recognition that corporate boards and management must act, and this is driven, in part, by shareholder activism from pension funds and others.

Cogan urged fiduciaries to take the steps outlined in a new publication from the Investor Network on Climate Risk (INCR), the *Investor Guide to Climate Risk*. This guide urges plan sponsors, fund managers, and corporate management to meet three primary goals to address climate risk – assess the risks, disclose strategies, and invest in solutions. Plan sponsors – the focus of this workshop – should:

- ◆ **Goal 1: Assess Risks** - Assign Staff, Network with Others
 1. Seek expert advice
 2. Conduct risk assessments
 3. Join investor networks
- ◆ **Goal 2: Disclose Strategies** - Inform Fund Managers, Corporations
 4. Issue policy statement
 5. Demand public disclosure
 6. Seek standardized emission accounting
 7. Vote proxies and engage companies in dialogue
- ◆ **Goal 3: Invest in Solutions** – Clean Energy and Integrated Approaches
 8. Develop integrated investment strategy
 9. Invest in energy efficiency and renewable energy
 10. Support government caps or limits on emissions

To assist investors, INCR, Ceres, and IRRC plan to issue future reports on climate risk. These include a report on how mutual funds voted their proxies on global warming shareholder resolutions during 2004, an update of the 2003's *Corporate Governance and Climate Change: Making the Connection*, and an *Investor Best Practices Guide*.

In response to Cogan's presentation, workshop participants urged Harvard and Ceres to engage in several actions to follow up the workshop and promote further understanding of climate risk. These suggestions included:

- ◆ An improved effort to educate leaders of the National Education Association, police and fire unions, and other unions to make sure that they understand climate change and the risks it poses to portfolios.
- ◆ Outreach to other associations that are concerned with this issues, such as the National Council on Teacher Retirement and the National Association of State Retirement Administrators.
- ◆ Developing a case study of shareholder engagement with American Electric Power to analyze all of the potential issues affecting investors and the company.
- ◆ Improving efforts to quantify climate risks for specific sectors and companies.

Conclusions

In their closing remarks, Ceres President Mindy Lubber and John Ruggie, Director of the Center for Business and Government and Professor at Harvard's Kennedy School of Government, summarized three key conclusions of the workshop:

- ◆ There has been much progress to raise awareness of climate risk. Many financial institutions see it as an issue they must address, as was made clear in presentations by Lehman Brothers, State Street Global Advisors and Swiss Re. However, there is still a long way to go to educate key players in the investment community, and to close gaps in understanding of the issue and the risks.
- ◆ Pension funds must act to address climate risk. The science and the economics indicate that this is a huge issue, and it falls well within the legal parameters of what fiduciaries must consider.
- ◆ Harvard and Ceres are both committed to continuing to work with investors to close the gaps between our understanding of the physical and regulatory risks, and of the financial risks. In addition, pension funds and their allies must connect climate risk much more directly to specific sectors and companies. In doing so, investors must bring the issue directly to the companies at the highest levels so that they consider and address the risks.

APPENDIX 1: Agenda

- 9:30** **Welcome and Introductions, Overview of Sustainability Issues**
Professor John Ruggie, *Harvard University*
Mindy Lubber, *Ceres*
- 10:00** **Risks from Global Climate Change – Presentation and Q&A**
Professor John Holdren, *Harvard University*
- 11:00** **Climate Change and Financial Risk – Panel and Q&A**
Professor Henry Lee, *Harvard University*
Alan Brown, *State Street Global Advisors*
Ted Roosevelt, *Lehman Brothers*
Chris Walker, *Swiss Re*
- 12:00** **Lunch**
William Reilly, *Former Administrator, U.S. EPA (1989–1992)*
- 1:00** **Fiduciaries’ Legal Duties – Panel and Q&A**
Lonie Hassel, *Groom Law Group*
Peter Kinder, *KLD Research & Analytics, Inc.*
Beth Young, *The Corporate Library*
- 2:00** **Perspectives of Pension Fund Leaders**
Dale McCormick, *Treasurer, State of Maine*
Howard Rifkin, *Deputy Treasurer, State of Connecticut*
Jeb Spaulding, *Treasurer, State of Vermont*
- 3:00** **Recommendations for Fiduciaries – Presentation and Discussion**
Douglas Cogan, *Investor Responsibility Research Center*
- 3:45** **Meeting Summary and Evaluation**
- 4:00** **Adjourn**
- 6:00** **Public Panel Discussion**
“Climate Change Hits Wall Street: What are the Risks of Inaction?”
John F. Kennedy Jr. Forum

APPENDIX 2: Sponsors

CSR Initiative

Corporate Social Responsibility Initiative
John F. Kennedy School of Government
Harvard University

Our Mission

The Corporate Social Responsibility Initiative at the Kennedy School of Government (KSG) is a multi-disciplinary and multi-stakeholder program that seeks to study and enhance the public role of the private enterprise. It focuses on exploring the intersection between corporate responsibility, corporate governance and strategy, public policy, and the media. The initiative aims to bridge the gap between theory and practice, encourage innovation, build leadership skills and support constructive dialogue and collaboration between different sectors. Our vision is to become a globally recognized center of excellence and source of reference in addressing the following three questions:

- How can the private sector voluntarily contribute to the solution of public problems in the United States and internationally, and help to address national and global governance gaps?
- What is the enabling role of government, the media, investment fiduciaries, and self-regulatory governance mechanisms in fostering responsible business practices?
- What are the leadership values and governance structures that underpin superior corporate performance on ethical, economic, social and environmental issues, and how do leading companies make the strategic business case for corporate responsibility?

Our Strategy

The CSR Initiative achieves its mission through a combination of:

- **Research** conducted by Harvard faculty, fellows and students, in collaboration with external academics, practitioner experts and organizations.
- **Education** activities to build relevant skills and competencies among the next generation of leaders in the public, private, and nonprofit sectors, in order to equip them to understand the role of the business in society and to develop effective cross-sector partnerships.
- **Outreach** through dialogues, seminars, and workshops that convene leaders from business, government, civil society, academia and the media around emerging trends and critical issues in corporate responsibility.

Our Partners

The CSR Initiative is a cooperative effort between the KSG's Center for Business and Government, Center for Public Leadership, Hauser Center for Non-Profit Organizations, and Joan Shorenstein Center on the Press, Politics and Public Policy. It is supported by a group of founding donors composed of Walter H. Shorenstein, The Coca-Cola Company, ChevronTexaco, and General Motors. Additional support is provided by Booz Allen Hamilton and the United Nations Industrial Development Organization. The CSR Initiative partners with students through the Corporate Responsibility Council, a Net Impact chapter.

Contact Information

For more information please visit our web site: www.ksg.harvard.edu/cbg/csri.htm or contact Christine Riley, Program Manager at (617) 496-4034 or Christine_riley@ksg.harvard.edu

Energy Technology Innovation Project

Science, Technology, and Public Policy Program

Belfer Center for Science and International Affairs

The John F. Kennedy School of Government, Harvard University

The Energy Technology Innovation Project (ETIP) is part of the Science, Technology, and Public Policy program of the Belfer Center for Science & International Affairs (BCSIA) at the Kennedy School of Government, Harvard University.

The overarching objective of ETIP is to determine and then seek to promote adoption of effective strategies for developing and deploying cleaner and more efficient energy technologies in three of the biggest energy-consuming nations in the world: China, India, and the United States. These three countries have enormous influence on local, regional, and global environmental conditions through their energy production and consumption.

ETIP researchers seek to identify and promote strategies that these countries can pursue, separately and collaboratively, for accelerating the development and deployment of advanced energy options that can reduce conventional air pollution, minimize future greenhouse-gas emissions, reduce dependence on oil, facilitate poverty alleviation, and promote economic development. ETIP's focus on three crucial countries rather than only one not only multiplies directly our leverage on the world scale and facilitates the pursuit of cooperative efforts, but also allows for the development of new insights from comparisons and contrasts among conditions and strategies in the three cases.

For more information on the Energy Technology Innovation Project, please contact the project's director, Dr. Kelly Sims Gallagher, at 617-495-1960.

Contact Information

The Energy Technology Innovation Project

John F. Kennedy School of Government, 79 JFK St., L331A, Cambridge, MA 02138

Phone: 617-496-5584, Fax: 617-495-5776

www.bcsia.ksg.harvard.edu/energy

Ceres

Ceres in Brief

Ceres' vision is of a world where a robust business community contributes to the ecological health of the planet and the welfare of human society.

Ceres' mission is to move businesses, capital, and markets to advance lasting prosperity by valuing the health of the planet and its people.

Ceres is a coalition of 85 activist and investor organizations united to advance corporate responsibility. Managing more than \$400 billion in assets, investor members of Ceres include state and municipal pension funds, socially responsible investment firms, religious groups, union funds, and foundations. It is this unique combination of the investor perspective, which requires profitable companies and robust economies, and the environmental perspective, which prizes the goal of a healthy planet, that shapes Ceres' strategies and methods. We believe that economic prosperity and protection of the earth cannot be pursued separately.

Ceres' work on corporate accountability began in 1989 with the Ceres Principles, a 10-point code of corporate environmental conduct. Today more than 70 companies have adopted the Principles and joined Ceres as corporate endorsers, including Bank of America, Baxter International, Coca-Cola, Ford, General Motors, Nike and Sunoco. In partnership with the United Nations Environment Programme, Ceres created the Global Reporting Initiative (GRI), an international, multi-stakeholder effort to create a common framework for reporting the economic, environmental and social impacts of corporate activity.

Ceres is secretariat for the Investor Network on Climate Risk (INCR). Launched in 2003 by 10 investor leaders at the Institutional Investor Summit on Climate Risk at the United Nations, INCR promotes better understanding of the risks of climate change among institutional investors. INCR also coordinates actions by institutional investors to reduce portfolio exposure to large financial risk resulting from the economic costs and opportunities associated with climate change.

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Contact Information

Ceres, Inc.

99 Chauncy Street, 6th Floor

Boston, MA 02111-1703

Phone: 617-247-0700

Fax: 617-267-5400

www.ceres.org

www.incr.com

Contact: Chris Fox, fox@ceres.org

Ceres, Inc.
99 Chauncy Street
Boston, MA 02111
617-247-0700
www.ceres.org

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