

# ON MATERIALITY AND SUSTAINABILITY: The Value of Disclosure in the Capital Markets

Initiative for Responsible Investment  
Hauser Center for Nonprofit Organizations  
at Harvard University  
September 2012

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# Preface

The Initiative for Responsible Investment, a project of the Hauser Center for Nonprofit Corporations at Harvard University, has prepared this report *On Materiality and Sustainability: The Value of Disclosure in the Capital Markets* for the Sustainability Accounting Standards Board (SASB). Steve Lydenberg is the report's author. This report builds on the report *From Transparency to Performance: Industry-Based Sustainability Reporting on Key Issues* published by the Initiative for Responsible Investment in June 2010.

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# Executive Summary

With the passage of the Securities Exchange Act of 1934, Congress created the Securities and Exchange Commission (SEC) and empowered it to require disclosure of corporate data material to the public interest and the protection of investors. Congress mandated this disclosure in part to assure fair and honest markets, reliable prices, and unencumbered interstate commerce. In addition, with the lessons of the 1929 stock market crash and subsequent Great Depression in mind, Congress believed that SEC oversight of the financial markets could help avert, moderate, or shorten “national emergencies” precipitated by financial crises. Since that time, the courts and the SEC have generally defined information sufficiently “material” to require reporting as information that would be useful to “reasonable” investors considering a “total mix” of information in their decision making.

The SEC, accountants, and others have typically interpreted this mandate to include required reporting on corporate financials, but not on non-financial sustainability data. A number of legal scholars have recently pointed out that the SEC has the ability under current law to require the disclosure of non-financial data—including sustainability or ESG (environmental, social and governance) data—as it deems necessary. They have also argued that the SEC has

an obligation to require sustainability disclosure if a substantial portion of the investment community considers this information material (a substantial number of institutional investors now assert ESG data is important to their investment process); if corporations are disclosing only “half-truths” (several thousand corporations worldwide now publish sustainability reports, but in widely differing depth and formats); and if asymmetries in the availability of corporate data exist (a widening gap exists between institutional investors who have access to ESG data and retail investors who do not). While generally arguing that systematic disclosure of sustainability data is not appropriate, in response to specific recent crises the SEC and Congress have nevertheless mandated the disclosure of specific environmental, social, and governance data at various times.

The growing interest in disclosure of sustainability data is symptomatic of the increased recognition since the 1980s of the importance of the concept of sustainability to the management of corporations, ecosystems, and economies in an increasingly populous, technologically sophisticated, globalized, and resource-constrained world. As the recognition of the importance of sustainability has grown, many institutional investors, stock

exchanges, regulators, and corporations around the world have come to view the availability of sustainability data as necessary to the effective management of their interests. Sustainability data can help reduce financial risks and increase investment opportunities, while simultaneously dispelling distrust in the capital markets, reducing excessive speculation and short-termism, and averting, moderating, or shortening national emergencies caused by financial crises or corporate misdeeds.

This worldwide demand for disclosure of material sustainability or ESG data can be seen in the growth of networks of institutional investors such as The Principles for Responsible Investment (some 1,000 signatories) and the assets under responsible investment management (some \$3.07 trillion as of 2010 in the United States). In addition, stock exchanges around the world—including those in South Africa, Brazil and China—have developed socially responsible investment indexes. Financial regulators in France, Sweden, Denmark, and elsewhere now require or strongly encourage the disclosure of corporate sustainability data. Thousands of corporations worldwide currently issue sustainability or ESG reports.

This heightened awareness of the importance of sustainability issues has been driven in part by organizations such as the Global Reporting Initiative that have elaborated definitions of materiality tied to stakeholder relations (i.e., the concerns of investors, employees, suppliers, communities, the environment, and others

impacted by, or with the ability to impact, corporations). However, as the amount of corporate sustainability data disclosed has increased, problems of comprehensiveness, comparability, and prioritization have emerged. These challenges arise in part because many disclosure regimes are voluntary or undefined with regard to the specifics to be reported. As a result, disclosure now takes many different forms, covers many different issues, and varies substantially in depth of detail.

To address these challenges, regulators, associations of investment professionals, accounting firms, and institutional investors have begun to develop industry-specific methods for determining material sustainability key performance indicators (KPIs). These methods for prioritizing the disclosure of industry-specific sustainability KPIs vary considerably.

In 2010 Initiative for Responsible Investments published *From Transparency to Performance: Industry-Based Sustainability Reporting on Key Issues*, which presented an initial proposal for an industry-based prioritization method. This paper elaborates on that proposal for a five-part, fact-based materiality test that identifies issues most material to:

- Financial impacts and risks implicit in sustainability issues specific to various industries
- Sustainability-related legal, regulatory, and policy drivers likely to have the greatest implications for these industries

- Sustainability norms and standards developed by particular industries or broad-based industry watch-dog organizations
- Stakeholder concerns of a substantial nature, and emerging substantial social and environmental trends in given industries
- Opportunities for social and environmental innovation specific to each industry

In addition, this report draws on three core sustainability concepts to help prioritize relevant materiality considerations.

- The potential for sustainability factors to cause substantial disruption, either positive or negative, to social and environmental systems. The greater the potential for disruption the more material the sustainability factor is likely to be.
- The degree of uncertainty involved in the potential impacts on social and environmental systems of a sustainability factor. The greater the range of uncertainty the more material the sustainability factor is likely to be.
- The length of time over which a sustainability factor has potentially disruptive impacts. The longer the period of time the more material the sustainability factor is likely to be.<sup>1</sup>

These methods can be applied to all industries to create a focused list of the most material sustainability factors by industry that

will help bring clarity to the prioritization of sustainability reporting and cut the “clutter” in corporate disclosures.

Developing minimum effective standards for targeted sustainability KPIs will not only address the challenges and confusions of the current sustainability disclosure environment, but also will increase the competitiveness of U.S. capital markets and corporations; enhance the ability of investors to assess social and environmental risks, value assets, and allocate investments efficiently; strengthen trust in our capital markets and corporations; encourage the private sector to provide goods and services that create positive externalities; limit the potential liability for corporations reporting material sustainability indicators; reduce costs for government in the oversight of corporations’ social, environmental, and governance practices; and renew attention to the long-term in investment, to benefits accruing to future generations from today’s investment decisions, and to the creation of a sustainable future.

The mandating of disclosure of sustainability data is the next natural step in the evolution of reporting requirements for U.S. corporations. It is necessary for the reasonable investor and other corporate stakeholders seeking to make fully informed decisions in the light of a total mix of information. It is necessary to maintain honest and transparent capital markets that investors and the general public will find worthy of their trust.

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<sup>1</sup> Steve Lydenberg, Jean Rogers, and David Wood *From Transparency to Performance: Industry-Based Sustainability Reporting on Key Issues*. (Cambridge, Mass: Initiative for Responsible Investment) June 2010. Available at [http://hausercenter.org/iri/?page\\_id=6](http://hausercenter.org/iri/?page_id=6) Last visited March 23, 2012.

## PART ONE:

Historical Background and Current Debate  
Concerning Corporate Disclosure  
and Sustainability

# 1

# Part One: Historical Background and Current Debate Concerning Corporate Disclosure and Sustainability

## I-A. Legislation and Legal Background Concerning Corporate Disclosure

### *Disclosure, National Emergencies and the Public Interest*

Congress passed the Securities Act of 1933 and the Securities Exchange Act of 1934 in order to regulate the issuance of investment securities for sale to the public and the exchanges on which they are traded. Lessons learned from the 1929 stock market crash and the ensuing worldwide Great Depression were fresh in the minds of the members of Congress as they created the Securities and Exchange Commission (SEC) and empowered it to regulate stock exchanges and the public reporting of corporations traded on these exchanges.

Among other things, Congress viewed the stock markets of that time as dangerously unstable and untrustworthy. In the SEC's words, the agency was "designed to restore investor confidence in our capital markets

by providing investors and the markets with more reliable information and clear rules of honest dealing." Fair and honest reporting was seen as an essential part of restoring that trust and confidence. The purpose of the 1934 Act was "to promote stability in the markets and, most importantly, to protect investors."<sup>2</sup>

In Section 2 of the 1934 Act, which serves as its preamble, Congress states that the stock markets are "effected with a national public interest" that makes it necessary to create a Federal regulatory agency "in order to protect interstate commerce, the national credit, the Federal taxing power, to protect and make more effective the national banking system and Federal Reserve System, and to insure the maintenance of fair and honest markets in such transaction." Section 2 goes on to elaborate these points. Its explanation of why it is necessary to regulate financial markets in order to protect "the national credit" is as timely today as it was in 1934.

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Part One footnotes, see p.32-33.

National emergencies, which produce widespread unemployment and the dislocation of trade, transportation, and industry, and which burden interstate commerce and adversely affect the general welfare, are precipitated, intensified, and prolonged by manipulation and sudden and unreasonable fluctuations of security prices and by excessive speculation on such exchanges and markets, and to meet such emergencies the Federal Government is put to such great expense as to burden the national credit.<sup>3</sup> (emphasis added)

Congress believed that there was a public interest in the regulation of the financial markets, stating that its provisions are “necessary or appropriate in the public interest or for the protection of investors.” This phrase in several variations occurs approximately 210 times in the Act and its various amendments since that time. One of its major concerns was the “maintenance of fair and orderly markets,” a phrase that also frequently appears in the 1934 Act. Such markets are presumed to execute orders with economic efficiency and price securities with reasonable accuracy.<sup>4</sup>

In 1934, however, when Congress referred to “national emergencies,” it also undoubtedly had in mind the national emergency that the country was living through at that time and blamed the stock markets with their wild gyrations and uncertain prices for triggering the economic depression into which the United States and the world had sunk.

A crucial part of the remedy to these problems that Congress envisioned was the requiring of public reporting by companies listed on stock exchanges.

[T]ransactions in securities as commonly conducted upon securities exchanges and over-the-counter markets are effected with a national public interest which makes it necessary to provide for regulation and control of such transactions and of practices and matters related thereto . . . to require appropriate reports<sup>5</sup> . . . (emphasis added)

To determine what is in fact appropriate reporting the SEC has created a series of non-profit financial accounting standards-setting organizations independent from both government and industry. The first of these was the Committee on Accounting Procedures, which originated the concept of generally accepted accounting principles (GAAP). It was replaced in 1959 by the Accounting Principles Board, which in turn was superseded in 1973 by the Financial Accounting Standards Board (FASB), founded at the recommendation of the Wheat Commission.<sup>6</sup>

Although not entirely without booms (the “nifty fifty” of the 1950s) and busts (the collapse and prolonged bear market starting in 1972), the financial markets remained relatively stable throughout most of the last half of the 1900s. However, with the collapse of the dot-com bubble in 2000, it appeared that the then current accounting

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Part One footnotes, see p.32-33.

and financial reporting standards were not sufficient for the job of assuring fair and honest financial markets and Congress passed additional legislation (Sarbanes-Oxley Act) to update past policies. Sarbanes-Oxley was no sooner implemented than the profound financial crises of 2007-2011 revealed even deeper flaws in the capital markets. Another round of extensive legislation (Dodd-Frank Act) attempted through a series of reforms—many of which have been fiercely resisted by the financial and corporate communities—to address these ills. Despite two major legislative initiatives within a decade, however, trust in the fairness and honesty of our financial markets has continued to decline. Trust in banks, for example, declined from 56% in 2008 to 40% in 2012.<sup>7</sup>

One lesson that could be drawn from the apparent inability of increasing amounts of financial disclosure to assure the fairness and honesty of financial markets is that, in this increasingly technologically sophisticated, interconnected, populous, and resource-constrained world of global corporations—so different from that of 1934—financial information is no longer sufficient to assure trust and that additional information of a different sort is now required. Indeed, it can be argued that social, environmental, and governance information is now necessary to fulfill Congress' original goals of establishing fair and honest markets, serving the public interest, and protecting investors.

## *Disclosure and the Reasonable Person*

A second factor that argues for the appropriateness of increased disclosure of sustainability data is the emphasis that the SEC and the courts have placed on a hypothetical “reasonable” investor in whose interest this disclosure is mandated.

In order to help managers, auditors, and investors determine what information to disclose, verify, or use, the SEC, the accounting profession, and the courts have provided guidelines on what data should be considered “material.” The SEC’s definition of materiality is spelled out in its 1999 “Staff Accounting Bulletin: No. 99—Materiality.” At the outset of SAB 99, the SEC states simply that “A matter is ‘material’ if there is a substantial likelihood that a *reasonable person* would consider it important.”<sup>8</sup> (emphasis added) The SEC’s Regulation S-K, Rule 1-02 defines “material’ as follows.

*The term “material,” when used to qualify a requirement for the furnishing of information as to any subject, limits the information required to those matters about which an average prudent investor ought reasonably to be informed. )<sup>9</sup> (emphasis added)*

These definitions are consistent with the Supreme Court ruling in *TSC Industries v. Northway, Inc.*, in which it held that a fact is material if there is “a substantial likelihood that the . . . fact would have been viewed by the *reasonable investor* as having significantly altered the ‘total mix’ of information made available.”<sup>10</sup> (emphasis added)

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Part One footnotes, see p.32-33.

Who is this “reasonable” investor and what information does he or she require to make an informed decision? In the law, a reasonable person is hypothesized primarily in relation to torts (i.e., harm done, but not relating to contracts) and negligence. *Black’s Dictionary of Law* defines a reasonable person as:

A hypothetical person used as a legal standard, esp. to determine whether someone acted with negligence: specif., a person who exercises the degree of attention, knowledge, intelligence, and judgment that society requires of its members for the protection of their own and others’ interests.<sup>11</sup> (emphasis added)

A reasonable person in the law of torts pays attention to the consequences of his or her decisions, recognizes their likely effects on others, understands what society (i.e., others generally at a given time) expects, and exercises judgment, which may include economic calculations, about the appropriateness of various actions by taking these factors into account.

The reasonable investor can, by analogy, be said to act according to similar principles. Such a reasonable investor would be, however, in sharp contrast to the “rational” investor hypothesized by neoclassical economists, who seeks solely to maximize as efficiently as possible his or her “self-interest,” however that may be defined.<sup>12</sup> Typically today it is supposed that a rational investor seeks to maximize the risk-adjusted returns of a portfolio relative to a financial

benchmark. In addition to seeking to maximize risk-adjusted returns, however, a reasonable investor would account for the effects of his or her investment decisions on “others”—that is, on such things as the stability of the capital markets, the health of the national economy, the sustainability of the environment, and the trust and confidence of a corporation’s stakeholders (customers, employees, regulators, suppliers, etc.) in management.

A reasonable investor might therefore find that disclosure that excluded key environmental, social, and governance data was inadequate for fully informed decision-making. Without a “total mix” of information that includes social, environmental and governance data, the reasonable investor might well be unable to assess the effects his or her investment on the increasingly complex and interrelated systems within which these investments take place.

Many in the business, academic, and investment communities argue today that corporations’ ability to survive in the short and long term depends on their success in creating value through strong stakeholder relations and in contributing positively to the systems within which they operate.<sup>13</sup> A reasonable investor might well want to avoid companies that are, in Lynn Stout’s graphic description, “fishing with dynamite” in order to generate profits<sup>14</sup>—or in the words of the Russian folk tale, burning down their house in order to keep warm

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Part One footnotes, see p.32-33.

in the winter—precisely because they are harming their stakeholders and destroying these systems.

Institutional investors such as the California Public Employees Retirement System are aware of the value of assessing the social and environmental impacts of their investments and the impacts of the corporations in which they invest. CalPERS has, for example, articulated the need for the data by which these impacts can be assessed in its statements of investment beliefs.

CalPERS believes that boards that strive for active cooperation between corporations and stakeholders will be most likely to create wealth, employment, and sustainable economies. With adequate, accurate and timely data disclosure of environmental, social, and governance practices, shareowners are able to more effectively make investment decisions by taking into account those practices in the companies in which the Fund invests.<sup>15</sup> (emphasis added)

Because the courts and the SEC have invoked the reasonable investor as the standard by which adequate disclosure is to be measured, it can be argued that in today's world reasonable investors might want to be fully informed about key sustainability indicators. They might feel the need to consider—in a “total mix” of information that allows them to exercise “attention, knowledge, intelligence and judgment”—the ramifications of their investment decisions on the stability of the financial, social, and environmental

systems upon which they depend for their long-term prosperity.

### *Disclosure and Accounting Standards*

The Financial Accounting Standard Board (FASB) has been empowered by the SEC to set accounting and disclosure standards. FASB emphasizes the role that these standards play in the smooth functioning of our economy, noting, for example, that “Such standards are important to the efficient functioning of the economy because decisions about the allocation of resources rely heavily on credible, concise, and understandable financial information.”<sup>16</sup>

The accounting profession relies upon the general principle of “materiality” to define what data should appropriately be disclosed by corporation, but as Robert G. Eccles and Michael P. Krzus note in *One Report: Integrated Reporting for a Sustainable Strategy*, “No clear consensus definition exists for what is ‘material’ financial information.”<sup>17</sup> Among financial indicators often cited as material are those that constitute:

- 1) 10% to 15% of average net income after taxes in recent years
- 2) 5% to 10% of the current year's income from continuing operation before taxes
- 3) 0.5 to 2% of total revenue or total assets
- 4) 1% to 2% of owners' equity<sup>18</sup>

Financial information that would cause a “material” change in a company's stock

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Part One footnotes, see p.32-33.

price would also be considered material for disclosure purposes,

The SEC has taken the position that such benchmarks are a useful preliminary “warning system,” but provide only a “preliminary assumption” that the matter is or is not material. In other words, matters of lesser financial impact can still be material and require disclosure.

The [SEC] staff reminds registrants and the auditors of their financial statements that exclusive reliance on this [5% of revenues] or any percentage or numerical threshold has no basis in the accounting literature or the law.

The use of a percentage as a numerical threshold, such as 5%, may provide the basis for a preliminary assumption that—without considering all relevant circumstances—a deviation of less than the specified percentage with respect to a particular item on the registrant’s financial statements is unlikely to be material. The staff has no objection to such a “rule of thumb” as an initial step in assessing materiality. But quantifying, in percentage terms, the magnitude of a misstatement is only the beginning of an analysis of materiality; it cannot appropriately be used as a substitute for a full analysis of all relevant considerations. *Materiality concerns the significance of an item to users of a registrant’s financial statements.*<sup>19</sup> (emphasis added)

As we will see below, users of financial statements—including, but not limited to, investors—are increasingly demanding sustainability data.

FASB and other accounting standards organizations have also tied the concept of materiality to data relevant to “economic decisions.” For example SAS No. 107 “Audit Risk and Materiality in Conducting an Audit” asserts:

The evaluation of whether a misstatement could influence *economic decisions* of users, and therefore be material, involves considerations of the characteristics of those users. Users are assumed to: ... (d) Make appropriate *economic decisions* on the basis of the information in the financial statements.<sup>20</sup> (emphasis added)

Similarly, the International Accounting Standards Committee states that “Information is material if its omission or misstatement could influence the *economic decisions* of users taken on the basis of the financial statements.”<sup>21</sup> (emphasis added)

The phrase “economic decisions” could be, and typically is, construed narrowly to mean “investment” decisions. It could also be interpreted to include economic decisions other than the purchasing of stocks or bonds. Corporate disclosure documents could well be used by employees deciding whether to work for a company; by potential suppliers or partners deciding whether to enter into a contract with a firm; by banks or other financial institutions deciding whether to lend to a company; by communities deciding whether to encourage a company to locate a plant in their region; or by members of a company’s board of directors and top management engaged in long-term strategic decision-making.

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Part One footnotes, see p.32-33.

This review of the history of Congressional legislation, SEC and court rulings and interpretations, and accounting guidelines suggests that while the focus to date has primarily been on the disclosure of financial data, disclosure of sustainability data can provide a valuable supplement to financial data in today's complicated world for reasonable investors and others making of informed economic decisions.

## I-B. Legal Arguments for Sustainability Disclosure

We turn now to recent observations by a number of legal scholars concerning the SEC's right and, under certain circumstances, obligation to require the disclosure of "non-financial" (that is, ESG or sustainability) information, and objections made by the SEC and others to the mandating of additional such disclosure at the current time.

In her seminal 1999 *Harvard Law Review* article on the SEC's authority to require disclosure of non-financial data, Cynthia Williams of the University of the Illinois College of Law argues that the legislative history of the 1933 Securities Act and the 1934 Securities Exchange Act makes it clear that Congress was providing "the SEC with the authority to require disclosure of facts concerning how companies were being managed."<sup>22</sup> In particular, disclosure was seen as a particular effective way of preventing misdeeds and improving behavior. Among the prominent thinkers of that

time advocating increased disclosure was Louis D. Brandies, who famously advocated "publicity" on the grounds that it "is justly commended as a remedy for social and industrial diseases. Sunlight is said to be the best of disinfectants; electric light the most efficient policeman."<sup>23</sup>

Williams also attributes influence to Adolph A. Berle and Gardiner C. Means, authors of the 1933 classic *The Modern Corporation and Private Property* in which they argue that "mandatory disclosure would promote market efficiency in valuing securities" and at the same time would help "challeng[e] the men controlling the great economic organisms . . . to accept responsibility for the well-being of those who are subject to the organization, whether workers, investors, or consumers."<sup>24</sup> Williams also cites their arguments that the structure of public markets necessarily implies a corporate duty to the public.

[P]assive securities holders, by surrendering control and responsibility over their property, had also surrendered the right "that the corporation be operated in their sole interest," while the managers had put forth no compelling claim that they should be the beneficiary of the shareholders' reduced claims. Rather, "[n]either the claims of ownership nor those of control can stand against the paramount interests of the community . . . It remains only for the claims of the community to be put forward with clarity and force."<sup>25</sup>

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Part One footnotes, see p.32-33.

The crucial role of disclosure as a remedy for the ills of the financial community has been recognized repeatedly by the Supreme Court since that time. For example, in *Basic Inc. v. Levinson* the Supreme Court asserted that “We have recognized time and again, a fundamental purpose of the various Securities Acts was to substitute a philosophy of full disclosure for a philosophy of *caveat emptor*, and thus to achieve a high standard of business ethics in the securities industry.”<sup>26</sup>

Williams therefore sees mandatory disclosure of social and environmental information as consistent with the Congress’ original intent in multiple regards.

The social goals underlying the securities acts include providing investors with full and fair information necessary to make informed investment decisions and to cast well-informed votes to continue with the present management of a company, to pressure management to adopt new strategies, or to vote for new management. Each of these goals is demonstrably advanced by providing investors with a full range of important information on the way companies are being managed: how profits are being earned, what social and environmental practices are being followed that may have negative ramifications in the future, and, indeed, what social and environmental practices are being followed that may be of present ethical or prudential concern.<sup>27</sup>

This disclosure creates “an honest ‘social accounting’ of the effects the corporation has had on society and on

the environment in the process of creating economic returns.”<sup>28</sup> Moreover, it would parallel the purpose and function of the financial reporting regime of today. “Consistent, periodic disclosure of such [social and environmental] information in a standard format would help to create ‘social transparency’ in the capital markets comparable to the financial transparency that now exists.”<sup>29</sup>

It is within the SEC’s purview to require such disclosure as material to investors if investors themselves consider it material.

It would thus be consistent with the SEC’s concept of its broad discretion to conclude that if a significant minority of investors’ priorities have expanded to include a concern with the social and environmental effects of the companies in which they invest, the SEC has the authority to expand disclosure accordingly.<sup>30</sup>

Indeed, many social and environmental issues can be considered potentially material to all investors because no clear line separating them from financial matters can be drawn.

Social investors are most obviously or directly interested in disclosure about corporate practices beyond that of compliance with the law, but economic investors have reason to be interested as well, particularly because today’s social issue is tomorrow’s financial issue. Ultimately, it is quite difficult to draw a meaningful distinction between a corporate “financial issue” and a corporate “social issue,” because social, consumer, and investor trends with respect to

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Part One footnotes, see p.32-33.

the corporation's relationship with society can eventually affect a company's profitability, for good or ill.<sup>31</sup>

Assessing the current status of disclosure of social and environmental information, Williams notes that its voluntary nature means that it will necessarily be incomplete and comparisons will be difficult. Moreover, not all investors have ready access to this data, which implies that some enjoy an unfair advantage in the marketplace.

There are . . . at least three problems with the current provision of socially significant corporate information: differential access to information between individual investors and market professionals; incomplete information; and information that is difficult to compare from company to company. Required disclosure of socially significant information by public reporting companies would address each of these problems.<sup>32</sup>

Two broad classes of social and environmental information can be considered as candidates for mandatory disclosure, according to Williams. These are "information that tracks compliance with a comprehensive array of statutes and international treaties" and "information about activity that is legal, though controversial."<sup>33</sup>

In a 2007 *Stanford Environmental Law Journal* article, David Monsma and Timothy Olson argue that corporations "assume

obligations of public trust and accountability when they sell stock to the public."<sup>34</sup>

Among these obligation is "full and fair disclosure of material information" necessary "to promote investor confidence in the truth and accuracy of issuing companies' financial statements."<sup>35</sup>

They point out that "[n]ot all information that is interesting to investors and analysts is material to the financial condition of a company . . . and not all material information must be disclosed."<sup>36</sup> It is therefore necessary for management, auditors, and regulators to make judgment calls when determining what information is and is not material for disclose purposes. These judgments are made in the context of changing conditions within individual companies, and of changing conditions in the marketplace and society. Monsma and Olson argue that changing "conditions in the securities markets" have "overtaken" the current regulatory and accounting framework, creating a situation in which "information about the social and environmental management of publicly held corporations is, in actuality, material information" but not yet disclosed.<sup>37</sup>

Among these changes is the growth of investor interest in social and environmental information. (See Section III-A below for a discussion of this growth.) "Simply stated, this information is 'material' to SRIs [socially responsible investors] because these investors consider 'the social and environmental impact of firms alongside financial performance.'"<sup>38</sup> They note that

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Part One footnotes, see p.32-33.

the SEC “can require disclosure if the information is determined sufficiently likely to be considered important by a significant number of reasonable investors.”<sup>39</sup> However, “[w]here there is no known legal duty to disclose particular information, but the information is arguably material, a duty arises only if the failure to disclose was more likely than not misleading to the investor in light of the total mix of available information.”<sup>40</sup>

This “duty not to mislead by way of omitted facts or misstatements”<sup>41</sup> is relevant to “the reasonable investor, not the professional or profit-seeking-only investor, who is the measure of materiality” in their view. The essential question, therefore, is whether omission of sustainability data will mislead reasonable investors in their ability to assess the future prospects of the company.

Corporate managers are increasingly taking social and environmental factors into account but reporting on them only voluntarily. Consequently investors only receive this information irregularly, incompletely, and inconsistently. For this reason,

[W]hile the duty to disclosure material social and environmental information does not necessarily arise out of a line-item SEC disclosure requirement, it does arise out of the fact that investors can be expected to rely on the completeness and accuracy of information once a corporate commitment is made or once activities to manage social and environmental areas are undertaken by companies.<sup>42</sup>

This “half-truth doctrine” means that once a company considers social and environmental issues of strategic management importance and opts to report on them to investors, it must report completely and accurately. The authors conclude that “[i]nvestor reliance on incomplete company information that is arguably material should, by itself, dictate the disclosure of such [social and environmental] information under the half-truth doctrine.”<sup>43</sup>

In 2001 the *Harvard Law Review* published a Note in response to Williams’ article. The author finds that Williams “argue[d] convincingly” that the SEC has the authority to require that corporations disclose social and environmental data, but that she was “less successful in arguing that the SEC *ought* to require such disclosure.”<sup>44</sup> (emphasis in original)

For disclosure to be mandated, the Note asserts that the SEC should be “bounded by considerations of investor welfare and underpinned by the same economic logic that supports mandatory financial disclosure” rather than be “free-floating.”<sup>45</sup> The key considerations are:

How important is the information to investors?  
Is the information already being collected, such that direct disclosure costs are likely to be low?  
Could curtailment of behavior associated with the information significantly affect profits; that is, will there be significant indirect costs from effects on activity level? Are there third-party effects associated with the information?<sup>46</sup>

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Part One footnotes, see p.32-33.

These questions correspond in large part to the rationales offered by the SEC during its protracted confrontation with the Natural Resources Defense Council (NRDC) during the 1970s over proposals for increased social and environmental disclosure. In 1971 the NRDC, along with the Project on Corporate Responsibility, filed a SEC rule-making petition calling for mandated corporate disclosure of certain environmental and equal employment opportunity information. After more than a half-dozen years of rulemakings, hearings, and court proceedings, the SEC's opposition to these increased disclosure requirements ultimately prevailed. Among the arguments against increased disclosure that the SEC made at that time were the following.

- Congress intended the disclosure of economically significant data, not social and environmental data, when it empowered the SEC to require reporting
- There is not currently sufficient interest in the investment community to justify requiring social and environmental disclosure
- It is beyond the mandate of the SEC to promote environmentally or socially beneficial corporate behavior through disclosure requirements
- If the information is material to investors, its disclosure is already required
- Disclosure of this information is costly and these costs outweigh its benefits<sup>47</sup>

These arguments held sway at that time. Since then, developments in the capital markets, the world of sustainability, the environmental facts of our times, and the interrelatedness of social and financial issues have done much to undercut the force of these objections.

As noted in part I-A above, it is arguable that Congress intended the disclosure of information that would restore trust and stability to the financial markets in passing its capital-markets reform legislation in 1933 and 1934. That it did not specific sustainability information as essential to that process at that time is understandable. As is pointed out below in Section I-C, only in the past three decades have scientists, economists, market theorists and others begun to recognize the importance of sustainability to our social and environmental, as well as financial, systems in an ever-changing world. It is changing times that have made sustainability data relevant to Congress' original intent.

It is increasingly difficult to argue that the investment community, particularly the institutional investment community, is not sufficiently interest in ESG data to justify its mandated disclosure. Section III-A below documents the rapid rise in the numbers of institutional investors that have committed to incorporating ESG data into their investment processes (over 1,000 with \$30 trillion in assets under management as of 2012), as well as the increasing number of stock exchanges that are encouraging the disclosure of such data by listed companies.

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Part One footnotes, see p.32-33.

As to the proper role of the SEC when it comes to responsible behavior of corporations, it is difficult in today's world to separate the health and stability of our financial, social, and environmental systems from the prospects of investors for generating healthy and consistent returns. If one assumes that the social, environmental and ethical practices of individual companies can influence the health and well-being of these larger systems, then investors might well need to know about these practices and the SEC have an obligation to serve that need. In short, the two worlds—capital markets and societal and environmental systems—have become inextricably linked and it is no longer possible to think separately about the two.

We agree that if social and environmental data is material to investors it should be disclosed. That is not to say, however, that material social and environmental information that should be disclosed is being disclosed. Corporations and their accountants may not appreciate its materiality in the traditional financial context—i.e., it may have quantifiable short-term impacts on revenues, profits, or stock price that are being ignored. It is equally possible that it is not being disclosed because corporations and their accountants are slow to recognize the sustainability aspects of this information that in and of themselves make it material to investors and other stakeholders seeking to make economic decisions based on a total mix of information.

Finally, the consideration of benefits versus costs is discussed at some length in Section IV-D below. Suffice it to say at this point that the benefits of systematic disclosure of ESG data are arguably numerous and substantial: enhanced ability of investors to identify risks and rewards; increased competitiveness of U.S. corporations and capital markets; enhanced trust in business and finance; reduced monitoring costs for government; increased clarity and reduced costs for corporations on sustainability reporting; and increased ability of government to cope with national crises caused by corporate misdeeds. The costs for reporting on these issues are incurred primarily at the company level, often have the potential to be offset by cost savings when management understands how sustainable social and environmental practices can generate profits, and are minimal, relatively speaking, when compared to the long-term system-level benefits that such reporting can generate.

*Current Requirements for Disclosure of Sustainability Data.* While generally taking the position that mandating specific disclosure of social and environmental data is not appropriate or needed, the SEC—along with Congress—has simultaneously chosen to require such disclosure, although unsystematically and in response to occasional crises.

In her article, Williams highlights particularly the significance of the SEC's ruling in the early 1970s that corporations must report illegal involvement in questionable payments

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Part One footnotes, see p.32-33.

(e.g., bribes) at home and abroad whether or not they were material to the financial prospects of the corporation. The SEC's decision was made in the context of a wave of revelations at that time of illegal corporate overseas payments and domestic political campaign contributions. The SEC considered these acts material in other than purely financial terms. "[T]he SEC took the position that the integrity of management, as reflected in its involvement in illegal activities, was material to investors and should be disclosed *irrespective* of financial materiality."<sup>48</sup> (emphasis in original)

In addition, the SEC has implemented a number of disclosure requirements for other social and environmental data whether or not it has an immediate impact on companies' financial stability. For example, the SEC now requires U.S. corporations to publish in their Form 10-K or proxy statement information on:

- Proposed environmental fines that might exceed \$100,000
- Potential obligations to clean up toxic waste sites, even if that obligation may be *de minimus*
- Consideration of gender and ethnic diversity on the firm's board of directors
- Percentage of unionized employees

In January 2012, at the request of the Investor Network on Climate Risk, the SEC issued an interpretative guidance for corporations on climate change, reminding

companies that they need to consider the potential impacts of regulation, legislation, and international accords concerning climate change on their operations, as well as the potential impacts of climate change on the economic systems within which they operate.

Disclosure of a variety of corporate governance data is also required whether or not it is material in financial terms. Companies are, for example, required to report in their proxy statements:

- Attendance record of board members
- Number of other boards on which their board members serve
- Total compensation of the company's CEO and its five highest-ranking officers

Congress and Federal regulators have at various times mandated corporate disclosure of social and environmental data as in the public interest. In the 1980s, Congress established the Toxics Release Inventory and required most industrial firms to report on the toxic chemicals they have stored on site, released into the environment, or recycled. Congress' intent was "to empower citizens, through information, to hold companies and local governments accountable in terms of how toxic chemicals are managed." Through a series of laws passed from the 1970s and 1980s, including the Home Mortgage Disclosure Act and the Community Reinvestment Act, Congress mandated that banks and other financial institutions disclose data on their mortgage and small-business

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Part One footnotes, see p.32-33.

lending practices. It did so to help assure that financial institutions lend appropriately to the communities from which they take deposits. The 2010 Dodd-Frank Act increases corporate obligations to disclose data on executive compensation, conflict minerals, and payment to foreign governments for natural resources extraction. In 2011, the Environmental Protection Agency required corporations operating in the United States to report greenhouse gas emissions.

The fact that the SEC, Congress, and Federal regulators have required these disclosures is symptomatic of the increasing materiality of this data. These reporting requirements, however, have evolved in a haphazard manner over an extended period of time with little attention to how systematic disclosure of sustainability data can best be implemented.

### **I-C. Background on the Increased Importance of Sustainability**

Although sustainability's roots extend back over a century, use of the term and awareness of its importance has grown dramatically since the 1980s as it has become a matter of extended public discourse and debate.<sup>49</sup> Its principles now underlie specialized fields of scientific, academic, and political thought, including ecological science, ecological economics, and sustainable economic development—not to mention its incorporation into the daily vocabulary of the press, the corporate community, and the general public.<sup>50</sup> It is not an exaggeration to say, "Sustainability

has become a mantra for the 21st century."<sup>51</sup>

Sustainability is an attribute of a system that allows its interrelated members to thrive and to survive in the face of unpredictable shocks over extended periods of time. Sustainability is not a "thing". It is not the characteristic of something as limited as a product, as McElroy and van Engelen have pointed out.<sup>52</sup> It is a characteristic of a successful complex system—what John Ehrenfeld calls "a living system."<sup>53</sup>

Within the field of economics, a line of research and theory development about sustainability has developed in recent years. Economists who have contributed to this development in the past range from Arthur Pigou (theory of externalities) and Harold Hotelling (study of the extraction of non-renewable resources) to, more recently, Nicolas Georgescu-Roegen (entropy and economics), Kenneth Boulding (spaceship earth), Ernst "Fritz" Schumacher (small is beautiful), and Herman Daly (ecological economics). The ecological economists in particular have emphasized the need to account for natural-resource constraints and often speak of human, social, and environmental capitals, in addition to financial capital.

Another line of research has emerged from the work of environmental biologists and ecologists, who have explored sustainability in the context of complex natural ecosystems. They have developed evaluative and management tools such as the carrying capacity of a ecological systems, maximum

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Part One footnotes, see p.32-33.

sustainable yields, soft systems management, and participatory rural appraisal.<sup>54</sup>

Business leaders, including members of the World Business Council on Sustainable Development, have found the eco-efficiency aspects of sustainability particularly attractive because of their applicability to efficiency in the management of their businesses. Industrial ecologists have worked with the corporate world to understand how the life cycles and energy flows of the natural world can find applicability in manufacturing contexts. National and international governmental organizations, as well as a host of non-governmental organizations, have embraced concept of sustainable economic development and generated a wide range of sustainability definitions, targets, measurement tools, and goals.

As far back as 1952, the U.S. Presidential Materials Policy Commission (Paley Commission) concluded that resource and energy shortages were inevitable and recommended investing in renewable energy including solar, wind, and biomass. In 1972 the Club of Rome published its controversial *Limits to Growth* report, which catalyzed awareness about resource constraints and the environmental and social challenges of global economic development. (A recent article in *Smithsonian Magazine*

validated many of the report's predictions to date.)<sup>55</sup> In 1969 the United States passed the National Environmental Policy Act, establishing a national policy "to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."<sup>56</sup> In 1987, the so-called Brundtland Report *Our Common Future* famously defined sustainable development as the ability "to ensure that [development] meets the needs of the present without compromising the ability of future generations to meet their own needs."<sup>57</sup> In 2001 the Organization for Economic Co-operation and Development established a set of four sustainability principles.<sup>58</sup> In 1992 the United Nations hosted the Earth Summit in Rio de Janeiro, from which came 27 principles for sustainable development, followed by its 2002 World Summit on Sustainable Development in Johannesburg and the Rio + 20 Summit in June 2012.

Today the term sustainability means many different things to these different parties, including corporations when it comes to sustainability reporting and disclosure. The word "sustainable", for example, appears no less than 80 times in Marks & Spencer's 54-page corporate social

1952	1970	1971	1972	1987	1992	1995	2000	2002	2009	2012	2015
Paley Commission	EPA formed	Entropy Law and Economic Process	Limits to Growth	Brundtland Report	Earth Summit Rio	WBCSD Formed	MDGs Earth Charter	World Summit 'People, Place, Prosperity'	Sarkozy Report	Rio 20+	MDG target date

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responsibility report for 2011, *How We Do Business*. It is used in reference to sourcing, cotton, palm oil, fabrics, farming, packaging materials, wood, fish, life, learning store, sources, tuna, textiles, routes, and practices among other things.<sup>59</sup>

Indeed the concept of sustainability has proven so useful and is applied so broadly that there is no one agreed-upon definition. As Marshall and Toffel have observed, “Robust answers to questions such as *what is sustainability? what is a sustainable society?, and what is a sustainable organization?* have proved elusive.”<sup>60</sup> Similarly the authors of *Sustainability Indicators*, a comprehensive survey of sustainability measurement as it has emerged in various disciplines, observe that “the precise meaning of sustainable, and what it embraces, varies depending upon who is using it and in what context. . . .”<sup>61</sup>

Despite the proliferation of various definitions of sustainability, certain underlying similarities in sustainability themes are helpful in understanding the relationship between the diverse set of ESG data points identified by such organizations as the Global Reporting Initiative as appropriate for sustainability reporting and the basic concept of sustainability that bind them together in a cohesive whole. The organization Sustainable Measures has succinctly identified these underlying and unifying aspects of sustainability. “All the definitions [of sustainability] have to do with:

Living within the limits; Understanding the interconnections among economy, society, and environment; Equitable distribution of resources and opportunities.”<sup>62</sup>

These three unifying themes help clarify why ESG data and its public reporting are valuable tools in serving the public interest and protecting investors in today’s complex world. They point to the growing interdependence and complexity of this world that has, over the past 30 years, made sustainability issues crucial to assessments of the systems within which corporations operate. The working group of the International Integrated Reporting Council (IIRC) has highlighted the importance of this increasing complexity.

The world has changed due to globalization and resulting interdependencies in economies and supply chains, advances in technology, rapid population growth and increasing global consumption. This has had a significant impact on the quality, availability and price of resources, including water, food and energy. It also puts increasing pressure on ecosystems that are essential to the economy and society.<sup>63</sup>

It is these changes in the context within which corporations operate that have made sustainability data, along with financial data, material today, along with financial data, in ways that help fulfill three of the original purposes of mandated disclosure for securities traded in the public markets. As discussed earlier, these are:

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Part One footnotes, see p.32-33.

- *Establish trust in financial markets* by providing the data necessary to assure that investors possess a “total mix” of information adequate for the evaluation of the prospects for long-term success of corporations
- *Temper the speculation* that is all too often a part of the financial markets by reducing the emphasis on short-term financial returns and increasing the emphasis on long-term perspectives and stability
- *Foresee, avert, or shorten national crises* precipitated by financial markets and publicly traded corporations—and particularly those requiring the commitment of resources by the Federal government

*Establish Trust.* Trust is necessary for the capital markets to function effectively and efficiently. Without trust, investors will flee the markets, the cost of capital rises, and the likelihood of financial crises increases. To trust our capital markets today, disclosure of a combination of sustainability and financial data is necessary. In particular, investors need to know whether companies are addressing the sustainability issues key to those challenges in their industry that are most likely to enhance or undermine the societal and environmental frameworks within which they operate and upon which they depend for success.

Despite a plethora of financial data available today, trust in corporations and our financial markets has declined precipitously. In the

course of less than ten years, Congress has found it necessary to enact two major financial reform bills (Sarbanes-Oxley in 2002 and Dodd-Frank in 2010) in attempts to restore this trust. Despite these efforts, the banking and financial services sectors still remain the least trusted industries, according to the 2012 Edelman Trust Barometer—with trust in banks dropping from 56% in 2008 to 40% in 2012.<sup>64</sup> Investors and the general public no longer trust corporate boards of directors to make appropriate decisions on issues as basic as levels of CEO compensation to the extent that Congress has felt it necessary to grant stockowners the right to a non-binding vote on their CEO's pay.

As part of an effort to regain that trust, corporations are increasingly issuing sustainability reports, but are often accused of “greenwashing” when these reports do not address the issues of greatest sustainability importance to their industry. Natural gas companies do not address the implications of their controversial hydraulic fracturing practices. Food product companies do not confront the obesity epidemic and the role their products may be playing in it. Utility companies do not confront the long-term environmental implications of dependence on coal as a primary fuel.

Pharmaceutical companies cannot earn the trust of investors and other stakeholders if they do not contend with the possibility that skyrocketing healthcare costs may destabilize local, state, or even national governments. Financial services companies

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Part One footnotes, see p.32-33.

cannot earn that trust if they do not address the destabilizing potential of their financial innovations and trading practices. Apparel companies cannot earn that trust if they give no more than lip service to their obligations to improve working conditions at their vendors' factories.

Even when regulators remind companies of the potential materiality of sustainability issues, their reporting can be spotty at best. In a 2012 study following up on the SEC's 2010 interpretive release clarifying to corporations that climate change issues can trigger material disclosure, Eccles et al. reviewed the Form 10-K filings of companies in the airlines (seven companies), auto manufacturing (two), banking (ten), insurance (ten), real estate (nine), and utilities (ten) industries. The study found that in two of these industries (banking and real estate) there was no disclosure or only "boilerplate" disclosure on climate change-related issues 100% of the time; for insurance there was no substantive disclosure by 90% of the companies; and for the other three industries over 60% failed to address the issue in substantive detail.<sup>65</sup>

*Temper speculation, encourage long-term perspectives, and promote stability.* Although speculation about the future is necessarily a part of the investment process and plays an important role in capital markets, speculative bets made without due consideration of the total mix of information publicly available can be little more than gambling and harm these markets as much as help them. The systematic availability of industry-specific

sustainability data can help temper harmful speculation and its associated volatility and short-termism in the markets because it will:

- Bring a *long-term perspective* to investors' and managers' decision-making, due to the inherently long-term nature of sustainability issues
- Help investors and managers contend with the irreducible *uncertainties* inherent in sustainability challenges by providing data upon which future-oriented scenarios can be built and actions taken in light of changing circumstance
- Educate investors and managers about the *complex systems* in which they operate and the likelihood that their decisions can affect these systems positively or negatively

Investors and managers operating without long-term, system-level sustainability data are forced to make decisions based only on financial considerations, which tends to drive them toward short-term outlooks and decisions.<sup>66</sup>

Financial data is based on quantifiable, verifiable numbers and provides a trustworthy portrait of corporations' current financial health. Because it is by nature retrospective, however, this data is primarily useful in making judgments about corporations' short-term prospects for success. For example, stock analysts rarely project company earnings beyond three years. By contrast, sustainability concerns, which tend to be prospective by nature, can

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be particularly useful in directing investors and managers to focus on the long-term, often meaning decades or even generations. This long-term focus of sustainability concerns can help moderate short-term speculative market gyrations.

Financial accounting also is well-suited for contending with relatively predictable risks, but less well-suited for contending with fundamental uncertainties.<sup>67</sup> Financial data can help assess risks such as the increase in the cost of oil within the next year or two, the loss of a current key customer, the growth of market share of a competitor over the next few years, or the potential effects of an underfunded pension plan. Sustainability data, by contrast, can help investors, as well as corporate managers and others, understand the broad scope of future uncertainties, minimize their downside effects, and maximize their upside potential. Long-term uncertainties on issues with broad-reaching implications include, for example, the availability of fresh water in the 21st century, the productivity of our oceans, the fertility of our arable land, the costs of health care, the equitability of the distribution of our wealth, and the stability of social systems where unemployment runs high. The ability of corporations—either individually or in partnership with others—to minimize the negatives and capitalize on the positives in these uncertain situations depends on the availability of good sustainability data, flexible scenario building, and thoughtful judgments and analyses.

Robert Skidelsky highlighted the importance of confronting and managing uncertainties when he observed in 2009, “[U]nderlying the escalating succession of financial crises we have recently experienced is the failure of economics to take uncertainty seriously.”<sup>68</sup> When investors and managers ignore uncertainties and account only for calculable risks, they are likely to make short-term decisions that introduce volatility and instability into financial and economic systems.

Stability in the markets and our is of great value and can only be achieved if investors and manager make sound economic decisions based on good data. Skidelsky cites John Maynard Keynes on the value of stability in the financial markets:

[P]eople cannot be expected to take proper account of the consequences of their economic acts if the standard of value [i.e., price] is constantly fluctuating. [Keynes wrote that] “Unemployment, the precarious life of the worker, the disappointment of expectation, the sudden loss of savings, the excessive windfalls of individuals, the speculator, the profiteer—all these proceed, in large measure from the instability of the standard of value.”<sup>69</sup>

Indeed, we cannot plan adequately for the future in volatile, unstable environments. This is true throughout the world—for developing societies as well as developed. As the authors of *Poor Economics* have observed about even the poorest of the poor, “A sense of stability may be necessary for people to be able to take the long

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view.”<sup>70</sup> Uncertainty causes investors, as well as consumers, to hesitate to allocate their resources to those investments or purchases the payoff for which will only materialize in the long term.

*Foresee, avert or shorten national crises.*

Congress saw in the 1930s that instability in our financial markets caused in part by lack of transparency could lead to economic crises requiring Federal intervention. One of its primary remedies was to mandate financial disclosure. At that time Congress could not have foreseen that 80 years later the Federal government would be contending with a series of sustainability crises requiring its intervention without the benefit of mandated disclosure of sustainability data.

The massive BP oil spill in the Gulf of Mexico in 2010 necessitated costly Federal, state, and local emergency response and profoundly disrupted local economies. The unsustainable rise in the costs of health care exacted by the U.S. insurance, pharmaceutical, medical devices, and acute care industries have resulted in severe governmental crises with which Federal, state, and local officials will be contending for decades to come. The recent banking and financial services crises precipitated in part by unethical and asocial business practices have required substantial Federal fiscal and policy interventions.

These crises have cost the public dearly and bring disruptive instability into our lives. Generation Investment Management is

among the investment managers today who draw the connection between government’s interest in requiring disclosure of corporate sustainability data and its interests preventing societal-level emergencies. Generation has called for “integrating ESG metrics into the [investment and corporate management] decision making process,” in order to bring about “greater long-term social stability as a result of steadier economic growth, greater productivity and more efficient resource utilization.”<sup>71</sup> Government’s interest in the adequate availability of ESG data is crucial because “Government is too often left with the task of cleaning up the wreckage left by the short-term and unsustainable practices of both companies and investors. The recent example of the global financial crisis highlights a sad reality: government is the backstop to serious blunders by businesses.”<sup>72</sup>

Moreover, when government intervenes after crises occur, it often does so hastily and in the absence of data adequate to the complete understanding of why these crises arose and how they can be prevented, mitigated, or shortened in the future. Mandated, systematic disclosure of key sustainability data is essential in this regard because it can help investors, regulators, and other economic actors foresee circumstances in which crises and national emergencies are likely to come to a head. When crises do occur, having comprehensive sustainability data helps all parties respond appropriately.

*Usefulness of Sustainability Principles in Prioritization of Sustainability Key*

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Part One footnotes, see p.32-33.

*Performance Indicators.* Three of the characteristics of sustainable systems turn out to be useful in establish priorities among the many social and environmental indicators that the GRI and others have identified, which is one of the major challenges of ESG reporting today.

The first involves the recognition that the large number and diversity of these corporate sustainability indicators is a reflection of the complex systems of which corporations are a part, involving multiple stakeholders with myriad concerns, complex interrelations with the natural environment and, frequently, global operations across cultural divides. The distinction made by sustainability experts between complex and complicated systems is particularly helpful here. Complex systems are ones that are predictable for long periods time, but which have unforeseeable aspects that cause them to act at times in unpredictable ways. By contrast, in complicated systems causal relationships can be determined and reliably predicted provided that enough data is available.

A second characteristic useful in prioritization is the fact that the elements of these systems operate within defined borders within which their members have impacts on each other and are impacted by others. A stable, sustainable system achieves a kind of balance that permits it to continue most of the time without disruption while supporting its members. At the same time, it is possible for exogenous forces, or disproportionate actions by actors within to the system, to

disrupt this balance and throw the system into a new, unpredictable mode of behavior that may no longer be able to support some of its members or even to allow the system to survive as a whole. The more diverse and flexible the system is, the more likely it is that it and its members will survive these occasional, but inevitable, disruptions.

The third characteristic of sustainability is that sustainable systems are simultaneously ever-changing and built to last. They resemble living organisms that evolve successfully in response to change. Actions appropriate to maintain a balance and stability at one time may be inappropriate at others, and vice versa. Constant communication, learning, and feedback loops are therefore necessary to assure the long-term success of these systems.

From these three characteristics of sustainability and sustainable systems can be derived three principles useful in the prioritizing the materiality of sustainability key performance indicators. They are:

- The greater the potential for a sustainability key performance indicator to produce disruption (positive or negative) in the system, the greater its materiality
- The more uncertain and unpredictable the degree of this disruption is, the greater the materiality
- The longer the time over which this disruption might take place, the greater the materiality

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How these principles can be combined with fact-based materiality tests is discussed in greater detail in Section IV-C below.

These three prioritization principles bear a similarity to three key questions in evaluations of the sustainability of a system highlighted by the authors of *Sustainability Indicators: Measuring the Immeasurable?*: 1.) What is the scope of the system being considered? Is it local and bounded? Is it global and all-encompassing? 2.) What is the timeframe over which sustainability is being considered? Is it the current moment? The next decade? Generations? Forever? 3.) What qualities of the system are given precedence? Is environmental sustainability the overriding factor? Does one measure the costs and benefits of social and economic benefits against environmental harm?

Using these three factors, Bell and Morse point out that it is possible to distinguish between sustainability assessments that are more all-encompassing (“stronger”) and those that are more limited (“weaker”). Those that are more all-encompassing will set broader physical boundaries to the system, will adopt longer time frames for measuring stability and success, and will minimize trade-offs among the sustainability interest of competing components in the system.<sup>73</sup>

The International Integrated Reporting Council, Mark McElroy, Jonathan Porritt and others have also pointed out that the long-term success of corporations and the sustainability of the systems within which

they operate depend on other capitals other than financial capital. These additional “vital capitals” include natural capital, human capital, social capital, and constructed capital.<sup>74</sup> These capitals represent the underlying assets upon which companies’ prospects for success depend and are related to their stakeholders and stakeholder relations. Without considering these capitals, companies run the risk of undermining the full range of assets necessary for their long-term success and the sustainability of the economic and environmental systems upon which they depend. Depleting all assets aside from the financial is not the road to long-term profitability or to sustainability.

Sustainability and survivability are related concepts. When we talk about sustainability key performance indicators and the disclosure of material sustainability data, we are dealing with factors that define success not only for corporations but also that affect the ability of the systems within which corporations operate to survive. Current financial accounting alone is poorly equipped to address these questions of long-term system-level survival. With a combination of mandated sustainability and financial data, investors and other stakeholders will be able to assess these larger questions and evaluate the prospects for the kind of “sustainable enterprise economy” that Sandra Waddock and Malcolm McIntosh envision and the “sustainable capitalism” that Al Gore and David Blood of Generation Investment Management view as within our reach.<sup>75</sup>

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Part One footnotes, see p.32-33.

## Part One Footnotes

- <sup>2</sup> See the SEC's website at <http://www.sec.gov/about/whatwedo.shtml>. Last visited May 4, 2012.
- <sup>3</sup> See the Securities Exchange Act of 1934, p. 2. Available at <http://www.sec.gov/about/laws/sea34.pdf>. Last visited September 5, 2012.
- <sup>4</sup> See for example, *Ibid.* Section 11A, page 134, for a description of what benefits markets might be presumed to provide.
- <sup>5</sup> *Ibid.* p.2.
- <sup>6</sup> <http://acct.tamu.edu/giroux/timeline.html>. Last visited February 15, 2012.
- <sup>7</sup> See 2012 Edelman Trust Barometer 2012 Results, available at <http://trust.edelman.com/trust-download/global-results/>, Last visited April 17, 2012.
- <sup>8</sup> Securities and Exchange Commission Staff Accounting Bulletin: No. 99—Materiality. 17 CFR Part 211. August 12, 1999.
- <sup>9</sup> See the website *Securities Lawyers Deskbook*, “Accounting Rules, Form and Content of Financial Statements: Regulation S-X—Rule 1-02 -- Definition of Terms Used in Regulation S-X (17 CFR part 210) <http://taft.law.uc.edu/CCL/regS-X/SX1-02.html> Last visited January 10, 2012.
- <sup>10</sup> United States Supreme Court. *TSC Industries v. Northway, Inc.* 426 U.S. 438, 449 (1976)
- <sup>11</sup> *Black's Dictionary of Law*.
- <sup>12</sup> For a further discussion of the distinction between reasonable and rational investors and the implications of this distinction for the concept of the fiduciary duty of financial trustees, see Steve Lydenberg “Reason, Rationality and Fiduciary Duty” available at <http://hausercenter.org/iri/wp-content/uploads/2010/05/Reason-Rationality-and-Fiduciary-Duty.pdf>. Last visited June 29, 2012.
- <sup>13</sup> Since the 1980s, an extensive academic literature has developed that elaborates the stakeholder theory of the corporation and its integration into corporate management. The stakeholder approach to corporate management bears certain similarities to the conception of the reasonable approach to investment in that reasonable investors are concerned with those who may be impacted by an investment (along with their portfolios’ returns) in the same way that corporate managers are concerned about the stakeholders that are impacted by their decisions (along with their companies’ profits). Seminal books in the stakeholder theory field include R. Edward Freeman *Strategic Management: A Stakeholder Approach* (Cambridge, United Kingdom: Cambridge University Press) 1984 and James Post, Lee Preston, and Sybille Sachs *Stakeholder Management and Organizational Wealth* (Stanford, California: Stanford University Press) 2002.
- <sup>14</sup> Lynn Stout, *The Shareholder Value Myth: How Putting Shareholders First Harms Investors, Corporations, and the Public* (San Francisco: Berrett-Koehler Publishers, Inc.) 2012: 50-52.
- <sup>15</sup> CalPERS Global Principles of Accountable Corporate Governance, November 14, 2011: 18. Available at <http://www.calpers-governance.org/docs-sof/principles/2011-11-14-global-principles-of-accountable-corp-gov.pdf>. Last visited, June 29, 2012.
- <sup>16</sup> See the FASB website at <http://www.fasb.org/jsp/FASB/Page/SectionPage&cid=1176154526495> Last visited Feb 15, 2012.
- <sup>17</sup> Robert G. Eccles and Michael P. Krzus *One Report: Integrated Reporting for a Sustainable Strategy* (Hoboken New Jersey: John Wiley & Sons, Inc.) 2010: 13.
- <sup>18</sup> Ahmad H. Juma’h. “The Implications of Materiality Concept on Accounting Practices and Decision Making” *Inter Metro Business Journal*. Vol. 5, No. 1: 22-37. Spring 2009.
- <sup>19</sup> SAB 99. Op. ci7.2-3.
- <sup>20</sup> SAS No. 107 “Audit Risk and materiality in Conducting an Audit” AU312.60.
- <sup>21</sup> “Framework for the Preparation of Presentation of Financial Statements” *International Accounting Standards* 1999. London: International Accounting Standards Committee.
- <sup>22</sup> Williams, Cynthia A. “The Securities and Exchange Commission and Corporate Social Transparency” *Harvard Law Review* 1999. Vol. 112: 1245.
- <sup>23</sup> *Ibid.* 1212.
- <sup>24</sup> *Ibid.* 1219.
- <sup>25</sup> *Ibid.* 1220.
- <sup>26</sup> Basic, 485 U.S. at 232, as cited by Amy Deem Westbrook in “Sunlight on Iran: How Reductive Standards of Materiality Excuse Incomplete Disclosure under Securities Law” *Hastings Business Law Journal* Vol 7: 27. 2007.
- <sup>27</sup> Williams. Op. cit. 1272.
- <sup>28</sup> *Ibid.* 1295.
- <sup>29</sup> *Ibid.* 1203.
- <sup>30</sup> *Ibid.* 1263.
- <sup>31</sup> *Ibid.* 1284.
- <sup>32</sup> *Ibid.* 1289.
- <sup>33</sup> *Ibid.* 1274-75.
- <sup>34</sup> David Monsma and Timothy Olsen “Muddling Through Counterfactual Materiality and Divergent Disclosure: The Necessary Search for a Duty to Disclose Material Non-Financial Information” *Stanford Environmental Law Journal* 26: 139. January 2007.
- <sup>35</sup> *Ibid.* 141.
- <sup>36</sup> *Ibid.* 142.
- <sup>37</sup> *Ibid.* 143.
- <sup>38</sup> *Ibid.* 161.
- <sup>39</sup> *Ibid.* 166.
- <sup>40</sup> *Ibid.* 171.
- <sup>41</sup> *Ibid.* 172.
- <sup>42</sup> *Ibid.* 184.
- <sup>43</sup> *Ibid.* 199.
- <sup>44</sup> *Harvard Law Review* “Notes” Vol. 115: 1433-1455. 2001-2002.
- <sup>45</sup> *Ibid.* 1435.
- <sup>46</sup> *Ibid.* 1452.
- <sup>47</sup> See Williams, op. cit. 1999-1257 for a detailed discussion of the NRDC case and the SEC’s rationales for opposing increased disclosure at that time.
- <sup>48</sup> Williams. Op. cit. 1260.
- <sup>49</sup> See Mark W. McElroy and J. M.L. van Engelen *Corporate Sustainability Management: The Art and Science of Managing Non-Financial Performance* (New York and London: Earthscan) 2012: 8-18 for a summary of some of these earlier thinkers as well as the development of the concept in the 20th century.
- <sup>50</sup> See Monika Freyman *Exploring the Concept of Sustainability*, A report prepared for the Initiative for Responsible Investment for an overview of the sustainability concept. Unpublished paper, available upon request from the Initiative for Responsible Investment.
- <sup>51</sup> Thomas Dyllick and Kai Hockerts “Beyond the Business Case for Corporate Sustainability” *Business Strategy and the Environment* Vol. 11: 130-141, 2002.
- <sup>52</sup> McElroy and van Engelen. Op. cit. 67-70.
- <sup>53</sup> John Ehrenfeld, *Sustainability By Design* (New Haven: Yale University Press) 2009.
- <sup>54</sup> For a thorough overview of scientific approaches to sustainability, see Simon Bell and Stephen Morse *Sustainability Indicators: Measuring the Immeasurable?* (London: Earthscan) 2008 throughout.

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## Part One Footnotes

<sup>55</sup> Mark Strauss, "Looking Back on *The Limits to Growth*: Forty Years after the Release of the Groundbreaking Study, Were the Concerns about Overpopulation and the Environment Correct?" *Smithsonian Magazine* April 2012.

<sup>56</sup> National Research Council *Sustainability and the U.S. Environmental Protection Agency* (Washington, DC: National Academy Press) 2011: 17.

<sup>57</sup> World Commission on Environment and Development, *Our Common Future* (New York: Oxford University Press) 1987: xi.

<sup>58</sup> See OECD *Environmental Strategy for the first Decade of the Twenty-First Century* 2001.

<sup>59</sup> Available at [http://corporate.marksandspencer.com/documents/publications/2011/how\\_we\\_do\\_business\\_report\\_2011](http://corporate.marksandspencer.com/documents/publications/2011/how_we_do_business_report_2011) Last visited May 25, 2012.

<sup>60</sup> Julian D. Marshall and Michael W. Toffel, "Framing the Elusive Concept of Sustainability: A sustainability Hierarchy" *Environmental Science & Technology* Vol. 39, No. 3 2005: 673-681.

<sup>61</sup> Bell and Morse Op. cit. 5.

<sup>62</sup> See the website of Sustainable Measures at [www.sustainablemeasures.com](http://www.sustainablemeasures.com).

<sup>62</sup> <sup>63</sup> International Integrated Reporting Committee, *Towards Integrated Reporting: Communicating Value in the 21st Century* 2011: 4. Available at [http://theiirc.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011\\_spreads.pdf](http://theiirc.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011_spreads.pdf) Last visited May 22, 2012.

<sup>64</sup> See 2012 Edelman Trust Barometer 2012 Results, available at <http://trust.edelman.com/trust-download/global-results/> Last visited April 17, 2012.

<sup>65</sup> Robert G. Eccles, Michael P. Krzus, Jean Rogers, George Serafeim "The Need for Sector-specific Materiality and Sustainability Reporting Standards" *Journal of Applied Corporate Finance* Spring 2012, Vol. 24, No. 2: 8-14.

<sup>66</sup> In recent years, stock holding periods for institutional investors have shortened dramatically. According to the NYSE Factbook, the average holding period for stocks in 1960 was 100 months (8 years). By 1970 it had dropped to 63 months (5 years). By 1980 it had dropped to 33 months, by 1990 to 26 months, by 2000 to just 14 months, and in 2010 just six months.

See Sy Harding "Investors Will Have to Learn to Trade" StreetSmart blog post, January 21, 2001. Available at <http://www.streetsmartreport.com/print/school/Commentaries/Investors%20Will%20Have%20to%20Learn%20to%20Trade> Last visited, October 21, 2011.

In addition, volatility has increased. A *New York Times* study found that in the first decade of the 2000s, intraday fluctuations of more than 4% in stock prices occurred six times more frequently than in the four previous decades and that swings in closing prices of more than 4% occurred on average 2% of the time during that decade, as opposed to only approximately 0.25% of the time in the previous decade. The MIT economist Andrew Lo observed that "The last few years have been the most volatile for all of recorded history." See. Louise Story and Graham Bowley "Market Swings Are Becoming New Standard" *New York Times* September 12, 2011: A1.

<sup>67</sup> In his *Treatise on Probability* Keynes distinguished among three types of risk: precisely calculable risks or probabilities (e.g., casino odds); risks that are only calculable in relative terms (e.g., the likelihood of rain tomorrow); and irreducible uncertainties (e.g., the price of oil ten years from now). The first type is precisely calculable, the second is approximately calculable, and the third is not subject to calculation. See Robert Skidelsky *Keynes: The Return of the Master*. (New York: Public Affairs) 2009: . Also see Paul Davidson *John Maynard Keynes* (Basingstoke, United Kingdom: Palgrave Macmillan) 2009: 31-35.

<sup>68</sup> *Ibid.* 188.

<sup>69</sup> *Ibid.* 149.

<sup>70</sup> Abhijit V. Banerjee and Esther Duflo *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty* (New York: Public Affairs) 2011: 229.

<sup>71</sup> Al Gore and David Blood *A Manifesto for Sustainable Capitalism*. Generation Asset Management. 2011:6. Available at [www.generation.com/media/pdf-generation-sustainable-capitalism.pdf](http://www.generation.com/media/pdf-generation-sustainable-capitalism.pdf) Last visited April 13, 2012.

<sup>72</sup> *Ibid.* 11.

<sup>73</sup> Bell and Morse Op. cit. 14-17.

<sup>74</sup> McElroy. Op. cit. 34-36.

<sup>75</sup> See Sandra Waddock and Malcolm McIntosh *SEE Change: Making the Transition to a Sustainable Enterprise Economy* (Sheffield, United Kingdom: Greenleaf Publishing Limited) 2011. Also Gore and Blood. Op. cit.

**PART TWO:**

Robust Definition of Corporate Data Disclosures

**2**

# Part Two: Robust Definition of Corporate Data Disclosures

## II-A. Existing Definitions of Robust Corporate Disclosure

Several organizations seeking to improve corporate disclosure have developed robust definitions of materiality that include both financial and sustainability data. Among these are the Global Reporting Initiative and AccountAbility. Their definitions are based on the belief that material corporate disclosure should include:

- Data on the impact and relevance of corporations' policies and practices for all stakeholders
- Acknowledgement by corporations of widely accepted norms and standards for their conduct in relation to society and the environment
- Consideration of the long-term implications of their policies and practices that may not be captured in today's stock market prices

Based in Amsterdam, the Global Reporting Initiative (GRI) is the premier standard setting organization for sustainability reporting. As of 2011, some 3,000 corporations and other organizations worldwide were reporting on

sustainability indicators drawing in whole or in part on GRI's Sustainability Reporting Guidelines.

Version 3.1 of GRI's Guidelines defines materiality as information that:

- Reflect[s] the organization's significant economic, environmental and social impacts, or that
- Would substantially influence the assessments and decisions of stakeholders.<sup>76</sup>

The Guidelines state:

A combination of internal and external factors should be used to determine whether information is material, including factors such as the organization's overall mission and competitive strategy, concerns expressed directly by stakeholders, broader social expectations, and the organization's influence on upstream (e.g., supply chain) and downstream (e.g. customers) entities. Assessments of materiality should also take into account the basic expectations expressed in the international standards and agreements with which the organization is expected to comply.

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Part Two footnotes, see p.40.

GRI places a strong emphasis on stakeholders<sup>77</sup> both external (“e.g., vulnerable groups within local communities, civil society”) and internal (“e.g., employees, shareholders and suppliers”) and notes that the “reasonable expectations and interests of stakeholders are a key reference point.”<sup>78</sup>

The GRI also stresses the importance of the forward-looking, societal-level aspects of sustainability considerations.

The underlying question of sustainability reporting is how an organization contributes, or aims to contribute *in the future*, to the improvement or deterioration of economic, environmental, and social conditions, developments, and trends at the local, regional or global level.<sup>79</sup> (emphasis added)

It draws on one familiar definition of sustainability, asserting that materiality determinations involve “considering economic, environmental, and social impacts that cross a threshold in affecting the ability to meet the needs of the present without compromising the needs of future generations.”<sup>80</sup>

Similarly, in 1999 the corporate sustainability consulting organization AccountAbility established standards for corporate social responsibility reporting under its AA1100 framework (updated in 2008). This framework is built on three Principles for Sustainable Development: the Principle of Inclusivity, Principle of Materiality, and Principle of Responsiveness.

AccountAbility’s Principle of Materiality defined material issues as ones that “influence the decisions, actions and performances of an organization and its stakeholders.”<sup>81</sup> AccountAbility asserted that a comprehensive definition of materiality is “essential for business managers, for policy makers establishing tomorrow’s regulator frameworks, and for those involved in their implementation and oversight.” A materiality definition is necessary so that an organization can report “adequate information about its sustainability performance for its stakeholders to be able to make informed judgments, decisions and actions.”<sup>82</sup>

AccountAbility established five materiality thresholds that trigger disclosure. Data is material if:

- It has “direct short-term financial impacts”
- It is the subject of company “policy statements of a strategic nature”
- Its “peers are deeming issues and aspects of performance to be of material importance”
- There is “reasonable evidence of likely impact on [stakeholders’] decisions and behavior”
- There are “societal norms that a company has considered”<sup>83</sup>

AccountAbility noted that these five tests need to be “interpreted in context,” and assumed that sustainability indicators are

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Part Two footnotes, see p.40.

determined at a company level, rather than an industry level—as a consequence of which “what is material for one company will be less so for others, or less so for the same company at a different time or place.” The responsibility “for interpreting the application of the tests” rests with a company’s Board of Directors and Boards “may well reach very different views from those of directors of their competitors as to what is material or not.”<sup>84</sup>

A variation on the materiality-of-sustainability theme has been enunciated by the Financial Services Institute of Australia (FINSA) in guidance to that country’s pension funds on integrating environmental, social, and governance data into investment practices. FINSA defines material ESG issues as those material issues not easily captured by financial accounting.

ESG investing principles are best described as fundamentals that have the potential to affect companies’ financial performance *in a material way, yet are generally not part of traditional financial analysis*. Obviously they fall into the categories of “environmental”, “social” or “governance”. Further, these principles generally have the following characteristics:

- » they tend to be qualitative and *not readily quantifiable in monetary terms* (for example, corporate governance and workplace safety);
- » they relate to externalities *not well captured by current market mechanisms* (for example, pollution);

- » they relate to wider elements of the supply chain (for example, suppliers, products and services);
- » they have a *medium- to long-term horizon* (for example, climate change, human capital/ demographics); and
- » they are increasingly the subject of policy and debate by legislators and regulatory agencies.<sup>85</sup> (emphasis added)

In addition, in its discussion paper *Towards Integrated Reporting: Communicating Value in the 21st Century* the International Integrated Reporting Committee (IIRC) highlights differences between traditional financial accounting and integrated reporting. IIRC views reporting that integrates sustainability data as a crucial next step in the practice of accounting because it:

- Integrates thinking about the “full complexity of the value creation process,” as opposed to more linear thinking
- Accounts for the stewardship of five capitals: manufactured, human, intellectual, natural, and social capitals—in addition to the financial
- Recognizes the ability of companies “to create and sustain value in the future” as opposed to the past
- Reports on “the positive with the negative”
- Focuses on “factors that are material to particular sectors and organizations”<sup>86</sup>

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Part Two footnotes, see p.40.

In addition, “future orientation” is one of the five guiding principles proposed by IIRC for integrated reporting.<sup>87</sup>

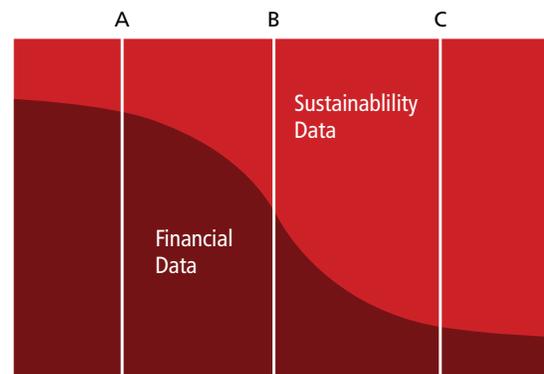
## II-B. Disclosure of Sustainability Data Defined

The argument proposed in this paper for the need for disclosure of material sustainability data that can help create capital markets worthy of trust and capable of stability builds on these existing definitions and emphasizes three key elements of sustainability theory as it has evolved in recent decades.

Put simply, *disclosure of material sustainability data is necessary to assess corporations’ ability to disrupt—either positively or negatively—the economic, environmental, and social systems within which they operate under conditions of substantial complexity and uncertainty. The greater the potential for corporate practices to impact these systems, the longer the term of these potential impacts, and the greater the uncertainties involved, the greater the need for disclosure.*

A materiality threshold may be reached for either sustainability or financial reasons, or for both. For some issues, sustainability aspects predominate. For others, financial considerations are of primary importance. For still others, both may be equally important. Investors need to consider both the sustainability and the financial implications for any given issue in their investment decision making.

## MATERIAL DISCLOSURE



This chart portrays a spectrum of issues material to investors and other stakeholders. (Note: this chart is not a Cartesian plotting of a mathematical formula with an “x” and “y” axes, but rather a graphic representation of the various types of material issues with varying balances of sustainability and financial components.) At the far left are issues (represented by line “A”) where material issues can best be expressed in financial terms. At the right (line “C”) are issues where material data can best be expressed primarily in sustainability terms. In the middle are issues for which a balance of sustainability and financial data is necessary for evaluating their materiality (line “B”).

For example, an investor evaluating an automobile manufacturer’s financial prospects might be concerned with inventory turnover. This data is material because the number of unsold cars provides an indication of market health and is a predictor of future revenues in the short term. This material issue falls along line “A” because it has few sustainability implications.

Part Two footnotes, see p.40.

Climate change, on the other hand, and the long-term concerns it raises would fall on line “C”. This sustainability issue involves complicated questions about the long-term prospects for gas-powered internal combustion engines, the development of alternative fuel systems for automobiles, and the future of the automobile in our society. Climate change is a material issue because it threatens to disrupt the automobile industry in unpredictable ways, as well as to disrupt our ecosystems far into the future. A reasonable investor (or other stakeholders) might well want to know about a company’s plans to deal with climate-change-related contingencies that cannot easily be captured in today’s market price.

Similarly with patent disputes: a patent dispute between two pharmaceutical companies would be financially material if it involved the right of one to extend its patent protection on a proprietary drug, thereby preventing the second from launching a generic version. The financial risks and rewards for each company here can be expressed in financial terms within well defined timeframes. This issue would fall along line “A”. If the dispute addressed the question of whether pharmaceutical companies in general—that is to say, the whole industry—have the right to patent human genes or new forms of life, the issue would fall along line “C” (or “B” for companies on the verge of launching specific products) because of its profound sustainability implications—i.e., the potential for substantial positive or negative systemic

disruptions for many years to come in unpredictable ways.

For investors and other stakeholders to be fully informed about sustainability issues, disclosure of both material sustainability and material financial data needs to be assured. Without disclosure of both aspects of materiality, investors and others will be forced to make decisions without data necessary to assess the long-term prospects for a company’s success.

Figure One represents this vision of integrated reporting—the disclosure of both material sustainability and financial data within a single framework. When put into practice, this integration appears to be useful to financial analysts, particularly when companies’ current financials are troubled. A recent study by Arnold, Bassen, and Frank found that “investment professionals indeed do read and use sustainability information for company valuation . . . and did modify their valuation scores when presented with a sustainability report.” The authors provided one group of mainstream investment analysts with financial data and sustainability data separately and another with integrated data. For companies with bad financial, but good sustainability, performance analysts rated companies more highly when both data sets were presented in an integrated format. However, when a company had good financial, but poor sustainability, performance the analysts’ valuations remained the same, whether data was provided in an integrated format or not.<sup>88</sup>

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Part Two footnotes, see p.40.

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## Part Two Footnotes

<sup>76</sup> Global Reporting Initiative, *Sustainability Reporting Guidelines Version 3.1* Page 8. Available at <https://www.globalreporting.org/resource/library/G3.1-Guidelines-Incl-Technical-Protocol.pdf> Last visited, May 25, 2012.

<sup>77</sup> GRI defines stakeholders as “entities or individuals that can reasonably be expected to be significantly affected by the organization’s activities, products, and/or services; and whose actions can reasonably be expected to affect the ability of the organization to successfully implement its strategies and achieve its objectives. This includes entities or individuals whose rights under law or international conventions provide them with legitimate claims vis-à-vis the organization.”

<sup>78</sup> Ibid. 10.

<sup>79</sup> Ibid. 11.

<sup>80</sup> Ibid. 8.

<sup>81</sup> AccountAbility Principles Standard 2008 (London: AccountAbility) 2008: 12. Available at <http://www.accountability.org/images/content/0/7/074/AA1000APS%202008.pdf>. AccountAbility’s definition of materiality is fully elaborated in Simon Zadek, Mira Merma *Redefining Materiality: Practice and Public Policy for Effective Corporate Reporting* (London: AccountAbility) 2003. Available at <http://www.accountability.org/images/content/0/8/085/Redefining%20Materiality%20-%20Full%20Report.pdf> Last visited January 23, 2012.

<sup>82</sup> Ibid. 3.

<sup>83</sup> Ibid. 18-22.

<sup>84</sup> Ibid. 27-28.

<sup>85</sup> Financial Services Institute of Australia (FINSIA) *Implementing Environmental, Social and Governance Principles in Investment Decisions: Guidelines for Superannuation Professionals* January 2012: 7. Available at [http://www.finsia.com/docs/default-document-library/pol11\\_11\\_esg\\_web.pdf?sfvrsn=0](http://www.finsia.com/docs/default-document-library/pol11_11_esg_web.pdf?sfvrsn=0) Last visited May 25, 2012.

<sup>86</sup> International Integrated Reporting Committee. Op. cit. 9.

<sup>87</sup> Ibid. 12.

<sup>88</sup> Markus Arnold, Alexander Bassen and Ralf Frank “Integrating Sustainability Reports into Financial Statements: An Experimental Study” Paper available at [http://papers.ssrn.com/sol3/papers.crf?abstract\\_id=2030891](http://papers.ssrn.com/sol3/papers.crf?abstract_id=2030891).

**PART THREE:**

Increasing Interest in Material Sustainability Data

**3**

# Part Three: Increasing Interest in Material Sustainability Data

## III-A. Increased Interest in Sustainability Disclosure among Institutional Investors, Stock Exchanges, Corporations, and Regulators

Since the 1980s, interest in disclosure of sustainability data among institutional investors, regulators, and corporations has grown steadily, and has increased dramatically since 2000. Among the indications of the growing demand for sustainability data are the following.

- The Principles for Responsible Investment, whose institutional investors as of 2012 numbered over 1000 and represented assets under management of some \$30 trillion
- The listing requirements by various stock exchanges around the world, including those in South Africa, China, Brazil, and India, for disclosure of sustainability data as a component of good governance
- The requirement of regulators, including those in France, Denmark, Sweden, China, Malaysia, and Indonesia, that corporations report on sustainability issues or explain why they do not do so

- The publication of sustainability and corporate social responsibility reports by several thousand companies around the world
- The Securities and Exchange Commission's 2001 ruling that asset owners have a fiduciary duty to vote on shareholder resolutions appearing on corporate proxy statements, hundreds of which address environmental, social, and governance issues each year

*Institutional Investors and Sustainability Data.* Institutional investors' interest in responsible investment continues to grow globally, and is accompanied by increasing demands for disclosure of sustainability data.

- A 2009 Robeco and Booz & Co. study estimated socially responsible assets under management as of 2007 at \$5 trillion worldwide and projected growth to \$26.5 trillion, or 15%-20% of total assets by 2015.<sup>89</sup>
- In Europe between 2002 and 2007, the number of responsible investment funds increased by 150 % to 447 in 2007.<sup>90</sup> Eurosif has placed the value of the responsible investment market at €2.665

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Part Three footnotes, see p.49.

trillion as of December 2007, an increase of 102% between 2005 and 2007.

According to Eurosif's figures, responsible investment accounts for 17.6% of total European funds under management.<sup>91</sup>

- The US SIF 2010 *Trends* report found that in the United States from the start of 2007 to the end of 2009, a three-year period when broad-market indices such as the S&P 500 declined and the broad universe of professionally managed assets increased less than one percent, assets involved in sustainable and responsible investing increased more than 13 percent (from \$2.71 trillion to \$3.07 trillion).<sup>92</sup> From 1995 through 2007 responsible investment assets increased by 324%.<sup>93</sup>

Another indication of institutional interest in the integration of environmental, social, and governance data is the growing number of signatories to the Principles for Responsible Investment (PRI). Signatories to the PRI, established in 2006, state that they “will incorporate ESG issues into investment analysis and decision-making processes.”

As institutional investors, we have a duty to act in the best long-term interests of our beneficiaries. In this fiduciary role, we believe that environmental, social, and corporate governance (ESG) issues can affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time). We also recognize that applying these Principles may better align investors with broader objectives of society.<sup>94</sup>

As of April 2012, over 1,000 financial institutions with approximately \$30 trillion had become signatories to these Principles.

In the United States, one indication of the growing importance of responsible investment and the call for increased sustainability data disclosure is the Investor Network on Climate Risk (INCR), which grew from 10 institutional investors managing \$600 billion in 2003 to 100 members managing nearly \$10 trillion in assets in 2012. Supported by Ceres, INCR conducted a multi-year campaign to encourage corporate disclosure of sustainability data relating to greenhouse gas emissions and climate change that culminated in the SEC's 2010 issuance of interpretive guidance reminding corporations of their obligations to disclose material data in these areas. The INCR also focuses on other sustainability issues such as water.<sup>95</sup>

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Part Three footnotes, see p.49.

## Institutional Members of PRI and INCR as of May 2012

ORGANIZATION	TYPE	PRI	INCR
AFL-CIO	Pension	X	X
Alliance/Bernstein	Money Manager	X	
AFSCME	Pension		X
BlackRock	Money Manager	X	X
California PERS	Pension	X	X
California STRS	Pension	X	X
Connecticut Retirement Plan and Trust	Pension	X	
Florida State Board of Administration	Pension		X
Goldman Sachs Asset Management	Money Manager	X	
Illinois State Board of Investments	Pension	X	
Kohlberg Kravis & Roberts	Money Manager	X	
Legg Mason	Money Manager		X
Maryland Retirement and Pension System	Pension		X
Northern Trust Global Investments	Money Manager	X	
NY City Employees Retirement System	Pension	X	X
PIMCO	Money Manager	X	
Prudential Investment Management	Money Manager		X
Service Employees International Union	Pension		X
T. Rowe Price	Money Manager	X	
TIAA-CREF	Pension	X	X

Other coalitions of institutional investors demanding increased disclosure of sustainability include the Carbon Disclosure Project, International Investor Group on Climate Change, Asia Investor Group on Climate Change, and the International Environmental Health Network.

*Stock Exchanges and Sustainability Data.* Numerous stock exchanges around the world currently either explicitly encourage disclosure of environmental, social, and governance data by listed companies or have created “socially responsible indexes” that evaluate listed companies on their ESG performance.

Part Three footnotes, see p.49.

In a 2012 survey of 27 major stock exchanges worldwide, Sustainable Stock Exchanges—launched in 2009 under the leadership of Aviva Investors with the sponsorship of the UN PRI, UN Environmental Program Finance Initiative, UNCTAD, and the UN Global Compact—found that 86% indicated that they “either already had or were planning to launch sustainability indices of their own.” In addition, 57% agreed that “strong sustainability requirements for listed companies made good business sense for the exchange.”<sup>96</sup> Among the 40 members in the Sustainable Stock Exchanges coalition are the BT Pension Scheme, CA Cheuvreux, Delta Lloyd Asset Management, the French Fonds de Réserve pour les Retraites, FTSE, Generation Investment Management, Hermes, MN Services, Rabobank Pensionfund, and the Church of Sweden—collectively representing assets under management of some \$1.6 trillion.<sup>97</sup>

In 2009 the Institute of Directors of South Africa issued the King Code and Report on Corporate Governance in South Africa (King III). King III established corporate citizenship and sustainability as principles key to the success of corporations and directed corporate Boards of Directors to pursue both and report on their progress. In addition, it recommended the integration of financial and sustainability reporting on a regular basis, including engagement with stakeholders and independent audits.<sup>98</sup>

In December 2011, the Hong Kong Stock Exchange issued for comment an “ESG Guide” that would encourage, but not

require, ESG disclosure by listed companies. The proposal encourages disclosure in four areas: workplace quality, environmental protection, operating practices, and community involvement. In each area companies will be asked to report on “general aspects” and then on key performance indicators within those aspects.<sup>99</sup>

In 2011 the SGX—the Singapore Stock Exchange—issued guidelines that encourage sustainability reporting among its listed companies. In March 2012, it announced that it would survey the actual reporting practices of its 100 largest companies in order to encourage best practices.<sup>100</sup>

In January 2012, the Brazilian Stock Exchange Bovespa announced that listed companies must either publish a corporate social responsibility report or explain why they are not doing so.<sup>101</sup> In 2005, it created the Bovespa Corporate Sustainability Index.

*National Regulators and Sustainability Data.* National regulators and legislatures around the world are increasingly requiring or strongly encouraging corporations to report corporate social responsibility and sustainability data.

Of these, France has one of the most specific sustainability reporting requirements. In May 2001 the French legislature passed the New Economics Regulations Act requiring most publicly traded companies to include in their financial reports specific corporate social responsibility data. In 2002, French regulators issued guidelines specifying that these reports include data on employees

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and employment practices including layoffs, absenteeism, compensation, equal opportunity employment, union relations, health and safety, training, employment of the handicapped; and on environmental issues including water and energy consumption and efficiency, air and water emissions, hazardous wastes, biodiversity, legal compliance, and environmental expenditures.<sup>102</sup>

Sweden also requires specific sustainability reporting for state-owned companies—a policy that encourages reporting by others. In 2007 the Swedish government issued its *Guidelines for External Reporting by State-Owned Companies*. These guidelines required some 55 companies (of which 40 were wholly owned by the government, 15 partially owned and four traded on stock exchanges) to prepare and publish a sustainability report in their annual reports in accordance to the Global Reporting Initiative Guidelines.<sup>103</sup>

In 2008 Denmark amended its Financial Statements Act to require its largest 1,100 businesses to include details in their annual report on: 1) corporate social responsibility policies, 2) how these policies are translated into actions, and 3) what the business has achieved as a result of its CSR initiatives and future expectations.

A 2010 survey by the Danish Commerce and Companies Agency, the Institute of State Authorized Public Accountants in Denmark, and the Copenhagen Business School found that in 2009 97% of companies provided

some CSR information, 60% accounted for how they translate CSR policies into action, and 37% reported on their achievements. The report noted that “environment and climate” and “social conditions aimed at Danish workplaces” are the themes most frequently accounted for and that “28% of the businesses make use of international CSR principles—and, in particular, the UN Global Compact—as sources of inspiration for their reports.”<sup>104</sup>

While the United Kingdom does not explicitly require reporting on sustainability issues, its 2006 revision of the Companies Act states in Section 172 that directors and managers of corporations have a duty to “promote the success of the company” and that long-term sustainability issues must be a part of the measurement of that success.

**Section 172. Duty to promote the success of the company**

- (1) A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole, and in doing so have regard (amongst other matters) to—
  - (a) the likely consequences of any decision in the long term,
  - (b) the interests of the company's employees,
  - (c) the need to foster the company's business relationships with suppliers, customers and others,

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- (d) the impact of the company's operations on the community and the environment,
- (e) the desirability of the company maintaining a reputation for high standards of business conduct, and
- (f) the need to act fairly as between members of the company.<sup>105</sup>

In China, the State-owned Assets Supervision and Administration Commission (SASAC) released a directive in January 2008 strongly encouraging state-owned enterprises to follow sound CSR practices and report on CSR activities. All state-owned enterprises are expected to publish CSR reports as of 2012. In March 2012, SASAC published its "Guide 2.0" to help companies with reporting. As of December 2010, 710 enterprises had issued CSR reports, up from 32 in 2006. This represented less than half of the total number of state-owned enterprises.<sup>106</sup>

As of 2012, the European Commission was considering the mandating ESG disclosure for companies headquartered in European Union countries. It has committed to "present a legislative proposal on the transparency of the social and environmental information provided by companies in all sectors."<sup>107</sup> In addition the Rio + 20 Declaration acknowledges the importance of "corporate sustainability reporting" and encourages companies to "to consider integrating sustainability information into their reporting cycle."<sup>108</sup>

#### *Corporations and Sustainability Data.*

Corporate managers increasingly view sustainability principles and goals as an integral part of their business practice. The 2010 survey of 776 CEOs of companies that are signatories to the United Nations' Global Compact found that 93% viewed sustainability as a "very important" or "important" factor for their companies' future success. The primary reason for adopting sustainability practices given by CEOs was to strengthen brand, trust, and reputation (72%). Some 52% viewed customers as their primary stakeholder and thus a major factor driving the demand for sustainability in the corporation. In addition, 96% believed that sustainability practices should be fully integrated into their companies (up from 72% in the 2007 survey).<sup>109</sup>

This trend toward adoption of sustainability management practices is further reflected in the increasing number of companies around the world that now issue corporate social responsibility or sustainability reports. As of May 2012, The Corporate Register had such reports from over 9,000 companies available on its website.<sup>110</sup> At that time, the Global Reporting Initiative maintained a database of corporate social responsibility and sustainability reports issued by some 3,871 organizations, most of which used or referenced the GRI guidelines.<sup>111</sup>

The issuance of the ISO 26000 guidelines on corporate social responsibility by the International Organization for Standards in

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2010 is likely to accelerate the systematic implementation of CSR programs at corporations around the world. These guidelines enumerate the key issues that companies wishing to achieve best practice in corporate social responsibility should address: Organizational Governance, Human Rights, Labor Practices, Environment, Fair Operating Practices, Consumer Issues, and Community Involvement and Development. Within each area, the ISO 26000 guidelines address specific topics. For example, Fair Operating Practices includes: anti-corruption, responsible political involvement, fair competition, promoting responsibility in the value chain, and respect for property rights.<sup>112</sup>

*Proxy Voting and Sustainability Data.* The U.S. courts have long recognized Congress' intent in the Securities Exchange Act of 1934 to protect the right of shareholders to file and vote on resolutions as an important means of communication with corporate management. In a 1947 ruling, for example, the courts noted that "It was the intent of Congress to require fair opportunity for the operation of corporate suffrage. The control of great corporations by a very few persons was the abuse at which Congress struck in enacting Section 14(a) [of the Securities Exchange Act of 1934]."<sup>113</sup>

Because hundreds of these resolutions each year deal with environmental, social, and governance matters, mutual fund managers and other institutional investors need adequate disclosure of sustainability data in order to cast fully informed votes. According to a study by As You Sow, in 2011 some 185 shareholder resolutions on social, environmental, and governance issues with "a social policy aspect" appeared on company proxies and an additional 153 were withdrawn after negotiations between corporations and filers. Of the resolutions filed, 34% dealt with environmental and sustainability issues, 23% with political contributions and 13% with labor and human rights matters.<sup>114</sup>

As of August 2004, the U.S. Securities and Exchange Commission required mutual funds investing in the equities of publicly traded companies to disclose their proxy voting policies and their specific votes for all issues appearing on the proxies of the companies in which they invest. It reminded companies that proxies should be treated as an asset of the fund and that fund managers have a fiduciary duty to manage that asset in the best interests of their shareholders.<sup>115</sup>

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Part Three footnotes, see p.49.

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## Part Three Footnotes

<sup>89</sup> Robeco and Booz & Co. *Responsible Investing: a Paradigm Shift, From Niche to Mainstream*. 2009. Available at [http://www.robeco.com/eng/images/Whitepaper\\_Booz&co%20SRI\\_final\\_tcm143-113658.pdf](http://www.robeco.com/eng/images/Whitepaper_Booz&co%20SRI_final_tcm143-113658.pdf) Last visited May 11, 2012.

<sup>90</sup> Lipper FERI. 2008. From niche to mainstream. *Hot Topics*. <http://www.lipperfmi.com/FERIFMI/Information/Files/Hot%20Topics%20SRI%200807.pdf>

<sup>91</sup> European Sustainable Investment Forum (Eurosif) *European SRI Study*. 2008. Available at [www.eurosif.org/publications/sri\\_studies](http://www.eurosif.org/publications/sri_studies).

<sup>92</sup> US SIF. 2011. *2010 Report on Socially Responsible Investing Trends in US—Executive Summary*. Washington, DC: US Social Investment Forum. Available at <http://ussif.org/resources/pubs/index.cfm> Last visited August 26, 2012.

<sup>93</sup> US SIF. 2008. *2007 Report on Socially Responsible Investing Trends in US—Executive Summary*. Washington, DC: US Social Investment Forum. Available at <http://ussif.org/resources/pubs/index.cfm> Last visited August 26, 2012.

<sup>94</sup> See the website of the Principles for Responsible Investment at <http://www.unpri.org/principles/> Last visited May 12, 2012

<sup>95</sup> See the Ceres website at <http://www.ceres.org/incr/about> Last visited May 12, 2012.

<sup>96</sup> Sustainable Stock Exchanges Initiative *Sustainable Stock Exchanges: A Report on Progress* March 2012: 5. Available at [http://www.responsiblesearch.com/Sustainable\\_Stock\\_Exchanges\\_2012\\_\\_\\_Online.pdf](http://www.responsiblesearch.com/Sustainable_Stock_Exchanges_2012___Online.pdf) Last visited May 25, 2012.

<sup>97</sup> *Ibid.* 43.

<sup>98</sup> The South African Institute of Chartered Accountants. *Summary of Report on Governance for South Africa 2009 (King III)*: 40-41. <http://www.auditor.co.za/Portals/23/king%20111%20saica.pdf> Last visited February 20, 2012.

<sup>99</sup> *Consultation Paper: Environmental, Social and Governance Reporting Guide*. Stock Exchange of Hong Kong: December 2011. Available at: <http://www.hkex.com.hk/eng/newsconsul/mktconsul/Documents/cp201112.pdf>. Last visited March 25, 2012.

<sup>100</sup> Hugh Wheelan “Singapore Exchange to Survey 100 Largest Companies on ESG reporting” Responsible Investor website, March 29, 2012. Available at [http://www.responsible-investor.com/home/article/esg\\_asia\\_sg/](http://www.responsible-investor.com/home/article/esg_asia_sg/) Last visited March 29, 2012.

<sup>101</sup> Robert Kropp “Brazilian Stock Exchange Recommends that Companies Report or Explain” Socialfunds.com January 7, 2012.

<sup>102</sup> See the listings of national CSR reporting requirements on the Corporate Sustainability Reporting website at: <http://www.reportingcsr.org/france-p-22.html> Last visited, February 21, 2012.

<sup>103</sup> See *Guidelines for External Reporting by State-Owned Companies* available at [http://reportingcsr.org/\\_sweden-p-50.html](http://reportingcsr.org/_sweden-p-50.html) Last visited February 20, 2012.

<sup>104</sup> See the report, *Corporate Social Responsibility Reporting in Denmark Impact of the Legal Requirement for Reporting on CSR in the Danish Financial Statements Act*. August 2010.

<sup>105</sup> See United Kingdom 2006 Companies Act as amended. Available at <http://www.legislation.gov.uk/ukpga/2006/46/section/172> Last visited May 25, 2012.

<sup>106</sup> See Syntao “SASAC: All Central Enterprises will release CSR reports in 2012. April 1, 2011. Available at [http://www.syntao.com/PageDetail\\_E.asp?Page\\_ID=13728](http://www.syntao.com/PageDetail_E.asp?Page_ID=13728) } Last visited February 20, 2012.

<sup>107</sup> [http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/reporting-disclosure/index\\_en.htm](http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/reporting-disclosure/index_en.htm) Last visited February 16, 2012.

<sup>108</sup> See Paragraph 47 of *The Future We Want* Publication of the United Nations Rio + 20 Conference. Available at <http://daccess-dds.ny.un.org/doc/UNDOC/LTD/N12/436/88/PDF/N1243688.pdf?OpenElement> Last visited September 9, 2012.

<sup>109</sup> *A New Era of Sustainability: UN Global Compact-Accenture CEO Study 2010* (New York: United Nations Global Compact) 2010: 13-19.

<sup>110</sup> See the website of The Corporate Register at <http://www.corporateregister.com/> Last visited May 15, 2012.

<sup>111</sup> See the website of the Global Reporting Initiative at <http://database.globalreporting.org/> last visited May 15, 2012.

<sup>112</sup> See the ISO 26000 website at [http://www.iso.org/iso/social\\_responsibility](http://www.iso.org/iso/social_responsibility) Last visited May 15, 2012.

<sup>113</sup> SEC v. Transamerica, 163 F. 2d 511 (3d Cir. 1947).

<sup>114</sup> Heidi Welsh and Michael Passoff *Proxy Preview:2012* (Oakland, California: As You Sow) 2012: 12

<sup>115</sup> See <http://www.socialfunds.com/news/article.cgi?sfArticleId=1015> and <http://www.sec.gov/investor/pubs/mfproxyvoting.htm> Last visited May 15, 2012.

**PART FOUR:**

Prioritization of Material Sustainability Indicators

**4**

# Part Four: Prioritization of Material Sustainability Indicators

## IV-A. Need for Prioritization of Material Sustainability Indicators

As we enter the 21st century, advances in technology, information gathering, and communications have increased exponentially the amount of financial and sustainability data potentially available. For advocates of transparency as the best “disinfectant” and “policeman” in the markets this is good news. It poses certain problems, however—the primary being how to prioritize the most valuable among the vast quantities of potentially available data.

The value of mandated financial disclosure is widely recognized. Nevertheless, some in the accounting and corporate communities have expressed concern that financial disclosure documents have become confusing and that valuable information can be hidden among masses of data without significance. The authors of *Disclosure Overload and Complexity: Hidden in Plain Sight* point out that, although “[s]ome users of financial information seem to have an insatiable appetite for more information,” others “observe that finding the truly significant information among the volume of routine and otherwise uninformative information is a challenge.”<sup>116</sup> They believe that current

“accounting policies should be streamlined to eliminate unnecessary redundancy and patently immaterial disclosures” and that “[a]ccounting professionals need to readdress the concept of materiality and also need sunset provisions on disclosures.”<sup>117</sup>

Similarly the Accounting Standards Board of the UK’s Financial Reporting Council issued a report in 2011 *Cutting Clutter: Combating Clutter in Annual Reports* that identified as problems “clutter” from immaterial information and from unnecessary repetition of information unchanged year to year. The authors commented that “the lack of agreement over what materiality means from a disclosure perspective results in each reviewer erring on the side of caution.” This means that “generally, if regulations require a disclosure, it goes in the report—regardless of the materiality or importance to the business.”<sup>118</sup> It notes that International Accounting Standards 1 states that “An entity need not provide a specific disclosure required by an International Financial Reporting Standard if the information is not material” and that there was generally a “lack of confidence in making the judgment between disclosures that are material and those that are not.”<sup>119</sup> In this spirit, the report called for “continuing debate around

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what materiality means from a disclosure perspective” and further guidance from regulators.<sup>120</sup>

As increasing numbers of corporations issue CSR and sustainability reports—many of them voluminous—a similar challenge has emerged in distinguishing the most material information from the least for both firms and industries. The number of sustainability indicators has proliferated in part because corporations’ various stakeholders have deep concerns about a broad range of sustainability matters and in part because corporations’ interface with society and environment is increasingly complicated, technologically sophisticated, and impactful.

In a 2011 report the United Nations Conference on Trade and Development observed that “More [corporate governance data] disclosure is almost always welcomed by investors, but there are good arguments for avoiding excessive disclosure: reporting can be costly and not all information is useful information. *Regulators should focus on a core set of mandatory disclosure items.*”<sup>121</sup> (emphasis in original)

In a 2005 white paper *Less Can Be More . . . A New Approach to SRI Research* Christoph Butz of Pictet & Cie. argued that instead of analyzing large numbers of sustainability data points, SRI investors should concentrate on the most meaningful one or two for a company or industry.

Another reason speaking against inflating the number of criteria is the ‘make believe’ nature of the procedure. It is often easier to answer a lot of irrelevant questions than to find answers to the few really relevant ones. However, an evaluation based on lots of irrelevant indicators is definitely less accurate than an approximation based on one single meaningful indicator. Although it might be more convenient to continue on the first path, e.g. because the irrelevant information is more easily available than the relevant one, one should not shrink from the effort to think about the one or two really relevant criteria and apply them in the research process.<sup>122</sup>

At the current time massive amounts of ESG data are being disclosed by some. For example, the 2011 CSR report of The Ford Motor Company is over 400 pages long. As one commentary described the situation, “In the developed world, we often have far more data than we can ever use. In most cases, what is lacking is not data but an understanding of what is important and the resolve to act.”<sup>123</sup> Simultaneously, many companies in both developed and emerging markets are reporting too little. Mandating industry-level key sustainability performance indicators can therefore help focus and deepen corporate disclosure on issues of greatest long-term impact to our financial, social and environmental systems, cut the “clutter” in some reports, and clarify bases for decision making.

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## IV-B. Current Status of Prioritization of Material Sustainability Indicators

As responsible investment has evolved, investors and other stakeholders have come to recognize the importance, as well as challenges, of identifying a limited number of material sustainability issues. Among these is the fact that most material sustainability indicators vary substantially by industry. Those for the chemical industry differ from those for apparel manufacturing or software development or food producing. To address this challenge, a number of organizations have recently developed methodologies for identifying industry-specific sustainability KPIs.

The Global Reporting Initiative has, from its inception, recognized the challenges of distinguishing the most material sustainability issues in CSR reporting. Its Sustainability Reporting Guidelines (version 3.1), point out that sustainability reports “should emphasize information on performance regarding the most material [sustainability] topics. Other relevant topics can be included, but should be given less prominence in the report.”

The GRI points out that individual industries face “unique sustainability issues” often not captured in its standard Guidelines and has developed Sector Supplements to identify them. As example the GRI cites “noise measurement for airports, the resettlement of people for mining and metals companies, [and] animal welfare for the food processing industry.”

Development of these GRI Sector Supplements can take two years and involve consultation with some 20 sector experts and stakeholder groups. As of 2012, GRI had prepared Sector Supplements for ten industries: Airport Operators, Construction and Real Estate, Event Organizers, Electric Utilities, Financial Services, Food Processing, Media, Mining, NGOs, and Oil and Gas. As with its more general reporting Guidelines, the GRI uses extensive international multi-stakeholder consultations and “due process including public comment . . . based on a consensus-seeking approach.”<sup>124</sup> This process has served GRI well, establishing the legitimacy of its final products and accounting for their wide acceptance relative to other ESG reporting formats worldwide.

In 2010, the European Federation of Financial Analysts Societies (EFFAS) published guidelines for integrating sustainability indicators into stock analysis and valuation. These guidelines were specifically tailored to investors’ needs and based on a definition of corporate sustainability that stresses productivity and profitability.

Corporate sustainability can be defined as the capacity of companies and organizations to remain productive over time and to safeguard their potential for long-term maintenance of profitability. Being sustainable means that companies actively pursue goals such as responsible use of natural resources both in their own operations and the operations of their respective clients, as well as respecting social

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rights in their markets of operation and those markets where their products and services are in use and being accountable to providers of equity and debt capital.

It defined sustainability key performance indicators (KPIs) primarily in terms of risks and opportunities. In their words, “Identifying and managing risks and identifying and capitalizing on business opportunities are the two pillars of capital-market oriented ESG management.” It argued that ESG is integral to core business strategies. “The company should outline the importance of ESG for the corporate strategy and explain how ESG aspects are taken into account when implementing the strategy.”

EFFAS identifies ten Level I indicators as relevant to all industries. They are: Energy Consumption; GHG Emissions ; Staff Turnover; Training and Qualification; Maturity of Workforce; Remuneration; Litigation Risks; Corruption; Revenues from New Products; and Innovation. It also identifies approximately 20 Level II and Level III indicators specific to various industries and subindustries. For example, for the healthcare providers its Level III KPIs include diversity (e.g., “percentage of female employees in relation to total employees”) and quality of service (e.g. “successful surgeries in percent”), whereas for Aluminum these KPIs are primarily environmental.<sup>125</sup>

Also in 2010, Dr. Axel Hesse authored a report of the German Federal Environmental Ministry that identified three sustainable

development key performance indicators (SD-KPIs) for the 68 industries of the Global Industry Classification Standard developed by MSCI and Standard & Poor’s.

To identify these industry-specific SD-KPIs, it conducted surveys of 13 leading research firms specializing in the analysis of corporations’ social and environmental records for the investment community. An indicator was “defined as an SD-KPI if at least 36% of the replies agreed it was important.” Then a second survey was conducted to prioritize “the two or three thus defined SD-KPIs relevant for a company’s development, position and anticipated development for the next five years.” Finally it identified the three sustainability KPIs for each industry that scored highest.

These three SD-KPIs differ from industry to industry. For example, the three key sustainability KPIs for the Electrical Equipment Industry were: energy and greenhouse gas efficiency of production/products /services/distribution; proportion of products with “Design for Environment”/ Eco- or Fair-trade Label; and audit coverage of ILO labor standards in-house and in the supply-chain. The three for Commercial Banks were: incorporation of sustainable development risk and opportunities in lending/financing; risk management performance including money laundering and sustainable remuneration/bonus system; and customer satisfaction, especially any predatory lending/mis-selling.

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The 13 organizations surveyed were: Crédit Agricole Cheuverux, Dexia Asset Management, Ethix/SRI Advisors, GES Investment Services, Hermes, imug/EIRIS, KLD Research & Analytics, RiskMetrics Group, Sarasin, Social Investment Forum Japan, Société Générale, Sustanalytics, and Vigeo.<sup>126</sup>

A number of major financial services companies have also recently developed in-house systems for identifying industry-specific sustainability KPIs. Although differing in methodology, they tend to focus on the translation of sustainability factors into company valuations that are then compared to today's stock price to determine if there is a "buy" or "sell" opportunity.

One of the more detailed of these systems was developed by the Italian company Unicredit, which believes that "socially responsible behavior is highly integral both to the level and volatility of the global equity market." It argues that, because "capital markets do not seem to fully incorporate ESG information," analysis of sustainability factors "can change earnings expectations" and be a "long-term value driver." Unicredit urges moving "from traditional to sustainability accounting" because "[t]raditional financial accounting only includes internal stocks and flows of financial value on the balance sheet and profit & loss accounts, respectively. Sustainability accounting disaggregates the internal accounts to show costs and benefits relating to environmental, social and governance performance."

Unicredit integrates ESG data into financial analysis, ultimately estimating its impacts on future earnings in a three step process.

- **ESG capitalization** . . . . We capitalize ESG issues by converting ESG-related flows such as employees leaving the company (social issue) into financial/capital flows by applying pricing factors such as the average turnover cost per employee.
- **The ESG cost yield.** We express the total costs derived from the conversion of ESG flows into financial flows as a percentage of total revenues, i.e. the company's ESG cost yield. . . .
- **ESG earnings impact.** . . . We calculate ESG EI through first determining ESG costs under the assumption that there are no changes in the management of ESG issue, i.e. KPIs remain constant. We then subtract the ESG costs derived from our forecasted KPIs to determine any ESG EI from implied cost reductions/benefits.

To determine specific sustainability factors, Unicredit begins with Sustainable Development Indicators that are part of the European Union's Sustainable Development Strategy. These include socioeconomic development; climate change and energy; sustainable transportation; sustainable consumption and production; natural resources; public health; social inclusion; demographic changes; global partnerships; and good governance.

Unicredit then applies each of these sustainability themes to specific industries,

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identifying a macro indicator (i.e., a societal level indicator of progress), a micro indicator (i.e., a corporate-level indicator of performance), and a pricing factor (i.e., a factor related to the micro-indicator that can potentially affect stock price). For example, the macro-factor for Socioeconomic Development is the energy intensity of the European economy (total European energy consumption/European GDP); the micro-factor is the energy intensity of corporate operations (megawatt hours/sales); and the pricing factor is the price of electricity (Euros/megawatt hour).

Unicredit believes that “some 45.5% of companies under [its] coverage are likely to improve their stock value through considering ESG issues and 54.5% are likely to face significant ESG-related price pressures in the years ahead.”<sup>127</sup>

Goldman Sachs and Société Générale are two other financial services firms that have begun to incorporate sustainability factors into their investment processes. GS Sustain, a project of Goldman Sachs, has developed a methodology to “create a consistent and objective long term investment framework” based on a combination of traditional financial analysis (“proprietary measures of the cash flow companies generate relative to the capital invested in their business” and “objective measures of the strategic strength of companies’ business models”) with an assessment of the quality of management that evaluates, among other things, the ability to effectively “recognize, address and manage the key environmental, social and

governance issues facing their industry.” GS Sustain believes that companies that rate highly in these areas “will be in the strongest positions to sustain industry leadership, achieve superior cash returns and deliver long run outperformance.”<sup>128</sup>

Other organizations such as Deloitte & Touche, West LB, and Société Générale, have similarly issued publications identifying KPIs and analyzing their potential to have an impact on stock valuation.<sup>129</sup>

#### **IV-C. Methodology for Prioritization of Industry-Level Material Sustainability Key Performance Indicators**

The approaches to the prioritization of key sustainability performance indicators outlined above produce helpful results in that they direct investors to a limited number of issues. It is not always clear, however, what particular sustainability tests and principles have been used to assure consistency in the identification of sustainability KPIs in these approaches.

Building on work published by the Initiative for Responsible Investment in *From Transparency to Performance: Industry-Based Sustainability Reporting on Key Issues*, this paper proposes the adoption of three principles derived from sustainability science and a fact-based, five-part test as a method for assuring consistency and relevance in the prioritization process. These principles and tests are useful in establishing the relevance of specific sustainability KPIs for the

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reasonable investor and other stakeholders and in identifying those issues that are of the greatest materiality for specific industries. The three principles are as follows.

- *Potential for Systemic Impact and Disruption.* Industry-specific sustainability KPIs that have the potential to disrupt substantially, either positively or negatively, the financial, environmental, or social systems within which corporations operate are likely to be among those given highest priority. The greater the potential for industry-specific policies or practices to cause discontinuous disruptions, the more likely they are to be a disclosure priority.
- *Degree of Uncertainty Related to These Impacts.* Evaluation of the range of uncertainties about these potential disruptions is an important prioritization consideration. The more substantial the uncertainties surrounding future impacts (positive or negative) of sustainability KPIs, the more likely they are to be a disclosure priority.
- *Long-Term Potential of These Impacts.* Industry-specific sustainability KPIs that involve impacts with particularly long time horizons are also likely to be a disclosure priority. The more likely the impacts are to play themselves out over decades or generations, the more likely they are to be a high priority.

The fact-based materiality tests consist of industry-specific answers to the following five questions.

*Does the sustainability KPI have substantial financial or risk-based implications?*

Sustainability issues whose impacts are likely to be short term, predictable, and not disruptive to economic, environmental, and social systems are most susceptible to translation into concrete financial terms. Their materiality is therefore likely to be financial, although they can also have a sustainability aspect. Conversely, those issues whose impact is disruptive, uncertain, and long term are likely to be best assessed in sustainability terms with a sustainability materiality predominating. They may well have financial implications, but these are likely to be uncertain and difficult to quantify. It therefore becomes confusing to talk of their materiality as “financial” in the usual sense of the term.

As the importance of sustainability data becomes increasingly clear to institutional investors, advocates of sustainable investing frequently assert that all sustainability issues are translatable into financial terms and are therefore in reality financial issues. This tendency to translate all materiality into financial materiality and ignore the materiality of sustainability issues in their own terms, can be confusing, as it seems simultaneously to give and to deny to the concept of sustainability its legitimate spot under the materiality tent.

For example, in a 2009 McKinsey & Company report based on surveys of corporate chief financial officers, SRI professionals, and in-depth case studies, Bonini, Koller, and Mervis argue that

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“many companies are creating *real* value through their environmental, social, and governance activities” and that “*financially valuable* objectives . . . . may depend, at least in part, on a company’s reputation for environmental, social, and governance programs that meet community needs and go beyond regulatory requirements or

industry norms.” (emphasis added) They assert that sustainability initiatives can be captured in financially relevant terms such as growth, returns on capital, risk management, and management quality. They equate the following financial values with specific ESG programs.

<b>GROWTH</b>	New markets	Access to new markets from exposure to ESG programs
	New products	Offerings to meet unmet social needs and increase differentiation
	New customers or market share	Engagement with consumers, familiarity with their expectations and behavior
	Innovation	Cutting-edge technology and innovative products for unmet social or environmental needs
	Reputation or differentiation	Higher brand loyalty, reputation, and goodwill with stakeholders
<b>RETURNS ON CAPITAL</b>	Operational efficiency	Bottom-line cost savings through environmental operations and practices—e.g. energy and water efficiency, reduced need for raw materials
	Workforce efficiency	Higher employee morale through ESG; lower costs related to turnover or recruitment
	Reputation or price premium	Better workforce skills and increased productivity through participation in ESG activities; Improved reputation making customers willing to pay price increase or premium
<b>RISK MANAGEMENT</b>	Regulatory risk	Lower level of risk by complying with regulatory requirements, industry standards, and demands of non-governmental organizations
	Public support	Ability to conduct operations, enter new markets, reduce local resistance
	Supply chain	Ability to secure consistent, long-term, and sustainable access to safe, high-quality raw materials or products by engaging in community welfare and development
	Risk to reputation	Avoidance of negative publicity and boycotts
<b>MANAGEMENT QUALITY</b>	Leadership development	Development of employees’ quality and leadership skills through participation in ESG programs
	Adaptability	Ability to adapt to changing political and social situations by engaging in local communities
	Long-term strategic view	Long-term strategy encompassing ESG issues

Source: Sheila Bonini, Timothy M. Koller, and Philip H. Mirvis “Valuing Social Responsibility Programs” McKinsey on Finance Summer 2009 Number 32: 11-18.

Similarly, in a 2012 paper for PricewaterhouseCoopers, Hervé C. Keiffel asserted that many sustainability initiatives create “a great deal of *tangible and short-term value* from costs savings, risk reduction, or product and service innovation” that can be directly calculated by “thinking in terms of probabilities” and “ranges of outcomes.” (emphasis added) For initiatives where benefits are less tangible, Keiffel asserts that indirect methods of valuation are possible and argues that a “multi-attribute utility analysis” can through “structured workshops” reconcile “diverging viewpoints” resulting in “a value model that essentially captures the compromises executives are willing to make between different sources of value.” But Keiffel also concedes that there may be a “value to society of these same initiatives” that involves externalities and public goods that are “beyond the scope” of the paper’s consideration.<sup>130</sup>

As these papers convincingly point out, the short-term financial aspects of certain sustainability issues are important and can be captured in financial terms. They are less convincing on the ability of financial accounting to capture the full implications of the longer-term aspects of sustainability considerations where broad issues of reputation, adaptability, or value creation for society play a crucial role. However much these sustainability issues may find short-term financial expression, a part of them still remains best expressed within a longer-term, non-financial sustainability framework. Indeed, the greater its sustainability risks

or rewards—for example, climate change, human rights, or fair labor standards—the more likely industry-level sustainability indicators will be useful in materiality assessments and the less likely company-level financial impact will be precisely calculable.

*Does the sustainability KPI have substantial legal, regulatory, or policy implications?*

One indication of the potential materiality of sustainability issues is proposed industry-related legislation or regulation. It is at this industry level that the concerns over the nature of the social and environmental implications of corporate conduct often find their expression. The more intense the battles are, the farther reaching their implications, the greater their potential to affect company business models—the greater the likelihood that disclosure of sustainability KPIs for these issues will be a priority. For example, battles have recently been hard fought at the Federal, state, and local levels over regulation and legislation regarding consumer fraud in financial products, the environmental implications of hydraulic fracturing, and disclosure of greenhouse gas emissions. These battles are a helpful tool in the prioritization of those sustainability issues for which disclosure can play a useful financial and societal role. Moreover, for future proposed legislation or regulation to be well reasoned and effective, adequate relevant data on these issues should be available.

*Does the sustainability KPI correspond to significant industry-specific social or environmental norms or standards?*

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Decisions by industries themselves to voluntarily adopt environmental, social, and governance norms and standards are an indication that these issues should have high priority for mandatory disclosure. This is particularly true when a notably broad and diverse set of stakeholders has been involved in the evolution of these standards. Without outside input and consultation industries may fail to face up to their most significant sustainability issues. Apparel-manufacturing vendor codes of conduct that recognize the right of workers to unionize, for example, are more rigorous than those that don't, and input from environmental organizations has helped the Forest Stewardship Council's sustainability forestry guidelines win wide recognition.

*Does the sustainability KPI identify substantial stakeholder concerns or significant emerging social trends?* This test reflects the frequency and intensity with which sustainability issues are raised by stakeholders (other than investors) and the general public. These stakeholders often provide an "early warning system" for emerging industry-specific sustainability issues. Bell and Morse have pointed out that addressing system-level sustainability challenges requires the involvement of a variety of stakeholders within the system because of the "value of different perceptions and the necessity for individuals involved in problem situations to learn from one another . . . ." Stakeholder participation supplements a purely scientific approach to problem solving, for example, because it "complements [the scientific paradigm]

and is sympathetic to its contribution while recognizing that there are other contributions that can also be made by other forms of thinking from other individuals and groups."<sup>131</sup> The more widespread these stakeholder concerns, the more likely they are to be material from a sustainability viewpoint. These concerns can include the highly technical (e.g., the safety of nanotechnology), the cultural (e.g., the role of women in society), or the political (e.g., community empowerment).

*Does the sustainability KPI imply substantial industry-specific opportunities for social and environmental innovation?* This test can be used to prioritize among those sustainability KPIs where industries, through development of innovative products or services, can address global sustainability challenges and create long-term societal value while still generating long-term profits. This indicator is useful in distinguishing between products or services through which industries add incremental value to customers that are already well served (e.g., a more nutritious form of pet food or a more trendy lip gloss) and those through which industries can add value to underserved customers or address pressing unmet societal or environmental needs (e.g., financial services for "bottom of the pyramid" customers, alternative energy sources for small-scale businesses, mobile communications in underdeveloped economies). The greater the opportunities an industry has to develop innovative products and services that address sustainability challenges, the higher the priority for mandated disclosure is likely to be.

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These three principles and five materiality tests can provide a consistent method for prioritizing material sustainability KPIs. These KPIs will help reasonable investors and other stakeholders identify companies that are sustainability leaders or laggards in their industries, industries that are leaders themselves, and the risks posed, and opportunities offered, by these companies and their industries. These principles and tests are industry based in part because today's society needs to move entire industries toward more sustainable practices as rapidly as possible. Highlighting sustainability challenges and assuring the availability of relevant data one company at a time is too slow an approach.

In addition, the industry focus helps mandated disclosure situate itself on that "sweet spot" that lies between the competing claims of comparability and relevance. Comparing company and industry progress on the most material sustainability issues will not be possible if voluntary disclosure rules the day. Reporting will be too varied from company to company in time frames, data selection, and reporting formats. But a one-size-fits-all reporting requirement for data for all industries will not capture the most relevant data for specific industries. Energy efficiency data, for example, needs to be reported differently for the real estate, chemical refining, freight delivery, household appliance manufacturing,

aluminum, electric utility, and automobile industries—and may not be a priority issue at all for other industries. Mandated industry-level disclosure strikes the right balance between comparability and relevance and creates a level sustainability playing field appropriate to each industry on which companies can compete and through which their industry progress can be measured.

Although sustainability KPIs may be best set at an industry level, reporting on them will still necessarily take place at the company level. A company can only report on what it itself is doing and has control over. Once the reporting of priority KPIs for all companies in each industry is mandated, the aggregation of individual company reports up to the industry level will make possible the benchmarking of the sustainability performance of one industry versus another, of a company versus its industry, and of year-over-year industry sustainability trends. With industry-specific information in hand, investors will be able to allocate resources effectively to those industries making the greatest progress in coping with their sustainability, as well as financial, challenges or to companies that excel in both within their industry. Moreover, these comparisons on key sustainability issues will be of use to other stakeholders—customers, suppliers, employees, regulators, or others—seeking to reward companies and industries effectively exploring sustainability pathways.

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#### IV-D. The Benefits and Costs of Mandated Material Sustainability Key Performance Indicators

The mandating of corporate disclosure of financial data by publicly traded corporations since 1930s has proven its worth many times over. The authors of *Full Disclosure: The Perils and Promises of Transparency* describe the financial disclosure system that the United States has established as among the most successful “targeted transparency” policies that has been tried. It is, in their words, the “nation’s oldest and most trusted transparency system” and one of the most highly effective.<sup>132</sup>

To be successful, such transparency initiatives, with their public policy and public interest agendas, generally necessitate disclosure of “standardized, disaggregated and comparable information regarding specific products or practices to a broad audience.”<sup>133</sup> These targeted transparency programs must also be “user-friendly” and “sustainable.” That is, they must be flexible enough to “embed new facts in the decision-making routines of information users and . . . embed user responses into the decision making of disclosers” In short, they must be user friendly and “gain in use, accuracy, and scope over time.”<sup>134</sup>

This robust financial disclosure scheme, based in part on principles of materiality, has proven remarkably effective over the past nine decades in enabling the growth of stable capital markets in the United States. Academic studies have, for example, shown

that the 1964 disclosure requirements in the over-the-counter (OTC) markets produced “dramatic reduction in stock volatility” and that on regional stock exchanges “variance of returns lessened substantially after disclosure was required.”<sup>135</sup>

Part of its success has been the ability of this reporting regime to adapt to changing times, assuring that the evolving interests of investors and the public continue to be served in ways that increase the “use, accuracy, and scope” of reporting on material issues. Part of the test of the flexibility and effectiveness of today’s reporting system for data material to investors and other stakeholders will lie in its ability to accommodate the rapid changes in the global economy brought by advances in information and communications technologies, transportation, manufacturing capabilities, workforce availability, resource constraints, and financial innovation that have transformed the landscape in which corporations and their investors operate. Mandated reporting on material sustainability KPIs will need to be a key component in the evolution of this reporting system.

That ESG data can be a valuable addition to the investment process has been demonstrated by such academic studies as that of Arnold et al. discussed above. In addition studies have shown that sustainability reporting positively influences the behavior of corporate managers. In a 2011 study using data from 58 countries, for example, Ioannou and Serafeim found

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that the adoption of mandatory CSR reporting increased the social responsibility of businesses, particularly in the areas of sustainable development, employee relations, corporate governance, and reduction of bribery and corruption, and that these improvements increased managerial credibility. The study also found that the stronger the enforcement laws and assurance practices in the countries in which disclosure was required, the greater the improvements.<sup>136</sup>

In a 2010 article, Chatterji and Toffel noted that a number of academic studies have found that “organizations do respond to government mandatory information disclosure.” The authors’ own research found that firms that received poor environmental ratings from an independent rating agency (in this case, KLD Research & Analytics) “subsequently improved their environmental performance more than other firms, and that this difference was driven by firms in highly regulated industries and by firms with greater low-cost opportunities to exploit.”<sup>137</sup>

But being effective is not enough. Reporting schemes must provide sufficient benefits to justify their costs. As in the case of currently mandated financial reporting, the benefits from reporting on industry-specific sustainability KPIs are likely to be many, varied, and substantial. They will accrue to investors, companies, government, financial markets, and the general public. They will include tangibles and intangibles that create value at the industry and system levels, as

well as the company level. The absence of these benefits is costing us dearly at the present time.

*Benefits to investors.* The public reporting of industry-specific KPIs creates three primary benefits for investors: 1) it will reduce their costs for gathering and analyzing their sustainability data, which is currently not publicly available; 2) it will reduce the asymmetries in the availability of sustainability information between institutional and retail investors, which arises because institutional investors can now purchase ESG data services not available to the public; and 3) it will help investors allocate investments to companies whose business models serve broad social goals and avoid investments in companies that run substantial social, environmental, or governance risks that can lead to short-term and long-term financial losses.

*Benefits to corporations.* The mandated reporting of the most material sustainability KPIs creates six primary benefits for corporations: 1) it will increase the competitiveness of U.S. corporations by forcing managers to address major sustainability issues that are rapidly becoming worldwide norms and standards; 2) it will create opportunities for increased operating efficiencies and cost savings as managers monitor sustainability challenges that address inefficient operations (e.g., energy usage) or poor stakeholder relations (e.g., employee policies); 3) it will reduce confusion about, and ultimately the costs of, reporting on sustainability issues as

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managers gain clarity about issues they should be reporting on; 4) it will reduce the number of shareholder resolutions on sustainability issues and of shareholder derivative lawsuits relating to such disclosure or its absence, as the disclosure of basic sustainability information becomes routinized; and 5) it will prepare corporations for disruptive shocks to the financial, societal, or environmental systems and other matters that can affect their reputations and competitiveness. Finally, full and frank discussions of issues of greatest material sustainability concerns will help corporations overcome investor and public perceptions of greenwashing and increase trust in the overall value they create in society.

*Benefits to government.* The mandated reporting of the most material sustainability KPIs creates five primary benefits for government: 1) it will help reduce market volatility and the boom-and-bust cycles caused by excessive speculation as it directs investors to considerations of long-term sustainability; 2) it will help government avoid, mitigate, or shorten national emergencies caused by financial disruptions and corporate misdeeds that result in shocks to the markets; 3) it will help lessen the need for direct government oversight of corporations' environmental and social practices by focusing corporate executives' attention on the most important sustainability risks for their industry; 4) it will help legislators and regulators distinguish in a fully informed manner situations when effective and efficient regulation is and is not necessary; and 5) it will help lessen

the governmental burden for providing certain goods and services that can more be effectively and efficiently provided by the market and provide public policy makers with data that can help distinguish market-based initiatives that work in the public interest from those that do not.

*Benefits to the financial markets and general public.* The mandated reporting of the most material sustainability KPIs creates two primary benefits for the financial markets and general public: 1) it will help increase the competitiveness for our capital markets, which have historically prided themselves on being among the most transparent in the world but are now falling behind on the availability of sustainability data; and 2) it will help increase trust in our capital markets and corporations by moderating the short-term outlook of investors and of the companies issuing securities in these markets.

*Costs of Sustainability KPI Disclosure.* These substantial benefits, many of which involve public goods and intangibles of immense value that are difficult to quantify, are counterbalanced by certain costs of disclosure, primarily borne by corporations.

Calculating the costs to corporations will probably best be done through a series of estimates of the costs to corporations for the gathering and publication of industry-specific sustainability data points. The estimates of these costs will range widely from issue to issue from essentially non-existent to substantial. If, for example, diversity and equal employment opportunity were to be

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considered a sustainability KPI for certain industries, as well they might, monitoring and measuring costs would be minimal for a number of key data points. Specifically, the number of women and minorities on corporate boards of directors is readily available to the companies. In addition, all firms contracting with the Federal government must now gather and report data on women and minorities employed by job category on the Equal Employment Opportunity Commission's EEO-1 form. (This information is currently not publicly available without company approval.) Virtually no additional reporting costs would be required.

At the other end of the spectrum will be the costs of reporting on complicated issues, for example those involving elaborate supply chains. The SEC recently estimated the overall initial cost of some 6,000 publicly traded companies disclosing data on their use and sourcing of conflict minerals (as per Congress' mandate in the Dodd-Frank Act) at \$3 to \$4 billion and ongoing costs of between \$207 million to \$609 million per year.<sup>138</sup>

Several factors, however, lessen the likelihood of high company costs for the monitoring and reporting of key sustainability KPIs. To begin with, although the more obscure issues are likely to have the highest initial costs due to the need for new data definition and gathering systems, they are also less likely to be material sustainability KPIs for a given industry. Second, managers are likely to be able to use some of these data-gathering

and reporting systems to implement cost-saving efficiencies. Improvements in energy efficiency, employee relations, supplier communications, and community affairs are likely to result in cost savings in the hands of skilled corporate managers. The focus on key performance indicators also means that reporting is likely to be required on issues where potential risks to the company are highest and the chances of avoiding costly management mistakes (e.g., environmental disasters, employee safety catastrophes, crippling community controversies) are the greatest.

Finally, many large international firms already gather their most material sustainability data. For these companies, additional costs would tend to be only incremental. For smaller companies, initial data-gathering costs might be substantial, but these are costs that, as sustainability becomes an increasingly important issue for investors, customers, employees, suppliers, and communities, they are likely to incur in any case.

*Other objections by corporations.* In their book *The Value Revolution*, Eccles et al. identified ten primary objections that corporate executives often raise as justifications for not being more transparent. Cost was one. The other nine were:

1. The market cares only about earnings
2. We already report a lot of information
3. Once we start reporting something, we can't stop

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4. No matter how much we report, the market always wants more
5. Bad numbers will hurt our stock price
6. Some of these measures aren't very reliable
7. Our competitors will use this information to our disadvantage
8. Our customers and suppliers could learn how much money we're making
9. We'll get sued<sup>139</sup>

This paper has addressed these objections at various points. Investors increasingly care about sustainability data, with substantial numbers of institutional investors calling for its disclosure and committed to its use (Objection #1). Companies are clearly not yet reporting enough of the right kind of information to create widespread trust in either themselves or the financial markets (Objection #2). A mandated set of sustainability KPIs sets a minimum effective standard for reporting of material sustainability data—companies can report additional data, but they can also stop once minimal effective standards have been met (Objection #3). Similarly, these standards will provide relief from the current pressures of the sustainability market for “always

more data” (Objection #4). The fact that markets may punish companies with poor sustainability records is a positive, not a negative. As Eccles et al. point out “That’s what markets are all about.” (Objection #5)<sup>140</sup> Public reporting requirements will force improvements in the quality of sustainability indicators and promote informed discussion on their meaning and reliability (Objection #6). Sustainability issues are, to a substantial extent, a matter of the public interest. Best practices in these matters will increase the competitiveness of entire industries, not of individual companies (Objection #7). Where companies can make or save money through innovations in sustainability, it is to their long-term reputational and competitive advantage to publicize the profitable aspects of their businesses (Objection #8). Mandated disclosure is likely to reduce lawsuits, not increase them. With mandated disclosure, corporations can comply with clear-cut minimum requirement for sustainability reporting. The risks of liability from non-disclosure likely to become the more relevant concern as the investors’ need for sustainability data becomes increasingly apparent. These risks include delisting from public exchanges, loss of directors and officers insurance, and fines for non-disclosure of material data (Objection #9).

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Part Four footnotes, see p.68.

## Conclusion

Current regulatory and legal frameworks are sufficiently broad to permit the mandated disclosure of industry-specific sustainability key performance indicators. Since the 1990s, the rapid development of an integrated global economic and financial system of great complexity, intertwined with powerful social and environmental forces, has elevated key corporate sustainability data to a level of materiality for investors, other stakeholders, and the general public. The materiality of these issues is reflected in institutional investors' growing demand for environmental, social, and governance (ESG) data and the movement among stock exchanges around the world to encourage ESG disclosure by listed companies, as well as in the substantial number of corporations now issuing sustainability reports.

Fact-based materiality tests and sustainability principles can identify these highly material issues. The KPIs associated with these issues are best described in sustainability, not financial, terms because they are leading indicators that address environmental and social impacts, describe issues with uncertain outcomes, play out over extended periods of time, and are not easily amenable to measurement or reporting in financial terms. The language of sustainability and scenario-building are therefore well suited for their expression.

Without the systematic availability of industry-level sustainability data, our current financial system will continue to operate in conditions of short-term volatility and investor distrust, and corporations will continue to be viewed as 'greewashers', unaccountable, and lacking commitment to the public interest. Although incurring some costs to corporations, the systematic disclosure of material sustainability KPIs will lead to substantial compensating benefits, including the increased competitiveness of U.S. financial markets and corporations; reduced overall costs and liabilities for corporations; increased trust in the capital markets and corporations; increased provision of products and services with broad societal benefits; and reduced governmental oversight and regulatory burdens.

The mandated disclosure of material sustainability KPIs is the next natural step in the evolution of the reporting requirements for U.S. corporations set in motion in the early 1930s—a step that will bring great benefit, both financial and reputational, to our corporations and capital markets. This disclosure will help protect the reasonable investor in an increasingly complex world, while at the same time serving the greater public interest.

## Part Four Footnotes

<sup>116</sup> KPMG and Financial Executives Research Foundation *Disclosure Overload and Complexity: Hidden in Plain Sight* 2011: 4. Available at <http://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/Documents/disclosure-overload-complexity.pdf> Last visited May 15, 2012.

<sup>117</sup> *Ibid.* 3, 10.

<sup>118</sup> UK's Financial Reporting Council *Cutting Clutter: Combating Clutter in Annual Reports* 2011: 5-6. Available at <http://www.frc.org.uk/images/uploaded/documents/Cutting%20clutter%20report%20April%2020112.pdf> Last visited May 15, 2012.

<sup>119</sup> *Ibid.* 20.

<sup>120</sup> *Ibid.* 10.

<sup>121</sup> United Nations Conference on Trade and Development (UNCTAD) *Corporate Governance Disclosure in Emerging Markets: Statistical Analysis of Legal Requirements and Corporate Practices* (Geneva: United Nations) 2011: iii. Available at: [http://www.unctad.org/en/docs/diaeed2011d3\\_en.pdf](http://www.unctad.org/en/docs/diaeed2011d3_en.pdf) Last visited February 23, 2012.

<sup>122</sup> Christoph Butz *Less Can Be More . . . A New Approach to SRI Research* (Geneva: Pictet & Cie.) 2005: 6 Available at [http://www.pictet.com/en/home/about/sustainability/sri\\_reports/less\\_more.html](http://www.pictet.com/en/home/about/sustainability/sri_reports/less_more.html) Last visited May 15, 2012.

<sup>123</sup> Lawrence, G. "Indicators for Sustainable Development" in Dodds, F. (ed.) *The Way Forward: Beyond Agenda 21* (London: Earthscan) 1997: 179-189. Cited in Bell and Morse. *Op. cit.*

<sup>124</sup> <https://www.globalreporting.org/reporting/sector-guidance/Pages/default.aspx>

<sup>125</sup> European Federation of Financial Analysts Societies and the Society of Investment Professionals in Germany *Key Performance Indicators for Environmental, Social and Governance Issues: A Guideline for the Integration of ESG into Financial Analysis and Corporate Valuation* (Frankfurt am Mein: DVFA) 2010: 7-9.

<sup>126</sup> Axel Hesse *SD-KPI Standard 2010-2014: Sustainable Development Key Performance Indicators (SD-KPIs) Minimum Reporting Standards for Relevant Sustainability Information in Annual Reports/Management Commentaries of 68 Industries* (German Federal Environmental Ministry) 2010 Available at [http://www.sd-m.de/files/SD-KPI\\_Standard\\_2010-2014\\_V12d.pdf](http://www.sd-m.de/files/SD-KPI_Standard_2010-2014_V12d.pdf) Last visited February 27, 2012.

<sup>127</sup> See Unicredit, *Equity Research: Environmental, Social and Governance Research—The Halo's Creed* (2011). Available at: [http://www.unicreditgroup.eu/ucg-static/downloads/UniCredit\\_ESG\\_report\\_The\\_Halos\\_Creed\\_Nov\\_2010.pdf](http://www.unicreditgroup.eu/ucg-static/downloads/UniCredit_ESG_report_The_Halos_Creed_Nov_2010.pdf) Last visited February 22, 2012.

<sup>128</sup> GS Sustain Website <http://www.goldmansachs.com/our-thinking/gs-sustain/gs-sustain-2011/html> Last visited February 22, 2012.

<sup>129</sup> See Whooley, Yannick Quaknine, Carole Crozat *SRI: Beyond Integration* (Paris: Société Générale) March 2011 "[Q]uite a few of the social and environmental issues typically identified for each sector are simply not material," but "ESG performance is only part of a complex picture, and these issues need to be aggregated into overall investment decisions when they are material (i.e. performance or risk sensitive)."

Eric Hespenheide and Dinah A. Koehler *Disclosure of Long-term Business Value: What Matters* Deloitte & Touche, 2012 "[M]anagers should choose a small set of material [sustainability] performance indicators that inform on valuation impacts and consistently report data and should focus less on trying to satisfy every one of the company's stakeholders." Available at [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us\\_scc\\_materialitypov\\_032812.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_scc_materialitypov_032812.pdf)

Hendrik Garz and Claudia Volk *What Really Counts: The Materiality of Extra Financial Factors* West LB, 2007. The study finds "a strong link between extra-financial risk, the cost of capital to a firm and thus to its shareholder value," but also that "the link to other financial variables [share price performance, valuation, profitability, growth] is much less pronounced and only in a few cases do we have reason to believe that it goes beyond mere statistical coincidence."

<sup>130</sup> Hervé C. Keiffel "Sustainability Valuation: An Oxymoron?" PricewaterhouseCoopers April 2012. Available at [http://www.pwc.com/en\\_US/us/transaction-services/publications/assets/pwc-sustainability-valuation.pdf](http://www.pwc.com/en_US/us/transaction-services/publications/assets/pwc-sustainability-valuation.pdf)

<sup>131</sup> Bell and Morse. *Op. cit.* 104.

<sup>132</sup> Archon Fung, Mary Graham, and David Weil *Full Disclosure: The Perils and Promise of Transparency* (Cambridge, United Kingdom: Cambridge University Press) 2007: 82.

<sup>133</sup> *Ibid.* 37-38,

<sup>134</sup> *Ibid.* 11.

<sup>135</sup> *Ibid.* 92.

<sup>136</sup> Ioannis Ioannou and George Serafeim "The Consequences of Mandatory Corporate Sustainability Reporting" Harvard Business School Working Paper No. 11-100, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1799589](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1799589) Also see "The Rise and Consequences of Corporate Sustainability Reporting" by the same authors in *European Business Review* September-October 11. Available at: <http://www.europeanbusinessreview.com/?p=4538>. Last visited April 26, 2012.

<sup>137</sup> Aaron K. Chatterji and Michael W. Toffel "How Firms Respond to Being Rated" *Strategic Management Journal* 31:917-945. 2010. <sup>140</sup> *Ibid.* 206.

<sup>138</sup> Steve M. Davidoff "Humanitarian Effort in Congo Puts Wall St. Regulator in Unintended Role" *New York Times* August 29, 2012: B7.

<sup>139</sup> Eccles, Robert G., Robert H. Herz, E. Mary Keegan, David M.H. Phillips *The Value Reporting Revolution: Moving Beyond the Earnings Game* (New York: John Wiley & Sons, Inc) 2001: 203-208.

# Bibliography

Arnold, Markus, Alexander Bassen and Ralf Frank "Integrating Sustainability Reports into Financial Statements: An Experimental Study" Paper available at [http://papers.ssrn.com/sol3/papers.crf?abstract\\_id=2030891](http://papers.ssrn.com/sol3/papers.crf?abstract_id=2030891)

Bell, Simon and Stephen Morse *Sustainability Indicators: Measuring the Immeasurable?* (London: Earthscan) 2008.

Bonini, Sheila, Timothy M. Koller, and Philip H. Mirvis "Valuing Social Responsibility Programs" *McKinsey on Finance* Summer 2009, Number 32.

Butz, Christoph. *Less Can Be More . . . A New Approach to SRI Research* (Geneva: Pictet & Cie.) 2005.

Chatterji, Aaron K. and Michael W. Toffel "How Firms Respond to Being Rated" *Strategic Management Journal* 31:917-945 2010.

*Corporate Social Responsibility Reporting in Denmark Impact of the Legal Requirement for Reporting on CSR in the Danish Financial Statements Act.* August 2010.

Daly, Herman *Beyond Growth: The Economics of Sustainable Development* (Boston: Beacon Press) 1997.

Dyllick, Thomas and Kai Hockerts "Beyond the Business Case for Corporate Sustainability" *Business Strategy and the Environment* Vol 11: 130-141 2002.

Eccles, Robert G. and Michael P. Krzus *One Report: Integrated Reporting for a Sustainable Strategy* (Hoboken: New Jersey: John Wiley & Sons, Inc.) 2010.

Eccles, Robert G., Michael P. Krzus, Jean Rogers, and George Serafeim "The Need for Sector-Specific Materiality and Sustainability Standards" *Journal of Applied Corporate Finance*, Vol. 24, No. 2: 8-14 Spring 2012.

Eccles, Robert G. and Michael P. Krzus, and Liv A. Watson. "Integrated Reporting Requires Integrated Assurance." *Effective Auditing for Corporations: Key Developments in Practice and Procedures*, 161-177. London: QFINANCE Key Concepts, Bloomsbury Information Limited 2012.

Ehrenfeld, John R. *Sustainability by Design: A Subversive Strategy for Transforming Our Consumer Culture* (New Haven: Yale University Press) 2008.

European Federation of Financial Analysts Societies and the Society of Investment Professionals in Germany: *Key Performance Indicators for Environmental, Social and Governance Issues: A Guideline for the Integration of ESG into Financial Analysis and Corporate Valuation* (Frankfurt am Mein: DVFA) 2010.

European Sustainable Investment Forum (Eurosif) *European SRI Study*. 2008.

Financial Services Institute of Australia (FINSIA) *Implementing Environmental, Social and Governance Principles in Investment Decisions: Guidelines for Superannuation Professionals* January 2012.

Fung, Archon, Mary Graham, and David Weil *Full Disclosure: The Perils and Promise of Transparency* (Cambridge, United Kingdom: Cambridge University Press) 2007.

Global Reporting Initiative, *Sustainability Reporting Guidelines Version 3.1* Page 8. Available at <https://www.globalreporting.org/resourcelibrary/G3.1-Guidelines-Incl-Technical-Protocol.pdf>

Gore, Al and David Blood, *A Manifesto for Sustainable Capitalism*. December 2011.

*Harvard Law Review* "Notes" Vol. 115.2001-2002.

Hesse, Axel. *SD-KPI Standard 2010-2014: Sustainable Development Key Performance Indicators (SD-KPIs) Minimum Reporting Standards for Relevant Sustainability Information in Annual Reports/Management Commentaries of 68 Industries* (German Federal Environmental Ministry) 2010.

International Accounting Standards Committee "Framework for the Preparation of Presentation of Financial Statements" London. *International Accounting Standards* 1999.

International Integrated Reporting Committee, *Towards Integrated Reporting: Communicating Value in the 21st Century* 2011.

Ioannou, Ioannis and George Serafeim "The Consequences of Mandatory Corporate Sustainability Reporting" Harvard Business School Working Paper No. 11-100.

Juma'h, Ahmad H. "The Implications of Materiality Concept on Accounting Practices and Decision Making" *Inter Metro Business Journal* Vol. 5, No. 1: 22-37 Spring 2009

Keiffel, Hervé C. "Sustainability Valuation: An Oxymoron?" PricewaterhouseCoopers April

2012. Available at [http://www.pwc.com/en\\_US/us/transaction-services/publications/assets/pwc-sustainability-valuation.pdf](http://www.pwc.com/en_US/us/transaction-services/publications/assets/pwc-sustainability-valuation.pdf)

KPMG and Financial Executives Research Foundation *Disclosure Overload and Complexity: Hidden in Plain Sight* 2011.

Kropp, Robert, "Brazilian Stock Exchange Recommends that Companies Report or Explain" Socialfunds.com January 7, 2012.

Lydenberg, Steve "Reason, Rationality and Fiduciary Duty" Working paper. Available at <http://www.irrcinstitute.org/pdf/FINAL-Lydenberg-Reason-Rationality-2012-Winner.pdf>

Lydenberg, Steve, David Wood and Jean Rogers *Transparency to Performance: Industry-Based Sustainability Reporting on Key Issues*. (Cambridge, Mass: Initiative for Responsible Investment) June 2010.

Marshall, Julian D. and Michael W. Toffel, "Framing the Elusive Concept of Sustainability: A Sustainability Hierarchy" *Environmental Science & Technology* Vol. 39, No. 3 2005: 673-681.

McElroy, Mark W. and J.M.L. van Engelen *Corporate Sustainability Management: The Art and Science of Managing Non-Financial Performance* (New York and London: Earthscan) 2012.

McKibben, Bill. *Eaarth: Making a Life on a Tough New Planet* (New York: St. Martin's Griffin) 2011.

Monsma, David and Timothy Olson "Muddling Through Counterfactual Materiality and Divergent Disclosure: The Necessary Search for a Duty to Disclose Material Non-Financial Information" *Stanford Environmental Law Journal* Vol. 26 January 2007.

National Research Council *Sustainability and the U.S. Environmental Protection Agency* (Washington, DC: National Academy Press) 2011.

Organization for Economic Co-operation and Development *Environmental Strategy for the First Decade of the Twenty-First Century* 2001.

Robeco and Booz & Co. *Responsible Investing: a Paradigm Shift, From Niche to Mainstream*. 2009.

SAS No. 107 "Audit Risk and Materiality in Conducting an Audit" AU§312.60

Securities and Exchange Commission Staff Accounting Bulletin: No. 99—Materiality. 17 CFR Part 211. August 12, 1999.

Skidelsky, Robert. *Keynes: The Return of the Master*. (New York: Public Affairs) 2009,

- Stock Exchange of Hong Kong. *Consultation Paper: Environmental, Social and Governance Reporting Guide*. December 2011.
- Story, Louise and Graham Bowley "Market Swings Are Becoming New Standard" *New York Times* September 12, 2011.
- Lynn Stout, *The Shareholder Value Myth: How Putting Shareholders First Harms Investors, Corporations, and the Public* (San Francisco: Berrett-Koehler Publishers, Inc.) 2012
- Strauss, Mark "Looking Back on *The Limits to Growth*: Forty years after the Release of the Groundbreaking Study, Were the Concerns about Overpopulation and the Environment Correct?" *Smithsonian Magazine* April 2012.
- Sustainable Stock Exchanges Initiative *Sustainable Stock Exchanges: A Report on Progress* March 2012.
- Syntao "SASAC: All Central Enterprises will release CSR reports in 2012. April 1, 2011.
- The South African Institute of Chartered Accountants. *Summary of Report on Governance for South Africa 2009 (King III)*.
- U.S. Social Investment Forum (SIF). 2008. 2007 report on socially responsible investing trends in US—executive summary. Washington, DC: US Social Investment Forum.
- Unicredit, *Equity Research: Environmental, Social and Governance Research—The Halo's Creed*. 2011.
- United Kingdom Financial Reporting Council *Cutting Clutter: Combating Clutter in Annual Reports* 2011.
- United Nations Conference on Trade and Development (UNCTAD). *Corporate Governance Disclosure in Emerging Markets: Statistical Analysis of Legal Requirements and Corporate Practices* (Geneva: United Nations) 2011.
- United Nations Global Compact. *A New Era of Sustainability: UN Global Compact-Accenture CEO Study 2010* (New York: United Nations Global Compact) 2010.
- Waddock, Sandra and Malcolm McIntosh *SEE Change: Making the Transition to a Sustainable Enterprise Economy* (Sheffield, United Kingdom: Greenleaf Publishing Limited) 2011.
- Welsh, Heidi and Michael Passoff *Proxy Preview: 2012* (Oakland, California: As You Sow) 2012.

Westbrook, Amy Deem "Sunlight on Iran: How Reductive Standards of Materiality Excuse Incomplete Disclosure under Securities Law" *Hastings Business Law Journal* Vol. 7 2007.

Wheelan, Hugh. "Singapore Exchange to Survey 100 Largest Companies on ESG reporting" *Responsible Investor* website, March 29, 2012.

Whooley, Yannick Quaknine, Carole Crozat *SRI: Beyond Integration* (Paris: Société Générale) 2011.

Williams, Cynthia A. "The Securities and Exchange Commission and Corporate Social Transparency" *Harvard Law Review* 1999. Vol. 112.

World Commission on Environment and Development, *Our Common Future* (New York: Oxford University Press) 1987.

Zadek, Simon and Mira Merma *Redefining Materiality: Practice and Public Policy for Effective Corporate Reporting* (London: Accountability) 2003.