

Environmental Drivers & Shareholder Value



The underlying thesis of the Socially Aware Investment discipline is that societal trends around globalization, cross-border investing, privatization, technology and natural resource management are increasingly taking on strategic importance to business. Consequently, how a company integrates these issues into its operations can impact its competitive opportunities and growth possibilities — thereby affecting its risk/reward profile. Toward this end, we believe that the methods companies use to integrate these trends into their operations can provide insight into competitive position and potential for growth.

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This white paper examines the potential implications of environmental trends on a company's current and future investment outlook. It draws on our own research and analysis, as well as our participation in a series of dialogues convened over the past several years by the Global Environmental Management Initiative, Global Reporting Initiative, Ceres, the World Business Council for Sustainable Development, and others.¹

The convergence

Historically, most corporate and financial analysts have viewed environmental issues in the context of compliance costs and legal liabilities that detrimentally affect a company's bottom line. In fact, empirical data suggest that environmental factors have had a limited impact on investment decisions, even in the natural resources and manufacturing sectors.²

Recent events in the global economy, however, suggest that environmental issues are becoming more important with regard to economic development, trade, and worldwide demand for goods and services. Among the factors driving this change are:

- A growing political consensus that action is warranted to address the problems of global warming and climate change.
- Increasing world population, growing rates of prosperity and consumption among some segments of society, and the associated demand for goods and services.
- Public concerns about air quality, water scarcity, and other quality-of-life factors are being tackled by governments through increasingly tougher health standards.
- Escalating demand for closed-loop, zero-impact processes and technologies, as opposed to the use of end-of-pipe controls.
- Increasing use of market mechanisms to supplement or replace command-and-control regulations.
- Expanding demands on a limited natural resource base, and the resulting pressure to improve resource productivity.

- Better and more widely available information on the environmental and social impact of development.
- The rapid increases of productivity and major advances in information technology.

We believe these trends will affect virtually every aspect of local, regional, and global economies — and change how companies conduct business. Already, these trends are transforming environmental issues from relatively minor factors in corporate decision making to those that are integral to remaining competitive in the 21st century. Failure to anticipate and integrate these trends in business planning and strategy could put a company's entire economic model — and investment outlook — at risk.

We believe that incorporating an environmental overlay in our investment process enhances our fundamental analysis and improves our ability to identify those companies that are likely to derive strategic value from their environmental "market intelligence." A growing body of evidence in business literature appears to support our premise.³

Risk reduction opportunities

The initial step in our investment process is to determine a company's investment risk, which is based on historical balance sheet data, earnings predictability, and stock price volatility. Understanding a company's risk profile is a critical first step in the investment process, since it determines what we should expect as an appropriate return on our investment.

¹ Global Environmental Management Initiative (GEMI), *Clear Advantage: Building Shareholder Value*, Washington, DC, 2004. • Investor Meeting held by Smith Barney Asset Management, Global Reporting Initiative (GRI) Secretariat, NY, NY, 2004. • Coalition for Environmentally Responsible Economies (CERES), Dialogue Group, CERES Annual Conference, Boston, MA, 2004. • World Business Council for Sustainable Development/UNEP FI event in NYC, March 2005.

² Merrill Lynch and World Resources Institute, "Energy Security and Climate Change: Investing in the Clean Car Revolution," 2005. • Austin, Duncan, and Amanda Sauer, "Changing Oil: Emerging Environmental Risks and Shareholder Value in the Oil and Gas Industry," World Resources Institute, June 2002.

³ Derwall, Jeroen, Nadja Guenster, Rob Bauer, and Kees Koedijk, "The Eco-Efficiency Premium Puzzle," *Financial Analysts Journal*, March/April 2005. • See note 1 above. • Goldman Sachs, "Introducing the Goldman Sachs Energy Environmental and Social Index," December 2004.

In some situations, particularly in the value sectors of the economy (e.g., autos, chemicals, energy, etc.) of a company's approach to environmental factors can have a direct bearing on one or more of these risk factors, and either exacerbate or diminish its overall risk as an investment. For example, nearly 90% of oil and gas industry analysts responded in a survey that company performance in regulatory compliance, employe health and safety, community service and lawsuits impact the value of a firm.⁴ Some of the specific ways this can occur are summarized below:


- How a company incorporates environmental, health and safety impacts associated with product use, misuse, and disposal into product design could affect its potential liability costs, which in turn could affect its creditworthiness and balance sheet.
- How thoroughly a company identifies and analyzes potential environmental liabilities associated with mergers & acquisitions affects the uncertainty of future litigation as well as the level of capital expenditures and operating costs required to meet existing and anticipated laws which can affect the balance sheet.
- How successfully a company reduces business disruptions arising from accidents and spills not only affects its environmental, health and safety compliance costs, but also determines the sustainability of its operating license.
- How a company responds to product tampering or accidental chemical releases can affect its image, reputation and investor sentiment, which, in turn, can influence its stock price volatility.

Increasing awareness of the value in environmental risk management is demonstrated by the growth of the Carbon Disclosure Project, which recently issued its fifth iteration, known as CDP5. The annual report provides an analysis of the commercial risks and opportunities that climate change presents to companies globally. Companies participating in the project share information on regulatory trends, changes

in physical environment and consumer sentiment. The project's main goal is to track companywide global greenhouse gas emissions and the steps taken to manage and reduce emissions. This year's project questionnaire generated the highest response rate to date, with 76% of FT Global 500 (footnote: the FT Global 500 comprises the largest 500 companies globally, ranked by market capitalization.) companies and a total of 1,300 corporations took part in the CDP5 survey, compared with 45% of FT Global 500 companies and 235 corporations total in the first survey in 2002.

The value creation potential

Research conducted in recent years suggests that integrating environmental considerations across a company's business proposition can enhance its



It is now widely accepted that human activity is largely responsible for changes to the world's climate patterns. Changing rainfall patterns, for instance, appear to be causing increasing desertification and crop failures, while rising sea temperatures seem to have led to a bleaching of coral reefs.⁶

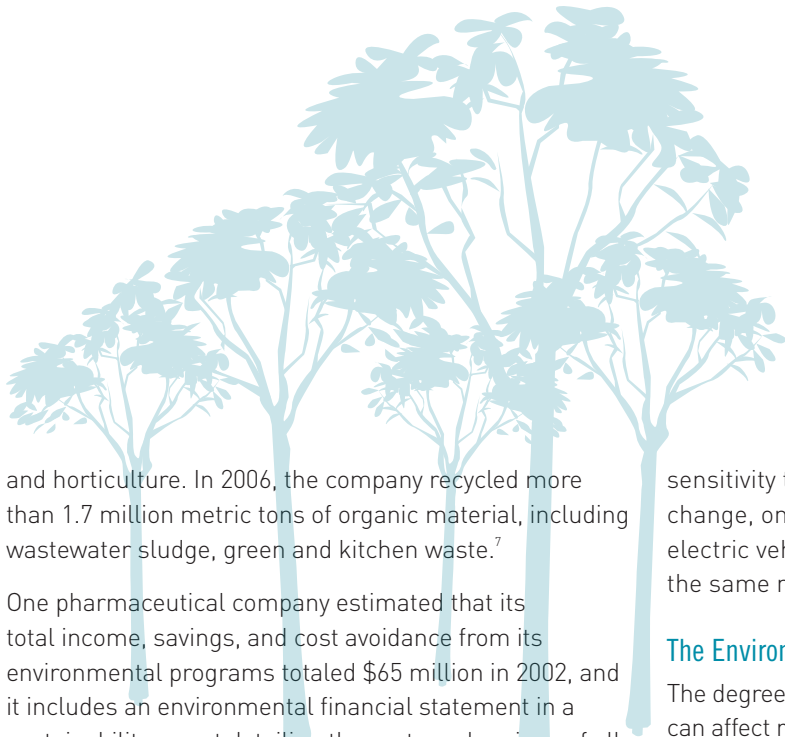
return potential through improvements to the bottom line and the top line.⁵

Environmental initiatives — whether designed to lower energy consumption, reduce waste, or lower the rate of input use — can help drive process changes that improve efficiency, resulting in higher margins and potentially higher return on investment. For example, one company specializes in recycling organic waste materials for agriculture, land restoration, forestry

⁴ See footnote 1.

⁵ Benson, Karen L., Timothy J. Brailsford, Jacquelyn E. Humphrey. "Do Socially Responsible Fund Managers Really Invest Differently?" Working Paper, University of Queensland Business School, May 2005. • Innovest Strategic Value Advisors, "New Alpha Source for Asset Managers: Environmentally Enhanced Investment Portfolios." New York: Innovest Strategic Value Advisors, April 2003.

⁶ Earthwatch Institute, The World Conservation Union, World Business Council for Sustainable Development, World Resources Institute. "Business and Ecosystems." November 2006.



and horticulture. In 2006, the company recycled more than 1.7 million metric tons of organic material, including wastewater sludge, green and kitchen waste.⁷

One pharmaceutical company estimated that its total income, savings, and cost avoidance from its environmental programs totaled \$65 million in 2002, and it includes an environmental financial statement in a sustainability report detailing the costs and savings of all its environmental initiatives.⁸ In 2006, a major chemicals company partnered with the U.S. Business Council for Sustainable Development to find ways to reuse non-chlorinated wastes (estimated to reuse 50 million pounds per year), identify opportunities in by-product synergies with an estimated potential savings of \$15 million per year, and reduce carbon dioxide (CO₂) emissions by 108 million pounds per year.⁹

Incorporating environmental factors into product design from the outset, in some situations, can lead to product and quality enhancements, that increase competitive advantage. Along these lines, a major high technology company used thin-wall plastic design to conserve material and make products lighter for transport, resulting in cost savings for the company. The company's product recovery and recycling program has been economically self-sufficient for a number of years.¹⁰

A keen understanding of environmental trends — whether driven by shifting consumer attitudes, changing societal expectations, or new public policy directions — can help a company protect its competitive position, differentiate its products, and gain a “first-mover” advantage in new markets. Responding to consumer

sensitivity to rising fuel costs and awareness of climate change, one major auto manufacturer's sales of hybrid-electric vehicles nearly tripled in April 2005 compared to the same month of the prior year.¹¹

The Environment/Investment Integration

The degree to which environmental management strategies can affect risk, return potential and ultimately, financial performance, has been a subject of considerable debate. However, incorporating these trends into our analysis, we believe, adds a new dimension to the valuation process that most investment advisers neglect.

Moreover, our experience suggests that our unique, integrated approach to financial analysis gives us a competitive edge when identifying top-quality corporate managements that are better positioned to create value in their companies and maintain leading positions in their industries. Our research is consistent with the results of numerous industry and trade studies indicating that companies with better environmental performance often have higher returns on investment compared with their competitors.¹² We focus on the concept of corporate eco-efficiency, a concept that reflects the environmental governance of the firm beyond that which is indicated by elementary environmental compliance and pollution control policies. Broadly, we can define eco-efficiency as creating more value with fewer environmental resources resulting in less environmental impact (for example, less pollution or natural resource exhaustion).¹³

This concept assumes that the more efficient a company's operations are with regard to resource usage, production and output, the greater the positive impact in terms of environmental stewardship, corporate citizenship and ultimately its potential economic value.

⁷ Griffiths, James. “Business, Biodiversity and Climate Change.” World Business Council for Sustainable Development. May 2007.

⁸ “Tackling the Critical Conundrum: How do Business, Government, and Media Balance Economic Growth and a Healthy Environment?” Frank Loy and Christine Todd Whitman for the Aspen Institute, 2004.

⁹ “World Business Council for Sustainable Development. “Case Study: Dow Chemical Company; By-Product Synergy = Energy Efficiency.” November 2006.

¹⁰ <http://www.sun.com/aboutsun/ehs/ehs-design.html>

¹¹ http://www.consumeraffairs.com/news04/2005/auto_sales.html (2005).

¹² Goldman Sachs. “Introducing the Goldman Sachs Energy Environmental and Social Index.” December 2003. See Footnote 1.

¹³ Guenster, Nadja, Jeroen Derwall, Rob Bauer and Kees Koedijk. “The Economic Value of Corporate Eco-Efficiency.” Working Paper, Erasmus University, July 25, 2005.

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