

Market Interest in Nonfinancial Information

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Market interest in nonfinancial information, including data produced by the Carbon Disclosure Project (CDP), is growing. Using data from Bloomberg, we have analyzed this interest from a variety of different perspectives. And our analysis provides a number of interesting insights:

First, there is a large and growing market interest in the level of a company's degree of transparency about its Environmental, Social, and Governance (ESG) performance and policies, as shown in the Disclosure scores calculated by Bloomberg. Besides reflecting increased investor concerns about corporate social responsibility, this high level of interest in ESG disclosure scores also suggests the growing use by investors of ESG disclosure quality as a proxy for management quality.¹

Second, at the aggregate market level, interest in Environmental and Governance information is greater than interest in Social information. Stronger interest in environmental than social data could be attributed to the fact that environmental implications are easier to quantify and integrate into valuation models. And a large body of literature and research findings on the implications of governance for corporate performance and riskiness could help explain the greater interest in governance data.²

Of the set of environmental metrics, the strongest market interest is shown in greenhouse gas (GHG) emissions and other climate change data, notably CO₂ emissions. But this is not the case for the U.S. market, where there is considerable skepticism about the potential effects of climate change.³ For the set of governance metrics, market interest is concentrated on board composition and board activity data. The market interest in these data in the U.S. is even stronger, consistent with the market's placing a high importance on governance characteristics.

We also analyze market interest by asset class, considering equity investors and fixed income investors. Equity investors have shown more interest in nonfinancial information than fixed income investors. Equity investors place more emphasis on ESG disclosure and GHG emissions data. In contrast, fixed income investors place more weight on governance data.

A potential explanation for this difference in emphasis is that equity investors care not only about downside risk, as fixed income investors do, but also about the upside potential of the business. One of the primary uses of governance metrics is to judge the risk of extreme negative events that could lead a firm to default in the future. By contrast, transparency about a company's ESG performance and policies is likely to be used by equity analysts and investors as a proxy for management quality and the potential for management to grow the value of the business. Similarly, GHG emissions represent a risk exposure to a company, including the potential for regulation or taxation of emissions that will affect equity prices more than bond prices.

Finally, we analyze market interest by type of investment firm. We find that sell-side firms (broker-dealers) are interested primarily in GHG emissions. Combined with recent evidence that sell-side analysts issue more optimistic recommendations for companies with higher sustainability scores,⁴ this finding suggests that analysts take account of the financial implications of GHG emissions in their investment recommendations. In contrast, buy-side firms (hedge funds, insurance firms, pension funds, and money managers) are most interested in ESG disclosure data. One reason for this difference could be that GHG emissions are easier to quantify and integrate into the valuation models and earnings forecasts that sell-side analysts rely on when forming their investment recommendations. Portfolio managers might use ESG transparency as an additional signal of how "investable"

1. See Goldman Sachs, "Challenges in ESG Disclosure and Consistency," October 2009.

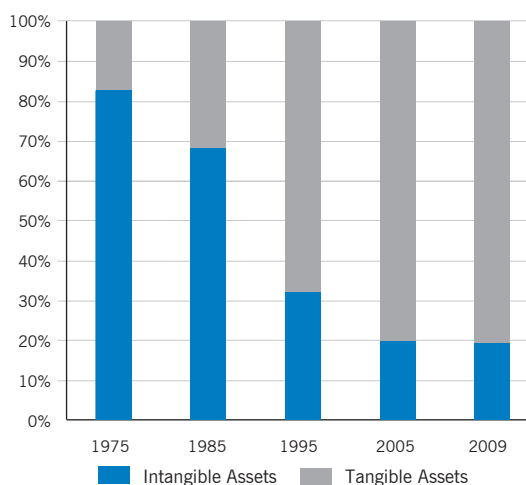
2. See Marco Becht, Patrick Bolton and Ailsa Roell, 2003, "Corporate governance and control," in G.M. Constantinides & M. Harris & R. M. Stulz (ed.), *Handbook of the Economics of Finance*, edition 1, volume 1, chapter 1, pages 1-109 Elsevier. See also a report published by the Organization for Economic Development and Cooperation (OECD) in 2004 that identified 45 current and predecessor governance codes and principles in 29 different countries. This finding did not include specific principles such as those of investment funds. Organization for Economic Development and Cooperation. *Corporate Governance: A Survey of OECD Countries*, 2004. <http://www.oecd.org/dataoecd/58/27/21755678.pdf>, accessed September 2011. In addition, a 2009 OECD

report included citations to 43 research papers and other governance literature. Organization for Economic Development and Cooperation. *Corporate Governance and the Financial Crisis: Keys Findings and Main Messages*, June 2009. <http://www.oecd.org/dataoecd/3/10/43056196.pdf>, accessed September 2011.

3. The World Bank. *Public attitudes toward climate change: findings from a multi-country poll*, December 3, 2009. <http://siteresources.worldbank.org/INTWDR2010/Resources/Background-report.pdf>, accessed September 2011.

4. See Ioannou, Ioannis, and George Serafeim, 2010, "The Impact of Corporate Social Responsibility on Investment Recommendations," Best Paper Proceedings of the Academy of Management, Annual Meeting.

Figure 1 **Components of S&P 500 Market Value**



a firm is, without necessarily formally integrating the valuation implications of ESG transparency.

In the pages that follow, we start by reviewing the growth of interest in ESG information by both companies and investors. Next we discuss the top 20 nonfinancial metrics for both the global and U.S. markets, followed by the most heavily accessed metrics for each of the four categories: Environmental, CDP, Social, and Governance. Third and last, we analyze how market interest in our data set varies with differences in asset class and firm type.

Growing Interest in Nonfinancial Information

During the past two decades, there have been many ideas for improving business reporting, and nearly all of them focus on the importance of companies providing more nonfinancial information. One reason for the growth in disclosure of nonfinancial information is that the percentage of an entity's market value that can be attributed to tangible assets has diminished from about 80% in 1975 to less than 20% in 2009 (see Table 1).⁵ A 2003 Institute of Chartered Accountants

Dow Chemical Company

The Dow Chemical Company is a multinational corporation headquartered in the United States. In 2010, Dow had annual sales of \$53.7 billion and employed approximately 50,000 people worldwide. The Company's more than 5,000 products are manufactured at 188 sites in 35 countries across the globe.¹

Dow describes itself as an organization that connects chemistry and innovation with the principles of sustainability² to help address many of the world's most challenging problems such as the need for clean water, renewable energy generation and conservation, and increasing agricultural productivity.

Dow used the Global Reporting Initiative³ G3 Guidelines⁴ as the framework for their *2010 Global Reporting Initiative Report: The Annual Sustainability Report*. The G3 Guidelines comprise five major sections.

1. Strategy and Analysis. This should provide a high-level overview of the organization's relationship to sustainability in order to provide context for the remainder of the report.

2. Organization Profile. The G3 Guidelines require a description of the business and its brands, services, products, and markets.

3. Report Parameters. The section should explain the process for defining report content, including materiality, prioritizing topics within the report, and assurance.

4. Governance, Commitments, and Engagement. This section includes disclosure of the governance structure and compensation policies.

5. Management Approach and Performance Indicators. This section is organized by economic, environmental, and social categories. Social Indicators include specific disclosures on Labor, Human Rights, Society, and Product Responsibility. The G3 Guidelines have seventy-nine specific performance indicators.

The following table provides a small sample of Dow's disclosure related to just a few of the G3 economic, environmental, and social performance indicators.

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1. The Dow Chemical Company. Our Company, <http://www.dow.com/about/>, accessed October 2011.

2. The Dow Chemical Company. Sustainability, <http://www.dow.com/sustainability/goals/index.htm>, accessed October 2011.

3. Global Reporting Initiative, Home, <http://www.globalreporting.org/Home>, accessed October 2011.

4. Global Reporting Initiative, Reporting Framework, G3 Guidelines, <http://www.globalreporting.org/ReportingFramework/G3Guidelines/>, accessed October 2011.

5. Ocean Tomo, "Intellectual Capital Equity®," <http://www.oceantomo.com/about/intellectualcapitalequity>, accessed September, 2011.

GRI G3 Indicator ¹	Dow Disclosure ²
EC2 Financial implications and other risks and opportunities due to climate change.	Since 1990... the Company's energy efficiency efforts have prevented more than 95 million metric tons of carbon dioxide from entering the atmosphere and have contributed cost savings of \$9.4 billion.
EC7 Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.	In 2010, we hired 4,119 people around the world. Ninety-one percent were local (from the country in which they were hired). Areas with a significant growth emphasis accomplish a very high percentage of hires from within the respective country: China (97 percent hired have a Chinese citizenship), Korea (97 percent) and India (90 percent). The majority (approximately 60 percent) of senior management hiring in 2010 was in-country. This percentage is lower than in 2009, not due to a change in strategy, but due to changing labor markets and a greater number of hires.
EN3 Direct energy consumption by primary source.	The direct energy consumed by the Company to produce product in 2010 was 403 trillion Btu, or 426 million gigajoules. Approximately 62 percent of this direct energy was generated from purchased fuel gas and 37 percent was fuel from feedstock.
EN8 Total water withdrawal by source.	Water intake is from all water sources including seawater and includes water for cooling purposes. Withdrawal in 2010 is 6 percent less than in 2009.
EN16 Total direct and indirect greenhouse gas emissions by weight.	One of the 2015 Sustainability Goal metrics is to reduce the intensity of greenhouse gas emissions per unit of production. During 2010, Dow's GHG emissions were 0.66 metric tons per metric ton of production, about a 5 percent increase from base year 2005. Dow's goal is to reduce GHG intensity 2.5 percent per year from 2005 to 2015. Kyoto GHG intensity is the sum of CO2 equivalent direct and indirect emissions of the "Kyoto" family of greenhouse gases divided by unit of production.
EN19 Emissions of ozone-depleting substances by weight.	Between 1994 and 2005, Dow has reduced ozone-depleting substances by approximately 73 percent. Ozone-depleting emissions were reduced an additional 83 percent in 2010 from 2009 levels due to reformulation in the Dow Building Solutions business.
LA4 Percentage of employees covered by collective bargaining agreements.	7,105 employees (14 percent) in Dow's workforce are covered by collective bargaining agreements.
HR7 Operations identified as having significant risk for incidents of forced or compulsory labor and measures to contribute to the elimination of forced or compulsory labor.	Dow's position on forced or compulsory labor is included in our Labor Policy in our Code of Business Conduct. (See HR5 for Labor Policy.) We have identified no operations with a significant risk for forced or compulsory labor in either operations or based on geographies with operations that might be more inclined to be at risk.
SO4 Actions taken in response to incidents of corruption.	<p>A review of the complaints and completed investigations in 2010 revealed that:</p> <ul style="list-style-type: none"> • No Dow employees were terminated for corruption-related behavior in 2010. • No Dow employees were formally disciplined for corruption-related behavior in 2010. <p>For the purposes of this Section SO4, Dow is defining "corruption" as any form of bribery involving private parties or government officials.</p>
PR2 Total number of incidents of noncompliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcome.	This indicator requests the number of noncompliance events identified for products that are ready for use and therefore subject to regulations concerning health and safety. A review of Dow's compliance tracking mechanism did not reveal a noncompliance incident during the 2010 period for a product ready for use, in use or in disposal.

1. The G3 Guidelines use the following abbreviations: "EC"=Economic, "EN"=Environmental, "LA"=Labor Practices and Decent Work, "HR"=Human Rights, "SO"=Society, and "PR"=Product Responsibility. <http://www.globalreporting.org/NR/rdonlyres/D8B503A9-070C-43DB-AD0F-5C4ACB1EBF39/0/G31Ref-Sheet.pdf>, accessed October 2011.

2. The Dow Chemical Company, Annual Sustainability report, <http://www.dow.com/sustainability/pbreports/>, accessed October 2010.

Table 2 **Assets under Management by Socially Responsible Investment Funds**³¹

	2008 (in billions)	2010 (in billions)
United States	€ 1,917	€ 2,141
Europe	€ 2,665	€ 4,986
All others	€ 381	€ 467
Total	€ 4,963	€ 7,594

of England and Wales white paper analyzed 11 initiatives to reform reporting and reached the following conclusion: “None of these models, whatever their merits, has so far succeeded in commanding general support.”⁶

But if no framework for nonfinancial reporting has risen to the level of International Financial Reporting Standards (IFRS) or U.S. Generally Accepted Accounting Standards (GAAP), an increasing number of companies have been experimenting with more effective disclosure of nonfinancial information. According to CorporateRegister.com, a data repository with over 35,000 reports from 8,220 different companies in 168 countries, almost 5,400 reports containing sustainability and other nonfinancial information were published in 2010.⁷

The Global Reporting Initiative’s (GRI) *Sustainability Reporting Guidelines*, better known as “G3,” may be the most widely used framework for nonfinancial information. G3 provides guidance on reporting on an entity’s economic, environmental, and social performance. The guidelines are designed for use by organizations regardless of size, sector, or location. In 2000, fewer than 50 companies prepared reports using the GRI Guidelines. That number grew to 376 in 2005, and over 1,860 companies used the G3 Guidelines for their sustainability reports in 2010.⁸ (For a good example of an organization whose disclosures follow the G3 Guidelines, see the insert on Dow Chemical Company.)

In addition to voluntary nonfinancial reporting by companies, other initiatives have been launched to push the development of more rigorous and systematic reporting of nonfinancial information.⁹ For example, South Africa has mandated “integrated reporting”—specifically, a single report that combines information on the company’s financial perfor-

mance with information on its nonfinancial performance.¹⁰ In 2010, the Johannesburg Stock Exchange (JSE) codified the King III recommendations by amending its listing rules to require approximately 450 listed companies either to produce an integrated report in place of their annual financial and sustainability reports or to explain why they are not doing so.

Another example is the United Nations Principles for Responsible Investment’s (UNPRI) Sustainable Stock Exchange Initiative.¹¹ This initiative is aimed at exploring how exchanges, investors, regulators, and companies can work together to improve disclosure of ESG performance and encourage long-term approaches to investment. Emerging market exchanges are leading the way in terms of implementing sustainability disclosure and other measures to enhance corporate sustainability reporting of listed companies. For example, exchanges in Brazil, China, Egypt, India, Indonesia, Malaysia, and South Africa have all issued ESG disclosure rules in recent years.¹²

In January 2011, a coalition of investors wrote to the CEOs of 30 stock exchanges to demand that sustainability reporting be embedded within listing rules and that listed companies put a forward-looking sustainability strategy to vote at their annual general meeting. The letter also sought opinions on, among other things, how companies should be integrating sustainability into long-term strategic decision-making and encouraging companies to undertake integrated reporting.¹³

Development of Frameworks for Reporting Nonfinancial Information

One barrier to widespread acceptance and use of nonfinancial information by investors and other stakeholders is the lack of a generally accepted information framework and reporting standards. Standards would bring consistency to reporting and permit comparison of company performance, at least within sectors. In addition, a standard would provide a benchmark against which reports could be assessed and assurance could be provided.

Since 2008, at least 18 organizations have issued frameworks and guidance for reporting nonfinancial information.¹⁴ This proliferation of guidance raises another issue. This number of frameworks creates a perception of “competing frameworks” and causes confusion in the marketplace about

6. Institute of Chartered Accountants in England and Wales. *Information for Better Markets: New Reporting Models for Business*, November 2003.

7. CorporateRegister.com. <http://www.corporateregister.com/stats/>, accessed September 2011. The database is available on a subscription only basis.

8. Global Reporting Initiative. <http://www.globalreporting.org/ReportServices/GRIReportsList/>, accessed September 2011.

9. Ioannou and Serafeim, 2011.

10. See Eccles and Krzus, 2009; and Institute of Directors South Africa. *King Report on Governance for South Africa 2009*. <http://african.ipapercms.dk/IOD/KINGIII/kingii-report/>, accessed September 2011.

11. UN Principles for Responsible Investment Sustainable Stock Exchanges, <http://www.unpri.org/sustainablestockexchanges/>, accessed September 2011.

12. UN Principles for Responsible Investment Sustainable Stock Exchanges. *Sustainable Stock Exchanges: Real Obstacles, Real Opportunities*. http://www.responsible-research.com/Responsible_Research_Sustainable_Stock_Exchanges_2010.pdf, accessed September 2011.

13. UN Principles for Responsible Investment Sustainable Stock Exchanges. <http://www.unpri.org/files/SSE%20Letters%20to%20exchanges%20-%20public%20version.pdf>, accessed September 2011.

14. Accounting for Sustainability, *Connected Reporting*; Alliance for Water Stewardship, AWS Standards; Australian Stock Exchange, Listing Rule 4.10.17; Buenos Aires City Council, Law 2598; Bursa Malaysia, Bursa Malaysia CSR Framework; Canadian Securities Administrators, Staff Notice 51-333 *Environmental Reporting Guidance*; Canadian Securities Administrators, National Instrument 51-102 *Continuous Disclosure Obligations*; China State-Owned Assets Supervision and Administration Commission, Directive; Climate Disclosure Standards Board, The CDSB Reporting Framework; Danish Commerce and Companies Agency, Parliamentary law; DVFA Society of Investment Professionals in Germany, KPIs for ESG Issues, Version 3.0; European Union, Business Review – Modernization Directive (4th and 7th Directives); Extractive Industry Transparency Initiative, EITI Principles and Criteria; France, Grenelle 2; Germany, German Sustainability Code; Global Reporting Initiative, G3 Guidelines; International Accounting Standards Board, IFRS Practice Statement *Management* >>

what framework a company should use. One initiative that might lead to convergence in these frameworks, similar to the convergence taking place between IFRS and U.S. GAAP, is the International Integrated Reporting Committee (“IIRC”). This diverse global organization includes “leaders from the corporate, investment, accounting, securities, regulatory, academic and standard-setting sectors as well as civil society.”¹⁵

Growing Market Interest in Nonfinancial Information

One force driving investors’ increasing interest in nonfinancial information is the growth in assets under management by socially responsible investment (SRI) funds, which make nonfinancial information a key component of their investment decisions. As reported in Table 2, between 2008 and September 2010, investment firms that identify themselves as “socially responsible investors” have increased their assets under management by almost 35%.

Another indicator of market interest in nonfinancial information is the widespread support for The United Nations-backed Principles for Responsible Investment Initiative. The PRI is a network of international investors working together to put the six Principles for Responsible Investment into practice. The Principles reflect the view that environmental, social, and governance issues can affect the performance of investment portfolios and therefore must be given appropriate consideration by investors intent on fulfilling their fiduciary duty.

The Principles provide a voluntary framework by which all investors can incorporate ESG issues into their decision-making and ownership practices and so better align their objectives with those of society at large. As of September 6, 2011, there were 941 signatories to the Principles, a group that included 239 asset owners, 535 investment managers, and 167 professional service partners.¹⁶ As of April 2011, 850 of these signatories had total assets under management of roughly \$25 trillion.¹⁷ To provide some context for that number, according to the World Federation of Exchanges, an association of 52 regulated exchanges around the world, global market capitalization at July 2011 was approximately \$56 trillion.¹⁸

Private equity investors have also shown a growing interest in nonfinancial information, specifically sustainability

information. In 2010, private equity firms invested over \$250 billion in companies around the world, with \$152.5 billion invested in North American companies and \$68.3 billion in European companies.¹⁹ At the end of 2010, the global private equity industry had nearly \$2.4 trillion in funds under management.²⁰ In February 2009, the Private Equity Council, today known as Private Equity Growth Capital Council (PEGCC), published *Guidelines for Responsible Investment*,²¹ which lists a set of principles that its members have agreed to apply prior to investing in companies and during their period of ownership. The guidelines cover environmental, health, safety, labor, governance, and social issues—and PEGCC members have committed to working with portfolio companies on these sustainability issues, with the goal of improving financial and nonfinancial performance. In order to do this, they need and are getting more nonfinancial information from their portfolio companies.

Clearly, reporting of nonfinancial information by companies is increasing and the market is increasingly interested in this information. The question is: “What specific types of nonfinancial information are being used by investors?”

Nonfinancial Information of Greatest Interest

Our data are based on the nonfinancial metrics included in Bloomberg’s database.²² We used data based on three bimonthly periods starting with November 2010 and ending with April 2011. The data take the form of the almost 44 million total hits to the 247 nonfinancial metrics in the Bloomberg database, where a “hit” is defined as every time a user accesses one of the data points. We have no way of knowing how the information was used, such as whether the user just glanced at it or if he or she incorporated it in a financial model in some formal way. However, the fact that a professional investor takes the time and effort to search for a data item is a signal to us that she finds the data item of interest.

The 247 nonfinancial metrics in the database are classified into five groups: (1) Carbon Disclosure Project (CDP) data (encompassing 102 metrics, with a total number of about 4.4 million hits for an average of about 43,000 per metric), (2) environmental metrics (121, with a total of 20.4 million hits and an average per metric of almost 170,000), (3) social metrics

Commentary; International Integrated Reporting Committee, Discussion Paper *Towards Integrated Reporting: Communicating Value in the 21st Century*; International Organization for Standardization, ISO 14000; International Organization for Standardization, ISO 26000; Johannesburg Stock Exchange, Listing requirements; Organization for Economic Cooperation and Development, Reporting Guidelines on Multinational Enterprises; Singapore Stock Exchange, *Policy Statement on Sustainability Reporting*; Sweden, Parliamentary law; U.S. Securities and Exchange Commission, Interpretive release – *Commission Guidance Regarding Disclosure Related to Climate Change*; U.K. Accounting Standards Board, *Reporting Statement: Operating and Financial Review*; United Nations, Global Compact; United Nations, Principles for Responsible Investment; Water Footprint Network, Water Footprint Assessment Manual. This list was adapted and updated from Lydenberg, Steve and Katie Grace. *Innovations in Social and Environmental Disclosure Outside the United States*, November 2008. http://www.domini.com/common/pdf/Innovations_in_Disclosure.pdf, accessed September 2011.

15. “The IIRC, Mission Statement,” International Integrated Reporting Committee, http://www.theiirc.org/the_iirc/, accessed September 2011.

16. Principles for Responsible Investment. <http://www.unpri.org/signatories/index.php?country=USA>, accessed September 2011.

17. UN Principles for Responsible Investment. <http://www.unpri.org/about/>, accessed September 2011.

18. World Federation of Exchanges. <http://www.world-exchanges.org/statistics/key-market-figures>, accessed, September 2011.

19. Private Equity Growth Capital Council. *Geographic Dispersion of Private Equity Investment in 2010*, <http://www.pegcc.org/wordpress/wp-content/uploads/2010-Geographic-Dispersion-v6.pdf>, accessed September 2011.

20. The City UK. *Private Equity, August 2011*, <https://www.thecityuk.com/assets/Uploads/PrivateEquity2011.pdf>, accessed September 2011.

21. Private Equity Growth Capital Council. *Guidelines for Responsible Investment*, http://www.pegcc.org/wordpress/wp-content/uploads/PEC_Guidelines-for-Responsible-Investment.pdf, accessed September 2011.

22. Which was kindly made available to us. In particular, we would like to thank Curtis Ravenel.

Table 3 Global Market Interest

Variable	Category	Hits
ESG Disclosure Score	DISCLOSURE	2,395,230
GHG Scope 1	ENVIRONMENTAL	1,520,488
Governance Disclosure Score	DISCLOSURE	1,337,078
Environmental Disclosure Score	DISCLOSURE	1,238,417
GHG Scope 2	ENVIRONMENTAL	1,067,085
Social Disclosure Score	DISCLOSURE	978,541
Total GHG Emissions	ENVIRONMENTAL	920,170
% Independent Directors	GOVERNANCE	899,148
GHG Scope 3	ENVIRONMENTAL	890,932
Direct CO ₂ Emissions	ENVIRONMENTAL	781,569
Size of the Board	GOVERNANCE	735,853
Carbon Disclosure Leadership Index Score	CDP	732,102
Scope 1 Activity Emissions Globally	CDP	729,630
Number of Independent Directors	GOVERNANCE	651,913
Verification Type	ENVIRONMENTAL	645,330
UN Global Compact Signatory	ENVIRONMENTAL	606,998
Total CO ₂ Emissions	ENVIRONMENTAL	583,403
Board Meeting Attendance %	GOVERNANCE	540,427
Number of Board Meetings for the Year	GOVERNANCE	519,099
CEO Duality	GOVERNANCE	508,482

(35, with a total of 6.6 million hits and an average of 188,000), (4) governance metrics (17, with a total of 6.5 million and an average of 385,000), and (5) disclosure scores (4, with a total of 5.95 million and a per metric average of almost 1.5 million).

Of the five categories, the one of greatest interest to the market on an average hits per metric (AHPM) basis is the disclosure scores. This category is based on calculations by Bloomberg about the degree of transparency of a company's reporting measured in terms of how many of the possible metrics a company is reporting. The four metrics that make up this composite disclosure score are the Environmental Disclosure Score (degree of transparency on environmental metrics), Social Disclosure Score (degree of transparency on social metrics), Governance Disclosure Score (degree of transparency on governance metrics), and ESG Disclosure Score (overall degree of transparency across all environmental, social, and governance metrics). The AHPM for the disclosure category, as noted, was almost 1.5 million, nearly four times as many as the second highest AHPM category of governance metrics. The social and governance categories are similar in terms of AHPM, at 188,089 and 168,292, respectively. Ranked last is CDP at 42,850 AHPM.

Data from the U.S. market show broadly similar results, although with some important differences. The rank order of the five categories is the same, with disclosure first (AHPM of 92,621) and CDP last (AHPM of 2,906). Governance

is ranked second with AHPM of 85,438, not far behind disclosure, in contrast to the global data where disclosure ranks much higher than governance. As with the global data, environmental and social have similar AHPMs.

These data show that investors are very interested in knowing a company's degree of transparency in disclosing ESG performance and policies. While these disclosure scores are not specific performance metrics, they indicate the degree to which a company is using and reporting on nonfinancial information. Our hypothesis is that, *ceteris paribus*, the market perceives less risk in investing in more transparent companies because there is less uncertainty about their ability to deliver on expected financial performance. This is due to using effective ESG management to capture revenue-generating opportunities, achieve cost savings, and minimize the downside of failures, fines, and lawsuits.

Table 3 shows the top 20 metrics of greatest interest to the market on a global basis. The metric of greatest interest is "ESG Disclosure Score," which received almost 2.4 million hits, significantly more than the second-ranked metric of GHG Scope 1 (1.5 million hits). Governance Disclosure Score (1.3 million), Environmental Disclosure Score (1.2 million), and Social Disclosure Score (980,000) are ranked third, fourth, and sixth, respectively. Eight of the top 20 metrics are environmental and they fall into two categories. The first is emissions (GHG Scope 1, GHG Scope 2, Total GHG Emissions, GHG

Table 4 U.S. Market Interest

Variable	Category	Hits
ESG Disclosure Score	DISCLOSURE	265,677
Number of Independent Directors	GOVERNANCE	257,750
Size of the Board	GOVERNANCE	249,250
Number of Board Meetings for the Year	GOVERNANCE	117,420
% Independent Directors	GOVERNANCE	112,059
Total CO ₂ Emissions	ENVIRONMENTAL	109,883
Total Waste	ENVIRONMENTAL	109,028
Number of Employees - CSR	SOCIAL	97,862
Community Spending	SOCIAL	97,300
CEO Duality	GOVERNANCE	96,230
Total Energy Consumption	ENVIRONMENTAL	95,404
Board Meeting Attendance %	GOVERNANCE	93,371
Environmental Fines	ENVIRONMENTAL	92,168
Number of Environmental Fines	ENVIRONMENTAL	88,631
CO ₂ Intensity	ENVIRONMENTAL	87,999
% Women in Management	SOCIAL	83,532
% Women on Board	GOVERNANCE	82,901
Energy Efficiency Policy	ENVIRONMENTAL	80,215
Emissions Reduction Initiatives	ENVIRONMENTAL	79,127
Fair Remuneration Policy	SOCIAL	78,499

Scope 3, Direct CO₂ Emissions, and Total CO₂ Emissions) and the second is the company's policy on carbon (Verification Type²³ and UN Global Compact Signatory). Carbon clearly dominates market interest in the environmental dimension, as compared to other topics such as water, waste, and energy consumption—although each of these can involve carbon as well. There are five governance metrics in the top 20 (percentage of Independent Directors, Board Size, Board Meeting Attendance, Number of Board Meetings for the year, and CEO chairman quality). Since there are only a total of 17 governance metrics, this is consistent with “G” being rated higher than “E” and “S.” Even though the AHPM for social metrics is about the same as for environmental ones, not a single social metric appears in the top 20, which is consistent with Social Disclosure being the lowest-ranked of the four disclosure scores. Two CDP metrics appear in the top 20: Carbon Disclosure Leadership Index Score and Scope 1 Activity Emissions Globally. The former is analogous to the four disclosure metrics and the latter is consistent with investor interest in carbon metrics.

Table 4 shows the top 20 metrics of greatest interest to the U.S. market; there are some significant differences with the global results, with only eight appearing on both lists (ESG Disclosure Score, Number of Independent Directors,

Size of the Board, Number of Board Meetings for the Year, % Independent Directors, Total CO₂ Emissions, CEO Duality, and Board Meeting Attendance %). Only one of the Disclosure Scores, ESG Disclosure Score, appears on the U.S. list, indicating that the market is primarily interested in a company's overall degree of transparency and not in terms of the specific dimensions of ESG. As with the global data, eight environmental metrics appear, but only two are about carbon *per se*: Total CO₂ Emissions and CO₂ Intensity. The other six are about the company's environmental policies (Energy Efficiency Policy and Emissions Reduction Initiatives), costs from violating environmental regulations (Environmental Fines and Number of Environmental Fines), waste (Total Waste), and energy (Energy Consumption). It appears that the U.S. market is more interested in environmental metrics that have clear financial implications since there is no price on carbon.

The same five governance metrics that appear on the global list are important to the U.S. market but they are all ranked higher elsewhere. The U.S. market also differs from the global one in its higher level of interest in social metrics, of which four appear in the top 20: Number of Employees-CSR,²⁴ Community Spending, % Women in Management, and Fair Remuneration Policy. U.S. interest in information

23. Verification Type Indicates whether the company's ESG policies were subject to an independent assessment for the reporting period.

24. This is the total number of employees in the company at the end of the reporting period as reported in the company's CSR report, if it has one, or taken from its annual report if it does not.

Table 5 **Global and U.S. Market Interest in CDP Data**

Global	Hits	U.S.	Hits
Carbon Disclosure Leadership Index Score	732,102	Carbon Disclosure Leadership Index Score	26,646
Scope 1 Activity Emissions Globally	729,630	CDP Regulatory Risk Exposure	23,083
Scope 2 Activity Emissions Globally	465,402	CDP Physical Opportunities Present	22,999
Co Uses GHG/other Methodology	170,936	CDP Physical Risk Exposure	22,999
CDP Regulatory Risk Exposure	135,305	CDP Regulatory Opportunities Present	22,996
CDP Physical Opportunities Present	134,785	Self-generated Renewable Energy	18,869
CDP Physical Risk Exposure	133,869	Energy Generated from Stationary Sources	18,694
CDP Regulatory Opportunities Present	126,779	Overall Strategy for Comp in Any Emissions Prog	9,911
CDP Other Risk Exposure	104,478	CDP Reported CH4	7,884
CDP Other Opportunities Present	104,184	CDP Reported N2O	7,884
Carbon Emissions Disclosure Indicator	88,452	CDP Reported HFCs	7,875
Emissions and/or Energy Reduction Target	81,096	CDP Reported SF6	7,860
Committee Has Responsibility for Climate Change	55,585	CDP Reported PFC	7,846
CDP Reported CH4	31,242	Emissions Avoided via Use of Goods and Services	7,357
CDP Reported SF6	31,126	Emissions for Facilities covered in the EU ETS	7,311
CDP Reported N2O	31,119	Emissions from Biologically Sequestered Carbon	7,302
Emissions Avoided via Use of Goods and Services	31,118	Emissions and/or Energy Reduction Plan in Place	3,479
CDP Reported HFCs	31,097	Activity Related Emissions Intensity	3,461
CDP Reported PFC	30,710	Emissions from Employee Business Travel	3,457
Self-generated Renewable Energy	28,751	Electricity from Renewables	3,448

on social performance replaces global interest in Disclosure Scores and CDP information.

Nonfinancial Information of Greatest Interest by Category

We also analyzed the top 20 metrics for environmental, social, and CDP and all of the 17 governance metrics. As with the overall list, there are similarities between the global and US markets, with the degree of differences varying by category. The greatest differences are in the environmental category, followed by CDP. Governance is the category with the most similarities, followed by social.

Environmental Information

Table 5 shows the top 20 environmental metrics for the global and U.S. markets. For the former, the metrics of most interest are about emissions: GHG Scope 1 (of greatest interest by far), GHG Scope 2, Total GHG Emissions, GHG Scope 3, and Direct CO₂ emissions. This is a reflection of the greater concern about climate change outside the U.S., particularly in Europe. The top five interests of the U.S. market are more varied. In addition to Total CO₂ Emissions, it has also shown strong interest in Total Waste, Total Energy Consumption, Environmental Fines, and Number of Environmental Fines, reflecting the pattern discussed above of being more concerned about environmental issues whose direct economic impact is

more easily calculated. Ten of the top 20 metrics are common to both groups, and they fall into the categories of emissions, policies, energy, waste, and environmental fines. The 10 other metrics of interest to the global market include more information on emissions, policies, water consumption, and new products for helping customers deal with climate change. The other 10 metrics for the U.S. market fall into the categories of waste, manufacturing and supply chain, and environmental rewards and penalties. In terms of the total number of “hits,” the U.S. market has shown as strong an interest in Total Waste as in Total CO₂ Emissions, which are ranked first and second respectively. In contrast, these are ranked eighth and twelfth by the global market, which ranks GHG Scope 1 and GHG Scope 2 first and second. In general, the global market is more focused on emissions and policies, whereas the U.S. market is looking at a broader range of environmental issues and more focused on business management topics, such as products and manufacturing.

CDP Information

Table 6 reports the top 20 CDP metrics for the global and U.S. markets. There are 12 metrics in common to these two groups. Highest ranked for both is the Carbon Disclosure Leadership Score, which makes it to the overall Top 20 list for the global market but not for the U.S. Also common to both groups are a broad range of emissions metrics (e.g., CH₄, N₂O, HFCs, SF₆,

Table 6 **Global and U.S. Market Interest in Environmental Data**

Global	Hits	U.S.	Hits
GHG Scope 1	1,520,488	Total CO ₂ Emissions	109,883
GHG Scope 2	1,067,085	Total Waste	109,028
Total GHG Emissions	920,170	Total Energy Consumption	95,404
GHG Scope 3	890,932	Environmental Fines	92,168
Direct CO ₂ Emissions	781,569	Number of Environmental Fines	88,631
Verification Type	645,330	CO ₂ Intensity	87,999
UN Global Compact Signatory	606,998	Energy Efficiency Policy	80,215
Total CO ₂ Emissions	583,403	Emissions Reduction Initiatives	79,127
Total Energy Consumption	458,246	Green Building Policy	77,280
Total Waste	449,561	Environmental Awards Received	72,579
Environmental Fines	418,969	Investments in Sustainability	72,556
Climate Change Policy	355,335	ISO 14001 Certified Sites	72,400
CO ₂ Intensity	351,164	Waste Recycled	71,654
Waste Reduction Policy	343,554	Hazardous Waste	70,107
Emissions Reduction Initiatives	341,817	CO ₂ Intensity per Sales	70,035
Indirect CO ₂ Emissions	324,926	Total GHG Emissions	67,822
Energy Efficiency Policy	324,390	Environmental Supply Chain Management	62,717
Water Consumption	321,031	Climate Change Policy	59,421
Environmental Quality Management Policy	307,778	Sustainable Packaging	59,280
New Products - Climate Change	299,462	Waste Reduction Policy	59,039

and PFCs). Both groups are also concerned with regulatory and physical issues that cover both risk and opportunity—Regulatory Risk Exposure and Regulatory Opportunities Present, and Physical Opportunities Present and Physical Risk Exposure) issues that cover both risk and opportunity. Consistent with the environmental metrics, the global market has shown a deeper interest in carbon disclosures and policies, such as whether the company has a committee responsible for climate change. The U.S. market is more interested in the relationship between emissions and business activity (e.g., Emissions Avoided via Use of Goods and Services, Emissions for Facilities covered in the EU ETS, Activity Related Emissions Intensity, and Emissions from Employee Business Travel) and sources of energy (e.g., Energy Generated from Stationary Sources and Electricity from Renewables). As we saw in the case of environmental metrics, the global market is more focused on the company's policies and the U.S. market is more focused on economics and business operations.

Social Information

Table 7 reports the top 20 social metrics for the global and U.S. market. Recall that four social metrics made the top 20 overall list for the U.S. and none did for the global list. The total list of 35 social metrics is much shorter than for the environmental (121) and CDP (102) lists, and thus there is less opportunity for variation in the top 20 list. Nevertheless, it is

striking to see that 18 of the 20 metrics are common to both groups and three of the top five (Fair Remuneration Policy, Number of Employees-CSR, and % Women in Management) are common to both groups. Fatalities-Total and % Employees Unionized appear only on the global list and % Minorities in Management and Fatalities-Contractors appear only on the U.S. list. The percentage statistics are a reflection of the much higher degree of unionization outside the U.S. in places like Europe and the more diverse workforce that exists in the U.S. Similarly, the use of contractors is more common in the U.S. and hence the focus on fatalities for this group.

Despite this high level of similarity, there are some important differences. As with the environmental and CDP metrics, there is a pattern of the global market showing more interest in a company's policies and the U.S. market greater interest in a company's business operations. For example, Human Rights Policy, Equal Opportunity Policy, and Health and Safety Policy all rank higher in the global market than in the U.S. market. Similarly, Community Spending, Employee Training Cost, and Actual Cash Flow per Employee all rank higher in the U.S. Nevertheless, there is more similarity in interest in social metrics between the two groups than there is for environmental and CDP metrics.

Governance Information

There are only 17 Governance metrics and these are reported

Table 7 **Global and U.S. Market Interest in Governance Data**

Global	Hits	U.S.	Hits
% Independent Directors	899,148	Number of Independent Directors	257,750
Size of the Board	735,853	Size of the Board	249,250
Number of Independent Directors	651,913	Number of Board Meetings for the Year	117,420
Board Meeting Attendance %	540,427	% Independent Directors	112,059
Number of Board Meetings for the Year	519,099	CEO Duality	96,230
CEO Duality	508,482	Board Meeting Attendance %	93,371
% Women on Board	504,207	% Women on Board	82,901
GRI Criteria Compliance	438,164	Business Ethics Policy	78,315
Business Ethics Policy	405,987	Board Average Age	65,537
Board Average Age	316,748	GRI Criteria Compliance	58,277
Audit Committee Meetings	277,291	Audit Committee Meetings	57,121
Exec Comp Linked to ESG	228,768	Political Donations	44,081
Board Duration	197,785	Political Donations/Profit Before Tax	42,191
Political Donations	113,259	Board Duration	26,878
Political Donations/Profit Before Tax	81,097	Exec Comp Linked to ESG	26,257
Board Age Limit	66,962	Board Age Limit	24,678
BBG Survey Completed	61,884	BBG Survey Completed	20,136

in Table 8. Thus the comparison between the two groups needs to be purely in terms of rank order. Even so, the governance dimension is the one on which there is the greatest degree of consensus and it is quite high. The top six metrics are the same for both groups, as are the bottom two. These findings suggest that principles of good governance are relatively universal and are based on such attributes as number and percentage of independent directors, number of and attendance at board meetings, and whether the role of Chairman and CEO is separate or combined. In contrast, the relative importance of social issues is more context-dependent, such as based on country culture and laws and regulations. This is even more so for environmental issues due to differences in laws and regulations and customer attitudes and buying patterns.

Variation by Asset Class

We analyzed market interest in nonfinancial information for equity vs. fixed income investors. As can be seen in Table 9, both fixed income and equity investors look at a broad range of information. One indicator of this is that the ratio of the number of hits for the highest to the lowest-ranked metric is about five in both cases. This is similar to hedge funds and money managers, where the ratio is six and four, respectively, but in contrast to ratios of 15 for broker-dealers, 17 for pension funds, and 78 for insurance companies.

In comparing these two asset classes, there are more differences than similarities; the two groups share only seven metrics in common (only two in the top 10), with four of these being governance metrics (% Independent Directors, Size of

the Board, Board Meeting Attendance % and CEO Duality). ESG Disclosure Score is at the top of the list for both, indicating the importance they accord to an overall assessment of a company's degree of transparency. Overall transparency is a proxy for the quality of management since more capable executives tend to be more confident about providing more performance information for which they are held accountable. The growing market interest in sustainability means that it is interested in having an overall sense of how well a company is integrating it into its strategy and operations. Total CO₂ Emissions appears on both lists, although much higher for fixed income (ranked fourth) than equity (ranked 17th). Also in common are two disclosure score metrics, one on overall ESG transparency and the other on governance.

Equity investors are more interested in environmental metrics, which represent 10 of their top 20 (as compared to six for fixed income investors). Both are very interested in governance as well, with six metrics for equity and seven for fixed income, four of which they have in common. But fixed income has five social metrics in their top 20 whereas not a single one appears on the list for equity investors.

The intense interest of equity investors in environmental metrics, eight of which are about carbon and other GHG emissions, presumably reflects their concern about the negative effect of economic, regulatory, and legislative forces on equity prices. In addition to a tax on carbon and regulations requiring companies to make capital investments to reduce emissions, other factors include greater weather risk (e.g., hurricanes and tornadoes), which disrupt operations and

Table 8 **Global and U.S. Market Interest in Social Data**

Global	Hits	U.S.	Hits
Fair Remuneration Policy	470,056	Number of Employees - CSR	97,862
Number of Employees - CSR	457,108	Community Spending	97,300
% Women in Management	377,441	% Women in Management	83,532
Human Rights Policy	375,018	Fair Remuneration Policy	78,499
Equal Opportunity Policy	337,508	Employee Training Cost	73,255
Employee Turnover %	333,798	Actual Cash Flow per Employee	68,637
Fatalities - Total	324,744	Employee Turnover %	65,161
Health and Safety Policy	319,579	Employee CSR Training	63,226
Community Spending	312,945	Equal Opportunity Policy	62,445
Employee CSR Training	284,881	Health and Safety Policy	61,132
Training Policy	245,300	Training Policy	60,190
Lost Time Incident Rate	221,128	Human Rights Policy	59,238
Training Spending per Employee	215,694	Community Spending/Profit Before Tax	55,791
Lost Time from Accidents	205,452	Training Spending per Employee	54,866
% Women in Workforce	202,884	Lost Time from Accidents	49,799
Employee Training Cost	192,638	% Minorities in Management	48,032
Community Spending/Profit Before Tax	172,881	Fatalities - Employees	43,261
Actual Cash Flow per Employee	160,045	Fatalities - Contractors	42,833
Fatalities - Employees	152,330	Lost Time Incident Rate	39,611
% Employees Unionized	126,436	% Women in Workforce	32,849

impose additional costs, and generally higher operating costs, as when, for example, energy suppliers pass along costs due to regulation and legislation to their customers. All of these can reduce earnings, both in the short-term and potentially over the long-term. In contrast, climate change will have much less of a direct effect on bond prices since they are determined by the risk that the company will not be able to meet its debt obligations. The effects of climate change are hard to model and will occur over a period of time that is longer than the current maturity of most debt instruments. Thus the environmental issues of concern to fixed income investors have a more immediate effect on cash flows since they are indicators of how efficiently (Total Waste, Total Energy Consumption, CO₂ Intensity) and effectively (Environmental Fines and Waste Recycled) the company is running the business.

Variation by Firm Type

We also analyzed market interest in nonfinancial information by firm type as shown in Table 10. Panel A reports data

25. Scope 1 includes emissions from operations that are owned or controlled by the reporting company. For example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment. Scope 2 emissions are from the generation of purchased or acquired electricity, steam, heating or cooling consumed by the reporting company. For example, use of purchased electricity, steam, heating or cooling. The Greenhouse Gas Protocol Initiative. *Greenhouse Gas Protocol* published by the World Business Council for Sustainable Development and the World Resources Institute, Revision March 2004 for Scopes 1 and 2, http://pdf.wri.org/ghg_protocol_2004.pdf, accessed September 2011.

26. Scope 3 covers all other indirect emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions such as, pro-

duction of purchased products, transportation of purchased products, use of sold products. Scope 3 emissions are hard to measure accurately given the large number of variables. For example, emissions related to employee travel includes factors such as, which legs of the trip to include, the average distance per trip, the number of vehicles per day, the number of passengers per vehicle, the type of vehicles driven, etc. The Greenhouse Gas Protocol Initiative. *Greenhouse Gas Protocol: Corporate Value Chain (Scope 3), Accounting and Reporting Standard* (second draft released November 2, 2010) for Scope 3 published by the World Resources Institute/World Business Council for Sustainable Development <http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-scope-3-standard-draft-november-20101.pdf>, accessed September 2011.

for broker-dealers (sell-side) and money managers (buy-side). These two types are broadly similar in terms of the metrics of interest, although there are some important differences as well. This is not surprising since the broker-dealers are advisors to money managers and thus focused on issues important to their clients. Environmental metrics dominate, with 10 and 13, respectively. Both types of firms care about governance, at six and three, respectively. Social metrics are of little interest to either—zero for broker-dealers and one for money managers—suggesting these are not particularly relevant to their recommendations and investment decisions. An important difference is that disclosure scores are more important to money managers, with ESG disclosure being the top-ranked metric for this category.

The characteristic of broker-dealers that differentiates them from money managers is the intensity of focus on just three metrics: GHG Scope 1, 2,²⁵ and 3.²⁶ The number of hits for each is roughly 665,000, with the fourth-ranked metric, ESG Disclosure Score, receiving only about 90,000 hits (for a

Table 9 **Market Interest by Asset Class**

Equity	Hits	Fixed Income	Hits
ESG Disclosure Score	2,097,700	ESG Disclosure Score	214,591
GHG Scope 1	1,359,862	% Independent Directors	86,641
Governance Disclosure Score	1,269,621	Total Waste	78,366
Environmental Disclosure Score	1,181,854	Total CO ₂ Emissions	68,695
GHG Scope 2	1,042,533	Total Energy Consumption	66,968
Social Disclosure Score	920,616	Number of Board Meetings for the Year	63,578
GHG Scope 3	871,697	Community Spending	63,108
% Independent Directors	755,857	Board Meeting Attendance %	61,832
Total GHG Emissions	720,775	% Women on Board	60,496
Carbon Disclosure Leadership Index Score	683,447	Number of Employees - CSR	56,367
Direct CO ₂ Emissions	626,252	Governance Disclosure Score	54,807
Size of the Board	624,212	CEO Duality	54,723
Verification Type	600,494	Size of the Board	54,307
Scope 1 Activity Emissions Globally	591,031	Business Ethics Policy	54,298
UN Global Compact Signatory	560,061	Fair Remuneration Policy	52,964
Number of Independent Directors	551,236	CO ₂ Intensity	51,881
Total CO ₂ Emissions	493,654	Employee Turnover %	51,573
Scope 2 Activity Emissions Globally	463,851	Environmental Fines	50,531
Board Meeting Attendance %	427,776	Waste Recycled	49,879
CEO Duality	424,538	% Women in Management	48,813

factor of seven) and the lowest-ranked metric, Investments in Sustainability, receiving about 45,000 hits (for a factor of 15). The sell-side clearly believes that greenhouse gas emissions have the largest potential impact on financial results. It is the nonfinancial “bottom line” for them in the same way that earnings are for financial results. Their role of covering many companies means that they look for a few simple metrics that they hope are good predictors of future financial performance. In the case of GHG emissions, high levels represent risks to earning should market and regulatory forces end up pricing those risks in various ways.

In contrast, money managers have a more evenly distributed level of interest with the ratio of the number of hits for the highest-ranked metric (almost 825,000 for the ESG Disclosure Score) to the lowest-ranked metric (218,000 for the Environmental Disclosure Score), a factor of four. For them various measures of GHG emissions are also very important, along with ESG Disclosure Score and Verification Type. But the fact that they have a high level of interest in other types of environmental metrics and some governance metrics shows that they are taking a more holistic view of nonfinancial performance.

Panel B reports data for three different types of asset owners—insurance companies, pension funds, and hedge funds. At a high level, their information interests are similar in terms of the balance between the categories. The four disclosure scores are on the top 20 list for each firm type,

and disclosure dominates the level of interest. Environmental metrics, and in particular GHG emissions, are the second category of interest. A broad difference exists between the firm types in terms of the distribution of their interest across their respective top 20 metrics. The ratio of the top-ranked metric to the bottom-ranked metric, an indicator of the range of information considered in investment decisions, is 78 for insurance firms, 26 for pension funds, and only 6 for hedge funds. This low number for hedge funds suggests that their models incorporate a larger range of nonfinancial information than do insurance firms and pension funds.

Each firm type also has some distinctive characteristics. Insurance firms are similar to broker-dealers in that a few metrics dominate. The ratio of the number of hits between the top-ranked and the 20th-ranked metric is 78. For insurance companies, it is the four disclosure scores, each of which receives around 585,000 hits, with the fifth-ranked metric, % Women on Board, receiving less than 28,871 hits. Insurance companies are experts at taking risk and the investment side tends to have a long-term perspective on their assets. Companies that score low in transparency represent high levels of risk due to the uncertainty about their long-term prospects and the difficulty of evaluating them due to the lack of information. We suspect that disclosure scores are used as an initial screen, with companies ranking low on this metric least likely to be held in their portfolios.

Table 10 **Market Interest by Firm Type**
 Panel A: Broker-dealers and money managers

Broker-Dealers	Hits	Money Managers	Hits
GHG Scope 3	666,034	ESG Disclosure Score	824,666
GHG Scope 1	665,028	GHG Scope 1	759,393
GHG Scope 2	664,688	Total GHG Emissions	748,793
ESG Disclosure Score	89,388	Direct CO ₂ Emissions	748,022
Governance Disclosure Score	84,911	Scope 1 Activity Emissions Globally	688,684
% Independent Directors	71,373	Verification Type	467,051
Social Disclosure Score	67,216	Scope 2 Activity Emissions Globally	424,771
Environmental Disclosure Score	64,426	Total CO ₂ Emissions	407,615
Number of Board Meetings for the Year	63,803	% Independent Directors	339,886
Environmental Fines	53,498	GHG Scope 2	309,935
% Women on Board	53,061	Indirect CO ₂ Emissions	298,732
Number of Environmental Fines	52,060	% Women on Board	280,690
Emissions Reduction Initiatives	49,918	Carbon Disclosure Leadership Index Score	268,522
Size of the Board	48,856	GRI Criteria Compliance	248,454
CEO Duality	48,000	Fair Remuneration Policy	241,360
Energy Efficiency Policy	46,993	Environmental Fines	240,564
Environmental Awards Received	45,140	Governance Disclosure Score	237,449
Business Ethics Policy	45,094	UN Global Compact Signatory	231,816
Greenhouse Gas Intensity per Sales	44,613	Total Waste	225,729
Investments in Sustainability	44,427	Environmental Disclosure Score	218,196

Pension funds have long-term liabilities, the payouts to the individuals whose retirements they are responsible for, and so they invest for the long term as well. For the same reason, transparency is important. The distinctive characteristic of pension funds is their high level of interest in governance. The top-ranked metric is Governance Disclosure Score, closely followed by % Independent Directors and CEO Duality. Pension funds have long been active in engaging with companies to improve their governance to reduce the likelihood of poor decisions by management that will destroy shareholder value.²⁷ More recently, pension funds have shown an interest in whether companies are adopting global frameworks related to sustainability,²⁸ such as the UN Global Compact, and whether or not a company is a signatory to this ranks fourth. Ranked fifth is whether the company is a UN PRI Signatory, a sustainability framework for investors. This is a topic of great importance to the pension fund itself, many of

which are signatories themselves, and thus they look for this in investment firms which are part of their portfolios.

For hedge funds, ESG Disclosure Score is ranked first, although for hedge funds it could be for a different reason than insurance firms and pension funds. Lack of transparency represents a potential opportunity for a hedge fund if it feels this has resulted in an underpriced asset due to market risk aversion from the resulting uncertainty. Hedge funds work hard to gather information that other investors don't have and, as a result, they are generally better at assessing the true risks of an investment. Not surprisingly, they have the smallest ratio of top- to bottom-ranked metric. They are also the only one of the five firm types that has at least one environmental, social, governance, and disclosure metric in their top six, again reflecting their interest in a broad range of information. One other distinctive characteristic of hedge funds is that Total Energy Consumption is highly ranked at

27. Holmstrom, Bengt and Steven N. Kaplan. *The State of U.S. Corporate Governance: What's Right and What's Wrong?* March 19, 2003. <http://research.chicagobooth.edu/economy/research/articles/185.pdf>, accessed September, 2011. The idea of a coordinated international corporate governance movement was initially discussed at a meeting of the Council of Institutional Investors in 1994. The discussion led to the formation of the International Corporate Governance Network. The ICGN was founded in March 1995 in Washington, DC when the first meeting was chaired by Professor William Crist of CalPERS. International Corporate Governance Network. History of the ICGN, <http://www.icgn.org/about/history-of-the-icgn/>, accessed September 2011.

28. The UN Principles for Responsible Investment signatories has grown to over 900 and assets under management now reach US\$ 30 trillion. United Nations Principles for Responsible Investment. *Annual Report of the PRI Initiative 2011*, <http://www.unpri.org>.

http://publications/annual_report2011.pdf, accessed September 2011. Principle 3 of the UN Principles for Responsible Investment is, "We will seek appropriate disclosure on ESG issues by the entities in which we invest." A survey of the different ways that UN PRI signatories request ESG information from investee entities showed that internal staff continue to play an important role in asking investee companies for disclosure related to ESG policies, practices and performance. In total, 87% of investment managers and 60% of asset owners rely on internal staff for this. However, there has also been an increase (61%, compared to 55% last year) in the number of asset owners asking their investment managers to collect ESG disclosure from their investees. United Nations Principles for Responsible Investment. *Report on Progress 2011, An analysis of signatory progress and guidance on implementation*. http://www.unpri.org/publications/2011_report_on_progress.pdf, accessed September 2011.

Table 10 **Market interest by firm type**

Panel B: Insurance firms, pension funds, and hedge funds

Insurance firms	Hits	Pension funds	Hits	Hedge funds	Hits
Governance Disclosure Score	588,839	Governance Disclosure Score	144,733	Environmental Disclosure Score	161,850
ESG Disclosure Score	586,212	% Independent Directors	126,299	ESG Disclosure Score	72,368
Social Disclosure Score	585,824	CEO Duality	124,244	Total Energy Consumption	60,428
Environmental Disclosure Score	585,506	UN Global Compact Signatory	116,803	Social Disclosure Score	57,238
% Women on Board	28,871	UN PRI Signatory	101,142	Governance Disclosure Score	54,742
Size of the Board	13,598	Social Disclosure Score	48,138	Number of Employees - CSR	44,221
% Independent Directors	13,404	ESG Disclosure Score	40,689	Size of the Board	39,461
Number of Independent Directors	13,231	Environmental Disclosure Score	35,318	Number of Independent Directors	39,152
Number of Employees - CSR	13,025	Board Meeting Attendance %	25,727	Number of Board Meetings for the Year	34,329
Business Ethics Policy	10,726	Size of the Board	20,230	% Independent Directors	33,216
CEO Duality	10,712	Number of Board Meetings for the Year	20,112	Water Consumption	32,641
Number of Board Meetings for the Year	10,078	Number of Independent Directors	19,458	Climate Change Policy	31,836
% Women in Management	9,954	Audit Committee Meetings	19,359	% Women in Workforce	30,628
CO ₂ Intensity	9,365	Board Average Age	18,070	% Women in Management	28,766
Board Average Age	7,821	Business Ethics Policy	17,373	GRI Criteria Compliance	27,229
Employee CSR Training	7,602	Human Rights Policy	9,512	Carbon Dioxide Intensity per Employee	27,153
Waste Reduction Policy	7,581	Health and Safety Policy	9,242	Energy Intensity per Employee	27,111
Sustainable Packaging	7,557	CO ₂ Intensity	9,185	% Women on Board	27,108
Health and Safety Policy	7,553	% Women on Board	8,880	Training Spending per Employee	26,710
Climate Change Policy	7,548	% Women in Management	8,476	Energy Efficiency Policy	26,161

third, and it does not appear in the top 20 of the other two firm types (or for the two firm types in Panel A). This suggests hedge funds are particularly concerned about the effect of energy prices on the value of an asset.

Recommendations for Company Executives

Company executives often wonder whether the market cares about nonfinancial information. This question is of greatest importance for those that are especially committed to reporting it. This question is often followed by the observation that questions about sustainability are never raised in quarterly conference calls or meetings with analysts and investors.

Yet the Bloomberg data show clearly that the market *is* paying at least some attention to nonfinancial information, although not to the same extent as traditional financial information. What is equally clear is that the market discriminates in terms of the specific nonfinancial information it is interested in and this helps to provide guidance for company executives in terms of their communication with the market.

Based on our analysis, we have five recommendations for executives concerning their market communications strategies. First, transparency matters. The ESG Disclosure Score is

the top-ranked metric for both the Global and U.S. markets. This and the other disclosure scores are very important for certain asset classes and firm types. Executives should assess their own company's degree of transparency, particularly in comparison to their peers; and if they rank low they need to make a conscious decision whether to improve their level of transparency or not. Opaque firms could pay a price in the form of limited access to capital when they want to fund new projects and make considerable investments.²⁹

Second, equity and fixed income investors have very different information needs, and so the company's communication strategy needs to be targeted to each. Disclosure and environmental metrics are relatively more important to the former and governance metrics are relatively more important to the latter.

Third, the sell-side is focused on a much narrower range of information than the buy-side; indeed, the sell-side's non-financial interest is almost entirely on GHG emissions. While these can be hard to measure, especially Scope 3, they are the nonfinancial analogue of earnings and so the company should ensure that it has the data it needs to produce and report these metrics. Moreover, sell-side analysts should try

29. See Cheng, Beiting, Ioannis Ioannou, and George Serafeim. Corporate Social Responsibility and Access to Finance. Harvard Business School Working Paper. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1847085.

to incorporate a broader set of nonfinancial measures to get a more holistic view of the business.

Fourth, some firm types are more interested in a broad range of information than others. The most efficient way for a company to respond to such differences is to make sure it is meeting the needs of its most information-intensive investors, particularly hedge funds and money managers. These two types are especially important since they often manage money for pension funds and even insurance companies, and since they typically represent the vast majority of a company's stock. This reinforces the importance of transparency and gives guidance on how to achieve it by making sure the company is reporting on the metrics of interest to hedge funds and money managers.

Fifth, interest in particular nonfinancial metrics varies by geography. Thus the company should target its communications strategy accordingly. For example, U.S. investors are relatively less interested in climate change than are those based in Europe.

All five of these recommendations have a general implication. Companies need to be constantly assessing the amount and quality of the information they are supplying to the market, both in absolute terms and in comparison to their peers. They also need to do this on a segmented basis due to variations by asset class, firm type, and geography.

Conclusion

Using data from Bloomberg, we have been able to provide insights into market interest in nonfinancial information at a level of granularity that has never been done. This has enabled us to go beyond the increasingly common assertion that "investors are paying more attention to ESG" and to identify exactly what information is of greatest interest, contrasting both the global and U.S. market across the full spectrum of ESG information and for each component of ESG, as well as CDP metrics. We were also able to show variation in interest across asset classes and firm types and we presented some preliminary explanations for these differences.

From a practitioner perspective, these data can be used to benchmark one's own information use according to asset class and firm type. Practitioners can assess whether any differences represent competitive strengths or weaknesses in the information they are using in their decisions. Companies can use these findings to create more sophisticated communica-

tion strategies tailored to the information needs of market participants across asset classes and firm types.

Finally, we conclude with the prediction that market interest in nonfinancial data will increase exponentially as more companies disclose more nonfinancial information, more knowledge is developed by research and teaching programs in business schools, and more sophisticated valuation models are developed by investors. Taken together, the efforts of practitioners and researchers can improve the dissemination and use of nonfinancial information, thereby enabling companies to create more sustainable strategies for a more sustainable society.

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