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"Engineering for the Environment"™

FAX COVER SHEET

DATE: 5 June 00 PROJECT NO.:

TO: Roger Ballentine / Jeff Seabright

COMPANY NAME: EOP - CCTF

FAX NUMBER: 202-456-1736

NO. OF PAGES: 3
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FROM: Kevin Hansen

MESSAGE:

Environmental Empowerment Foundation

June 5th, 2000

Mr. Roger S. Ballentine
Deputy Assistant to the President for Environmental Initiatives
The White House
1600 Pennsylvania Avenue
Washington, D.C.

Subject: Financial community incentives for environmentally sustainable business

Dear Roger:

Thank you for the opportunity to speak with you at the Globe 2000 Conference in Vancouver, BC this March. One of the most encouraging aspects of this conference was the emergence of evidence that environmentally sustainable business is also highly profitable. One of the keys to identifying environmentally sustainable businesses is the use of "sustainability metrics." Sustainability metrics techniques form an important bridge by linking business performance with environmental effects, and have emerged rapidly with increasing knowledge about the business costs of environmental effects.

The accurate measurement of environmental sustainability allows the financial/investment community and business managers to encourage environmentally sustainable practices *because those businesses are more profitable.* Illustrative of this fact, several of the key presentations at Globe 2000 provided evidence that showed superior business profitability results from environmentally sustainable business practices. *Importantly, persuasive evidence shows that environmentally sustainable business practices could also identify good general business management.*

The Environmental Empowerment Foundation believes that this approach could be more powerful than regulatory control of business because it would be "self-policing." A self-motivated approach towards environmentally sustainable business practices, originating within the business and financial communities, would result in enormous benefits for both business and the environment.

Good measurement is fundamental to good management. Business leaders are constantly seeking better measurement tools for their own organizations to ensure better management. Repeatedly during the conference, executive officers sought methods to include environmentally sustainable business practices in their organizations. They were unaware, however, of good models for business sustainability. Additionally, they could not measure whether sustainable business practices were working. The wide range of ways currently used to evaluate business sustainability does not yet provide an adequate basis of comparison. Thus, it fails to provide a consistent basis for comparison that is essential.

Environmental Empowerment Foundation

Therefore, we suggest that a conference be held in to develop a common basis for measuring environmental sustainability. Government often brings together industry interests to develop common standards for the benefit of the entire sector. We suggest that the importance of environmental sustainability metrics is great; the opportunity is available; the technology has advanced sufficiently to create these metrics tools, and the benefits would be substantial for many interested parties.

The analogy we suggest is to the "Generally Accepted Accounting Practices" (GAAP) standards now used in the financial accounting field. The GAAP standards were developed to meet specific needs, such as comparability between business annual reports that was identified as a need following the Great Depression. Just as GAAP were developed to meet specific accounting needs and bring uniformity to the accounting world, uniform sustainability metrics would meet the urgent need for businesses to understand environmental sustainability more clearly. We now face a similar urgent need for businesses to understand environmental sustainability more clearly.

The development of metrics for environmental sustainability would have numerous benefits, including:

- **For business:** Managers/CEOs will have specific knowledge to shape business practices towards sustainability, including both profitability and environmental sustainability.

- **For capital markets:** Lenders/investors would be able to compare businesses and invest in those that are profitable and sustainable.

- **For political leaders:** Pro-business/pro-environment is a centrist position that can be cast as a benefit to both conservative business leaders and liberal environmental leaders.

- **For the environment:** Positive, environmentally sustainable business practices are at the heart of reversing negative environmental trends.

The Environmental Empowerment Foundation proposes that the conference be held under the sponsorship of the White House to bring together leaders with a strong common interest in developing environmental sustainability metrics:

- Business executive officers
- Financial/investment community leaders
- Environmental sustainability leaders
- Financial/economic analysts
- Scientific/research community leaders
- Accounting analysts
- Information/communications experts

Cover Letter for Sust Metrics.doc

Environmental Empowerment Foundation

Dr. Matthew Kiernan, a leading thinker in the area of sustainability metrics for the financial/investment community, has already identified key participants in such a conference, and the Foundation strongly supports his initiative. The Environmental Empowerment Foundation will work with Dr. Kiernan to assemble the conference with assistance and coordination through Jeff Seabright of your office. Jointly, we will develop an agenda for the conference. We anticipate a working group of 20 to 40 key individuals, which would serve to develop specific projects, related to sustainability metrics.

We look forward to discussing with you this opportunity in the near future. For further information about the Environmental Empowerment Foundation please visit our Website at http://www.betterearth.org. You may contact me by e-mail at khansen@betterearth.org, or by telephone at 610.558.3300, x158.

Very Truly Yours,
Environmental Empowerment Foundation

Kevin Hansen, P.G.
Executive Director

Cc: Dr. Matthew Kiernan
Dr. Martin Whittaker
Chiang Tai, EEF
Paul Osimo, EEF
Jeffrey Hallett, EEF

Cover Letter for Sust Metrics.doc

Climate + Finance 5/11

- one level message is highlighting that sustainable/environmentally good co's are doing well
  - "sustainability index"
- next level is evaluating them in the first place according to new metrics.
- Financial Accounting Standards Board
  - set standards
- European "Green Label" program
  - model
- could also focus on nascent carbon markets and highlight them.
- Commerce Dept. - Baldridge Awards
  - analogy.
- How about climate-friendly "labelling" of companies.
- TRI Model
  - make greenhouse gas emissions inventory publicly available
- Find out what we already have on info
  - EPA
  - DOE

Seabrook's Paper

Finance and Climate Change

Summary: Wall Street can and should play a larger role today in mainstreaming carbon risks and benefits in asset valuation, which would in turn accelerate corporate commitments to become more climate friendly. A high-level dialogue with senior policy makers could help achieve this goal.

White House climate change outreach efforts to date have focussed almost exclusively on manufacturing and basic industry, utilities and technology developers. We have not aggressively engaged with the financial sector, which arguably has the greatest potential to leverage change. Capital markets are the "financial oxygen" on which companies depend for debt and equity financing, and are therefore effective tools to both punish and reward corporate behavior.

Over the last decade, institutional investors increasingly have recognized the linkage between environmental performance and financial performance. Inclusion of environmental concerns as contingent liabilities on balance sheets is now common practice, but has not extended to carbon dioxide and other greenhouse gasses. The recently released "Dow Jones Group Sustainability Index", which tracks environmentally responsible companies which consistently outperform their peers globally, is another confirmation of this enviro-finance link.

The one aspect of climate that has captured limited attention is the nascent carbon reduction and offset market. PriceWaterhouse Coopers recently created a group focussed exclusively on carbon trade issues. In addition, two of the largest Wall Street firms, Cantor Fitzgerald and Tullett & Tokyo Liberty have taken major initiatives into carbon trading. Howard Cantor is personally engaged in his company's new carbon desk and the global currency and bond broker Tullett & Tokyo Liberty has recently purchased Natsource which has an active emissions brokerage to gain a foothold in this nascent carbon market.

Although climate change is likely to have a greater impact on the U.S. business community and financial markets than other environmental issues in the decades ahead, Wall Street has not yet "mainstreamed" the issue, due largely to lack of information about the potential impacts of a carbon-constrained world. Other countries, however, are moving ahead: Germany, Switzerland and Australia have legislation pending that would require companies to include carbon reporting in their annual reports. In the UK, imminent greenhouse gas emissions legislation has prompted European investment banks to convene recent roundtable sessions with greenhouse gas market experts in order to begin the process of addressing these issues.

Companies that own large and growing stationary sources of greenhouse gas emissions arguably carry a carbon "liability"– a fact that should be incorporated in any calculation of net present value. Similarly, companies that have progressive emissions management strategies may be more richly rewarded in a carbon-constrained world and their value should reflect that in some measure. There are clearly risks and opportunities to the future revenue streams of companies but the impact of greenhouse gas emission constraints is not yet formally legislated and therefore not easily quantified. The potential impact of the issue has not come to the attention of many Wall Street senior managers this has impeded the development of the relevant risk management tools. However, there is now a widespread recognition that some form of carbon regime will likely take effect over the next twenty years.

As Mark Moody-Stuart, CEO of Shell, has stated:

> "Applying a rough estimate for future carbon prices to new long term investments, despite all the inherent uncertainties, seems to me an imminently more sensible way to manage the risk and win competitive advantage, than continuing to assume, as we have historically done, that the costs of emitting carbon will remain or return to zero."

To help broaden and deepen Wall Street's understanding of climate change and its impact on their industry, it may be useful to convene a trilateral dialogue among policymakers in the Administration, financial leaders and business leaders. The meeting would focus on "best practices" of successful companies, assessment of carbon liabilities, potential for carbon assets and profits from trading, the need for common disclosure and accounting approaches to carbon, and the potential for a corporate-led initiative to "value" carbon in trade and investment. Some major players on Wall Street have demonstrated environmental credentials and could be looked to for leadership, e.g. John Hill Wilson (Managing partner at Morgan Stanley and ED Board member); John Rosenwald (Vice Chairman, Bear Stearns also on ED Board); Hank Paulon (CEO Goldman Sachs is on TNC Board) etc.

From the Administration perspective, the optimal outcome of such an event would be a commitment by several "blue chip" companies to work towards a common approach to including carbon liabilities, premised on the assumption that some form of global carbon regime will emerge. The signal sent by such a move by major financial houses would significantly accelerate corporate commitments to address climate change.

Natsource on the Financial Markets and Climate Change

Business increasingly recognizes that whatever the fate of international negotiations on the Kyoto Protocol, growing scientific consensus about the occurrence of anthropogenic climate change will inevitably result in some form of greenhouse gas (GHG) emissions restrictions. Prudent business managers need to consider what preparations are necessary to thrive in a "carbon-constrained" future business environment. The financial sector, as an engine of economic growth and development, has unique role to play in preparing companies for this environment. Now is an appropriate time for financial leaders on Wall Street to consider exactly what this role might be.

Natsource has been actively involved in the development of the evolving risk-management-driven GHG reductions market. Consequently, we have a strong understanding of the associated risks and opportunities facing companies. In view of this experience, Natsource recently was invited to present to a roundtable session of investment banks in London to discuss the role of the financial sector in GHG markets. We would be delighted to share these views with colleagues on Wall Street.

There are several relevant issues, which could be further discussed in our meeting. A few of the most important topics are:

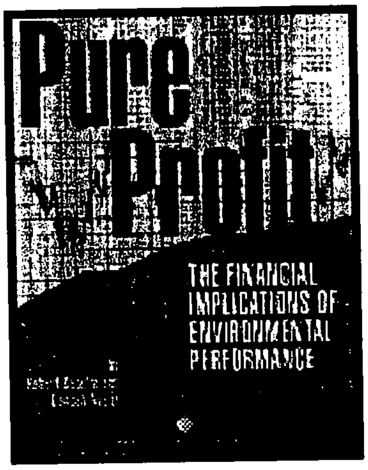
- **Equity price valuation:** From an equity analyst's point of view, questions are likely to focus on how a company's future revenue flows will be affected by emissions restrictions and markets for emissions permits. At a general level, there is a sense that fuel producers such as oil and gas companies may face net costs, while more environmentally benign companies may earn net revenues under regulated carbon constraints. But there is a need for more sophisticated analysis. Under most proposed GHG regulation energy companies will not be liable for the carbon embedded in the fuels they produce, but rather for the actual GHG emissions that result directly from their business activities. As an asset class, sellers of high carbon fuels may encounter slackening demand growth as consumers shift to ever more price-competitive low-carbon fuels. This may lead to absolute revenue loss within a sector. But how might a company perform relative to competitors within its sector? For example if an oil company effectively manages its direct emission exposure and diversifies its business activities away from high-carbon fuels, should this company's equity valuation reflect this strong potential for revenues? How should this be quantified? Answers to these questions require an understanding of the GHG market, allowance pricing, and GHG risk management.

- **Accounting:** As legislation to restrict GHG emissions advances at various levels of government, and as markets for emissions permits originate and mature, accurate accounting practice will necessitate that companies report their GHG-related assets and liabilities. Wall Street leaders should contribute their input on the nature of relevant standards and methodologies to the Federal Accounting Standards Board.

- **Lending/project finance:** Companies use capital markets to finance new investments. The willingness of investors to lend on favorable terms depends on investments' risk and expected rate of return. The establishment of GHG emission constraints changes traditional calculations of rates of return. For example, investment in a coal-fired plant may be much less attractive in the future as emissions restrictions impose increasing costs. Conversely, a wind power development may not have been attractive to investors in the past, but the prospect of an additional and substantial stream of revenue from associated GHG credits might make the project competitive. In addition, the GHG market can be a source of up-front project finance through the forward sale of embedded emission reductions, thus reducing the initial capital requirements of climate-friendly projects. Investment banks will need to amend lending and project finance criteria to account for these changes in valuation, and the types of business activities that receive finance will change accordingly.

- **Trading:** Companies facing GHG emissions restrictions will need to develop strategies for compliance, hedging risk, and exploiting opportunities. These strategies will include a mix of internal emissions abatement measures and participation in markets for emissions permits and derivatives. But many industries that may be affected by GHG restrictions have little trading experience or little capacity to operate in sophisticated markets. Trading may not be their core activity, and companies may find it advantageous to outsource their trading requirements to specialized traders with the technical capacity and expertise to manage positions effectively and reliably. There is precedent in power markets for investment banks to trade the positions of generation companies in return for guaranteed minimum rates of return. Of course, investment banks will use liquid GHG market to trade for their own account.

PURE PROFIT: THE FINANCIAL IMPLICATIONS OF ENVIRONMENTAL PERFORMANCE



ROBERT REPETTO

DUNCAN AUSTIN

WORLD RESOURCES INSTITUTE
WASHINGTON, DC
2000

EXECUTIVE SUMMARY

This report demonstrates how environmental issues can successfully be integrated into financial analysis. It explains a newly developed methodology derived from fundamental principles of financial analysis and demonstrates the approach by applying it empirically to companies in the U.S. pulp and paper industry. The results show clearly that companies within this industry face environmental risks that are of material significance and that vary widely in magnitude from firm to firm. These risks are not evident in companies' financial statements nor are they likely to be incorporated in current market valuations.

The methodology is consistent with the framework used by analysts to evaluate conventional business risks and opportunities, and avoids some of the limitations of other approaches currently used to relate environmental and financial performance. The approach is forward-looking and scenario-based, recognizing that financial markets are concerned more with the future than with the past. It deals explicitly with uncertainties regarding future environmental policies and other environmental pressures on the firm, rather than merely assessing past and present levels of environmental performance. It uses standard techniques of financial analysis to derive measures of expected environmental impacts on share values and financial measures of environmental risk. It focuses on those environmental issues deemed most important by industry experts and not simply those for which data are readily available.

This tool will be of interest to professionals in both investment and corporate communities. Investors can use it to integrate environmental risks more fully into financial analysis in evaluating potential mergers and acquisitions, in securities analysis and portfolio building, in credit rating, and in insurance underwriting. Environmental managers can use it to quantify their environmental exposures and risks; to benchmark their companies (or facilities) against rivals; to identify which investments in environmental control would do most to reduce their outstanding environmental risks; and to move beyond compliance-based environmental actions toward a more forward-looking and strategic approach. Managers and CFOs could use it to gauge how much it would be worth spending in self-insurance to eliminate environmental risks, or as part of a strategic management system emphasizing real options.

APPLYING THE METHODOLOGY

We have tested the methodology by applying it to 13 companies in the U.S. pulp and paper industry. In this industry, environmental developments will significantly affect future materials and energy costs, earnings, and balance sheets. This industry:

- depends on forest harvests and recycled paper for its raw materials;
- is one of the most energy-intensive of all industries;
- emits a wide range of toxic and conventional pollutants to air, water, and land;
- is one of the largest contributors to the solid waste stream;
- is identified in the public mind with pollution and resource degradation;

- is subject to an enormous range of environmental and natural resource regulation and litigation; and
- must allocate significant portions of investment and operating outlays to environmental control programs.

To an extent equaled by few others, the environment can significantly affect the financial results of companies in the pulp and paper industry.

Mainly as a result of decisions taken in years past for broader business reasons, companies have positioned themselves differently with respect to pending environmental issues. *Where* mills and forestlands are located, *what* products they turn out, and *what* technologies are imbedded in the capital stock are historical factors that largely determine companies' exposure to impending environmental issues. The legacy of past decisions makes some firms vulnerable to certain issues and others virtually immune.

The steps in the methodology are

a. identifying salient future issues;

b. building scenarios around each;

c. assigning probabilities to scenarios;

d. assessing company exposures to these issues;

e. estimating financial impacts contingent on scenarios; and

f. constructing overall measures of expected impact and risk.

Steps (a) to (c) were undertaken with the assistance of industry representatives as well as outside experts to ensure that priority industry issues were identified. Information was collected on impending air and water quality regulations, fiber supply issues, and climate change issues. Scenarios were generated reflecting possible developments in these areas and probabilities assigned to each.

In step (d), firm-by-firm information was collected on the priority issues. Information was compiled from publicly available sources, including annual reports, Securities and Exchange Commission (SEC) filings, and other releases by the companies themselves; news reports; pulp and paper industry directories; and Environmental Protection Agency (EPA) public data files on facility-by-facility environmental performance.

In step (e), the companies' exposures to the various environmental scenarios were translated into financial impacts. For each company and each scenario, the financial impacts on revenues, production costs, investment spending, and the value of owned assets were estimated individually for all years of the forecast period, then reduced to discounted present values using an estimate of the weighted average cost of capital. These present values were then added to obtain a net financial impact for the scenario and the company in question. The financial impact was then expressed as a percentage of a company's current market valuation.

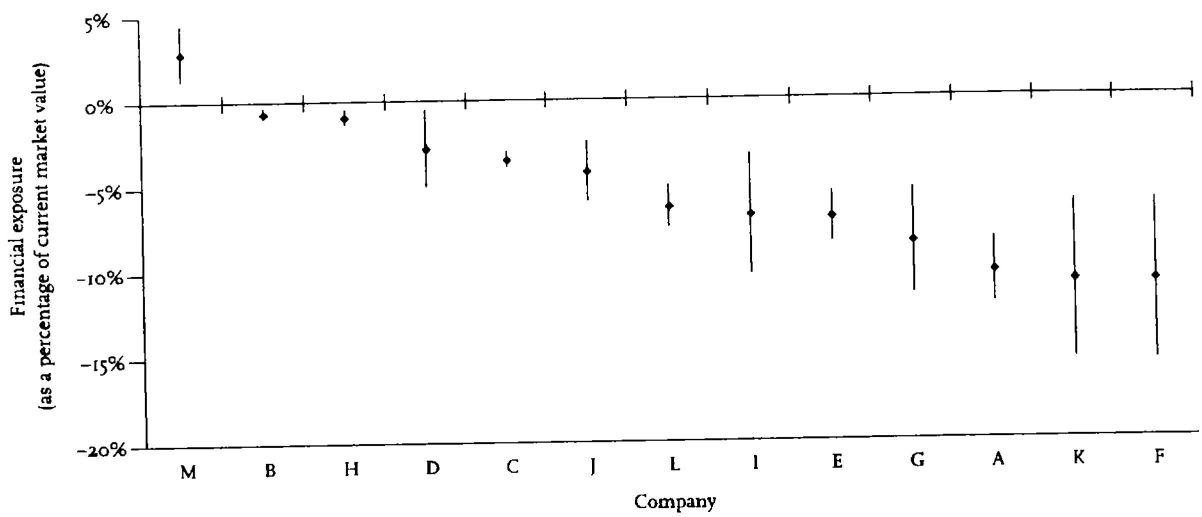
In step (f), the financial impacts of individual scenarios were aggregated for each company with probability weightings to arrive at overall measures of exposure and risk for the range of environmental issues examined.

RESULTS AND CONCLUSIONS

The scenarios outlined in this report would have substantially different financial implications across companies. For some firms, should a particular scenario come to pass, the financial impact would be significant; for others, the impact would be insignificant or even opposite in direction.

Such differences are clear when summary statistics for all the companies in the study are arrayed together. (*See Figure A.*) The most likely outcome for each company is represented by a dot, indicating the expected impact on its share value of impending environmental issues. A few companies can reasonably expect an insignificantly small positive or negative effect—less than three percent one way or the other. At the other extreme, three companies could, at this point, expect quite a significant negative impact—greater than 10 percent of their total market value. The others face a most likely impact of between 4 and 8 percent of share value.

FIGURE A. FINANCIAL EXPOSURE TO PENDING ENVIRONMENTAL ISSUES OF 13 U.S. PULP AND PAPER COMPANIES



The range of potential outcomes also varies greatly from one company to another. The variance of impacts, as a measure of financial risk arising from exposure to these environmental issues, is less than 1 percent of share value for three companies in the group. At the other extreme, it is greater than 9 percent of share value for two other companies. The former group is effectively hedged against environmental risk, in the sense that its future earnings will not be highly sensitive to the outcome of the issues it faces. The latter companies are greatly at risk; their earnings will depend heavily on the way these issues develop.

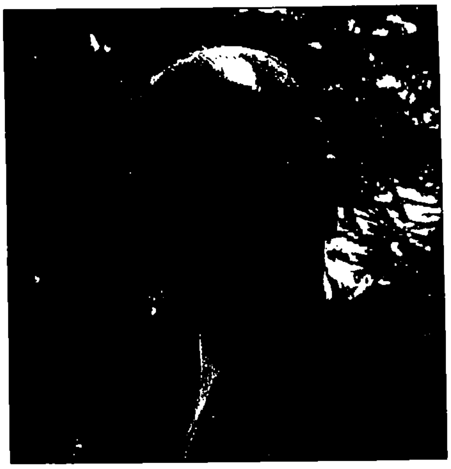
Of course, the figures reflect current expectations of the magnitude of environmental issues and their likely occurrence, both of which are subject to change over time. Company value on environmental issues will be continually evolving, just as company values are continually adjusted on the stock market. This tool provides a way to relate a firm's environmental performance decisions to its value and risk to shareholders.

The information on environmental exposures and risks in this paper goes substantially beyond what companies report in their financial statements. Companies tend to report only on capital costs to be incurred to comply with environmental standards and regulations that have already been issued in final form and on remediation costs for which the company has already been implicated through EPA action. In our group of 13 companies, only three mentioned in their most recent annual financial report *any* of the environmental issues analyzed here. All three of those companies offered only qualitative discussion.

Companies also assume that regulations will affect other firms in the industry equally. Several companies offered statements to the effect that "[the company] does not anticipate that compliance with [environmental] statutes and regulations will have a material adverse affect on its competitive position since its competitors are subject to the same statutes and regulations to a relatively similar degree." The results in this paper demonstrate that such statements are erroneous and potentially misleading. The same environmental standards are likely to have quite different impacts across companies in the industry.

Financial analysts could gain additional insights into companies by using the approach outlined here. However, to do so will require a greater flow of company-specific information than is currently available. The EPA, the SEC, and the companies themselves could all help in this regard.

The convergence of environmental and capital markets

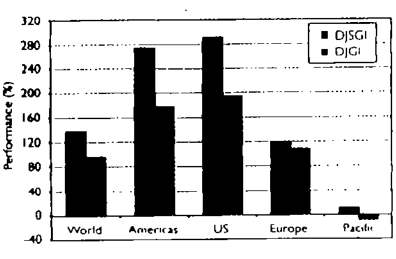


We are delighted to introduce the first of a monthly series of articles by Richard Sandor exploring the growing use of capital markets products to solve environmental problems.

Few people are better placed to comment on this important trend. Best known as "the Father of Financial Futures" for his pioneering work on interest rate futures contracts, Dr Sandor is currently chairman and chief executive of Environmental Financial Products, a Chicago-based company [illegible] tools for the environmental, financial and commodity markets. He is also a senior advisor to PricewaterhouseCoopers on greenhouse gas emissions trading; an expert advisor to the United Nations Conference on Trade and Development on tradeable permits for greenhouse gases; a director of Zurich-based investment and risk management company Sustainable Performance Group; a principal of SAM Sustainability Group and a member of the board of Dow Jones Sustainability Group Indexes GmbH.

During several years' work with the Chicago Board of Trade, he was instrumental in developing the exchange's annual auction of sulphur dioxide allowances and its options and futures contracts for catastrophe insurance.

Dow Jones Sustainability Group Index: five-year performance
(Jan 1, 1994–Jun 30, 1999, US dollar, price index)



Two facets of the convergence of environmental and capital markets became visible in September 1999 as final preparations were being made for the COP 5 climate change meetings in Bonn.

The early news from the markets is good. The cost of reducing greenhouse gases is less than early forecasts and corporations that are sustainable yield superior value to shareholders.

In London, British Petroleum reported on the success of its pilot program in greenhouse gas emissions trading and announced its plan to expand to group-wide emissions trading in January, 2000.

In Zurich and Chicago, Dow Jones and the SAM Sustainability Group announced the launch of a family of comprehensive stock indexes – the Dow Jones Sustainability Group Index (DJSGI) – that track the share prices of the leading companies that have a proven record of being financially, socially and environmentally sustainable. The select companies represented in the new indexes demonstrate a real commitment to reducing pollution and safeguarding human and natural resources.

In 1998 British Petroleum – a component of DJSGI – announced that it would voluntarily reduce its greenhouse gas emissions to 10% below 1990 levels by the year 2010. It began a pilot emissions trading program to accomplish this objective in the most cost effective way. Twelve business units initially participated. The cost of reducing a ton of carbon emissions in early trades was approximately \$63–\$70 (\$17–\$20/ton CO_2). Although the initial prices should be viewed cautiously, they are significantly below some early forecasts of \$200 per ton. Furthermore, the expansion to group-wide emissions trading and the inclusion of credit-based trading (e.g. net emission reductions associated with external investments in energy efficiency and carbon sequestration) should witness a further reduction in costs associated with meeting the corporate targets. It is important to emphasise that British Petroleum extended its commitment when it acquired two US companies, Amoco and Arco.

The comprehensive sustainable stock index family includes an index with global coverage, the DJSGI World, as well as regional indexes focused on companies in Europe, North America, Asia-Pacific, and a country index – DJSGI USA.

The table shows salient features of the global DJSGI index.

The DJSGI index is fully integrated with the Dow Jones Global Index in the sense that it uses the same calculation, publication and review methodologies. Sustainability ratings for individual companies are based on general sustainability criteria, industry sustainability and a corporate sustainability criteria. In addition to public information a proprietary corporate sustainability questionnaire is used.

The results of backcasting the price appreciation performance of the indexes are very instructive. As shown in the chart, in all instances the sustainable indexes outperformed the standard Dow Jones index. Furthermore, these superior returns were realised with minimal increases in volatility (risk) relative to comparable indexes. Evidence from the markets shows that sustainability and maximisation of shareholder value are entirely compatible.

Both these examples of the convergence of the environmental and financial markets provide interesting price signals. The cost of reducing greenhouse gas emissions appears to be lower than many predicted and corporations that cut pollution and manage for sustainability will increase value to their shareholders.

Special thanks to Dr Alois Flatz, Dr Michael Walsh and Rafael Marques for their valuable input.

Salient features of the Dow Jones Sustainability Group World Index

Number of companies:	229
Total market capitalisation:	\$4.3 trillion
Selection criteria:	Dow Jones Global Index companies scoring in the top 10% of SAM sustainability index
Coverage:	73 major industries in 22 countries, best-of-class selection
Share weighting process:	market capitalisation
Currency:	prices and total returns expressed in US dollars and euros
Base value:	set at 1,000 on December 31, 1998

Jefferson B. Seabright
05/05/2000 03:52:00 PM

Record Type: Record

To: Roger S. Ballentine/WHO/EOP@EOP

cc:

Subject: Re: testing testing 123

WRI note attached.

---------------------- Forwarded by Jefferson B. Seabright/WHCCTF/EOP on 05/05/2000 03:51 PM ---------------------------

Nancy Kete <nkete@wri.org>
05/04/2000 04:35:29 PM

Record Type: Record

To: Jefferson B. Seabright/WHCCTF/EOP

cc: Don Reed <donr@wri.org>

Subject: Re: testing testing 123

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wow. that is one heck of an email address. No wonder you don't give it over the phone.

I talked with Don Reed, our resident financial guru about the prospect we discussed. His quick first take follows. I guess our recommendation is that the issue is still a little under ripe to blow a one shot great opportunity on at this time. Although it would still be a bit risky late in the summer or early fall, we would probably be far enough along with our project to feel we had something that folks could talk about, or to stimulate discussion. We wouldn't want to lose out on an opportunity like this before the election.

Jeff, you might want to talk to Don directly about the state of the art wrt investing for climate or to protect from climate policy, and get his take on how far innovest and the like are on the issue. His number is 202 729-7649.

From Don:

1) The Whitehouse brings uncommon convening power on this subject.
2) That's good in that it would get the SEC to the table at a senior level to hear investors talk about what's important to them on this issue.
3) It's not so good for investors who never like being told what to do, etc. by government.
4) While timely, the work on this isn't really ripe yet. Plenty of folks have the broad context. Innovest and others have some data. But no one yet has a good clean analysis for investors about how climate change will affect their portfolios. That's why WRI is trying to develop that analysis.

5) What's the desired outcome? Getting this on the screen at a senior level at the SEC is worth the price of admission, but there needs to be more. For the main conversation with investors, government doesn't need to be at the table, but this would clearly be an opportunity to get the ideas in front of investors who wouldn't show up but for the Whitehouse ask.

>>> <Jefferson_B._Seabright@whcctf.eop.gov> 05/04/00 12:08PM >>>

Jefferson B. Seabright
05/10/2000 02:43:30 PM

Record Type: Record

To: Roger S. Ballentine/WHO/EOP@EOP, David Gardiner/CEQ/EOP@EOP
cc:
Subject: Finance Mtg

Roger: Below are some thoughts on how to approach this issue tomorrow. The unanswred question I have is how ripe this issue is among financiers -- can we get senior attention? Dirk and Fred Krupp will be talking about this generally to their moneymen at the ED Board mtg this weekend in San Francisco. WRI's expert working this , Don Reed, thinks that the WH effect is needed to put this issue on the radar screen more visibly.

Broadly, there are two ways to go:

Option 1: A business/NGO-led conference in DC/NY with senior Adm representation (ED and WRI likely leaders on NGO)

Option 2: An Administration/WH-led event in DC .

Issues: focus more on the positive side of the ledger: emergence of emissions trading market, performance of "sustainable" companies (Dow Jones Sustainability Index, Morningstar); also touch on asset valuation and need for common metrics.

What do we get out of this? I think we can:

1. get more acknowledgement that "things are moving" in the US as we head to COP 6 (we got a little bump on the emissions market in Bonn last year and this is a theme Sandalow wants to hit in The Hague).

2. generate higher visibility for the connection between finance and climate among opinion leaders on the Street and elsewhere, including SEC.

3. Possible tangible deliverable on "the way forward" - maybe something on metrics as proposed by Kevin Hansen could emerge

5-2-00

ROGER -
DIRK SENT THIS DRAFT PER OUR CONVERSATION. IF HE CAN GET SERIOUS PLAYERS TO SIGN, IT WOULD GIVE US 'COVER' AND HELP ENGAGE TREASURY.
REACTION? LET'S DISCUSS.
I WOULD LIKE TO GET BACK TO HIM BY END OF WEEK.
T

DRAFT/DRAFT/DRAFT

John Podesta
Chief of Staff to the President of the United States
Executive Office of the President
The White House
Washington, DC 20515

Dear Mr. Podesta,

We appreciate the President's continued engagement on the issue of global climate change, the most important international environmental issue of our time. At the recent World Economic Forum in Davos, Switzerland, the participants voted climate change to be the "greatest challenge facing the world at the beginning of the century." They also voted it to be the issue where business could most effectively adopt a leadershop role.

The international business community is beginning to take the issue of global climate change seriously. Major companies are adopting comprehensive greenhouse gas management regimes in order to prepare for a carbon-constrained future. These companies, like BP-Amoco, Shell and DuPont, are demonstrating that the climate change issue is can be addressed without sacrificing economic growth.

The international financial community is also becoming increasingly engaged in the range of issues that it will need to confront as our understanding of climate change progresses and policies to address it mature. Admittedly, this interest is in its early stages. A few global reinsurance firms are engaged in evaluating the effects of a changing climate on their portfolios. Some global commodity trading firms and emissions trading firms are engaged in the emerging greenhouse gas trading markets. And a several venture capital firms and investment banks are beginning to develop investment strategies for mobilizing capital to finance the technological firms poised to bring climate-change solutions to market as well as to support firms making plans to add environmental upgrades to high emitting facilities.

At this juncture, the range of interests within the financial community have rarely gathered to focus on common interests regarding global climate change. We believe that the White House should consider convening a forum for leaders from the financial community could come together to exchange views with members of the President's Cabinet and Senior White House officials on mobilizing the financial community on global climate change. This forum could address ways that private financial markets could better engage to offer leadership to the policy debate, and it could consider ways that government policy could be better focused to address climate change in an economically efficient manner.

We offer our pledge of support for this endeavor. If we can be of assistance in coordinating such a forum, please feel free to contact us.

Sincerely,

John Hill Wilson (?)
Morgan Stanley Dean Witter

John Rosenthal
Vice Chair
Bear Stearns

Hank Paulson

President and CEO
Goldman Sachs

Howard Cantor
Cantor Fitzgerald

Innovest Strategic Value Advisors

Richard Sandor
Environmental Financial Products

TO: Roger Ballentine
FR: Jeff Seabright
RE: FINANCE AND CLIMATE CHANGE

I have done more thinking on the finance and climate agenda, and believe we should meet this week – Thurs or Friday – with Aldy, Cumby, Lawrence, Paul Weinstein, others to review options. There is no doubt that this issue is real and ripe for attention; less clear is what WE can or should do about it.

The broad agenda includes both the emerging emissions trading business, as well as the need to "mainstream" carbon in market analysis and valuation. There is enough on the positive side of the ledger to focus the message more on efficient markets and rewarding innovators, and less on diminishing the value of carbon heavy assets.

The question of the "it" – an event focussed on what is happening already and what is emerging on the horizon in terms of financial community engagement would be a strong message in its own right, and help demonstrate domestic action. An optimum outcome would include calls for action on next steps by the industry, i.e. a common approach/metric for incorporating carbon.

On the "what", I am more inclined to see if a group from the outside would convene an event in DC or maybe NY with a strong agenda and commitments from senior Administration officials to participate.

Dirk is keen to get ED and Krupp personally to engage to bring along ED's Board members who work on Wall Street (including a possible letter to the Administration asking for a dialogue). One option suggested by Dirk is a Wall Street/ED event at which Adm. officials might attend.

Eileen tells me that PEW has something in gestation on the subject but would not share.

Attached is a slightly revised 2 pager that I did, a very good note from Natsource sent last week by Neil Cohn, a revised Innovest proposal and various articles you may find of interest. PriceWaterhouse Coopers collaborated on the Natsource paper.

I am happy to re-work based on your input.

Finance and Climate Change

Summary: Wall Street can and should play a larger role today in mainstreaming carbon risks and benefits in asset valuation, which would in turn accelerate corporate commitments to become more climate friendly. A high-level dialogue with senior policy makers could help achieve this goal.

White House climate change outreach efforts to date have focussed almost exclusively on manufacturing and basic industry, utilities and technology developers. We have not aggressively engaged with the financial sector, which arguably has the greatest potential to leverage change. Capital markets are the "financial oxygen" on which companies depend for debt and equity financing, and are therefore effective tools to both punish and reward corporate behavior.

Over the last decade, institutional investors increasingly have recognized the linkage between environmental performance and financial performance. Inclusion of environmental concerns as contingent liabilities on balance sheets is now common practice, but has not extended to carbon dioxide and other greenhouse gasses. The recently released "Dow Jones Group Sustainability Index", which tracks environmentally responsible companies which consistently outperform their peers globally, is another confirmation of this enviro-finance link.

The one aspect of climate that has captured limited attention is the nascent carbon reduction and offset market. PriceWaterhouse Coopers recently created a group focussed exclusively on carbon trade issues. In addition, two of the largest Wall Street firms, Cantor Fitzgerald and Tullett & Tokyo Liberty have taken major initiatives into carbon trading. Howard Cantor is personally engaged in his company's new carbon desk and the global currency and bond broker Tullett & Tokyo Liberty has recently purchased Natsource which has an active emissions brokerage to gain a foothold in this nascent carbon market.

Although climate change is likely to have a greater impact on the U.S. business community and financial markets than other environmental issues in the decades ahead, Wall Street has not yet "mainstreamed" the issue, due largely to lack of information about the potential impacts of a carbon-constrained world. Other countries, however, are moving ahead: Germany, Switzerland and Australia have legislation pending that would require companies to include carbon reporting in their annual reports. In the UK, imminent greenhouse gas emissions legislation has prompted European investment banks to convene recent roundtable sessions with greenhouse gas market experts in order to begin the process of addressing these issues.

Companies that own large and growing stationary sources of greenhouse gas emissions arguably carry a carbon "liability"– a fact that should be incorporated in any calculation of net present value. Similarly, companies that have progressive emissions management strategies may be more richly rewarded in a carbon-constrained world and their value should reflect that in some measure. There are clearly risks and opportunities to the future revenue streams of companies but the impact of greenhouse gas emission constraints is not yet formally legislated and therefore not easily quantified. The potential impact of the issue has not come to the attention of many Wall Street senior managers this has impeded the development of the relevant risk management tools. However, there is now a widespread recognition that some form of carbon regime will likely take effect over the next twenty years.

As Mark Moody-Stuart, CEO of Shell, has stated:

> "Applying a rough estimate for future carbon prices to new long term investments, despite all the inherent uncertainties, seems to me an imminently more sensible way to manage the risk and win competitive advantage, than continuing to assume, as we have historically done, that the costs of emitting carbon will remain or return to zero."

To help broaden and deepen Wall Street's understanding of climate change and its impact on their industry, it may be useful to convene a trilateral dialogue among policymakers in the Administration, financial leaders and business leaders. The meeting would focus on "best practices" of successful companies, assessment of carbon liabilities, potential for carbon assets and profits from trading, the need for common disclosure and accounting approaches to carbon, and the potential for a corporate-led initiative to "value" carbon in trade and investment. Some major players on Wall Street have demonstrated environmental credentials and could be looked to for leadership, e.g. John Hill Wilson (Managing partner at Morgan Stanley and ED Board member); John Rosenwald (Vice Chairman, Bear Stearns also on ED Board); Hank Paulon (CEO Goldman Sachs is on TNC Board) etc.

From the Administration perspective, the optimal outcome of such an event would be a commitment by several "blue chip" companies to work towards a common approach to including carbon liabilities, premised on the assumption that some form of global carbon regime will emerge. The signal sent by such a move by major financial houses would significantly accelerate corporate commitments to address climate change.

Natsource on the Financial Markets and Climate Change

Business increasingly recognizes that whatever the fate of international negotiations on the Kyoto Protocol, growing scientific consensus about the occurrence of anthropogenic climate change will inevitably result in some form of greenhouse gas (GHG) emissions restrictions. Prudent business managers need to consider what preparations are necessary to thrive in a "carbon-constrained" future business environment. The financial sector, as an engine of economic growth and development, has unique role to play in preparing companies for this environment. Now is an appropriate time for financial leaders on Wall Street to consider exactly what this role might be.

Natsource has been actively involved in the development of the evolving risk-management-driven GHG reductions market. Consequently, we have a strong understanding of the associated risks and opportunities facing companies. In view of this experience, Natsource recently was invited to present to a roundtable session of investment banks in London to discuss the role of the financial sector in GHG markets. We would be delighted to share these views with colleagues on Wall Street.

There are several relevant issues, which could be further discussed in our meeting. A few of the most important topics are:

- **Equity price valuation:** From an equity analyst's point of view, questions are likely to focus on how a company's future revenue flows will be affected by emissions restrictions and markets for emissions permits. At a general level, there is a sense that fuel producers such as oil and gas companies may face net costs, while more environmentally benign companies may earn net revenues under regulated carbon constraints. But there is a need for more sophisticated analysis. Under most proposed GHG regulation energy companies will not be liable for the carbon embedded in the fuels they produce, but rather for the actual GHG emissions that result directly from their business activities. As an asset class, sellers of high carbon fuels may encounter slackening demand growth as consumers shift to ever more price-competitive low-carbon fuels. This may lead to absolute revenue loss within a sector. But how might a company perform relative to competitors within its sector? For example if an oil company effectively manages its direct emission exposure and diversifies its business activities away from high-carbon fuels, should this company's equity valuation reflect this strong potential for revenues? How should this be quantified? Answers to these questions require an understanding of the GHG market, allowance pricing, and GHG risk management.

- **Accounting:** As legislation to restrict GHG emissions advances at various levels of government, and as markets for emissions permits originate and mature, accurate accounting practice will necessitate that companies report their GHG-related assets and liabilities. Wall Street leaders should contribute their input on the nature of relevant standards and methodologies to the Federal Accounting Standards Board.

- **Lending/project finance:** Companies use capital markets to finance new investments. The willingness of investors to lend on favorable terms depends on investments' risk and expected rate of return. The establishment of GHG emission constraints changes traditional calculations of rates of return. For example, investment in a coal-fired plant may be much less attractive in the future as emissions restrictions impose increasing costs. Conversely, a wind power development may not have been attractive to investors in the past, but the prospect of an additional and substantial stream of revenue from associated GHG credits might make the project competitive. In addition, the GHG market can be a source of up-front project finance through the forward sale of embedded emission reductions, thus reducing the initial capital requirements of climate-friendly projects. Investment banks will need to amend lending and project finance criteria to account for these changes in valuation, and the types of business activities that receive finance will change accordingly.

- **Trading:** Companies facing GHG emissions restrictions will need to develop strategies for compliance, hedging risk, and exploiting opportunities. These strategies will include a mix of internal emissions abatement measures and participation in markets for emissions permits and derivatives. But many industries that may be affected by GHG restrictions have little trading experience or little capacity to operate in sophisticated markets. Trading may not be their core activity, and companies may find it advantageous to outsource their trading requirements to specialized traders with the technical capacity and expertise to manage positions effectively and reliably. There is precedent in power markets for investment banks to trade the positions of generation companies in return for guaranteed minimum rates of return. Of course, investment banks will use liquid GHG market to trade for their own account.

INNOVEST STRATEGIC VALUE ADVISORS

PRELIMINARY AGENDA

FINANCE AND CLIMATE CHANGE: THE WHITE HOUSE SUMMIT

CHALLENGES AND OPPORTUNITIES FOR U.S. BUSINESS AND INVESTORS

FINANCE AND CLIMATE CHANGE: THE MILLENNIUM SUMMIT

CHALLENGES AND OPPORTUNITIES FOR U.S. INVESTORS

PROPOSAL PRESENTED BY INNOVEST STRATEGIC VALUE ADVISORS

THE CHALLENGE:

The greatest challenge facing the world at the beginning of the century is climate change, according to the consensus among hundreds of business and governmental leaders at the World Economic Forum's prestigious Annual Meeting in Davos. Not only did the audience choose climate change as the world's most pressing problem, they also voted it as the issue where business could most effectively adopt a leadership role.

As the debate surrounding global climate change becomes more focused on economics and finance than politics and science, it is becoming clear that the public policy agenda must find a way of effectively harnessing the power of the financial markets if it is to achieve success. Unfortunately, the enormous potential of the financial markets to reinforce -- rather than undermine – the White House's climate change agenda has scarcely even been touched. **By the same token, Wall Street itself remains largely unaware of the importance of the climate issue to the U.S. economy and its power to effect positive change.**

The capital markets have proven highly effective at punishing and rewarding corporate behavior in any number of areas, providing they are given accurate, timely, and credible information about company performance. Applying this logic to the climate change issue is compelling. Major industrial companies are without doubt one of the greatest sources of greenhouse gas emissions. Corporate industrial behavior is in turn heavily conditioned by the quality and availability of their "financial oxygen" – debt and equity financing. If the two constituencies can be strategically aligned, the capital markets have enormous potential to reinforce and accelerate public policy objectives as they relate to climate change.

To date, beyond the general truism about this need to involve the markets there has been little if any discussion of the precise role that the U.S. financial community could play. The main reason that the markets' potential to serve as an engine for progress on climate change has been greatly under-utilized is that, for the most part, the markets have neither the information nor the motivation to use it. Institutional investors have not yet recognized the close – and growing – linkage between industrial companies' environmental performance and their financial performance and international competitiveness.

Even if they did recognize this connection, they would be hard-pressed to find the information they need to make investment decisions. Major investors have received very little balanced and credible information on the subject, yet no environmental performance issue is likely to have a greater impact on the U.S. financial markets and business than climate change.

THE RESPONSE:

A high-level, invitation-only White House Summit on finance, investment and climate change. Such a Summit would provide leading members of the U.S. financial community with their first organized opportunity to understand the linkages between environmental and financial performance, and why the climate change debate will almost certainly affect them directly.

THE OBJECTIVES:

1. To elevate awareness of both the risks and opportunities created by climate change among leaders of the two constituencies with arguably the greatest ability to affect both economic *and* environmental outcomes: the corporate and investment communities.
2. To communicate White House climate change policy directly to influential corporate and investment leaders who will have a substantial stake in its success.
3. To create a series of ongoing initiatives designed to ensure that there will be tangible, ongoing follow-up to the most promising initiatives identified at the summit.

THE BACKGROUND:

Public awareness of the relationship between financial performance and environmental issues is increasing. In recent months, consider:

- Climate change figured prominently in President Clinton's most recent State of the Union Address. He proposed the commitment of $2.4 billion to address the issue, fully 40% greater than Congress's last approved level. The impact of the President's proposal would be dramatically reinforced and accelerated if the U.S. investment community accorded climate change a similarly high priority. But first they need the information.
- Leading industrial companies are recognizing the growing importance of the emerging sustainability paradigm – the "triple bottom line" in which social, economic, and environmental criteria are priorities. Furthermore, companies such as DuPont, Enron, and Dow Chemical Company are now directly addressing the issue of climate change in their public reports.

- Public recognition that investors do not adequately address environmental risks in their investment decisions is growing. The explosive growth of "socially responsible" investing is one manifestation of this trend. More than any other environmental issue, climate change has the potential to create the kind of commercial turbulence that investors need to become aware of.
- Major financial and investment institutions are also under increasing pressure to examine significant but "non-traditional" issues. Prominent institutional investors such as CalPERS are now explicitly linking companies' attractiveness as investments with their environmental performance. These investors consider environmental performance to be an increasingly important part of companies' corporate governance and social responsibility.
- Governments the world over are united in their belief that market-based mechanisms are the key to achieving the Kyoto targets – indeed, a study by the Boston-based Tellus Institute finds that that the U.S. could exceed its objective while significantly reducing its energy costs and creating new jobs.
- Nascent markets for GHG emissions credits have been set up that appear to presage the emergence of a global trading architecture which could be worth upwards of $60-billion within 5 to 10 years.

THE TARGET

By bringing together leading figures in investment and finance from across the United States to discuss the risks and opportunities that climate change inheres, we aim to bridge the disconnect that exists between the business, financial and public sectors. To this end, we anticipate our target audience comprising senior executives from such organizations as:

- Citigroup
- Merrill Lynch
- Salomon Smith Barney
- Goldman Sachs
- J.P. Morgan
- Morgan Stanley
- Fidelity Investments
- Charles Schwab
- Vanguard
- CalPERS
- TIAA-CREF
- Barclay's Global Investors
- State Street Global Advisors
- Deutsche Bank/Bankers Trust
- Mellon Bank
- Scudder Kemper
- Chase Manhattan
- Bank of America
- Prudential
- Northern Trust
- New York State Common Fund
- Teachers Retirement System of Texas

THE DRAFT PROGRAM:

What follows is a draft of how the Summit program might look. Specific invitations to financiers, industry CEO's, and climate change experts would, of course, be at the sole discretion of the White House. The proposed program aims to view climate change from the perspective of leading practitioners from the business and investment communities in order to identify where the latter group can play a role, what this role will be and what steps should be taken and by whom. Perspectives will be offered from across the full spectrum of investment decision-making; accounting and law; company management; the public policy makers; and finally, the investment community itself.

1. CLIMATE CHANGE: UPDATE ON SCIENTIFIC AND POLICY CONSIDERATIONS

These presentations will establish the foundations for the climate change issue from a scientific and public policy perspective. The objectives are to elucidate the present thinking of these important constituencies and to map out possible future courses of action over the short-to-medium term. Special attention will be paid to discerning how, in economic terms, the climate change issue will affect U.S. industries.

- **Mr. David Sandalow**
  Asst. Secretary of State for Oceans and International and Scientific Affairs

- **Mr. Frank Loy**
  Under Secretary for Global Affairs, Department of State

2. ACCOUNTING FOR CARBON: LIABILITIES AND OPPORTUNITIES

The stakes for U.S. businesses and industries are high. The U.S. is the largest global emitter of carbon, both on an absolute and per capita basis, and U.S. business and industry stands to be significantly affected by the economic turbulence that climate change mitigation measures could bring. The full cost of such measures remains unknown, although authoritative estimates *start* at $100-300 billion/year in gross national product. **Yet for leading companies climate change is not just about risk. It is about *opportunity* - an opportunity to create value in an entirely new way.** Many companies have already begun to explore the opportunities created by emissions trading, for example. The next two sessions will elaborate on this theme by examining how companies stand to win or lose due to climate change. Here, the meeting will examine how accounting, disclosure and other legal instruments may be brought to bear on company risk, liability and opportunity profiles.

- **Senior Managing Partner**
  PriceWaterhouseCoopers (or another 'Big 4' accounting house)

- **Mr. Donald Carr**
  Senior partner in environmental law and climate change specialist at Winthrop, Stimson, Putnam & Roberts, Washington, D.C.

3. CORPORATE PERSPECTIVES: INITIATIVES BY LEADING-EDGE COMPANIES

This session will provide real-world examples of how major companies perceive the risks associated with climate change and how these risks and challenges have been converted to business opportunities and sources of competitive advantage. Attention will be devoted where possible to putting dollars and cents to the companies' activities, and to determine how current and future GHG emissions mitigation initiatives might affect future earnings, strategy and stock price.

Companies will be invited to share their experiences in addressing climate change from a strategic and financial perspective in particular. Opportunities to boost profitability through top-line revenue growth and reduced expenditure will be highlighted.

[Between 2 and 4 CEOs would be invited to present, depending on the length of the meeting.]

- **Mr. Kenneth Lay**
  Chairman and CEO, Enron
- **Mr. Charles Holliday**
  Chairman and CEO, DuPont
- **Mr. Michael Bowlin**
  Chairman and CEO, ARCO
- **Sir John Browne**
  Chairman and CEO, BP Amoco

4. OPPORTUNITIES AND CHALLENGES: AN INVESTOR'S PERSPECTIVE

This key session will allow investment and financial professionals to articulate their own opinions on the issue. Views will be sought from various key actors from within the international financial and investment community: public pension funds, the World Bank, investment banking and asset management. The focus of the session would be entirely congruent with the objectives of the meeting itself, i.e., emphasis would be placed squarely on elaborating concrete steps by which this group could begin to play a role in mitigating climate change.

(Depending on time available, speakers invited could include:)

- **Mr. James Wolfensohn**
  President, International Bank for Reconstruction and Development (World Bank)

- **Mr. John Rosenwald**
  Vice Chair, Bear Stearns

- **Mr. John Whitehead**
  Ex-Chair & CEO, Goldman Sachs; Director or NY Federal Reserve Board

- **Mr. Ron Denham**
  Ex-Chair & CEO, Salomon Bros.

- **Mr. Deryck Maughan**
  Vice Chair, Citigroup

- **Mr. Jim Burton**
  CEO, CalPERS

- **Mr. Carlton Bartels**
  Managing Director, Cantor Fitzgerald - Investment Brokerage Services, New York.

- **Mr. Jim Martin**
  Chairman, Innovest Strategic Value Advisors, New York; formerly Chief Investment Officer, TIAA-CREF, North America's largest pension fund.

5. THE WHITE HOUSE POLICY AGENDA

This portion of the meeting will provide the White House with an opportunity to present its own analysis of the climate change issue, how these forces of change might influence the U.S. economy and how the financial community might augment public policy efforts in practical terms.

- **President Clinton, Vice President Gore,** or a senior White House official

- **Mr. Roger Ballantine**
  Deputy Assistant to the President for Environmental Initiatives

6. WRAP UP: NEXT STEPS

In order to maintain and accelerate the momentum created by the Summit, it is recommended that a number of concrete follow-up initiatives be announced and pursued. Among the most promising could be the following:

1. Creation of a high-profile working group on carbon reporting and accounting. Led by a partner or partners in one or more "Big 4" accounting firms, or possibly under the umbrella of the U.S. professional accounting body.
2. Creating a U.S. exchange where an orderly, systematic market in carbon emissions allowances trading would occur. This would be analogous, albeit on a *much* larger scale, to the market already created for SO_2 emissions permits. The Chicago Mercantile Exchange would be a logical starting place for this initiative.
3. Launching a new, *private* sector "Climate Fund", which would invest in major companies who are best positioned to benefit from the business *opportunities* created by climate change. Among other benefits, such a Fund would strongly encourage companies to improve their "carbon efficiency" in order to attract investment from the Fund.
4. Creation of an ongoing, four-party dialogue designed to increase the profile of climate change and to develop innovative solutions. Modeled on the President's Council for Sustainable Development, the four constituencies which could potentially be brought together in a process of this type would be:

    - Business and industry
    - Financiers and investors
    - Government and public-policy makers
    - Civil society/NGO's

5. An ongoing series of workshops for financial analysts. Survey evidence suggests that the Wall Street analysts have a strong influence on investors, but that they are currently *less* aware of the financial relevancy of environmental issues than either corporate CEO's or mainstream institutional investors. It will be critically important to increase their appreciation of the financial and competitive consequences of climate change.

About Innovest

Innovest Strategic Value Advisors (ISVA) is a New York investment advisory firm specializing in environmental finance. ISVA's chairman is the former Chief Investment Officer with TIAA-CREF, the largest pension fund in the United States. ISVA's Board of Directors also includes former senior executives from Citigroup and Chemical Bank, as well as a former G7 finance minister. The firm's clients have included several of America's largest institutional investors, as well as over 20 Fortune 500 companies. At present, over $50 million in assets is being managed on the basis of Innovest's proprietary EcoValue '21 investment research platform.

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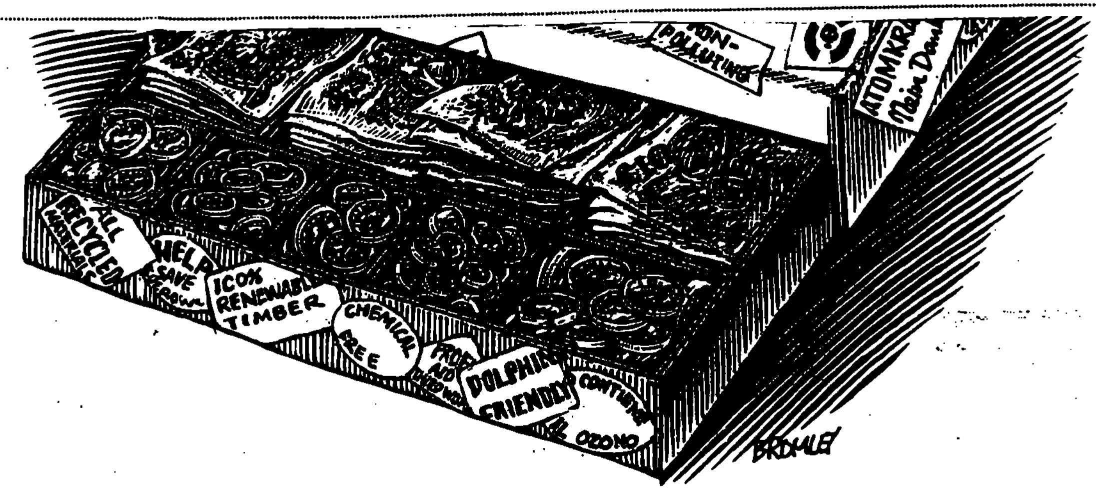
ENVIRONMENT BENEFITS OF AN ECOLOGICAL APPROACH

Go green, invest and then prosper



Edward Alden on claims that investing in companies that care about the environment is a way to outperform the market

Matthew Kiernan has experienced the cold shoulder often on Wall Street and in the City of London.

The head of Toronto-based Innovest Strategic Value Advisors, Mr Kiernan has spent the last three years trying to peddle a controversial idea to financial analysts and institutional investors: that companies that care about the environment outperform those that do not.

"People of my ilk are generally deemed by Wall Street and the City as ephemeral, woolly-minded, granola-eating types," he says. "The opposite is true."

Mr Kiernan is part of a small but growing number of financially-minded environmentalists who are building a compelling case that investing in companies with strong environmental management is a way to outperform the broader market consistently.

In a live simulation last year conducted by Innovest and Morgan Stanley, an enhanced index weighted towards companies with strong environmental management outperformed the Standard & Poor's 500 by nearly 2 percentage points. A similar three-year back test showed a gain of nearly 3¼ percentage points.

Innovest's results are much like those of other environmentally-focused money managers using comparable approaches.

But they have done little to thaw the frosty reception on the street.

A UN development programme survey last year of US financial analysts and chief financial officers showed that environmental factors barely register in weighing corporate performance. Only 10 per cent of analysts reported they had criteria for including environmental issues in their analyses.

"The gut instinct is to say this is nonsense, that if you want to buy environmental performance it will be at the expense of financial performance," says Mr Kiernan. That, he argues, is simply wrong. Environmental performance ratings are "a potent, pregnant, robust proxy for superior strategic management," which translates into stronger earnings and greater shareholder value.

The scepticism may come in part from the comparison with socially responsible investment funds. Those funds, which are growing rapidly and now control nearly $100bn (£625m) in assets in the US, exclude certain companies from their portfolios on ethical grounds, particularly eschewing companies in the nuclear, armaments or tobacco industries. Most analysts believe that adding such ethical criteria distorts investment decisions.

Innovest and others taking a similar approach, however, do not automatically exclude these companies. Where a socially responsible fund might avoid mining or chemical companies because those industries are generally heavy polluters, Mr Kiernan argues this is precisely where an environmentally-focused approach has the greatest value.

An example he cites is the comparison between Mobil Oil, which recently entered a merger agreement with Exxon, and Unocal, both large US petroleum companies. Standard & Poor's regards them as virtually identical credit and investment risks, but according to Innovest's environmental risk and performance ratings, Mobil is far the superior company. Its toxic wastes per dollar of revenue, for instance, are half those of Unocal.

'People of my ilk are generally deemed by Wall Street and the City as ephemeral, woolly-minded, granola-eating types'

Matthew Kiernan
Head of Toronto-based Innovest Strategic Value Advisors

Not surprisingly, Mr Kiernan says, Mobil stock has far outperformed Unocal during the past 10 years, and particularly during the last three years when Mobil's environmental rating has steadily improved.

Linda Descano, senior vice-president environmental affairs at Salomon Smith Barney, the US investment bank, agrees that "there is a growing business case for the link between environmental performance and financial performance." But she says that most people on the street still think of the environment as an ethical issue rather than as something driving business strategy.

At most, analysts will acknowledge that some companies with bad environmental records face risks of liabilities and litigation. But rarely will they acknowledge that a better environmental record may translate into superior performance, she says.

Part of the problem is practical. Most companies don't gather environmental data in a way that is useful for analysts.

Ralph Earle, who heads the Massachusetts consulting firm the Assabet Group, says that gathering consistent, objective information to compare corporate environmental performance is exceedingly difficult. To be useful for investors, the information must be available promptly. Two-year-old data on toxic emissions might tell you little about the present or future environmental performance of a company.

Despite widespread scepticism, Mr Kiernan has won some converts. Bill Coughlin, managing director at Delta Capital, says the environmental approach "is outside Wall Street's little box, their strategic manual of how to analyse companies. But times are changing so rapidly it would be ludicrous to ignore anything."

The biggest hurdle for Innovest and others pushing environmentally-driven investing may be the perception that they care more about the environment than they do about money.

Mr Kiernan says his goal is to make money by exploiting a link between environmental and corporate performance that investors are only slowly acknowledging. "We try to be as empirically-driven, as non-ethically-driven, as we can be.

"The fact that we hope to save the planet is a byproduct."

Ecological wake-up call for fund managers

A fresh generation of analysts is divided about whether such investments are a blessing or a curse, says **Vanessa Houlder**

Should fund managers go green? The idea that investors should play a role in sustainable development is argued with increasing urgency within bodies such as the UK government, the EU and the United Nations.

The issue is also promoted by pressure groups, such as Friends of the Earth. That organisation is gathering information for a campaign next year against fund managers with particularly poor environmental records.

Underpinning these arguments is the view that the financial markets have a potentially crucial influence on company strategy. And the long-term nature of most investors' interests means they have a natural interest in ensuring that companies invest sustainably.

But most fund managers dismiss environmental concerns as trivial or misguided. As one analyst put it: "Any attempt to link up financial decisions with morals or emotional decisions does not work."

For campaigners, this argument misses the point. Investors' self-interest should encourage them to consider environmental issues. Admittedly, many overtly environmental companies, such as "green" retailers or waste disposal managers, have performed badly during the last decade. But mainstream companies with good environmental records have tended to perform well.

Studies, mostly from the US, have found a significant correlation between the environmental credentials of companies and share performance.

Why has this point made so little impact on fund managers? Are the financial analysts behind the times? Or are they right to think that the arguments linking the environment with financial performance owe more to wishful thinking than to careful analysis?

The first possibility – that financial institutions are being slow on the uptake – was endorsed by a recent European Commission report.

"Companies increasingly see environmental issues as being of relevance to their business development, yet financial markets, particularly investors, are uninterested," said Delphi International, the consultancy.

The report blamed this indifference on lack of quality information, the investment community's inertia and conflict between the short-termism of the financial markets and long-term sustainable development.

There are some exceptions. In the late 1980s and early 1990s, a handful of brokers published research examining the impact of the environment on investments. And the large provisions by British Gas and Hanson for the cost of cleaning up contaminated land acted as clear "wake up" calls.

'They're being green because specific environmental actions make good business sense'

But overall, the Delphi researchers concluded that "of all the forces for change on the investment sector, those coming from within have been probably the least effective," it says.

But could the mainstream financial sector be justified in its reluctance to use environmental issues as a guide to investment performance?

Sceptics point out that correlation is not the same as causation. The link between environmental and investment performance may be because companies with good environmental records are better managed. More profitable companies have more money and greater flexibility when it comes to environmental projects.

There are dangers in making sweeping generalisations about such a complex issue. "There is no reason to believe that environmental performance is an equal driver of value across all sectors and industries," says the World Resources Institute, a Washington-based environmental think-tank.

It points out that environment management is not a single topic. Rather, it says, it can be split into several issues: the need for a company to protect its "franchise" by complying with regulations and preserving its reputation; "eco-efficiency" measures that prevent pollution and reduce waste; and the adaptation of product and markets to take advantage of new opportunities.

To lump all environmental strategies together is to ignore the motivation of individual companies: "They aren't merely being green; they're being green because specific environmental actions make good business sense."

Defining the environmental actions that make good business sense is not easy. A recent report from Earthscan, the UK-based environmental publisher, on the link between company environmental and financial performance illustrates the point by setting out a number of potential "green" corporate benefits including cost savings, credit ratings, recruitment, morale, risk avoidance, employee morale, stakeholder relations, media attention and public respect.

In each case, however, it puts forward a possible counter-argument. For example, promoting a good environmental image may increase a company's vulnerability to bad publicity. "It is much easier to attack a high-profile environmentally-aware company like the Body Shop for a single transgression from its stated environmental policy because the company has a high media profile built on the back of its excellence," it says.

Perhaps the most important issue concerning the business impact is the question: Do environment improvements lead to savings or to extra financial burdens? David Edwards, author of the Earthscan report, says enthusiasm about cost savings has given way to a more cautious approach: "As diminishing returns on environmental investment have set in, the new generation of environmental managers have found it difficult to replicate the impressive successes of the 1980s and are increasingly nervous of stakeholder reaction to expensive environmental investments."

But this debate itself suggests that for better or worse, environmental issues have a financial impact. Regardless of whether environmental spending is a burden or a benefit, arguably investors should take note of it.

Adopting this approach would involve a change of investor attitude. A survey carried out in 1994 by Extel Financial showed that investment analysts often shied away from examining environmental issues on the grounds that they were "moral" or "emotional".

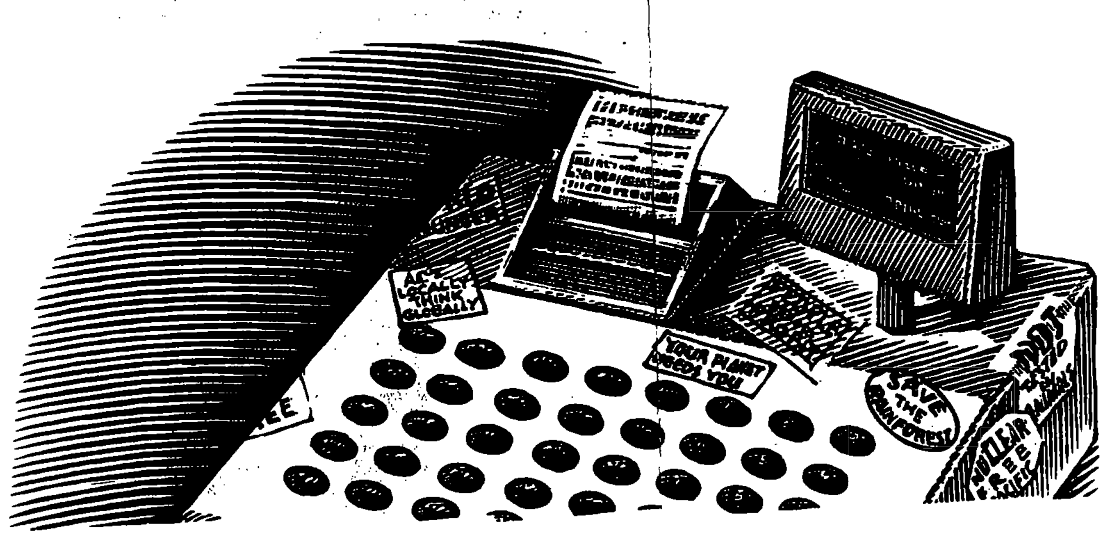
"Once you start taking an emotional standpoint, you undermine what you're there for," says an insurance analyst.

This attitude was evident last year when John Denham, a UK government minister, proposed that pension fund trustees should outline their ethical positions. His proposal was criticised by the pensions industry on the grounds that it failed to recognise the fiduciary duty of the trustee.

But the idea that trustees cannot take account of environmental issues in shaping their investment policy is a misunderstanding. It ignores the potential impact on the investment's long-term risk and attractiveness, according to Stephen Tromans, head of the environmental law department of Simmons & Simmons, a law firm: "It is difficult to see how trustees could in fact fulfil this role properly without paying regard to environmental matters."

A similar debate is underway in the US. The legal obligation of investors to act "prudently" and "exclusively" for the owner of the assets has been generally considered to exclude social concerns such as environmental issues.

But the World Resources Institute argues that this logic could eventually be turned on its head. Once it has been firmly established that there is a link between environmental and financial performance, then it would be imprudent not to consider a company's environmental performance when selecting an investment. "While this sounds far-fetched now, it might not be so far off," it says.



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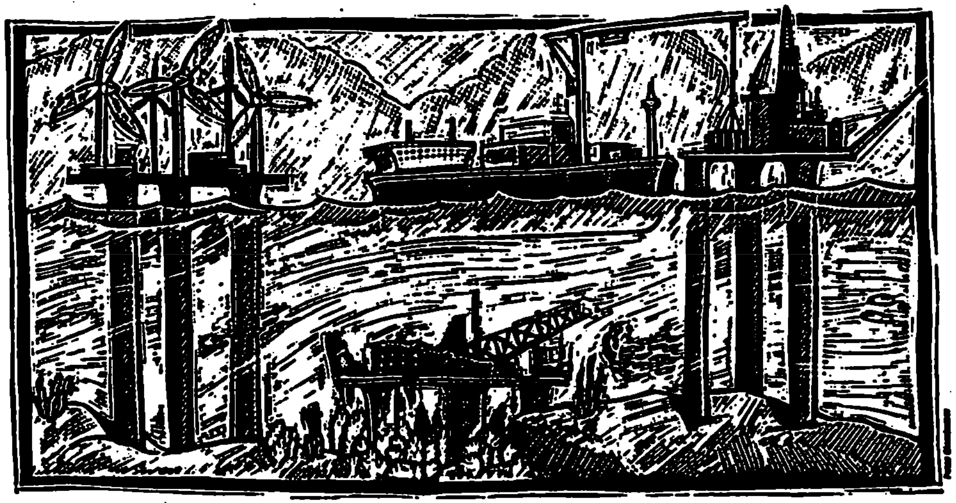
BUSINESS & THE ENVIRONMENT

For Big Business, Ecological Policies Can Make Sound Financial Sense

By Quentin Fottrell

There has been a storm brewing in the North Sea. The question of how to deal with 34 rusting, redundant oil platforms off the coast of Scotland has divided oil companies, the British government and environmental activists. The British government and international environmental campaigning group Greenpeace both insist that the oil companies should foot the cost of dismantling and recycling the platforms.



Rust or renewal? The North Sea's old oil platforms could become offshore wind farms or man-made coral reefs.

The Oslo and Paris Commission, which last year set out anti-pollution guidelines for marine water, is now figuring out how to implement the estimated $16 billion recycling program over the next ten to 20 years. As yet, there has been no date set by any of the major oil companies to begin taking the large steel platforms out of the North Sea, an area also seen as a potential source of offshore wind energy.

The issue has even brought dissent among green campaigners themselves. Pete Wilkinson, a former director of Greenpeace, and David Bellamy, the U.K.'s best-known environmentalist, have raised questions relating to the precise nature of the threat posed by redundant oil platforms and landfill problems once the rigs are taken on-shore.

Mr. Bellamy even stated that it would be better for the steel structures to remain in the North Sea, providing that toxic waste and chemicals were removed. "There is a lot of muddy mysticism going on," he says. He believes that allowing the platform frames to "gently rot away" would behave as an artificial coral reef, actually boosting marine life by adding iron, an important mineral fertilizer, to the sea.

Many other high profile cases have acted as cautionary tales for large multinationals. The 1989 Exxon Valdez oil spill in Alaska — the worst in U.S. history, costing Exxon $3 billion in fines — is still proving to be a lasting public relations disaster as well as an environmental one. A study of pink salmon, published by the U.S. National Marine Fisheries Service this month, suggests that such dangerous oil pollutants in sea water linger years longer than had been previously believed.

Indeed, one of the major driving forces behind companies improving their environmental policies is the threat of legal action in addition to concerns for public image, company morale and investor relations. Most multi-national organizations will, of course, never be fully "green", but environmental responsibility is slowly creeping onto their agendas.

As far as investor relations are concerned, lucrative advertising campaigns featuring beautifully photographed coral reefs or plush meadowlands are no substitute for transparent environmental analysis. Just as financial statements are slowly becoming more readable, companies are cottoning onto the advantages of accessible environmental reports, which lay bare a company's goals — and, where appropriate, achievements — relating to the reduction of waste and gas emissions, recycling materials and eliminating environmental prosecutions.

Mark Wade, a member of the social accountability team which produced Shell's "Profits & Principles" report last year, believes that reporting on long-neglected issues such as human rights and the environment has as much to do with long-term financial credibility as image-making. "People don't just want to know how much money you made, they also want to know how you made it. And if they don't like what they see consumers these days will vote with their wallets."

While Shell has stopped its controversial operations in Ogoniland, supporters of the human rights struggle in Nigeria have demanded that it clean up farms and waters that have been reportedly polluted. The company recently announced an $8.5 billion investment in Nigeria over the next five years and insists that it continues to be concerned about the local population's human rights and will monitor the situation closely when the new elected government is installed there on May 29.

In one significant step last month toward the transparency of corporate activities, business and investment firms reached agreement with environmental groups on green guidelines. These groups — which include the World Resources Institute, the Japanese Environmental Auditing Research Group and General Motors of the U.S. — are working toward their Global Reporting Initiative becoming an international standard.

Under its guidelines, for example, corporations will have to disclose the details of any accidental chemical/oil spills or emissions. The guidelines also aim to simplify the format of reports that look at environmental performance, labor practices and other social impacts.

Companies would also be required to list air emissions and water discharges, as well as total energy, material and water use; outline damages or improvements to the surrounding land or habitat; and report if they were complying — or not — with local, national and international laws relating to the environment, labor and human rights.

Already, British Petroleum, Co-Operative Bank, Shell and an increasing number of other mainstream companies have followed groups like the Body Shop by opening up their social and environmental activities to the public. Two major accounting firms, PricewaterhouseCoopers and KPMG, have also set up operations in this field.

Co-Operative Bank of the U.K., set up in 1872, launched its "ethical stance" in 1992. Last year the bank, which is relatively small in size with 150 high street branches and two million customers, reported its fifth consecutive year of record profits of £55 million ($88 million). The bank vows not to invest in any business that relies on the extraction or production of fossil fuels, manufacture of unnatural chemicals — which may contribute to ozone depletion or may build up in nature — or the unsustainable harvest of natural resources, such as timber.

"We wanted our customers to know what happens to their money when it's in the bank," says spokesman Dave Smith. "We tell our company exactly who we will and won't do business with. We are proof that you can be profitable and ethical in a highly competitive market. Our ethical stance has given us a unique position to attract new customers."

"Environmental Non-Governmental Organizations have started to target fund managers and investment banks over their investments and involvement with environmentally-damaging companies," according to "The Role of Financial Institutions in Achieving Sustainable Development", a report for the European Commission by Delphi International Ltd. in London.

Mark Mansley, head of Claros Consulting in London and author of this report, says, "Organizations are coming under increasing pressure to sign up and disclose environmental policies. Large companies, which have been traditionally reluctant to take on the view of outsiders, are starting to address these issues in response to consumer demand."

As part of its efforts to promote the integration of environmental considerations into all aspects of the financial sector's operations, the United Nations Environment Program's (UNEP) Financial Institutions Initiative conducted a survey on the activities of its 114 signatories, mostly Europe-based.

It reported that 20% of these financial institutions have formally integrated environmental risk into overall strategic credit or investment portfolio management. However, 60% of financial institutions have developed some form of green financial product — the most common being ethical/environmental investment funds.

Many investors simply do not believe, says Matthew Kiernan, head of Innovest Strategic Value Advisors in Toronto, Canada, that companies with effective environmental management actually outperform those without. Innovest established a pilot portfolio last year with Morgan Stanley Asset Management. Its results showed that highly diversified companies with strong environmental management outperformed the Standard & Poor's 500 by more than two percentage points over a six month period last year.

"The first generation of ethical funds [pioneered by campaigners against tobacco and alcohol firms around 30 years ago] were financial disasters because they were constructed too narrowly," says Mr. Kiernan. "Perhaps even more importantly, this outperformance premium is expected to become even greater in the future, as environmental regulations tighten, globalize and impact corporate balance sheets with even greater force."

Although there are an estimated $1.1 trillion of global funds invested with an environmental (and/or social) screening, there is still a long way to go.

Many previously lauded socially and environmentally responsible investment funds have fallen from grace, while critics question the ethics of some of the business world's current success stories. Microsoft, for example, may be a shining example of a profitable, clean, forward-looking corporation — but it is also being prosecuted by the federal government for alleged antitrust activities.

International environmental agencies are, in any event, certainly turning their attentions to finance houses. A coalition of environmental groups — including the Center for International Environmental Law, the Environmental Defense Fund and the Pacific Environment Resource Center — recently called on the World Bank to reform its lending policies.

According to the Institute for Policy Studies, loans in 1992 to 1997 resulted in the release of 9.5 billion tons of carbon into the air, while the bank puts this figure at 1.4 billion tons. Environmental groups want greenhouse gas emissions in the Bank's energy and transportation portfolios reduced by at least 10% annually.

The World Bank has taken heed of this new investment climate. It has refused to extended loans for the controversial $24 billion Three Gorges Dam in China, due for completion in 2010. The dam, which will be used to ease the chronic shortage of electricity, is expected to submerge 17,000 hectares of agricultural land and force an estimated 1.2 million residents out of their villages.

It requires an estimated $3 billion to complete the second of its three phases and will attempt to source the capital through bank loans, foreign investment, stock markets and corporate bonds. The severe environmental impact of this project has made it a less attractive and ultimately higher risk investment. Large multinationals and governments across the globe are undoubtedly taking note.

For Wall Street, Increasing Evidence that Green Begets Green

By CLAUDIA H. DEUTSCH

FOR years now, environmentalists have tried to persuade investors to eschew putting mon-y into companies that pollute. Not urprisingly, Wall Street has neered, insisting that a good way to naximize shareholder wealth is to ninimize environmental costs.

But now the do-gooders are con-ronting the money folk with evi-ence that they are wrong, couched n the language that Wall Street nows best: numbers. They are howing, through real and phantom ortfolios, that eco-efficient compa-ies — those that recapture raw ma-erials from waste, for example — eward stockholders with more than lean consciences.

"Analysts who don't respond to alk about emissions understand if ou say that such measures lower isks," said Linda Descano, vice resident for environmental affairs t Salomon Smith Barney.

The new eco-investors do not sug-est that environmental perform-nce is more important than finan-ial indicators of a stock's prospects. They avoid environmentally sound companies whose stocks seem fully valued. And few will put more than 5 ercent of their holdings into even he greenest company.

Nor are they investing only in "clean" industries — service firms, ay, or solar energy and windmill ompanies. Instead, they are buying he "best of class" stocks in basic ndustries like steel or paper.

Few posit a direct cause-and-ef-ect relationship between environ-nental performance and stock price. nstead, they say investors would do vell to include environmental cri-eria when picking stocks.

"Wall Street sees environment as rrelevant, or bad news waiting to appen," said Matthew J. Kiernan, hief executive of Innovest Strategic Value Advisors, a Toronto-based irm specializing in finance and the nvironment that has a formula for ying environmental performance to tock price. "We say it is a robust roxy for financial performance."

Confirming evidence is pouring in rom Europe. Two years ago Store-rand, a big Norwegian insurance ompany, and Scudder Kemper In-estments jointly created the Store-rand Scudder Environmental Value und. Scudder screens a company's financials; Storebrand checks environmental factors. Only the stocks that pass both screens — Sony, Du Pont and 3M, for example — are included.

The fund, which started with $10 million of Storebrand's money, has appreciated about 51 percent since its inception, outperforming the Morgan Stanley Capital International World Index by more than eight percentage points.

Storebrand will offer the fund to European institutional investors this summer and expects to offer it later in the United States. "We will not market this as a green fund, but as a good financial returns fund with limited risk," said Jan-Oluf Willums, a Storebrand senior vice president.

That is the approach at UBS Brinson in Switzerland. On June 16, 1997, as part of Swiss Bank, the group began offering two funds composed of 101 companies, including Johnson & Johnson, British Telecommunications and Bristol-Myers Squibb, that showed superior financial and environmental performance. A year later the two eco-efficiency funds, which are distributed only in Europe, had increased in value by 24 percent, compared with 22.4 percent for the Morgan Stanley index.

"An eco-efficient company is making efficient use of its resources, and that's probably a strong signal that it is well-managed as a whole," said Ingeborg Schumacher, an associate director of UBS Brinson.

Now, North American environmentalists-cum-financiers are buying into that idea. In January, Innovest put together a phantom portfolio that included all the Standard & Poor's 500 companies but was overweighted in the stocks of 65 companies with high scores on environmental factors, including Boeing, Weyerhaeuser and Xerox, and underweighted in those with low scores. In the first half of 1998 the environmentally weighted portfolio outperformed the S.& P. by 2.8 percentage points.

That does not surprise Jackson W. Robinson, president of the Winslow Management Company, the environmentally focused division of Eaton Vance, the mutual fund management company. Winslow pumped money into KTI Inc., a Guttenberg, N.J., company that uses a relatively clean method to burn waste to generate electricity. KTI also extracts aluminum and other metals for recycling.

Its stock is up 45 percent this year, vastly outperforming the S.& P.

"Some of the best investment opportunities are environmentally sensitive companies in otherwise 'dirty' industries," Mr. Robinson said.

Still, for most of Wall Street, that idea remains a hard sell. "You say 'environment' to a bunch of analysts, and they go, 'Ugh, risk, negative,'" said Lisa Laff, an asset manager at Salomon Smith Barney who is a chairwoman of the New York Society of Securities Analysts' social investment working group.

Part of the problem is that environmental data are hard to get. "It's a lot easier to check out a company's margins than to figure how they manage their waste," said Jack L. Kelly, a conglomerate analyst at Goldman, Sachs.

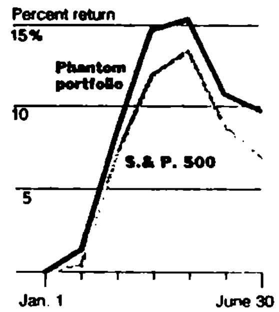
Still, proponents of environmental investing are building a compelling case for making the effort. The Alliance for Environmental Innovation, a nonprofit group in Boston, recently reviewed 70 research studies and concluded that companies that outperform their peers environmentally will also outperform them on the stock market, by as much as two percentage points. They found no studies that documented a negative relationship between financial and environmental performance. "You can't find them, because the facts just don't support that concept," said Ralph Earle 3d, the group's director.

In another study, released last year, the ICF Kaiser Consulting Group found that companies with high scores on environmental criteria were "lower-beta stocks," financial jargon for less risky investments, and would thus enjoy a lower cost of capital and, ultimately, a higher stock price. In fact, the study, which looked at 327 of the S.& P. 500 companies, indicated that companies can push up their stock price 5 percent by improving their environmental performance.

ICF Kaiser, however, is not claiming a definite cause-and-effect relationship between environment and stock price. "What we've done," said Peter A. Soyka, an ICF Kaiser vice president, "is give executives something they can use to persuade their own boards that it makes sense to run an environmentally friendly operation."

A Clean Sweep

A phantom portfolio of companies with strong environmental records outperformed the S.& P. 500-stock index by 2.8 percentage points this year through June.



Source: Innovest Strategic Value Advisors

Sound, Environmentally and Financially

Research by Innovest identified a number of industries in which companies that rate higher on its scale of environmental performance produced better returns for stockholders than did less environmentally conscious competitors. Here are five examples. In each case, the two companies received the same rating from equity analysts at Standard & Poor's; the company with the higher ecological rating from Innovest is shown in **bold type.**

	Compound return 1994-97
Communications equipment	
Northern Telecom	+47.7%
Andrew Corp.	+19.0
Pharmaceuticals	
Bristol-Myers Squibb	+59.2
Abbott Laboratories	+32.6
Utilities	
Edison International	+31.6
Dominion Resources	+10.4
Forest products	
Weyerhaeuser	+17.6
Louisiana-Pacific	- 6.6
Oil	
Mobil	+25.3

Source: Innovest Strategic Advisors

The New York Times

Environmental performance linked to profitability, competiveness

Recent study contradicts traditional views

By JAMIE CRAIG
Editor

In a recent study of the oil and gas industry, Royal Dutch/Shell and Exxon emerged as the two top environmental performers among a competitive set of 13 large cap U.S. oil and gas stocks. The report, "The Petroleum Industry — Hidden Risks and Value Potential for Strategic Investors," calls into question the traditional industry view of the environment as a pure cost center and presents an argument in support of the link between superior environmental performance and superior competitiveness and profitability.

> *"Environmentally driven attributes can and often do contribute directly to a company's competitive advantage in the marketplace."*
>
> *—Dr. Martin Whittaker, Innovest Strategic Value Advisors*

The report was prepared by Innovest Strategic Value Advisors, an internationally recognized investment advisory firm specializing in environmental finance and investment opportunities.

Innovest Strategic Value Advisors' investment model, EcoValue '21, evaluates environmental risk and opportunity profiles of companies to determine the implications for investors. EcoValue '21 is a disciplined, proprietary investment analysis platform used to uncover lucrative hidden value potential.

Information for the report was derived from company published material, senior executive interviews, industry groups, federal agencies and databases, nongovernmental organizations, industry experts, private companies, financial analysts, and personal contacts, among other sources.

The study taps into an undiscovered source of shareholder value for mainstream investors — corporate eco-efficiency.

"Environmentally driven attributes can and often do contribute directly to a company's competitive advantage in the marketplace. Environmental management is simply a good proxy for overall good management throughout a company, which is the prime driver of shareholder value and financial performance," Dr. Martin Whittaker, the report's principal author, said. "This relationship will only strengthen as environmental regulations tighten, as market demands for environmentally responsible products and corporate policies continue to increase, and as pressure on corporate cost structures intensify."

Whittaker is a senior research analyst for Innovest Strategic Value Advisors Inc. and is an environmental consultant with a specialization in risk management. His areas of expertise include the petroleum, mining and petrochemical sectors. Whittaker holds a doctorate in environmental science from the University of Edinburgh as well as both a bachelor's and master's degree in chemistry.

The study sheds light on a critical side of the industry and examines:

—The full extent of the financial minefield created by looming U.S. and international environmental regulations, policy developments and related industry sustainability issues (for example, the estimated $40 billion required for offshore facility decommissioning).

—The internal environmental management dynamics of the top U.S. oil and gas companies.

—How the various environmental risk and profitability drivers are translated into financially meaningful terms.

—How leading companies are positioning themselves in natural gas, renewables, alternative fuels, emissions trading and technological innovation.

The report provides insight into criteria that investors should use when considering oil and gas stocks. In addition to considering the financial fundamentals, the report looks at company risk exposures, their environmental management expertise and their capacity to profit from environmentally driven business opportunities.

> *"Our message to investors would be that environment does make a difference to a company's bottom line. Even investors with little interest in environmental issues should take note."*
>
> *—Dr. Martin Whittaker, Innovest Strategic Value Advisors*

"Our message to investors would be that environment does make a difference to a company's bottom line. Even investors with little interest in environmental issues should take note," Whittaker said. "The results of our study are evidence that investors, particularly fiduciaries, would be wise to add environmental performance to their money management criteria. Indeed, we argue that fiduciaries would not be fulfilling their responsibilities if they ignored environmental factors."

Central findings of the report provide a wake-up call for both companies and investors — top environmental performers outperformed their industry rivals by 17 percent over the course of 1998. In addition, variances as great as 500 percent were detected in the environmental risk profiles of companies regarded by mainstream Wall Street analysts and rating agencies as virtually identical credit and investment risks.

Both Shell and Exxon scored high in a 25-point analysis of environmental management capabilities, as well as in their capacity to profit from environmentally driven business opportunities. Shell's $500 million investment in renewables and Exxon's leading role with GM, Toyota and Renault in the development of low-emissions gasolines were notable plus points.

The report also served as a warning to the companies by exposing inequalities in corporate risk exposure, management capability and strategic positioning. With the American Petroleum Institute, the World Energy Council and other influential organizations repeatedly citing environmental matters as being among the most pressing of all issues faced by the oil and gas sector, it is clear that tomorrow's winners and losers will be increasingly defined by environmentally driven risks and opportunities.

The report contradicts two pieces of conventional wisdom. First, the notion that the environment is purely a cost center — by and large consistent between companies as all companies are subject to the same environmental laws and regulations — is proved untrue. The study refutes the idea and allows the correlation of specific environmental, health and safety management elements with their implications for shareholder value.

Second, the report sheds light on the belief that "big oil" is bad for the environment. The top two companies in the study are global leaders that have been associated with negative incidents (Shell's Brent Spar and the Exxon Valdez).

"By going beyond the headlines to look at internal environmental management dynamics, we feel that we can present a different view of corporate environmental engagement that investors can relate to," Whittaker said.

The report's implications for investors and industrial companies are that investor returns can be substantially improved by investing in companies with superior eco-efficiency. The findings should add another dimension to the relationship between the business, financial and investment community that would allow leaders to distinguish themselves from others.

"Many companies are doing great things when it comes to the environment that are either being buried in the language of regulations and compliance or are lumped in with what we call 'greenwash,'" Whittaker said. "These insights provide a much more serious platform for companies engaged in environment and sustainability to build on their achievements and reach out to the investment community through a means other than 'ethical funds,' for example."

The report should serve to benefit institutional, retail and individual investors; companies themselves; industry groups; and all those interested in environment and finance.

As for the future of the oil and gas industry, Whittaker predicts a greater role for those presenting a "business case" for the environment and a continuing decline in significance of the "compliance mentality" toward more voluntary initiatives designed to enhance underlying corporate goals (new markets, improved earnings, market share).

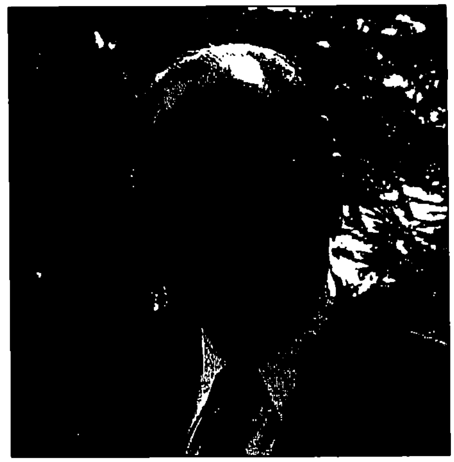
"The oil and gas industry has a tremendous upside potential in energy provision, fuel technology and economic development on a large scale. These upside opportunities must be brought to bear upon the markets, especially in the developing world," Whittaker said. "Ultimately, we will see the emergence of the triple bottom line — social, environmental and economic imperatives of sustainable development — as a corporate strategy. Later, these imperatives will become a fundamental tenet of business activity."

The report was written as part of a series of publications that Innovest Strategic Value Advisors produces on a regular basis. Similar reports are available for the forest industry, chemicals and electric utilities. Plans for reports on other sectors are underway, including mining, heavy industry/manufacturing, and transportation, among others.

"Innovest Strategic Value Advisors sells its reports primarily to the financial community — pension funds, mutual fund companies, investment banks and the like. Although, companies themselves, including those wishing to be benchmarked against others in the industry understandably take a keen interest as well," he said.

For more information on the report, contact Martin Whittaker at (905) 707-0876 or visit Innovest Strategic Value Advisors' Web site at www.innovestgroup.com. ❑

The convergence of environmental and capital markets



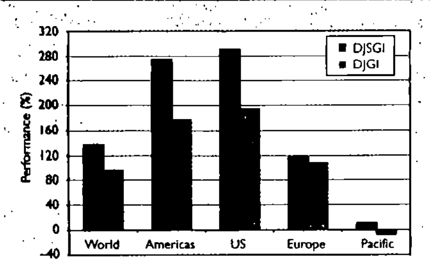
We are delighted to introduce the first of a monthly series of articles by Richard Sandor exploring the growing use of capital markets products to solve environmental problems.

Few people are better placed to comment on this important trend. Best known as "the Father of Financial Futures" for his pioneering work on interest rate futures contracts, Dr Sandor is currently chairman and chief executive of Environmental Financial Products, a Chicago-based company which designs novel risk management tools for the environmental, financial and commodity markets. He is also a senior advisor to PricewaterhouseCoopers on greenhouse gas emissions trading; an expert advisor to the United Nations Conference on Trade and Development on tradeable permits for greenhouse gases; a director of Zurich-based investment and risk management company Sustainable Performance Group; a principal of SAM Sustainability Group and a member of the board of Dow Jones Sustainability Group Indexes GmbH.

During several years' work with the Chicago Board of Trade he was instrumental in developing the exchange's annual auction of sulphur dioxide allowances and its options and futures contracts for catastrophe insurance.

Dow Jones Sustainability Group Index: five-year performance

(Jan 1, 1994–Jun 30, 1999, US dollar, price index)



Two facets of the convergence of environmental and capital markets became visible in September 1999 as final preparations were being made for the COP 5 climate change meetings in Bonn.

The early news from the markets is good. The cost of reducing greenhouse gases is less than early forecasts and corporations that are sustainable yield superior value to shareholders.

In London, British Petroleum reported on the success of its pilot program in greenhouse gas emissions trading and announced its plan to expand to group-wide emissions trading in January, 2000.

In Zurich and Chicago, Dow Jones and the SAM Sustainability Group announced the launch of a family of comprehensive stock indexes – the Dow Jones Sustainability Group Index (DJSGI) – that track the share prices of the leading companies that have a proven record of being financially, socially and environmentally sustainable. The select companies represented in the new indexes demonstrate a real commitment to reducing pollution and safeguarding human and natural resources.

In 1998 British Petroleum – a component of DJSGI – announced that it would voluntarily reduce its greenhouse gas emissions to 10% below 1990 levels by the year 2010. It began a pilot emissions trading program to accomplish this objective in the most cost effective way. Twelve business units initially participated. The cost of reducing a ton of carbon emissions in early trades was approximately \$63–\$70 (\$17–\$20/ton CO_2). Although the initial prices should be viewed cautiously, they are significantly below some early forecasts of \$200 per ton. Furthermore, the expansion to group-wide emissions trading and the inclusion of credit-based trading (e.g. net emission reductions associated with external investments in energy efficiency and carbon sequestration) should witness a further reduction in costs associated with meeting the corporate targets. It is important to emphasise that British Petroleum extended its commitment when it acquired two US companies, Amoco and Arco.

The comprehensive sustainable stock index family includes an index with global coverage, the DJSGI World, as well as regional indexes focused on companies in Europe, North America, Asia-Pacific, and a country index – DJSGI USA.

The table shows salient features of the global DJSGI index.

The DJSGI index is fully integrated with the Dow Jones Global Index in the sense that it uses the same calculation, publication and review methodologies. Sustainability ratings for individual companies are based on general sustainability criteria, industry sustainability and a corporate sustainability criteria. In addition to public information a proprietary corporate sustainability questionnaire is used.

The results of backcasting the price appreciation performance of the indexes are very instructive. As shown in the chart, in all instances the sustainable indexes outperformed the standard Dow Jones index. Furthermore, these superior returns were realised with minimal increases in volatility (risk) relative to comparable indexes. Evidence from the markets shows that sustainability and maximisation of shareholder value are entirely compatible.

Both these examples of the convergence of the environmental and financial markets provide interesting price signals. The cost of reducing greenhouse gas emissions appears to be lower than many predicted and corporations that cut pollution and manage for sustainability will increase value to their shareholders.

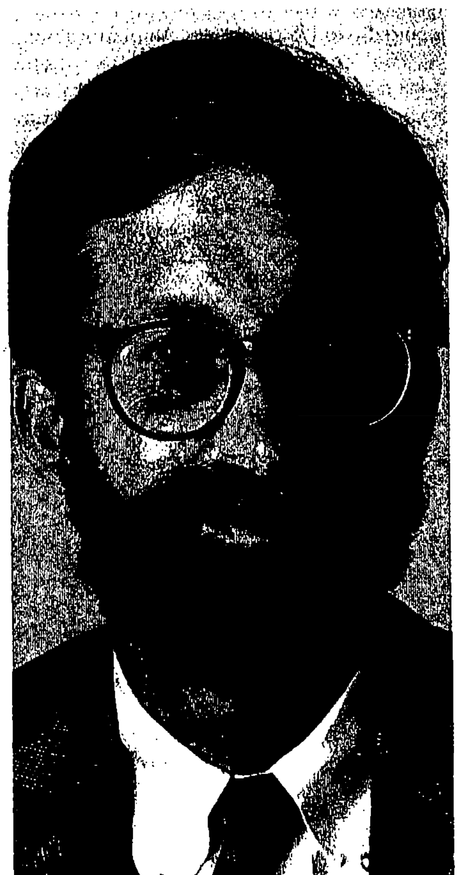
Special thanks to Dr Alois Flatz, Dr Michael Walsh and Rafael Marques for their valuable input.

Salient features of the Dow Jones Sustainability Group World Index

Number of companies:	229
Total market capitalisation:	\$4.3 trillion
Selection criteria:	Dow Jones Global Index companies scoring in the top 10% of SAM sustainability index
Coverage:	73 major industries in 22 countries, best-of-class selection
Share weighting process:	market capitalisation
Currency:	prices and total returns expressed in US dollars and euros
Base value:	set at 1,000 on December 31, 1998

Dow initiative ignites debate

Sustainable investing has taken a giant stride towards the mainstream with the launch of the Dow Jones Sustainability Group Indexes. But, as **Mark Nicholls** finds, the methodology has proved controversial.



"The sustainability concept is not static – there's always going to be a certain amount of subjectivity in component selection"

David Moran, Dow Jones

Most analysts, consultants and environmental fund managers have warmly welcomed the September launch of Dow Jones' new family of sustainable indexes. The heavyweight US index provider, they say, brings kudos and publicity to the sustainable investing debate. But behind the broad expressions of approval, the company has run into criticism for the methodology it has chosen to calculate the indexes – highlighting just how controversial the rating of companies for sustainability remains.

"They've done a good job, given the current state of the art," says David Coles, head of the sustainability advisory services group at consultants KPMG in London. "That isn't to say that the methodology won't need to be substantially improved. There's currently not enough information [on sustainability] in the public domain."

"My first reaction is that I support the initiative," says Matthew Kiernan, executive managing director of Innovest Strategic Value Advisors, a New York-based investment research firm, which offers clients an alternative eco-rating methodology. "But I'm mildly surprised that Dow Jones would build a methodology that is so open to question." Kiernan, and others, have questioned the objectivity and reliability of the data used to select the 229 companies that make up the flagship Dow Jones Sustainability Group Index (DJSGI).

The New York-based president of Dow Jones Indexes, David Moran, is not slow to acknowledge the difficulties in formulating an index of this type. "The sustainability concept is not static – there's always going to be a certain amount of subjectivity in component selection. But after a period of consultation, we've decided that [the approach Dow Jones has taken] is sufficiently analytically rigorous."

To produce the indexes, Dow Jones has entered into a partnership with the Zurich-based SAM Sustainability Group, to form Dow Jones Sustainability Group Indexes GmbH, also headquartered in Zurich. SAM, which specialises in corporate sustainability assessment, has provided the methodology and the research behind the indexes. The process is based on questionnaires sent to the 2000 largest components of the Dow Jones Global Index. Their responses are cross-checked against company reports, regulatory filings and an ongoing media review.

The DJSGI index family consists of one global, one US, and three regional (North America, Europe and Asia-Pacific) indexes. Four specialised indexes are also calculated for each of these geographical regions excluding alcohol, gambling, and tobacco stocks, and all of the above.

Over the last five years, the US dollar global DJSGI returned 137%, compared to 96% for the Dow Jones Global Index. The US sustainable index, however, returned a staggering 290%, compared to 194% for its mainstream equivalent. Dow Jones is reluctant to make too much of this, pointing out that back-testing indexes is notoriously unreliable. The returns will, however, give heart to those investors who believe sustainable investing makes good financial sense.

Returns aside, criticisms have centred on the indexes' reliance on questionnaires for assessment of each company. "You have to be a little cautious about questionnaires. They're useful, but you need independent verification," says Mark Mansley, at London-based Claros Consulting, which specialises in ethical and environmental investing.

Alois Flatz, head of sustainability research at SAM in Zurich, vigorously defends the methodology. He says that the media review can often pick up on the less-than honest. "Some companies that claimed that they weren't involved in corruption cases were automatically excluded from the index when press reports showed large numbers of violations." Flatz adds that because the questionnaires are signed by senior company managers, there would be "legal implications" in providing incorrect information to DJSGI GmbH, as this could amount to misinforming shareholders.

Dow Jones and SAM have also come under fire for their lack of company visits to verify the information they receive. "I'm old fashioned," says Kiernan. "I like to visit the companies we rate."

But the drawback with company visits, says Flatz, is that they would add another layer of subjectivity to the assessment process. Unless SAM was to visit all of the sites of all of the companies they analyse, then they would be unable to assess companies fairly, he says. This would also be prohibitively expensive, he adds.

And Flatz argues that it is possible to attempt to collect too much information from companies. One of SAM's competitors, he says, recently sent a 36 page questionnaire to a German bank. The bank – which told Flatz that it struggled to complete the 14 page questionnaire sent by DJSGI GmbH – simply declined to respond. "You can ask 150 questions or 1000," he says, "and you will most likely see the same companies leading."

Many observers agree that SAM and Dow Jones were forced down the questionnaire path by the paucity of third party information available on sustainability issues. Outside the US, where companies have a legal obligation to provide certain information to regulatory bodies, it can be extremely difficult to access data without going directly to the company itself, they say.

But Kiernan also questions how SAM has weighted the relative importance of the various factors that it has chosen to ask about. "The number of environmental audits and the amount of carbon dioxide produced by a company do not have the same financial impact," he argues. Equally, the very choice of questions asked of companies – particularly in the industry specific sections – is subjective, say some analysts.

Flatz says that DJSGI GmbH has made every effort to reach some sort of consensus, involving external consultants and industry experts. Some companies themselves were asked to comment on draft questionnaires. "At the end of the day, it will always be subjective. We've tried to limit this as much as possible," he says. The process also involves standards where they exist, such as the United Nations Environment Programme standards on environmental reporting. "What is important is that we treat all the companies in the same way," he says.

Moran also points out that the judgements made in assessing sustainability criteria are not set in stone. "We're only making judgements on the relative sustainability prospects of a particular company in a particular industry at a particular point in time. As the sustainability concept develops and changes, I hope we can take that into account as we review the index components on an ongoing basis," he says.

Leslie Christian, president of Seattle-based asset management company, Progressive Investment Management, believes that all definitions of sustainability are subjective. "The index's perceived subjectivity is no reason to dismiss it. It's wonderful that there's this much focus on sustainability from a company like Dow Jones."

Adrian Henriques, head of corporate accountability at London-based pressure group, consultancy and auditors New Economics, believes that the index should encourage companies to provide 'harder' information on sustainability: "Given that it's not easy to get this kind of information, it's better that this index exists than not. But I'd like to know how Dow Jones intends to develop it, to influence companies to provide objective, verified information."

KPMG's Coles believes that the very existence of the index will push companies in the direction of a greater emphasis on sustainability issues, and towards greater accountability. "The great plus with this index is that it will put pressure on companies to address sustainability."

At the time of writing, six European companies had signed letters of intent with DJSGI GmbH to launch products based on the indexes. In mid-September, Germany's HypoVereinsbank listed five year index certificates on the Frankfurt Stock Exchange. Deutsche Bank is to manage a private fund linked to the index, and Swiss insurance group Bâloise Assurance is planning to launch a product aimed at Swiss pension funds.

As of September, Dow Jones had yet to begin marketing the indexes, according to Dow Jones' European regional director Scott Stark. Hence, the only concrete interest thus far had come from European institutions that had learnt about the indexes via SAM, he says.

The response from one of those companies that has signed a letter of intent to licence the DJSGI underlines the extent to which sustainability analysis remains a work in progress. Robeco plans to use the index to benchmark its €110 million ($116 million) sustainability equity fund, the RG DuurzaamAandeelen Fund, which it launched in February.

"We're not 100% happy with the thoroughness of current research [carried out to assess sustainability], which is why we use a total of four consultants to screen the companies included in the fund," says Ronald Wuijster, sustainability fund manager at the Rotterdam-based asset management company. Robeco also supplements its analysis with its own assessment of the 500 companies that comprise the fund's investible universe.

That said, Wuijster acknowledges that there is as yet no perfect answer. "This is a field in a very early stage of development. It is very easy to criticise such initiatives without actually delivering anything yourself." And, as Moran cheerfully notes, "in this environment, you can expect criticism about anything you do."

A questionable methodology?

The methodology by which Dow Jones Sustainability Group Indexes (DJSGI) GmbH arrives at its chosen 229 companies has generated intense debate. DJSGI GmbH claims to have developed the "world's first systematic methodology for identifying leading sustainability companies world-wide", predominantly driven by questionnaires sent to the largest 2000 companies in the mainstream Dow Jones Global Index.

Sustainability is defined by the company as the integration of economic, environmental and social opportunities into business strategy. Each company is judged against two sets of sustainability criteria:

- "Sustainability opportunities" cover everything from management organisation and stakeholder relations to the extent of computer systems integration and environmental and social reporting to exploiting new markets for sustainable products or services.
- "Sustainability risks" focus on the defensive aspect of sustainability management, examining issues such as risk management, corporate codes of conduct, social and environmental audits and trends in environmental liability payments.

The risks and opportunities are broken down into six sections of which two are tailored to each industry grouping. The six sections each carry 12 points, with an extra four points awarded according to the quality of the information available, totalling a maximum possible score of 76 points.

Information is derived from three sources: questionnaires sent to the chief executive office, company policies and reports – including filings to regulatory bodies, and stakeholder relations via a continual review of relevant media. The top scoring 10% in each industry group are then included in the DJSGI. The index is reviewed annually, although there is an ongoing review process to cover mergers or take-overs for example, as well as extreme changes in a company's sustainability performance.

DJSGI GmbH publishes price returns (excluding dividend payments) and total returns in both euros and US dollars.

Finance and Climate Change

Summary: Wall Street can and should play a larger role today in mainstreaming carbon risks and benefits in asset valuation, which would in turn accelerate corporate commitments to become more climate friendly. A high-level dialogue with senior policy makers could help achieve this goal.

White House climate change outreach efforts to date have focussed almost exclusively on manufacturing and basic industry, utilities and technology developers. We have not aggressively engaged with the financial sector, which arguably has the greatest potential to leverage change. Capital markets are the "financial oxygen" on which companies depend for debt and equity financing, and are therefore effective tools to both punish and reward corporate behavior.

Over the last decade, institutional investors increasingly have recognized the linkage between environmental performance and financial performance. Inclusion of environmental concerns as contingent liabilities on balance sheets is now common practice, but has not extended to carbon dioxide. The recently released "Dow Jones Group Sustainability Index", which tracks environmentally responsible companies which consistently outperform their peers globally, is another confirmation of this enviro-finance link.

The one aspect of climate that has captured limited attention is the nascent carbon offset market. PriceWaterhouse Coopers recently created a group focussed exclusively on carbon trade issues, and one of the largest trading firms on the Street, Cantor Fitzgerald, has launched a carbon practice (Howard Cantor of Cantor Fitzgerald is personally engaged on this issue and very knowledgeable about the carbon market).

Although climate change is likely to have a greater impact on the U.S. business community and financial markets than other environmental issues in the decades ahead, Wall Street has not yet "mainstreamed" the issue, due largely to lack of information about the potential impacts of a carbon-constrained world. Other countries, however, are moving ahead: Germany, Switzerland and Australia have legislation pending which would require companies to include carbon reporting in their annual reports.

Companies that have large fossil fuel reserves, for example, arguably carry a carbon "liability" over the next twenty years – a fact that should be incorporated in any calculation of net present value. Similarly, companies with large carbon offset potential may be more richly rewarded in a carbon-constrained world and their value should reflect that in some measure. But this issue is poorly understood by senior managers on Wall Street. There is not yet a widespread recognition that some form of carbon regime will likely take effect over the next twenty years, nor is there anything like a common metric for understanding carbon liabilities.

As Mark Moody-Stuart, CEO of Shell, has stated:

"Applying a rough estimate for future carbon prices to new long term investments, despite all the inherent uncertainties, seems to me an imminently more sensible way to manage the risk and win competitive advantage, than continuing to assume, as we have historically done, that the costs of emitting carbon will remain or return to zero."

To help broaden and deepen Wall Street's understanding of climate change and its impact on their industry, it may be useful to convene a trilateral dialogue among policymakers in the Administration, financial leaders and business leaders. The meeting would focus on "best practices" of successful companies, assessment of carbon liabilities, potential for carbon assets and profits from trading, the need for common disclosure and accounting approaches to carbon, and the potential for a corporate-led initiative to "value" carbon in trade and investment. Some major players on Wall Street have demonstrated environmental credentials and could be looked to for leadership, e.g. John Hill Wilson (Managing partner at Morgan Stanley and ED Board member); John Rosenwald (Vice Chairman, Bear Stearns also on ED Board); Hank Paulon (CEO Goldman Sachs is on TNC Board) etc.

From the Administration perspective, the optimal outcome of such an event would be a commitment by several "blue chip" companies to work towards a common approach to including carbon liabilities, premised on the assumption that some form of global carbon regime will emerge. The signal sent by such a move by major financial houses would significantly accelerate corporate commitments to address climate change.

- "Model Balance Sheet standards" that include greenhouse gas impacts? get some to adopt and build public pressure / shareholder impact. Give a measurement of company.
- Government contract standards?
- ECA standards?