

The Investor Rationale for Responsible Investment: Environment

As an institutional investor, Wespath Investment Management adheres to our obligation as a prudent fiduciary. As a division of the General Board of Pension and Health Benefits of The United Methodist Church, we also understand that financial transactions carry ethical implications. These two perspectives form the basis of our well-rounded investment strategy, which utilizes traditional financial metrics and also considers the impact of environmental, social and corporate governance (ESG) practices.

This paper, one of a series of Wespath research papers published at wespath.com, examines the relationship between shareholder value and corporate environmental practices.

Introduction

Globally, the cost of human activity as it affects the environment (comprised of such factors as greenhouse gas emissions, overuse of water, pollution, and unsustainable natural resource use) was estimated to be \$6.6 trillion in 2008. Comparatively, this figure is 20% higher than the \$5.4 trillion decline in the value of pension fund assets during the 2007/2008 global economic crisis.¹

As a result of the diminishing availability of natural resources, companies may experience increased costs, decreased output and stricter regulatory standards. Because environmental externalities can pose material risk to investment portfolios, many investment valuation models should incorporate an assessment of environmental factors. Before this can be achieved, however, companies must consistently disclose an assessment of their environmental assets and liabilities.

Wespath supports the integration of ESG factors into portfolio construction. We regularly ask companies to measure, monitor and publicly report on many types of environmental issues. For example, we encourage companies to set goals to achieve safe and sustainable food systems, reduce waste, improve water and energy efficiency, and publicly disclose their environmental performance.

Companies regularly affirm the importance of these matters by reporting significant cost savings after implementing environmental management programs — benefits frequently amount to tens of millions of dollars.

The Investor Perspective

Climate Change

Climate change caused by higher levels of greenhouse gases (GHG) in the atmosphere is a concern of many stakeholder groups — legislators, regulators, investors, insurers and consumers, to name a few. Prudent investors are conscious of the following factors and the potential impact on their portfolios.

Financial/Competitive Risk

- In May 2009, Goldman Sachs reported, “We find that while many companies acknowledge the challenges climate change presents...there are significant differences in the extent to which companies are taking action. Differences in the effectiveness of response across industries create opportunities to lose or establish competitive advantage, which we believe will prove increasingly important to investment performance.”²
- The 2006 Stern Review on the Economics of Climate Change, led by the former chief economist at the World Bank, estimated that the overall (worldwide) costs and risks of climate change will be equivalent to losing up to 20% of global GDP each year, now and forever. In contrast, the cost of mitigating action would be about 1% of global GDP each year.³
- Internationally, carbon emissions laws have already been passed in the European Union, Canada, Japan and Russia.

Legislative/Regulatory Risks

- More than 20% of states have enacted regulations to reduce carbon emissions, requiring many electric utility companies to develop complex delivery systems to meet the differing emissions targets.
- The U.S. Environmental Protection Agency requires the 10,000 largest emitters (representing approximately 85% of GHG emissions) to report their emissions data.
- More than 1,000 mayors have joined the U.S. Conference of Mayors’ Climate Protection Agreement, vowing to reduce carbon emissions in their cities below 1990 levels, in line with the Kyoto Protocol.⁴
- In 2010, the Securities and Exchange Commission published “Commission Guidance Regarding Disclosure Related to Climate Change” (Release Nos. 33-9106; 34-61469; FR-82), in which the Commission said, “This interpretive release is intended to remind companies of the obligations under existing federal securities laws and regulations to consider climate change and its consequences as they prepare disclosure documents to be filed with us and provided to investors.”

Opportunities

By implementing energy efficiency measures, companies can immediately realize substantial cost savings and reductions in emissions. Participants in the EPA’s Climate Leaders program report savings of tens — and sometimes hundreds — of millions of dollars through energy efficiency and emissions reduction programs.⁵

Corporate energy efficiency helps electric power companies manage their own emissions. This is an important step, as the electric power sector is responsible for one-third of global GHG emissions. Better efficiency in the production of electric power is a key leverage point to achieve the goal of reducing global emissions.

When examining the risks and opportunities climate change presents, investors can consider whether companies are prepared in the following ways:

- Do the companies have policies that address climate strategies?
- Have they enacted those strategies, or are they prepared to act?
- Are they measuring and disclosing their outcomes?

Likewise, a 2010 report by the Carbon Disclosure Project examined whether carbon management should be elevated to the level of a strategic priority. Two of the report's findings are:

- ***Significant cost savings and potential new revenue streams dispel the carbon cost myth:*** Firms leading on carbon reductions are already experiencing benefits in the form of cost savings through areas such as energy reduction, waste minimization, travel substitution and a lowering of fuel use. In addition, revenue-fueling innovation and marketing benefits open up new revenue streams.
- ***Carbon management must be embedded through the business:*** The impacts of the different market drivers are not solely the responsibility of the sustainability department but are felt across a company: energy costs impact finance; employee expectations demand communication between sustainability and human resource teams; and the inclusion of carbon management in customers' procurement criteria affects sales, marketing and supply chain departments. Individually the different factors related to carbon management are set to grow, but they are also interrelated and interact in many ways...⁶

Water

Water is the world's third largest industry (only oil and electric power are larger). As a utility, it is highly capital-intensive, essential and a finite resource. Less than 3% of the Earth's water is fresh water and, of that, less than 0.5% is accessible for use.

The global economy is critically dependent on water — industries cannot operate without it. Population growth and economic development are driving significant increases in demand for water. However, water is already over-appropriated in many regions of the world, and approximately one-third of the world's population lives in water-stressed countries.⁷ Thus, water is increasingly identified as a strategic business risk. In November 2009, the Carbon Disclosure Project (CDP) launched the CDP Water Disclosure program and in the accompanying report stated, "[i]nvestors need to be concerned about water because it is already impacting companies' operations and costs and it will continue to do so..."

Financial/Competitive Risks

Water resources are affected when economic growth and environmental sustainability are not conducted in concert. For example, the depletion of China's natural capital (including water resources) is estimated to cost the country's economy as much as 12% of GDP annually.⁸

Companies producing water-intensive products may lose market share to less "thirsty" alternatives, especially in areas where consumers have experienced water rate hikes. For example, Coca-Cola and PepsiCo lost their license to operate and were forced to shut down plants in Kerala, India, after local residents protested the large water withdrawals from their already-stressed aquifers.

Business/Financial Risks

In 2010 the U.S. Securities and Exchange Commission acknowledged the impact of water scarcity by saying, “Changes in the availability or quality of water...can have material effects on companies.” This is being borne out with increasing frequency:

- In 2009, water shortages in California devastated the state’s agricultural industry, leading to estimated losses of 21,000 jobs and \$1 billion in revenues.
- During the 2007-2008 drought in Georgia, electric power firm Southern Company was forced to buy \$33 million in fossil fuels to replace lost hydropower generation in Atlanta.
- Newmont mining relinquished access to 3.9 million ounces of gold reserves in Peru after local residents protested the company’s impact on water reserves.⁹

Companies in water-intensive industries (such as agriculture, food and beverage, semiconductor, electric power generation and resource extraction) may be among the first to be affected by water restrictions. However, it is incumbent upon all companies to assess their supply chains for areas that are vulnerable to water scarcity. For example, a drought in the corn belt can materially impact the meat, processed food, pet food, oil and gas, transportation, automotive and retail industries.

Regulatory Risks

Increased water shortages will lead to regulatory caps and/or higher costs for water.¹⁰ Following several years of drought in California, farmers had to choose between reducing production or paying extra money to “opt out” of the state-mandated water supply reductions.

Issues may also arise as water-stressed areas compete for available resources. In several instances, upstream water withdrawal plans have been challenged by downstream jurisdictions. For example, Alabama and Florida successfully sued Georgia over plans to withdraw water from Lake Lanier, which feeds into the Chattahoochee River and supplies water to the lower states.¹¹

Implications for Fixed Income

Municipalities are also impacted as they struggle to maintain aging infrastructures and offset rising costs while delivering affordable services to their customers. Credit rating agencies typically assign a lower credit rating to municipal bonds than to a similar corporate issue, since corporate bonds offer better disclosure of the underlying financials. To be competitive, municipalities may purchase expensive “credit enhancement” insurance. In an attempt to improve its credit rating and reduce the cost of borrowing, Charleston Water (Charleston, S.C.), became the first public water utility in the U.S. to receive ISO 14001 certification for its environmental management system. Partially as a result of providing evidence of substantial, verifiable operational and environmental improvements, the utility was successful in upgrading its bond rating.¹²

In water-stressed areas, investors should carefully examine bond offerings to determine if the municipalities have sufficient ability to mitigate water shortages — for example, through the ability to raise rates, implement conservation measures, or raise additional capital to develop new water delivery systems.

Opportunities

Businesses can undertake several measures to turn many risks into competitive opportunity:

1. Conduct water assessments and adopt a policy that sets out reduction goals.
2. Implement water-efficiency measures in company-owned facilities that encompass both water inputs and water discharges.
3. Consider water availability in the assessment of future operational sites.
4. Examine the supply chain for water risk, and discuss water efficiency measures with suppliers.
5. Publicly disclose the results of the company's initiatives and the accompanying cost or savings.

In order to analyze water risk, investors should examine corporate public disclosure against the above criteria. If necessary, investors should contact the company and request improved disclosure.

Food Safety

A safe and sustainable food supply is critical to the human population. In the United States, agricultural production has shifted from a large network of independent farms to a concentrated system of "factory farms." The industrialized system has vertically integrated the agricultural sector, and companies benefit from the subsequent economies of scale. However, heavy reliance on externalization of environmental liabilities may present long-term business risks.

Livestock

The poultry and swine markets are dominated by a few large, integrated companies. The benefits of this highly-controlled structure include enhanced brand recognition, consistent taste and texture of meat products, and better ability to select for desirable genetic traits.

This structure also concentrates large numbers of animals — and large amounts of animal manure — in geographic clusters. The untreated waste — which contains high levels of nitrogen, phosphorus and possibly *E. coli*, antibiotics residue and other pathogens — is typically stored in waste lagoons or sprayed as fertilizer onto fields. Excessive land application can overwhelm the soil's ability to absorb it naturally, raising the risk that byproducts will leach into wells and create runoff into nearby water sources.¹³

The desire to maximize short-term profits has squeezed thousands of animals into ever-smaller living spaces, increasing the risk of illness that comes with close confinement. A 2007 report by the U.N. Food and Agriculture Organization warned that increasing industrialization of pig and poultry production could lead to a higher risk of disease transmission from animals to humans.¹⁴ The report cites the examples of Nipah, SARS and highly pathogenic avian influenza. After the report was issued, the H1N1 "swine flu" pandemic swept the globe.

To offset the risk of disease that comes with close confinement of animals, low-levels of antibiotics are used as a feed additive. Use of antibiotics in animal feed has been scientifically linked to the rise in antibiotic-resistant bacteria in humans.¹⁵ Bacterial resistance is a significant health concern. According to the Centers for Disease Control and Prevention, more people in the U.S. die from resistant bacterial infections than from AIDS.¹⁶

The non-therapeutic use of antibiotics is facing increasing scrutiny on many fronts:

- Research by Tyson Foods show that 91% of consumers say they prefer antibiotic-free chicken.¹⁷
- More than 300 hospitals have signed the “Healthy Foods Pledge” and are purchasing meat grown without routine use of antibiotics.
- Companies such as McDonalds, Chipotle and Bon Appetit have adopted policies restricting the non-therapeutic use of antibiotics by their suppliers.
- The Preservation of Antibiotics for Medical Treatment Act (PAMTA), which would ban the use of certain antibiotics in animal feed, has more than 100 co-sponsors and has been endorsed by more than 300 public organizations, including the American Medical Association, American Public Health Association, the World Health Association and Johns Hopkins University.
- Outside of the U.S., the practice has been banned in the European Union since 2006 and is often cited by countries such as Russia as the reason meat imports are rejected.

A review of publicly available documents indicates the large meat companies are not prepared for (or have not disclosed) the potential impact a restriction on antibiotics would have on their businesses.

Seed Crops

Genetically modified organisms (GMOs) are organisms whose genetic structures have been altered by the introduction of nonrelated genetic material. This cross-species genetic manipulation is meant to enhance or improve the original organism. For instance, in the case of agricultural products, crops can be genetically modified to improve crop yield, improve taste, increase nutrients, resist traditional pests and/or tolerate the application of herbicides.

GMOs represent an ever-growing segment of all U.S. agricultural production. According to GMO Compass (www.gmo-compass.org), a website funded by the European Union, the U.S. is the world’s largest producer of genetically modified crops. In 2009, genetically modified seeds in the U.S. accounted for:

- 91% of all soybeans
- 85% of all maize
- 88% of all cotton

Supporters of the use of GMOs claim they can help eradicate world hunger, make more efficient use of farm land, reduce pollution hazards and raise nutritional levels. Opponents, however, point out that food containing genetically modified crops has not been adequately tested for safety and may cause as-yet-unknown allergic reactions. In addition, they claim that cross-pollination of crops can contaminate fields planted with heirloom seeds. Indeed, a report by the Union of Concerned Scientists found that “Seeds of traditional varieties of corn, soybeans, and canola are pervasively contaminated with low levels of DNA sequences derived from transgenic varieties.”¹⁸

Incidents have been recorded of GMO crops used improperly. In 2000 StarLink corn was found in more than 300 products even though it was not approved for human use. As a result, the products were recalled, mills closed, and exports were halted. In 2006, GMO varieties of rice contaminated the U.S. rice supply, causing Japan to ban imports and resulting in losses of more than \$1 billion.¹⁹

Concerns also have been raised over the excessive amount of pesticides on crops. While U.S. farmers are trending toward lower-use patterns, growers outside the U.S. continue using older, higher-risk

pesticides. Imported fruits and vegetables account for about one-third of U.S. consumption of these products.

United Methodist Instruction

The Social Principles of the Church state, “All creation is the Lord’s, and we are responsible for the ways in which we use and abuse it.” Resources that are valuable to us — water, air, soil, minerals, etc. — “are to be valued because they are God’s creation and not solely because they are useful to human beings.”

The United Methodist commitment to good environmental stewardship is also supported in *The Book of Resolutions*. Resolution 1023, Environmental Justice for a Sustainable Future, acknowledges that “humankind is destroying the global ecological balance that provides the life-support systems for the planet,” and calls upon our organization to “evaluate its securities on adherence to high standards of environmental accountability...”

The bishops of The United Methodist Church elaborated on the concept of stewardship in a 2009 pastoral letter that called upon all United Methodists to “practice social and environmental holiness” by “caring for God’s people and God’s planet and by challenging those whose policies and practices neglect the poor, exploit the weak, hasten global warming, and produce more weapons.”

Climate Change

In 2008, General Conference added a new section to the Social Principles on global climate stewardship. Resolution 1031 specifically voices support for “mandatory reductions in greenhouse gas emissions...” while calling on United Methodists to “reduce human-related outputs of greenhouse gases” and “educate others outside their church communities on the need to take action on this issue.”

These statements augment long-standing concerns for environmental justice and sustainability. Resolution 1026, Environmental Stewardship, first adopted in 1984, declares, “As stewards of the natural environment we are called to preserve and restore the air, water, and land on which life depends...We must give special attention to the long-term effects of air pollution, such as the depletion of the ozone layer, global warming, and acid rain; we support international and bilateral efforts to eliminate the cause of these problems.”

Water

Resolution 1029, Protection of Water, declares that water “is an integral part of God’s radical expression of God’s love to all humanity. Water cannot be monopolized or privatized. It is to be shared like air, light, and earth. It is God’s elemental provision for survival for all God’s children together on this planet.” Furthermore, United Methodists “shall encourage and commit to good water management by all entities, corporations, and communities” and “push companies that pollute to provide funds and services to clean waters that they pollute.”

Resolution 1026, Environmental Stewardship, affirms “water is a gift from God that needs to be kept clean. We advocate measures that will address polluted runoff...; protection of waters for future generations; wetlands preservation...; the public’s right to know that their water is safe for drinking, swimming, and fishing; and effective enforcement against illegal pollution.”

Food Safety

United Methodists have voiced important concerns about the food we eat. The Social Principles call for “policies that protect the food supply and that ensure the public’s right to know the content of the foods they are eating (§160G).” They support more rigorous inspection of foods, independent testing for chemical residues, clear labeling of processed or altered foods, and no weakening of organic foods

standards. In ¶162Q, the Social Principles affirm support for “a sustainable agricultural system that requires a global evaluation of the impact of agriculture on food and raw material production.” In addition, the Principles “call upon our churches to do all in their power to speak prophetically to the matters of food supply... The concentration of the food supply for the many into the hands of the few raises global questions of justice that cry out for vigilance and action (¶163H).”

Resolution 1026, Environmental Stewardship, recommends “that industry, consumer groups, and governmental agencies aggressively investigate and study the long-range effects of chemicals used for the processing and preservation of food products, since many of these chemicals are harmful to animals and humans.”

Find Out More

If you would like more information on Wespath’s investment products, services and commitment to responsible investment, please contact Derek Casteel at **1-847-866-4100** or via e-mail at investmentinfo@wespath.com.

-
- ¹“Universal Ownership: Why Environmental Externalities Matter to Institutional Investors,” p. 4, PRI Association and UNEP Finance Initiative, October 2010. http://www.unepfi.org/fileadmin/documents/universal_ownership.pdf.
 - ²GS Sustain, Change is Coming: A Framework for Climate Change — A Defining Issue of the 21st Century, May 21, 2009, p. 1.
 - ³The Economics of Climate Change: The Stern Review, Nicholas Stern, Cambridge University Press, 2007.
 - ⁴<http://www.usmayors.org/climateprotection/revise/>.
 - ⁵<http://www.epa.gov/climateleaders/casestudies/index.html>.
 - ⁶The Carbon Management Strategic Priority, Carbon Disclosure Project, 2010, p. 3.
 - ⁷“Water Scarcity & Climate Change: Growing Risks for Business & Investors” p. 4-5, Ceres, 2009.
 - ⁸*The Corporate Examiner*, Vol 36, No. 8-10. Liquid Assets: Responsible Investment in Water Services, p. 20. Published by Interfaith Center on Corporate Responsibility, New York, NY. 2009.
 - ⁹Ceres, Murky Waters: Corporate Reporting on Water Risk, February 2010, p.7.
 - ¹⁰“Water Scarcity & Climate Change: Growing Risks for Businesses & Investors,” p. 15, Ceres, 2009.
 - ¹¹Ibid, p. 16.
 - ¹²*The Corporate Examiner*, Vol 36, No. 8-10. Liquid Assets: Responsible Investment in Water Services, p. 34. Published by Interfaith Center on Corporate Responsibility, New York, NY. 2009.
 - ¹³Duhigg, C. “Health Ills Abound as Farm Runoff Fouls Wells,” *New York Times*, 17 September 2009. <http://www.nytimes.com/2009/09/18/us/18dairy.html?scp=1&sq=farm%20runoff%20fouls%20wells&st=cse>. See Hodne, C.J. Concentrating on Clean Water: The Challenge of Concentrated Animal Feeding Operations, The Iowa Policy Project, 2005.
 - ¹⁴J. Otte, D. Roland-Holst, D. Pfeiffer, R. Soares-Magalhaes, J. Rushton, J. Graham, E. Silbergeld. Industrial Livestock Production and Global Health Risks, Food and Agricultural Organization of the United Nations, June 2007.
 - ¹⁵Testimony of Dr. Joshua Sharfstein, Principal Deputy Commissioner of Food and Drugs of the Food and Drug Administration, before the Committee on Rules of the House of Representatives held a hearing on H.R. 1549, 13 July 2009, www.rules.house.gov/111/oj/hr5419/statements/sharfstein. See, also, Testimony of Dr. Margaret Mellon, www.rules.house.gov/111/oj/hr5419/statements/mellon; and Robert Martin’ www.rules.house.gov/111/oj/hr5419/statements/martin.
 - ¹⁶Boyles, Salyann. More US Deaths from MRSA than AIDS, *WebMD Health News*, October 16, 2007.
 - ¹⁷“Tyson Goes Antibiotic-Free”, Matthew Enis. June, 20, 2007, found at http://supermarketnews.com/fresh_market/tyson_antibiotic_free/
 - ¹⁸“Gone to Seed: Transgenic Contaminants in the Traditional Seed Supply” Union of Concerned Scientists, 2004.
 - ¹⁹Madill, Gillian and Illuminato, Ian. “GMO Crops: A Growing Concern,” *Business Week*, December 2007, as found at http://www.businessweek.com/debateroom/archives/2007/12/gmo_crops_a_growing_concern.html



1901 Chestnut Avenue
Glenview, Illinois 60025
1-847-866-4100
wespath.com