ENVIRONMENTAL FINANCIAL ADVISORY BOARD

Members

A. James Barnes
Chair

Terry Agriss

Julie Belaga

John Boland

George Butcher

Donald Correll

Michael Curley

Rachel Deming

Pete Domenici

Kelly Downard

Mary Francoeur

James Gebhardt

Steve Grossman

Scott Haskins

Jennifer Hernandez

Keith Hinds

Steve Mahfood

Langdon Marsh

Greg Mason

Lindene Patton

Cherie Rice

Helen Sahi

Andrew Sawyers

Jim Smith

Greg Swartz

Steven Thompson

Sonia Toledo

Jim Tozzi

Justin Wilson

John Wise

Stan Meiburg
Designated
Federal Official

APR 29 2008

Mr. Brian F. Mannix
Associate Administrator for
Policy, Economics and Innovation
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Mannix:

The Environmental Financial Advisory Board (EFAB) is pleased to enclose its observations and recommendations regarding *Environmental Management Systems and the Use of Corporate Environmental Information by the Financial Community*. The Board's work was led by its Environmental Management Systems Project Workgroup, chaired by Ms. Rachel Deming, a partner with Scarola Ellis LLP of New York City. In finishing this important project, the Board would be sorely remiss if we failed to recognize the excellent work and cooperation of two individuals from your Office, Mr. Chuck Kent and Ms. Shana Harbour.

EPA has long recognized the potential that environmental management systems (EMSs) have for improving environmental performance and compliance. In the past few years, EPA's Financial Incentives for EMSs Steering Group, led by your Office, has done important work in examining the extent to which the financial sector values the development and implementation of corporate EMSs. As an adjunct to the Steering Group's work, your Office asked EFAB to explore some questions regarding EMSs and financial issues. When EFAB started looking into these questions, it became clear that the initial request needed to be examined in a broader context. The EFAB workgroup worked closely with your staff to refine the questions to take into account market realities. The enclosed report is the product of Board meetings, conference calls, member discussions and a workshop involving experts from the equity, debt and insurance financial sub-sectors. A detailed summary of the workshop is also enclosed for your reference.

The Board believes that the work of the Steering Group is very timely in light of the increasing awareness of the role the environment plays is all segments of the economy and strongly supports the continuation of the Agency's work with

the financial sector and companies to develop and promote a better understanding of the relationship between EMSs, environmental performance and financial value. EFAB believes that among the many areas that EPA could work, attention should be given to developing mutually useful environmental metrics that can be used as indicators by financial analysts, identifying all relevant environmental information collection systems, and improving the measurement of certain environmental impacts, starting with carbon footprints and the developing markets relating to use of greenhouse gases.

We hope that you will find Board's more detailed observations and recommendations constructive and useful. The members of EFAB appreciate the opportunity to advise and assist the Agency on important environmental finance issues. If you would like to discuss the report in more detail, we would be happy to meet with you and/or members of your Office as you deem appropriate. EFAB is very interested in helping to facilitate better evaluation of environmental performance for the financial markets and remains willing to help the Agency in any way requested consistent with its charter.

Sincerely,

A. James Barnes
Chair

A. Stanley Meiburg
Designated Federal Official

Enclosures

cc: Stephen L. Johnson, Administrator
Marcus C. Peacock, Deputy Administrator
Lyons Gray, Chief Financial Officer

Environmental Financial Advisory Board

EFAB

A. James Barnes
Chair

A. Stanley Meiburg
Designated Federal Official

Members

Hon. Pete Domenici
Terry Agriss
Julie Belaga
John Boland
George Butcher
Donald Correll
Michael Curley
Rachel Deming
Kelly Downard
Mary Francoeur
James Gebhardt
Steve Grossman
Scott Haskins
Jennifer Hernandez
Keith Hinds
Stephen Mahfood
Langdon Marsh
Greg Mason
Lindene Patton
Cherie Rice
Helen Sahi
Andrew Sawyers
Greg Swartz
James Smith
Steve Thompson
Sonia Toledo
Jim Tozzi
Justin Wilson
John Wise

Environmental Management Systems and the Use of Corporate Environmental Information by the Financial Community

This report has not been reviewed for approval by the U.S. Environmental Protection Agency; and hence, the views and opinions expressed in the report do not necessarily represent those of the Agency or any other agencies in the Federal Government.

April 2008

Printed on Recycled Paper

EFAB EMS Project Final Report

Environmental Management Systems and the Use of Corporate Environmental Information by the Financial Community

---

Original Request: Financial Market Incentives for Organizations to Reduce Risk and Improve Environmental Performance Using Tools like Environmental Management Systems (EMSs)

Original Requester: Office of Policy, Economics and Innovation

Original Questions:

1. Do EMSs yield information on financial risk that is relevant and meaningful to investment and underwriting decisions? If yes, how?

2. What are the financial services industry's beliefs, practices, and conventions regarding EMS?

3. What additional organizations have an interest in EMS?

Addressee: Brian Mannix, Associate Administrator for Policy, Economics and Innovation
United States Environmental Protection Agency

cc: Honorable Stephen L. Johnson, Administrator
United States Environmental Protection Agency

Marcus C. Peacock, Deputy Administrator
United States Environmental Protection Agency

Lyons Gray, Chief Financial Officer
United States Environmental Protection Agency

Subject: EFAB Findings and Recommendations on the Use of Corporate Environmental Information Management Systems in Investment Evaluations and Decisions Made by the Financial Services Communities in the Equity, Commercial Banking, and Insurance Sectors

Background

The United States Environmental Protection Agency (EPA) has recognized the potential for environmental management systems (EMSs) to achieve compliance and to establish standardized systems for monitoring and enhancing environmental performance. EPA's policy is to encourage companies to implement EMSs. In connection with this policy, EPA created a program called *Performance Track* which is focused on the implementation of EMSs by operating facilities. EPA also decided to examine ways in which the financial markets could provide incentives for companies to implement EMSs.

A Steering Group was established by EPA to look at financial market incentives, which is led by the Office of Policy, Economics and Innovation (OPEI). This Steering Group conducted extensive research and prepared a Phase 1 report on its findings, entitled "Financial Market Incentives for Environmental Management Systems" http://www.epa.gov/ems/docs/resources/FinalFinancialIncentivesforEMS%203-07.pdf.

While this research was in progress, OPEI staff attended the August 2005 meeting of the Environmental Financial Advisory Board (EFAB) and requested the Board's assistance in identifying the financial advantages of EMSs. OPEI also asked the Board to provide recommendations to EPA on ways in which the market value of EMSs could be promoted. EFAB formed an EMS Workgroup (the Workgroup) to assist EPA.

Initially, the Workgroup had to assess whether the charge from EPA was feasible. Very few of the EFAB members knew what an EMS was, and those that did knew there were wide variations in EMSs. EPA itself did not establish specific requirements for EMSs, since it wanted to allow companies the maximum flexibility to implement a management system that worked for each company.

At the EFAB meeting in March 2006, the Workgroup considered options for addressing OPEI's requests. The Workgroup members recognized that an EMS as a standard suffered from definitional problems. First, in establishing a qualified EMS, each facility is given the latitude to establish its own goals. The main benefit of the EMS is to establish a mechanism to systematically evaluate those goals and assess the company's performance in attaining those goals. From a market standpoint, there is no specific endpoint that can be measured across companies or business segments. EMSs are used by the financial sector largely as an indicator of good management. Second, EMSs do not usually exist as a stand-alone system. A company that has an EMS will also have management systems for several other operational areas such as health and safety and product stewardship.

The Workgroup decided to look at three financial market sectors separately, equity, debt and insurance, and developed a couple of concepts to test in each sector: (1) what is the importance of measurable results; and (2) whether branding a form of EMS would assist the market sector in valuing environmental performance. In connection with the latter charge, a representative of EPA's *Energy Star* program talked to the Workgroup about the development of that program and the time it took for recognition by consumers in the marketplace.

At the August 2006 Board meeting, the Workgroup discussed some results of contacts with representatives of the equity and insurance markets, as well as contacts within companies, and the on-going review of the available literature. The Workgroup also heard a presentation by a representative of the American Chemistry Council (ACC) on the discussions she had with certain sustainability indices in the equity market. ACC's *Responsible Care*® Program includes an EMS

requirement that is consistent with EPA's EMS criteria for *Performance Track*. The ACC representative stated that an EMS is one of the factors that sustainability indices look at when evaluating the criteria for including companies on the index. ACC was working with the FTSE4Good Index, on the London Stock Exchange, to get recognition for its *Responsible Care®* Program and felt it was having some success.

The Workgroup decided to explore the possibility of setting up a workshop to get more formal feedback from the financial market sectors. As part of that effort, some potential questions were developed for a workshop and presented to the Workgroup at the March 2007 meeting. The Workgroup refined those questions and developed a format for a workshop consisting of three panels, one for each of the market segments: equity, debt and insurance.

In connection with preparation for the workshop, the chair of the Workgroup attended an EPA-sponsored dialogue among financial and corporate representatives. Some important conclusions from that dialogue are:

(1) the focus of the financial markets is on short-term performance while they perceive environmental performance to require a long-term focus, unless it is a sudden negative event;

(2) environmental metrics currently collected by EPA are not readily useful because the data are facility-based and the information is backward looking;

(3) other environmental reporting frameworks like the Global Reporting Initiative (GRI) are not as useful as they might be to mainstream investors; and

(4) this arena is changing due to climate concerns.

An excellent summary of the June 2007 workshop is attached for reference. Some of the key points made during the workshop include:

(1) Standardized and consistent reporting has value to a number of stakeholders;

(2) independent verification of the information reported is important;

(3) several participants mentioned the need for stronger EPA enforcement;

(4) the measurement and reporting on carbon footprints is already happening and is the kind of metric that the financial sector has found useful; and

(5) EPA should not speak for the market, but it could help to make data more transparent and understandable.

Further work on developing sensible metrics that can be used to measure a few leading indicators will take more work. Continued dialogues among regulators, the regulated community and market sector representatives would be helpful to identify metrics that add value.

Some Observations

1. The equity market is looking for endpoints, while an EMS is focused on process. The insurance market segment is interested in both endpoints and process. The banking sector is generally a follower as a market sector.

2. Financial analysts are often asked to make decisions on the financial value of a company with a significant environmental footprint in a short time span. Therefore, standardized metrics and transparent reporting are more helpful to financial analysts than information that requires value judgments.

3. Information currently being collected by EPA overall is not as helpful as it could be to financial analysts to assess business value. The information collected by EPA primarily relates to its role as a regulator rather than an assessor of environmental performance. In addition, EPA collects data by facility and investors need information on companies. Similarly, information from environmental reporting organizations like GRI has not been especially helpful to the mainstream financial community.

4. The one environmental issue that is getting traction in the financial markets is the emission of greenhouse gases and the measurement of carbon footprints.

Recommendations

1. EPA should take a leadership role in working with the financial sector and companies to better understand the relationship between EMSs, environmental performance and financial value. This will assist the financial industry to better understand the benefits of using environmental criteria in valuing individual firms and/or in determining actual risks that can be reflected in the appropriate cost of financing such firms.

2. EPA should work with companies and the three financial market segments already identified in developing environmental metrics or categories of data that would be of value to the financial markets, for both operational and legacy environmental concerns. This would give the financial markets better information for making more knowledgeable decisions on environmental risks and performance. The adoption of metrics can drive implementation of management systems in order to collect the information necessary for reporting the requested information. The reporting of such metrics could be on a voluntary basis; it does not need to be mandatory. The greater the interest of the financial sector in the metrics, the more likely that companies will implement systems to collect the information to report the metrics. The development of key environmental metrics could provide enhanced methods of differentiating corporate environmental performance, which to date have been evaluated primarily on a qualitative basis.

3. If EPA decides to pursue this path, then it should make sure that the Steering Group identifies all the relevant information collection systems within the agency, including information that may reside in the regions, so that any new system considers all the information available within the agency.

4. The agency should consider contacting environmental regulators and organizations in Europe, Japan and Australia, which are geographical regions that have been identified as more advanced in collecting environmental performance information that is of interest to the financial markets. Examples of such information include energy use, water use and carbon footprints.

5. EPA should coordinate on the development and use of environmental metrics with other agencies, such as the Securities and Exchange Commission (SEC) and the Occupational Safety and Health Administration (OSHA), and State environmental regulators.

U. S. Environmental Protection Agency

Environmental Financial Advisory Board

Meeting Summary

The Use of Corporate Environmental Information in Financial Decisions

June 12, 2007 – Arlington, Virginia

Prepared by:

International Decision Strategies, Inc.
911 Duke St.
Alexandria, Va.

Table of Contents

Welcome and Introductions.....1

Review of Questions Asked to Panels.....1

Corporate Environmental Information and the Financial Community —EPA Overview.....2

Speaker: Commercial Banking/Lending.....4

Panel 1: Credit Analysis and Equity Investment.....7

Panel 2: Insurance..... 13

EFAB Workgroup/EPA Office of Policy, Economics and Innovation Follow-up Discussion.....18

Public Comment.....22

Closing Comments and Next Steps.....22

Participants.....24

United States Environmental Protection Agency
Environmental Financial Advisory Board

Meeting Summary
The Use of Corporate Environmental Information in Financial Decisions

June 12, 2007 – Arlington, Virginia

Welcome and Introductions

- Stan Meiburg, EFAB Designated Federal Official

Stan Meiburg opened the meeting and described the Environmental Financial Advisory Board (EFAB) and its purpose. Founded in 1989, EFAB is concerned with how to pay for environmental protection. Its initial work focused on state revolving funds to finance water and wastewater infrastructure, and has evolved since. Today's workshop started with an EPA request regarding Environmental Management Systems (EMS)—how can we make EMS more attractive to firms through financial incentives? Expanding this question, how do financial professionals use or not use environmental information to make decisions? He added that the EFAB is fortunate to have a distinguished panel at today's meeting.

He then introduced EFAB members in attendance. Rachel Deming has been a big help in bringing better understanding of financial assurance issues. Jim Gebhardt is a relatively new (two months) member, who is a Chief Financial Officer (CFO) and can help address matters related to socially responsible investment (SRI). Lindene Patton also is a relatively new member and can speak to insurance issues, while Helen Sahi can address the environmental banking perspective because she is a former President of the Environmental Bankers Association. The chair also thanked members of the EFAB Staff, Vanessa Bowie and Tim McProuty, for setting up the meeting.

Review of Questions Asked to Panels

- Rachel Deming, EFAB Member; Partner, Scarola Ellis LLP

Rachel Deming introduced the topics and questions for the meeting. She began by describing her own involvement with the EFAB, which started at a meeting in San Francisco at which she heard a presentation given by Shana Harbour of EPA; Ms. Deming then volunteered to chair an EFAB subcommittee focusing on EMS. Prior to her current employment, she worked at CIBA, a major European-based chemical company. While there, she became well grounded in the Responsible Care® program and developed a background in management systems.

In preparation for this meeting, she said she worked with EPA to refine the EFAB's charge, and break it into pieces to be better understood. She suggested that financial people do not frame their questions in the same way as EPA, and that getting all participants to fully understand one

another has been a challenge. She thanked fellow EFAB members Lindene Patton and Helen Sahi for help in recruiting participants for today's meeting.

On a more personal note, Ms. Deming said she had retired from CIBA earlier this year, and found herself needing to better understand her retirement assets; this coincided with hearing a presentation by Bruce Kahn (a panelist), which piqued her interest in the connections between investing and the environment. It is not her impression that people rarely ask about SRI funds or environmental issues, nor do others in the financial services industry generally promote or talk about environment or environmentally screened companies.

She then described the questions that EPA would like to have addressed by meeting panelists, and indicated that they had been refined several times. The questions are organized by topic and are as follows:

- To what degree do you consider environmental performance or environmental management information when assessing the financial strength of a company? Of a sector?

- If there is no (or minimal) consideration made for environmental performance/ management in fundamental analysis, why not? Is it a perceived lack of relevance? Is environmental performance considered not material in relation to corporate fundamentals? Or, are the data to accurately measure the impact of environmental performance not reliable or not readily accessible to analysts?

- Are there environmental impacts/elements that you would like to see measured?

- Would branding something as Responsible Care one or more forms of EMS help?

- What role can EPA play to promote greater understanding, increased information exchange and generation, and use of environmental performance data that are more relevant, consistent, timely, and meaningful to capital market participants?

Corporate Environmental Information and the Financial Community—EPA Overview

- Charles W. Kent, Director, Office of Business and Community Innovations, Office of Policy, Economics and Innovation (OPEI)

Stanley Meiburg introduced Charles Kent, and noted that Mr. Kent had provided nearly 30 years of service to EPA in a variety of roles.

Mr. Kent opened his remarks by thanking Mr. Meiburg, and stated that he worked with him closely over the years and that the EFAB is fortunate to have his involvement. Mr. Kent continued by saying EPA is trying to learn about the financial sector and the relevance of this sector to decisions regarding environmental performance. EPA wishes to test the theory that better information would lead to better decisions, and serve as an incentive for better behavior

and performance. He stated that EPA's job is to find new ways to provide incentives to stimulate this improved behavior. He expressed appreciation for panelists' willingness to help EPA staff learn about the work of the financial markets, and to better ask questions of financial market participants.

He then provided some background on EPA's Steering Group and its work. The Group was formed and performed extensive research before going to the EFAB for further ideas and guidance. EPA seeks EFAB input on the extent to which EMSs provide useful information, but acknowledges that EMSs are not widely understood.

Mr. Kent described some of the key findings of the Group's early stage research, which include:

- There is a positive association between environmental performance and financial performance
- Intangible assets are an increasingly important determinant of company financial performance
- Equity markets do react to environmental events, both positive and negative
- Investors are only moderately aware of environmental issues, at best, but their interest is growing, and
- Investors have an interest in EMS as concept, but not as a specific tool; at best the presence or absence of an EMS serves as a proxy for effective environmental management and, more commonly, as a surrogate for good management generally.

Mr. Kent also described several significant trends that developed as the Group was conducting the initial phase of its work:

- Interest in environmental issues and performance is perceived by many to be increasing both in investment firms and in the companies in which they invest
- Disclosure requirements for public corporations have been strengthened significantly during the past two years—as a result, corporations have begun to disclose more information on environmental issues
- Institutional shareholders are increasingly asking for management action to define environmental/sustainability policies, actions, measurement, and reporting
- Due to concerns about climate change, major insurance companies are bringing renewed attention to environmental and sustainability issues
- A number of companies—including some of the largest companies in the world, like GE, are visibly seeking to turn environmental issues to their business advantage, and
- These trends will likely shape the interests and behaviors of financial sector participants relative to EMS and environmental issues in the coming years.

The Group has prepared and issued a report describing these findings, which has been delivered to all EFAB members. He also indicated that EPA had received some press coverage for its work, and had been invited to a Wall Street dialog with representatives of several financial firms.

Mr. Kent then described a dialog held in April with another group of financial market participants and corporate representatives. Findings from this dialog include:

- There is a fundamental disconnect between the short term orientation of the financial markets and the long term value created by most environmental investments
- Currently used environmental metrics are not useful to investors
- Major environmental reporting frameworks (e.g., Global Reporting Initiative—GRI) are not germane to investor concerns, and
- The "game" is, however, changing due to climate concerns.

He closed by thanking all participants.

Mr. Meiburg then recognized EFAB expert witness Sarah Diefendorf, who represents one of EPA's Environmental Finance Centers. He then asked panelists to each limit their remarks to about ten minutes and then opened the session to dialog.

Commercial Banking/Lending

- Helen Sahi, Past President, Environmental Bankers Association

Helen Sahi began her remarks by stating that the EFAB and EPA meeting organizers were unable to find a traditional banker to participate in today's meeting. She emphasized that today's large banks are now financial institutions offering a variety of services (equity, insurance), and not just "banks." She indicated that she and other EFAB members were able to find traditional risk managers, but no one was willing to come, for several reasons. One is that bankers felt that they did not sufficiently understand EMS to feel comfortable discussing the issue in an open forum. Also, because loan officers often hold relationships with customers for many years, environmental issues may be examined but generally may not be viewed as very important in relation to other issues.

Continuing, she said larger banks now use their own internal environmental experts to evaluate environmental issues. These experts are not risk managers or underwriters. Most of these positions came into being following release of the FDIC bulletin in 1992 stating that banks need to have an environmental policy appropriate to their size, and a person responsible for environmental issues. The bulletin did not, however, include any definitions. Over time, the internal environmental experts at a number of the larger banks founded the Environmental Bankers Association to provide a forum to discuss issues of common interest. Ms. Sahi said she has been involved since the early days of this organization. It remains small, with only about 60-80 banks as members. The larger institutions (30 or so) may have a small dedicated staff, but most other banks rely on consultants to address environmental issues.

Given the principle business and risk exposure of banks, the focus was and continues to be on real estate transactions, with little attention paid to EMS. Most large institutions hire outside scientists and other experts to handle (i.e., clean up and sell) foreclosed real estate. Work on other environmental issues, when it occurs, is driven by the business lines. Many institutions with customers in the chemical sector tend to examine company financial statements (i.e., Form 10(k)), and develop a deep understanding of their customers, their product offerings, and the information they are providing to their customers (e.g., Responsible Care, EMS). She believes

few banks have looked at larger issues, and those that do often use outside legal counsel to investigate.

That said, major institutions are now saying that the environment is a major issue and are making substantial commitments in this area (e.g., $20 billion by Bank of America). Many, however, have not specified or may not know in what manner these funds will ultimately be spent. One emerging area is a growing interest in Leadership in Energy and Environmental Design (LEED) certification of buildings. This point of focus seems natural given the heavy real estate orientation of most banks. One promising idea is to try to measure productivity changes from green building, though this thinking is in its formative stages.

On the issue of reporting, many financial institutions use or follow the Global Reporting Initiative, and report on their own internal processes (e.g., paper, water, energy consumption). Some are starting to think about EMSs, for reasons of scale if nothing else. Ms. Sahi illustrated her point by stating that Bank of America, uses the equivalent of two sheets of every ream of paper sold in the U.S., and occupies more office space than is available in the City of Chicago.

She closed by saying that Bank of America is focusing on the costs of mail, internal operations, and other opportunities for improvement. She believes that the banks are getting there, but will need more time and working experience to fully understand EMS. She also feels that banks need to complete their internal (environmental) efforts before looking at other organizations (e.g., prospective customers).

Ms. Patton asked whether bank lending has any parallels with insurance underwriting, and why banks are so focused on real estate. More specifically, what are the remaining concerns if things go bad, and what can make them go bad?

Ms. Sahi responded that real estate is often the security for the loan or the lender's last resort. What this means at a practical level is that if a customer has one piece of property, the bank will focus on legacy contamination using a site assessment. If, however, the borrower has a portfolio of properties, performing environmental site assessments (ESAs) may not be feasible; this might instead be a good point of application for an EMS. In lieu of performing site assessments on a sizeable portfolio, a bank might examine who is responsible for environmental issues, or establish escrows or buy insurance to mitigate risk. The key question is, "What steps or tactics can be used to produce an informed, forward-looking assessment?"

Wilhelm Wang, a member of the public who certifies EMSs, asked about EPA support of small and medium-sized enterprises (SMEs), stating the presumption that EPA is promoting a systems approach when working with these businesses. He asked whether there were any signs of operating risks being evaluated with an EMS.

Ms. Sahi responded that the burden is on the customer to show the value of a management practice, whether it is EMS or something else. She added that legacy (contamination) issues could be managed with an EMS, and that banks might change loan rates or terms based on its perceived strength.

Panelist, Paul Scian, asked whether in evaluating a single property versus a portfolio there is a "tipping point" e.g., 12 properties, at which one would look for systems instead of performing ESAs at all sites.

Ms. Sahi responded this varies by bank; some will do ESAs at 40-60 properties while others will go earlier to an EMS to save time and capture a deal. Timeliness is very important because bank lending is very competitive.

Ms. Patton noted that in the banking industry, environmental experts came into the business from the outside in the 1980s. She asked whether people are looking at operational versus legacy issues, and if so, what is the split between these perspectives?

Ms. Sahi responded that operational issues usually are handled internally, while consultants are retained to handle legacy issues.

Mr. Meiburg asked whether banks offer lower rates for good environmental performers.

Ms. Sahi responded there are no established metrics to prove lower lending risk for such companies, and that EPA could help provide these metrics.

Mr. Kent asked whether environmental performance is viewed as material; he noted that some say it's of tertiary importance.

Another panelist, Peter Meyer, asked whether environmental performance affects the terms and conditions attached to a loan.

Ms. Sahi responded that revised terms and conditions are being looked at, but are not used currently. She added that activity in this area is being driven by announcements concerning greening and a corresponding need to "walk the talk." She believes the current view of materiality will change, and that the need for maintaining a reputation as a sound environmental performer is growing in importance. New scrutiny being applied to lenders; stakeholders are now focusing on who is receiving loans from whom. Bank marketing departments are now measuring and reacting to positive and negative media coverage in this regard.

Ms. Patton concurred that in her industry, marketers also are trying to quantify these issues. And a number of people are now quantifying the value of green offerings for consumer products, though not much is being done concerning commercial products or services. She added that historically, materiality always focused on the security issue, so unless an EMS can substitute for collateral (security) it would not be considered material. Unless you can reduce costs (security), EMS and other environmental improvements are not likely to be considered material.

Ms. Sahi, acknowledging these comments, said things are changing by the week. People are looking more at the company level and at behavior as well as more traditional, tangible endpoints. There seems to be a belief that doing so will enhance a bank's marketing capabilities.

Another EFAB member, Jim Gebhardt, said that in a collateral-based (e.g., real estate) context, financial value is the key question, and in that situation, EMS has a very marginal impact. He added that EMS has some traction, but will not save you if your balance sheet does not hold up. There is a continuum of relevance here, and EMS is most valuable in an equity context.

Panel 1: Credit Analysis and Equity Investment

- Kyle Loughlin, Managing Director, Corporate and Government Services, Standard & Poors
- Bruce Kahn, Investment Management Consultant, Smith Barney
- Sonia Wildash, Senior Research Analyst, EIRIS – Ethical Investment Research Services
- Michelle Smith, Director, Environmental Health and Safety Development, Rohm and Haas Company

Mr. Meiburg initiated this session by stating that EMS may mean different things to different people, and that in this session we would likely hear a range of views.

The first panelist, Bruce Kahn, began by describing his role in the equity markets. He manages the SRI practice for a variety of investors. In his work, he looks at all investments while accounting for environmental, social and governance (ESG) issues and conducts due diligence research on these issues. In response to a topic raised in the earlier discussion, he assumes that these issues are material. His firm does not perform exclusionary screening of prospective investments, but instead practices "responsible" investment.

Mr. Kahn responded to EPA's question one, by saying yes, I do look at environmental issues when evaluating companies, as I believe that these issues are material to equity pricing. Translating EMS to balance sheet information is, however, a big challenge and a gap that has yet to be spanned.

His analysis involves integrating separate (i.e., project-level) analyses done by individual analysts using a variety of techniques (e.g., ratio analysis, discounted cash flows, profit impact relative to cost of capital, option pricing), then rolling up all of the initiatives for the company. This is a labor-intensive approach and is very expensive.

Regarding EPA's second question, Mr. Kahn said the problem is that one cannot capture all of the relevant facts with which to evaluate environmental management quality or performance. The data are not that available or reliable, and there is too much required granularity across multiple business lines.

With respect to metrics, he examines greenhouse gas (GHG) emissions and risk as well as other fundamentals, such as waste, water use, etc. These more traditional indicators are, however, being eclipsed by global warming concerns.

On question 3, Mr. Kahn said he thought branding might be helpful. At present, some of the existing extra-financial researchers look at company EMSs, though usually as a binary (yes/no) consideration. Having a brand associated with certification is important.

Finally, he believes EPA could play a useful role by fostering EMS standards and/or processes. EPA already has an abundance of data, and there are huge amounts of data available in journals, dissertations and other sources. The key question is how to get this information into the capital markets. In terms of any new data requirements, he believes there would be value in looking first at the ultimate endpoints, i.e., the condition of the environment, and then tracking any substandard conditions back to company behavior and its association impacts. EPA also can reach out to other agencies and collect, organize and analyze data held by these organizations.

The next panelist, Kyle Loughlin, began by describing his function, which is to evaluate waste management companies from the standpoint of default risk; he manages a team of ten people, and collectively, they determine the debt ratings of 130 companies in the United States.

To them, the key issues are default risk and the likelihood of loss given a default. They do use environmental information, but its importance varies. They treat environmental and asset retirement obligations in similar fashion to debt, and look at a range of indicators. Environment is not a key factor, except in certain cases. To develop the pertinent facts, they rely on financial statements and accompanying notes and other Securities and Exchange Commission (SEC) filings.

Mr. Loughlin's firm conducts approximately 100 meetings with company management teams over the course of a typical year. These often happen during "road show" events hosted by companies seeking additional financing. In his experience, it is a very rare company that will talk about environmental risks or systems in the absence of questions from analysts. Finally, in his view, existing disclosures usually are sufficient regarding liabilities and their cash flow impacts. In cases in which they may not be or impacts are potentially significant, he and his colleagues drill down further, asking additional, more specific questions.

Mr. Loughlin then provided a few examples of how environment can affect the ratings assigned to a company or otherwise intersect with financial markets:

- Some notes now provide ranges of and time frames for addressing contingent liabilities; often an environmental adjustment is notable but not a major rating factor, though sometimes it is.
- Adjustments may be made in financial models to account for environmental liabilities, along with many other issues; this may result in adjustments to conventional financial ratios.
- Default risk may be affected by environmental issues, in particular by required capital outlays, bonding/letters of credit, and other financial obligations that affect liquidity as well as by contingent or even perceptual risks.
- Similarly, phase-out of a product, particularly an important one, can affect a company's cash flow and, therefore, its risk of default.

Mr. Loughlin next described how his firm addresses the risk of loss for all companies that are rated "speculative," or below investment grade. This is done by conducting a recovery analysis, which involves simulating a path to default, then forecasting a revised cash-flow-at-default estimate. Debt and non-debt claims are evaluated, along with a distribution of the projected value of the firm. The end result is a recovery rating. Environmental claims and risks must be included in these analyses, but they rarely are important, because the typical time frame of analysis is less than five years.

Mr. Kahn asked whether the ratings evaluation considers only legal liability and compliance issues.

Mr. Loughlin responded it did, not least because the entire analysis is conducted within about a two-week time frame. This is because the road shows are performed to raise capital and to make deals quickly. Accordingly, the focus is on default risk over the intermediate term.

The next panelist, Michelle Smith, represents a major multi-national chemical company. She is responsible for the company's EHS (environment, health and safety) & Sustainability Report, which includes a detailed description of its EMS, among many other items.

The company serves the electronics, paint and coatings, household, personal care and industrial segments, and has little direct exposure to consumers. Ms. Smith believes her company's products can yield environmental benefits, an issue they will be looking at more closely in the future. Energy, health care and water are specific new areas for potential expansion.

The company is now looking at its supply chain, especially high risk areas such as waste management.

Regarding environmental performance, she suggested language may be an important barrier to effectively communicating what is in a sustainability report as well as the meaning of particular results. In her experience, investors may not be familiar with environmental issues and their relevance to business results, so better communication will be important to raising awareness.

With respect to EPA's question on branding, she believes that in the case of the American Chemistry Council (ACC)'s Responsible Care program, branding has been valuable.

Ms. Smith suggested that EPA play a role in defining what the important leading and lagging indicators should be, and put some sustained scientific horsepower behind filling this need.

The final panelist of this session, Sonia Wildash, explained that she is employed by a company that performs sustainability ratings of companies, and that she had formerly worked as a mainstream investor. She described the typical SRI understanding of environmental issues—there is a relatively large upfront cost associated with making environmental improvements, but these investments lead to savings, and essentially, a sustainability "sweet spot" through creating less volatile companies that make better long-term investments.

In contrast, she characterized the mainstream investor perspective as: if a company is not breaking the law, environmental issues are of no interest. More generally, she believes the

market does not put a price on environmental benefits from existing and new corporate behavior, but does punish disappointments.

Environmental information must be easy to find or it will not be used. In cases in which such information is found, it usually has not been independently audited, so investors may be suspicious of its reliability. Ms. Wildash noted there is no global standard for environmental reports, which tend to be full of photos of children and fluffy text rather than data that are of interest to investors. In her view, lack of time is a frequent excuse of corporate representatives for not providing more extensive environmental information. Also, meetings with corporate management tend to be short and are not focused on the environment.

Ms. Wildash believes ESG issues and their importance must be introduced in investor training programs early on and not left to personal interest or random chance.

As far as useful indicators are concerned, she would like to have a single number or index with which to compare companies.

She also spoke to the perceived lack of materiality of environmental issues by saying that they are not viewed as important until it is too late to prevent a rare but profound occurrence; because such incidents are rare, time is better spent focused on other issues. In her view, a catalyst is needed to break the circular logic that inhibits consideration of environmental issues by investors. A virtuous circle could be created if the market started to differentiate between companies on environmental issues. As an example, the position of the sell-side appears to be changing in Europe. Sell-side analysts are influential. In the U.S. they are notably unconcerned about environmental issues.

Regarding branding, Ms. Wildash thought such efforts would not be especially helpful; only 15 percent of companies have one-third or more of their locations certified to the ISO 14001 standard in the U.S. as opposed to 50 percent in Japan. She believes it would be much more fruitful to focus on getting more companies to comply with existing regulatory and other standards, rather than further "raising the bar."

As to the question of what EPA can do, Ms. Wildash suggested developing a framework for public reporting of environmental performance and, perhaps, making it compulsory. EPA also could define key issues and metrics, and time frames for attainment. She also suggested there be a legal requirement for audits of publicly reported environmental information. She also called for a means to ensure board-level responsibility for environmental performance. As partial justification for this, she noted that American companies have had more trouble staying in the sustainable company indices than their European counterparts.

As examples of possible approaches to consider, she said the UK government has promoted companies displaying leadership behavior. In Japan, the Ministry of Environment has facilitated many stakeholder consultations, leading to a number of performance improvements. For example, 40 percent of companies now have independent environmental reviews and 80 percent disclose their internal environmental accounting standards. EPA could help U.S. companies emulate these behaviors.

Ms. Wildash closed her remarks by thanking EPA for inviting her and stating that panels like this are valuable.

Ms. Patton said there seems to be consensus that there is a lack of good indicators relating environmental performance to financial issues, and asked where one should start in producing standards for use by the financial markets. As an example, how do you move from proprietary models for greenhouse gas (GHG) emission risks to generally accepted rules?

Ms. Wildash said her firm uses several management and performance indicators when evaluating GHG and other environmental dimensions of a company. They provide the environmental analysis for the FTSE4GOOD index. She would like all of this information to be publicly disclosed, e.g., on company web sites and/or in Form 10(k)'s.

Mr. Kahn also responded to the question by saying that the ESG world has no standard, so EPA has an opportunity to establish some kind of new standard or approach. He concurred that all existing players are competing with their own individual proprietary methods. He added that all financial analysis is an art, so evaluating ESG issues is not fundamentally different than assessing other aspects of company performance. He said EPA should help establish a credible, scientific standard for environmental measurement and reporting.

Ms. Wildash noted there is need for an analog to Generally Accepted Accounting Principles (GAAP) for mainstream financial information, as analysts and investors want to spend time analyzing information rather than finding it. Ms. Smith added that metrics across businesses can swing considerably, and their interpretation is part of the "art" of investment analysis. She urged EPA to be careful in crafting any standards, especially if they are rigid or uniform.

Ms. Deming asked what we might learn from the experience of Europe and Japan in this area.

Ms. Wildash said the focus currently in evaluating EMS is its presence or absence in companies. Rather than focusing on more nuanced evaluation of EMS quality, she advocated the promotion of more certification of EMSs in the U.S. and getting information on this out to the financial markets.

Ms. Patton said she thought self certification of EMSs is of questionable value. Ms. Smith responded that, in her view, EMS is best applied in concert with other improvements, but has added value to her firm in a variety of ways.

Mr. Loughlin returned to the issue of branding, saying it is not likely to be critical; instead, consistency in reporting is much more important. He added that anything EPA could do to bring consistency would be helpful, as there is little uniformity in the ways that environmental risks, management processes, methods, ranges of estimates and time frames are addressed and described by companies, even those with EMS.

Ms. Patton asked about the emphasis between legacy and forward-looking issues in terms of getting new standards developed. She suggested legacy issues are very controversial in this regard.

Mr. Kahn said an EMS is not a trivial matter, as many companies use them as a management tool. He also questioned whether branding might be used by some companies to "game" the system. He thought EPA needs to get the SEC involved with this. Existing regulations require disclosure, but the government is behind the curve in understanding that companies have appropriated environmental services while creating significant externalities and social burdens. He believes accounting for these environmental services (externalities) will be increasingly important in the future. EMS, he believes, can help illuminate these issues.

Mr. Meiburg saw two possible opportunities. One is for the SEC to step up and play a more active role in promoting more full disclosure; the other is to equip financial analysts with the background information and questions needed to conduct meaningful company level analysis of environmental issues.

Regarding metrics, Ms. Deming said the Responsible Care program is developing new metrics that will address many stakeholder interests, including GHG. She asked whether these will be of value to investors.

Mr. Meyer asked whether the desired environmental reporting does or will consider secondary impacts (e.g., employee travel), or whether that would produce an "envelope" that is too large.

Ms. Sahi responded that in the case of her company, it would indeed consider secondary impacts.

Mr. Gebhardt suggested that ecosystem services might be beyond the context or reach of EMS. He believes that a whole new paradigm may be needed, the costs of which may be significant.

Mr. Kahn agreed, saying this conversation has gone further than the original focus of the meeting. He would like to be able to measure impacts rather than natural conditions first, so that he can determine the better steward of natural resources among different companies.

Ms. Diefendorf said her state government (California) seems to be very interested in greening companies and in green chemistry and asked, to what degree should government force environmental performance when the financial sector doesn't act?

Ms. Wildash responded that some of the large public pension funds (e.g., the California Public Employees Retirement System (CalPERS) have been important in pushing this debate. She believes their large size creates influence and noted that, in addition to CALPERS, the pension funds of Connecticut, Vermont and New York also have been active.

Ms. Smith said consumers are the driver of innovation and whatever can influence them is the shortest path.

EPA representative, Dale Ruhter, returned to the issue of the SEC and legacy costs, asking, to what degree has the financial community gone to the SEC with the concerns voiced here?

Mr. Loughlin responded he knew of no specific examples of lobbying for action.

Mr. Kahn said the group, Friends of the Earth, has lobbied the SEC and members of the environmental media (e.g., CSR wire) have reported on these discussions. He also noted the U.S. Supreme Court had very recently ruled that companies may be held responsible for climate change risk.

Finally, Ms. Smith said she would be open to using other environmental metrics, but emphasized that voluntary approaches are preferable to new mandates. She also noted that issues of confidentiality may be important in certain cases, as these may limit which issues a particular corporation can report on.

Panel 2: Insurance

- Susan M. Vetter, Vice President, Environmental Services Group, AON Risk Services, Inc. of New York
- Laurie Rudolph, Senior Risk Engineering Consultant, Zurich NA
- Paul Scian, AIG Consultants
- Dr. Peter Meyer, Director, Center for Environmental Policy and Management, University of Louisville

The first panelist, Susan Vetter, began her remarks by saying her firm helps clients with risk management overall, an approach that includes not just insurance but other products and methods that take into account a particular client's appetite for risk. She also related her own professional experience, which began with another carrier, where she became involved in all types of insurance. Her perspective on the environment reflects the industry's history, in which products and services initially had a casualty focus, which then evolved to a financial-risk management perspective. This perspective is reflected in current environmental insurance products, which remain a "discretionary buy" for many companies.

She then described the major types of environmental insurance that currently are available:

- Site specific, e.g., pollution legal liability
- Environmental services
- Cost cap

Underwriters evaluate risks under each, based on warranted information (applications signed by a director). Issues of interest to underwriters include reportable releases, Phase II environmental site assessment results, and the like. In an acquisition (due diligence) context, information on permits, consent decrees, "no further action" letters, closed UST reports and waste management vendors all would be of interest. In addition, real estate liability underwriters now often require spill plans and other evidence of a proactive approach to controlling site-related risks. Moreover, typical insurance products automatically exclude known conditions, so having public information on site characteristics is very important. In fact, the most useful information to an underwriter relates to site conditions.

While not required, EMSs would be embraced by underwriters, as they provide a source of information on environmental conditions as well as some assurance that environmental risks are being controlled. In other words, EMSs can help carriers make informed business decisions.

Underwriters would value an easily accessible way to access information on a site or operations; in this regard, an EMS could be of interest. The effect would be an increasing level of comfort by an underwriter with a particular site or company; greater underwriter comfort level leads to better insurance policy rates and terms.

Ms. Vetter also stated that a partnership results once risk issues are fully identified, i.e., the insured and insurer tend to work together on an ongoing basis to resolve and control the identified risks. Because an EMS can serve to store and manage risk-related information and increase an underwriter's level of comfort that relevant issues have been identified and controlled, it could help to produce financial benefits for a company.

Despite its potential value, EMS still has yet to fully demonstrate that it provides quantifiable risk reductions. When companies can show the long-term cost effectiveness of their EMS, they will then be offered the best terms and conditions.

Ms. Vetter concluded by saying she would like to see an EMS requirement, and observed that many companies are integrating other issues, such as health and safety, into their environmental programs. She believes that insurance underwriters will increasingly want to work with such forward-looking companies in the future.

The second panelist, Paul Scian, began his remarks by stating that he served as a consultant, or in-house service provider to his employer, a major insurance carrier. His firm's work is mainly transaction driven; in that context, the key question is, what could go wrong?

Mr. Scian's area of special expertise is the costs of complex environmental site remediation. In his work, his role is to pose "impolite" questions of a prospective insured, to bring to the surface important risk-related issues. While he does not decide to offer or not offer coverage, unconvincing answers to his questions may result in notes to the file, which in some cases might put future claims at risk. This would occur if the insured did not fully disclose pre-existing site conditions, for example.

Mr. Scian stated that in a sound insurance underwriting transaction, all parties should win.

He then turned his attention to the four questions posed by EPA.

In response to the first, Mr. Scian said he evaluates environmental information every day. In talking with prospective insured parties, he conducts telephone dialogs and completes a checklist while doing so. The absence of a complete or convincing answer to a question raises "red flags," causing him to probe more deeply into the issue.
He emphasized no insurer wants to inadvertently underwrite a known condition and so he questions company representatives closely. On the other hand, assessment and underwriting are usually conducted very quickly—a two-week window at most. This can result in a "war of

paper," in which it can be a struggle to find and adequately review what may be a large assortment of site-related documentation that addresses conditions over a period of years.

Mr. Scian said risks can be segmented (e.g., legacy known vs. unknown, on-going), and can be covered in various ways by insurance policies. Because underwriters make business decisions, coverage may be offered even if risks are identified, though higher risks result in higher premiums, more stringent conditions, and/or more limited scope of coverage. Because all of these variables are in flux for any given underwriting situation, he and his peers are accustomed to dealing with ambiguity.

With regard to the relationship of environment to corporate fundamentals, Mr. Scian asked, what is material? This judgment is somewhat situational and arbitrary. For example, he said, a $5 million liability may be material in one situation and inconsequential in another. In practice, insurers strike a balance among many factors.

He also commented on emerging financial accounting and reporting requirements, stating that the Financial Accounting and Standards Board (FASB) doesn't necessarily require disclosure of potential contamination if investigations are ongoing. Sarbanes-Oxley may change this behavior, however. He believes that, as a result, there will be lots of "new" sites and related liabilities announced in the future. He also felt that more data is preferable to less, but suggested that it is important to know when to make the decision with the available data rather than continue to seek new information.

Mr. Scian also offered an opinion on the question of branding, with respect to ISO 14001 EMSs as well as other variants on the EMS concept. He believes that EPA should focus on getting more attainment of well-functioning EMSs, rather than setting the bar higher.

Mr. Scian also said EPA could play a valuable role in developing/promoting some common quantitative metrics (e.g., energy/unit) that could be used across a wide variety of companies and industries. Teasing out some of the data currently subsumed in the balance sheet and income statement would enable better industry-wide comparisons.

The third panelist, Laurie Rudolph, described her main responsibility as risk assessment. She also emphasized that pollution insurance and related products are not mandatory. There is substantial negotiation in establishing coverage and rates and considerable variability in the terms, conditions and scope of individual policies.

She said she has not observed any direct relationship between the presence of an EMS and lower insurance costs. In her view, interest in environmental issues and EMS varies by insurer and depends upon individual appetite for risk.

She did suggest that in the context of her work—trying to assess what could go wrong—the aspects analysis of an EMS could be very useful. She further thought that it would be helpful if EPA could in some way assist with the quantification of risk and exposures for benchmarking and cross-company comparisons. From an insurer's perspective, EMS is most useful for its

ability to control or minimize risks and demonstrate and document that effective controls are in place.

In Ms. Rudolph's view, EMSs are often written well, but the key is quality of implementation. Insurers would look to a well-implemented EMS to formulate and track action on risk reduction recommendations and might modify coverages, terms and rates accordingly.

With respect to EPA's question about branding, Ms. Rudolph does not believe that it would be likely to be appealing. In her view, ISO 14001 certification of an EMS is not meaningful, because registration has been market (customer) driven, rather than stimulated by a desire to truly improve performance (e.g., risk reduction). Accordingly, it is not clear that registered EMSs are any better than non-registered management systems. She does believe that having some form of management system will make companies more desirable to insurance underwriters.

The fourth panelist, Peter Meyer, began his remarks by reviewing some features of environmental insurance policies and contrasted them with other types of insurance products.

He stressed that environmental insurance policies are "surplus" or "admitted" rather than "admitted" insurance lines. This means that they are not standardized, and may (and do) vary considerably from state to state. Coverage may or may not be available in a given location, as there is no pool of insurers to guarantee access to coverage as there typically is for admitted insurance lines (e.g., homeowners, auto insurance).

Also, insurers are not regulated at the federal level, though they may (or may not) be regulated in individual states. He suggested the discretionary nature of environmental policies may inhibit more extensive environmental disclosure, particularly by poorly performing companies.

He also suggested the risk appetite for underwriting may vary over time within the same company. Indeed, such changes may occur from month to month as the characteristics of the firm's portfolio evolve, as well as in response to more general market conditions.

Another important factor, in Mr. Meyer's view, is that the "industry" offering environmental insurance products is narrow enough to pose problems when thinking about standardization.

Also, as these products are "surplus" or non-standardized lines, meaning each policy is individually tailored and negotiated, there can be an important lack of clarity regarding the utility of EMS to identify and control risks and, by extension, influence insurance policy rates and terms. That said, he believes having an EMS may lead to some negotiating room for an insured. For example, a company may receive fewer exclusions from policy coverage.

With regard to influencing insurance coverage for ongoing operations, Mr. Meyer said EPA should be careful about mandating EMS requirements. He believes it is important to avoid creating redundant information. On the other hand, getting more information reported should lead to self-correcting behavior and improved environmental performance.

Looking toward the future, Mr. Meyer concluded that if an EMS standard to satisfy everyone could be developed and adopted, it might help in someday getting environmental insurance products standardized and admitted as insurance lines. Indeed, if the relationship between EMS and the process of risk transfer that is provided by insurance were to be fully defined, he suggested in the long term, EMS might even take the place of insurance in some cases.

In response to this statement, Ms. Patton said that while not required now or (probably) in the future, companies would likely continue to need environmental insurance, and offered an analogy to automobile insurance. She also asked how EMSs or their components affect underwriters of "core" insurance coverages (e.g., property, workers comp).

Ms. Rudolph responded that workers' compensation, property coverage and general liability coverages may be affected by a good management system. These systems may reduce the risk of serious illness or injury in an insured company's operations and make them more attractive to the insurer.

Ms. Vetter said having a plan is better than not having one, even if it is not implemented perfectly. She added that many factors do intermingle in designing coverages, e.g., employee driving records. In that respect, the management system can help to delineate, or clarify, the relationships between the company and the employee, as well as between the company and insurer. In some respects, a company demonstrates that it is investing in its own future by going through this process. In assisting a company in developing plans, underwriters often ask for information on general liability losses; these show the effects of prior investments as well as company cultural aspects.

Ms. Deming then asked the panelists whether the applications used by different carriers pose the same questions.

Ms. Vetter responded they did. Because the information solicited by the form is warranted, it tends to be the same, though carriers all have their own application form that must be completed. In terms of differences between environmental coverages and more general business insurance (e.g., CGL), applications for both will require a description of operations, revenues, employee counts and the like, but as discussed previously, forms for environmental coverages also require information on (and from) ESAs and other relevant site data.

Ms. Rudolph added that for coverages addressing ongoing operations, underwriters also will want to know what the company has done to mitigate risks. It is important to understand, however, that all underwriters have their own particular concerns, and that policy underwriting remains both art and science in practice.

Ms. Deming then asked whether there were typically gaps in the information reported to the underwriter.

Mr. Scian said gaps always exist at a particular site.

Ms. Patten asked about legacy exposure and EMS.

Ms. Rudolph said, in her view EMS is focused on the present and future. To address legacy issues, she generally relies on ESAs and other site-specific documentation. She added, there are good mechanisms available to manage site assessment data.

Mr. Scian observed that EMSs have been in place for many years in some companies, and the "history" of such systems can be important, in that reviewing the company's experience can reveal important insights into its attitudes, behaviors and responses to new information. Ms. Rudolph added, EMS history shows something about the culture of the host organization.

Mr. Meyer indicated that "legacy" includes current off-site disposal of wastes, so if an EMS tracks waste disposal sites, it may provide a bridge to legacy issues.

Ms. Diefendorf said, in California there is a third-party certification program that recognizes companies that achieve compliance and beyond, i.e., a "green company" certification. She added that, in her view, some certified companies might invite review of their past history, but only if it is solid. She then asked the panelists whether such a certification might serve as basis for an insurance rate reduction.

Ms. Vetter responded it would. She said credits are available to underwriters that might be used to account for this, and insurers are most interested in companies that can show evidence of effective risk management.

EFAB Workgroup/EPA Office of Policy, Economics and Innovation Follow-up Discussion

Mr. Meiburg shared a few observations and posed some questions to begin this session.

He outlined some of the differences among sectors and between the operational and legacy perspectives when considering environmental risks. He also was struck by the degree of commonality between EPA and financial sector with respect to the information that is of interest in an environmental system, performance and risk context. He asked how these commonalities could be harnessed for the mutual benefit of all.

He then asked about a prominent EPA database that is intended to provide the types of information that should be of interest to meeting participants, the Enforcement and Compliance History Online (ECHO) database. He asked whether anyone uses it.

He closed by saying that EFAB has focused on insurance as a financial assurance mechanism. He has heard, however, many complaints from state regulators regarding insurance industry behavior, and asked, somewhat facetiously, whether insurance companies ever pay on claims made on policies used for financial assurance purposes.

To add some perspective to the discussion, Mr. Kent reviewed some of what had been heard in the previous dialog. He said that Paul Portney (formerly with Resources for the Future and now with the University of Arizona) had said that most environmental information is incorporated

already into market decisions, i.e., no further action is needed. Many others, however, still believe that new information is out there and being used for a variety of purposes. What is to be made of it?

He added, some also believe it is not EPA's business to define what is important (or not) regarding environmental performance. Instead, the market place should dictate what should be measured, communicated and considered by financial analysts.

He went on to say that EPA's OPEI is looking at EPA's information management functions, and observed that they could be improved. He asked the group, what does the Agency need to do differently? Is the information of interest really there?

He stated that much behavior change is based upon rules changing, which is now occurring in ways that are somewhat unclear. He believes some of the observed behavior change is occurring not based on data, but on new social expectations for improved environmental performance, or even sustainability, i.e., on intangibles. In such a context, environmental leadership may produce a first mover advantage.

Another EPA representative, Shana Harbour, recounted some of the discussions that EPA conducted with financial representatives over data. It is unclear at this point whether the data are there but are not used in the right way(s), or are not there and are hard to get at. While there is a lot of "buzz" around integration of environment into financial markets, it is not yet really happening in mainstream markets.

She asked the group how we can develop forward-looking metrics, where EPA's leverage points might be, how EPA can act as a catalyst, and what are appropriate roles for EPA and other parties.

Mr. Scian drew an analogy to the early days of the EPA underground storage tank program. This program started very simple, but became very complex over time. He added EPA should be careful about what it asks companies to do, and go with simple, basic metrics and build over time.

Ms. Smith suggested tying metrics to a goal, and asked, what are our national priorities (e.g., water quality, carbon footprint)? One should not have metrics for metrics' sake. She pointed out the emerging stakeholder expectation that environmental/sustainability performance reports should be global may pose some issues for EPA; as many will want global data that may not correspond to EPA's needs.

She added that, ideally, the marketplace would ensure that environmental issues are integrated into mainstream business practice and offered the analogy of the TQM/quality management movement as an example.

She noted that issues may evolve in the same direction on environment, with companies achieving accelerated progress on environmental impacts, quality, cost and other key

determinants of value. She asked whether environmental performance is actually improving over time, and whether more environmental insurance is being purchased.

Ms. Vetter said that more companies are buying environmental insurance products, or at least looking at related issues, as well as improving their management of legacy issues. Leaders in the more sophisticated companies also are getting more comfortable with the management of these issues. Interestingly, chains of effect are kicking in, e.g., environmental insurance may be required to obtain a bank loan. In this type of market environment, clients will want to contribute to addressing risks and finding solutions.

Mr. Scian said growth in the environmental insurance business is slowing but still there; environmental coverages are now an accepted component of risk management. The recent high level of merger and acquisition (M&A) activity is fueling demand at present.

Ms. Patton said the environmental insurance market does not appear to be slowing down. She added that the industry covers many activities, from real estate to services, and each may be affected by different things. For example, there may be issues on the state level. Each competitor has a different profile.

Mr. Meyer said there is an important distinction between a claims-made versus current policy. This is important because the disclosure of some information can lead to a refusal to renew a policy. On a claims-made policy, the claim must precede the expiration of the policy to be honored by the insurer even when the insurer refuses to renew the policy. This means a bigger risk for the insured, which often has less power in the relationship than the insurer.

With respect to suitable environmental metrics (e.g., for water, energy use), he said all companies have data on expenses, so there would be no additional data required to report consumption of these endpoints. He also suggested it might be most appropriate to express such resource consumption data as a ratio of consumption to output. He asked whether such questions might be an appropriate focus for EPA.

He added that there are extensive data in state agencies regarding permit or other regulatory violations, and suggested perhaps EPA could form a clearinghouse in which to house and distribute these data.

Ms. Vetter asked whether the data of interest are really there. She believes a large portion is, but one would need to consider how much time should be invested in sifting through it. EPA has data, but it would be helpful if access could be made simpler. She added having good data is more important than a lot of data, so imposing additional reporting requirements may not get us to where we would like to be quickly. As an illustration from the insurance industry, she said environmental insurance applications are now typically two pages in length rather than seven.

Mr. Meiburg asked Mr. Kahn whether his evaluation of a particular company is time limited. Mr. Kahn responded that for a firm like Standard & Poors, the evaluation period is very time limited, although in other firms and contexts it might not be similarly constrained.

He spoke further to the short-term versus long-term orientation question. He noted that many environmental issues have a long time span (a decade or more). To address this problem, the analyst looks at company culture and the value creators that have been important during the past 18 months. He added that environmental investments are analogous to R&D investments, which are widely viewed as important determinants of long-term value creation potential.

Ms. Deming recounted the experience of her former (chemical) company in measuring energy and water consumption 18 years ago, and stated that doing so was very difficult. She said, however, that ratings firms liked metrics that went beyond the traditional ones, so her company realized some benefit in the longer term.

She noted that the American Chemistry Council, which represents many U.S. chemicals producers, has added some of these types of metrics to its Responsible Care program. These enhancements make the program more consistent globally as well as more satisfying to stakeholders.

In the current context, she suggested the group should first figure out which endpoints and metrics are helpful to the financial community before proceeding further, as there is a lot of variation in what is used and in what ways.

Ms. Rudolph suggested one needs to be careful to consider local climates and conditions when looking at metrics such as energy consumption. Geography (e.g., local climate) may be important, so it is important to not oversimplify.

Mr. Gebhardt pointed out this is a mis-assessment of the information and results in mis-pricing. Eventually, the marketplace will sort out the issue of what information is important; he expressed the view that EMS may be helpful in that regard.

Ms. Diefendorf said small and medium-sized enterprises (SMEs) would need help if information requirements became more extensive.

At this point, Mr. Meiburg posed two questions for participants to consider, and asked that each panelist respond to the one of their choice: 1) What is most important thing EPA can do to stimulate progress? and 2) What would you most like to ask one of the other panelists?

Mr. Kahn responded to the first question by stating that EPA should act as the enforcer of existing regulations and policies, as well as be a conduit for receiving information from other agencies, which should then be put into a concise, accessible database. Similarly, Mr. Scian said EPA should take the lead in developing, quantifying and enforcing key metrics.

Ms. Sahi asked whether the panelists had received much feedback on GRI and other environmental/sustainability performance reports. Mr. Scian asked Ms. Sahi what the most useful environmental metric(s) is/are in executing a property transaction. She responded that data found within ESAs and similar documents that speak to risks are the key metrics; her role is to evaluate these risks and deliver her assessment to the lender, who prices the service accordingly.

Ms. Vetter indicated that she views EPA as an enforcer, adding that it can add value by making performance visible, as no entity wants to be non-compliant in the public eye. She expressed support for the idea that EPA should be a conduit for information.

Ms. Rudolph said people need to talk the same language, e.g., across sectors. Topics of interest here include defining what an EMS is, and industry-specific liability issues. She added that having some common goals across all sectors would be helpful.

A different perspective was provided by Ms. Smith, who encouraged EPA to "do what only you can do." She noted that a shift toward more proactive behavior over time has occurred in U.S. corporations. She suggested that EPA's activities might be able to help address potential major environmental and resource challenges, such as shortages of water and energy shortages. Ms. Smith added that industry is a customer for environmental performance information just as are financial markets. She expressed the hope that EPA could help to make these markets and underlying processes more efficient.

Ms. Wildash took a different tack endorsing (more) vigorous enforcement of existing regulations, as well as an expanded role for EPA in identifying key environmental metrics for investors, promoting standardization and inclusion of these metrics in company financial (e.g., 10(k)) reports.

Mr. Meyer emphasized that EPA can and should make state-level public data more available and accessible to people in other states and nationally.

Mr. Kahn inquired of the EFAB members and EPA representatives whether they have SRI funds available in their 401(k) or other retirement accounts. Mr. Kent responded that legislation has been introduced to allow SRI funds to be included in the federal government's thrift savings plan; this effort is being supported by EPA.

Mr. Kahn continued by stating that $2.1 trillion or one of twelve U.S. investment dollars, are being screened in some way, and pointed out that there has been enormous growth (2001-05) in demand for climate risk data. More assets are being placed with explicit reference to environmental and social issues, which to him suggests that perhaps this is a "buy" signal. This could reflect a continuing maturation of SRI as a discipline, or perhaps is simply more people "putting their money where their mouth is."

Mr. Gebhardt responded to these comments by saying that, to him, it seemed that, behavior increasingly is being driven by financial considerations, not traditional SRI screening criteria.

Public Comment

Michael Joiner, of Georgia Gulf, offered his view that environmental metrics need to be normalized, measured, and reported in real time, and as much as possible, leading rather than

lagging indicators. He also expressed some frustration with the way in which EMS is defined and used within EPA; he said EMS is defined in at least seven different ways on EPA web sites, and called for a common operational definition. He would like to know where companies should invest their resources, considering that they are major consumers of environmental performance information just as are financial market participants.

Closing Comments and Next Steps

Ms. Deming stated that there will be a meeting of the EMS subgroup in San Francisco in August as part of a broader EFAB meeting. At this time, the subgroup will discuss options for further activity and action. She identified two common threads that emerged during today's discussion:

- Standardizing and normalizing information is important to a variety of stakeholders, and
- The process of reaching a widely accepted standard for measuring and reporting environmental information will be iterative.

In the near term, she would like to see the questions and criteria that are of interest to all parties compiled so that one can determine where there is overlap. She also wondered how much of the current "disconnect" between providers and users of environmental performance information is due to terminology or language differences. She also endorsed the idea that EPA can serve as a clearinghouse for state-level information.

Ms. Patton said that focusing on common threads in simple, valuable ways is a key step and favors maximizing the information value that can be aggregated into a few leading indicators or surrogates. She said existing indicators have limitations and their relevance varies by sector.

Mr. Gebhardt expressed the view that the market is moving in competitive mode regarding EMS, and returned to the question of the appropriate role for EPA. He believes EPA could help make data more transparent, and could offer useful expertise in defining and making sense of metrics that capture the essence of EMS, as well as testing candidate metrics in the marketplace. He emphasized, however, that EPA should not speak for the market, but rather enable market participants to make more informed decisions.

Ms. Sahi suggested possible efforts to educate and raise awareness more broadly. This might be done, for example, by providing training for financial analysts. She also highlighted campaigns being conducted in some states, e.g., New Hampshire's *EMS is Not Just for Big Businesses* effort, and more general outreach in schools.

Mr. Meiburg responded by stating that EMSs can work and add value to many enterprises, even small farms.

Mr. Kent expressed thanks to all participants, and described several new EPA information products. These include new energy use data by sector (found at www.EPA.gov/sectors), and the overall Sectors Program performance report. He indicated that both products provide performance data over a ten year time period. He added that EPA also is working on a product

that would express TRI data adjusted for risk. He closed by saying that feedback on these products would be very helpful.

Mr. Meiburg expressed thanks to the panelists, noting the day's conversations were rich and will require time in which to reflect.

He stated that during the day the issue of legacy versus ongoing operations continued a pattern exhibited in previous dialogs, and seemed to be a useful distinction. He added that metrics, databases and indicators are all within the scope of the Environmental Information Exchange Network, which has a ten year life span and participation from all 50 states. He asked whether this network might have potential for use in the current context.

He observed further that branding did not seem to be viewed as very important by panelists, and that the suggested role(s) for EPA focusing on enforcement and related activities was interesting.

Mr. Kent noted EPA had not endorsed a specific EMS model or construct as yet, as the concept has room to grow. EPA wants to promote EMS as a tool, but not any particular variant. That said, he believes EMSs will help EPA and others to analyze sustainability questions, and further consideration of much more than traditional "within fence-line" issues and endpoints.

Mr. Meiburg closed the meeting with the comment that when the EFAB tried six years ago to gauge the level of interest in EMS as it related to water/wastewater treatment plant financing within the financial markets, there was little or no interest. Recent events and today's discussion show that change is in wind. The form that this change will take, however, has yet to be defined.

The meeting adjourned at 4:30 p.m.

Participants

EFAB Designated Federal Official

Stan Meiberg, National EPA Liaison to Centers for Disease Control and Prevention, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry

EFAB Members

Rachel Deming, Partner, Scarola Ellis LLP
Jamed Gebhardt, Chief Financial Officer, New York State Environmental Facilities Corporation
Lindene E. Patton, Senior Vice President and Counsel, Zurich North America
Helen Sahi, Past President, Environmental Bankers Association

Business & Industry

Susan Briggum, Vice President for Federal Public Affairs, Waste Management, Inc.
Chiara Frabucchi, Principal, Industrial Economics Incorporated
Bruce Kahn, Investment Management Consultant, Smith Barney, Citigroup
Kyle Loughlin, Managing Director, Corporate and Government Services, Standard & Poors
Laurie Rudolph, Senior Risk Engineering Consultant, Zurich North America
Paul Scian, AIG Consultants
Susan M. Vetter, Vice President, Environmental Services Group, AON Risk Services, Inc. of New York
Michael Joiner, Georgia Gulf Corporation
Robert Kerr, Managing Director, Pure Strategies, Inc.
Ray Potter, Casals & Associates
Michelle Smith, Director, Environmental Health and Safety Development, Rohm and Haas Company
Peter Soyka, Soyka & Company, LLC
Tomaysa Sterling, American Chemistry Council
Wilhelm Wang, Lead EMS Auditor/Marketing Manager–Sustainability, BSI Management Systems, BSI-Global
Sonia Wildash, Senior Research Analyst, Ethical Investment Research Services

Academia

Dr. Peter Meyer, Director, Center for Environmental Policy and Management, Louisville University; EFAB Expert Consultant

Sarah Diefendorf, Director, Environmental Finance Center, Dominican University of California; EFAB Expert Consultant

Press

Colin Finan, Reporter, Inside EPA

U.S. Environmental Protection Agency

Nishkam Agarwal
Kathleen Bailey
Deb Berlin
Vanessa Bowie
Kevin Donovan
George Faison
Charles W. Kent
William Hansen
Shana Harbour
Richard Kashmanian
Sandra Keys
Dinah Koehler
Sarah Mazur
Timothy McProuty
Bhanna Patfl
Verena Radulovic
Dale Ruhter
Pamela Scott
Larry Zaragoza

U.S. Department of Energy

Myra Sinnott

Workshop Agenda

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL FINANCIAL ADVISORY BOARD (EFAB)

WORKSHOP ON THE USE OF ENVIRONMENTAL INFORMATION IN FINANCIAL DECISIONS

United States Environmental Protection Agency
One Potomac Yard
2777 S. Crystal Drive, 4th Floor Conference Center (S-4380)
Arlington, VA 22202-3553

AGENDA

June 12, 2007

TOPIC: The Agency and the Board seek to collect information and ideas with respect to how professionals in the areas of credit ratings, equity investment, commercial banking/lending, and insurance use or do not use a corporation's environmental information in their analyses.

Questions to be Addressed

(1) To what degree do you consider environmental performance or environmental management information when assessing the financial strength of a company or a sector?

(2) If there is no (or minimal) consideration made for environmental performance or management in fundamentals analysis, why not? Is it a perceived lack of relevance? Is environmental performance considered not material proportionate to corporate fundamentals? Or, are the data to accurately measure the impact of environmental performance unreliable, or not readily accessible, to analysts?

(3) Are there environmental impacts/elements that you would like to have measured?

(4) Would branding (e.g. Responsible Care) one or more forms of EMSs help?

(5) What role can EPA play to promote greater understanding and increased generation and use of environmental performance data that are more relevant, consistent, timely, and meaningful to capital market participants

8:30 am REGISTRATION

9:00 am Welcome and Introductions

Stan Meiburg, EFAB Designated Federal Official,
National EPA Liaison to CDC, NCEH/ATSDR
Rachel Deming, EFAB Member, Partner, Scarola Ellis LLP

9:15 am Corporate Environmental Information and the Financial Community -- EPA Overview

Charles W. Kent, Director, Office of Business and Community Innovations, Office of Policy, Economics and Innovation (OPEI)

9:30 am **Panel 1: Credit Analysis and Equity Investment**

Kyle Loughlin, Managing Director, Corporate and Government Services, Standard & Poor's
Bruce Kahn, Investment Management Consultant, Smith Barney, Citigroup Global Capital Markets Inc.
Sonia Wildash, Senior Research Analyst, EIRIS – Ethical Investment Research Services
Michelle Smith, Director, Environmental Health and Safety Development, Rohm and Haas Company

10:45 am BREAK

11:00 am Speaker: Commercial Banking/Lending

Helen Sahi, Past President
Environmental Bankers Association

12:00 – 1:30 pm **LUNCH**

1:30 pm **Panel 2: Insurance**

Susan M. Vetter, Vice President Environmental Services Group, AON Risk Services, Inc. of New York
Laurie Rudolph, Senior Risk Engineering Consultant, Zurich NA
Paul Scian, AIG Consultants
Dr. Peter Meyer, Director, Center for Environmental Policy and Management,
Louisville University

2:45 pm **BREAK**

3:00 pm **EFAB Workgroup/EPA Office of Policy, Economics and Innovation Follow-up Discussion**

4:00 pm **Public Comment**

4:30 pm Meeting Close: Next Steps and Adjourn

Rachel Deming, EFAB Member, Partner, Scarola Ellis LLP
Stan Meiburg, EFAB Designated Federal Official