CARBON DISCLOSURE PROJECT

Carbon Disclosure Project 2009
S&P 500 Report

On behalf of 475 investors with assets of $55 trillion

Report written for Carbon Disclosure Project by:

PRICEWATERHOUSECOOPERS

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Carbon Disclosure Project 2009

This report and all of the public responses from corporations are available to download free of charge from www.cdproject.net.

CDP Members 2009

CARBON DISCLOSURE PROJECT

MEMBER 2009

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California State Teachers Retirement System US

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Catholic Super Australia

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CIBC Canada

Daiwa Asset Management Co. Ltd Japan

Essex Investment Management, LLC US

Ethos Foundation Switzerland

Folksam Sweden

Fortis Investments Belgium

Generation Investment Management UK

Grupo Santander Brasil Brazil

ING Netherlands

KLP Insurance Norway

Legg Mason, Inc. US

Libra Fund, L.P. US

London Pensions Fund Authority UK

Mistra, Foundation for Strategic Environmental Research Sweden

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Morgan Stanley Investment Management US

National Australia Bank Limited Australia

Neuberger Berman US

Newton Investment Management Limited UK

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The RBS Group UK

The Wellcome Trust UK

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CDP Signatories 2009

475 institutional investors with assets of over US$55 trillion were signatories to the CDP 2009 information request dated February 1st 2009, including:

Aachener Grundvermögen Kapitalanlagegesellschaft mbH Germany
Aberdeen Asset Managers UK
Acuity Funds Canada
Addenda Capital Inc. Canada
Advanced Investment Partners US
Advantage Asset Managers (Pty) Ltd South Africa
Aegon N.V. Netherlands
Aeneas Capital Advisors US
AGF Management Limited Canada
AIG Investments US
Alberta Investment Management Corporation (AIMCo) Canada
Alberta Teachers Retirement Fund Canada
Alcyone Finance France
Allianz Group Germany
Altshuler Shacham LTD Israel
AMP Capital Investors Australia
AmpegaGerling Investment GmbH Germany
APG Investments Netherlands
ARIA (Australian Reward Investment Alliance) Australia
Arkitekternes Pensionskasse Denmark
Artus Direct Invest AG Germany
ASB Community Trust New Zealand
ASN Bank Netherlands
ATP Group Denmark
Australia and New Zealand Banking Group Limited Australia
Australian Ethical Investment Limited Australia
AustralianSuper Australia
Aviva Investors UK
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AXA Group France
Baillie Gifford & Co. UK
Bakers Investment Group Australia
Banco Sweden
Banco Bradesco S.A Brazil
Banco de Galicia y Buenos Aires S.A. Argentina
Banco do Brazil Brazil
Banco Santander, S.A. Spain
Banesprev – Fundo Banespa de Seguridade Social Brazil
Bank of America Corporation US
Bank Sarasin & Co, Ltd Switzerland
Bank Vontobel Switzerland
BANKINTER S.A. Spain
Barclays Group UK
BayernInvest Kapitalanlagegesellschaft mbH Germany
BBC Pension Trust Ltd UK
BBVA Spain
Bedfordshire Pension Fund UK
Beutel Goodman and Co. Ltd Canada
BlackRock US
Blue Marble Capital Management Limited Canada
BMO Financial Group Canada
BNP Paribas Investment Partners France
Boston Common Asset Management, LLC US
BP Investment Management Limited UK
Brasilprev Seguros e Previdência S/A. Brazil
British Columbia Investment Management Corporation (bcIMC) Canada
BT Financial Group Australia
BT Investment Management Australia
Busan Bank South Korea
CAAT Pension Plan Canada
Caisse de dépôt et placement du Québec Canada
Caisse des Dépôts France
Caixa de Previdência dos Funcionários do Banco do Nordeste do Brasil (CAPEF) Brazil
Caixa Econômica Federal Brazil
Caixa Geral de Depósitos Portugal
California Public Employees' Retirement System US
California State Teachers Retirement System US
California State Treasurer US
Calvert Group US
Canada Pension Plan Investment Board Canada
Canadian Friends Service Committee (Quakers) Canada
CAPESESP Brazil
Capital Innovations, LLC US
CARE Super Pty Ltd Australia
Carlson Investment Management Sweden
Carmignac Gestion France
Catherine Donnelly Foundation Canada
Catholic Super Australia
Cbus Superannuation Fund Australia
CCLA Investment Management Ltd UK
Central Finance Board of the Methodist Church UK
Ceres, Inc. US
Cheyne Capital Management (UK) LLP UK
CI Mutual Funds' Signature Advisors Canada
CIBC Canada
Clean Yield Group, Inc. US
ClearBridge Advisors, Socially Aware Investment US
Close Brothers Group plc UK
Colonial First State Global Asset Management Australia
Comite syndical national de retraite Bâtirente Canada
Commerzbank AG Germany
CommInsure Australia
Companhia de Seguros Aliança do Brasil Brazil
Compton Foundation, Inc. US
Connecticut Retirement Plans and Trust Funds US
Co-operative Financial Services (CFS) UK
Corston-Smith Asset Management Sdn. Bhd. Malaysia
Crédit Agricole Asset Management France
Credit Suisse Switzerland
Daegu Bank South Korea
Daiwa Securities Group Inc. Japan
DB Advisors Deutsche Asset Management Germany
DEFO – Deutsche Fonds für Immobilienvermögen GmbH Germany
DEGI Deutsche Gesellschaft für Immobilienfonds mbH Germany
Deka FundMaster Investmentgesellschaft mbH Germany
Deka Investment GmbH Germany
DekaBank Deutsche Girozentrale Germany
Deutsche Bank Germany
Deutsche Postbank Privat Investment Kapitalanlagegesellschaft mbH Germany
Development Bank of Japan Japan
Development Bank of the Philippines (DBP) Philippines
Dexia Asset Management France
DnB NOR ASA Norway
Domini Social Investments LLC US
DPG Deutsche Performancemessungs-Gesellschaft für Wertpapierportfolio mbh Germany
East Sussex Pension Fund UK
Economus Instituto de Seguridade Social Brazil
ELETRA – Fundação Celg de Seguros e Previdência Brazil
Environment Agency Active Pension fund UK
Epworth Investment Management UK
Erste Group Bank AG Austria
Essex Investment Management, LLC US
Ethos Foundation Switzerland
Eureko B.V. Netherlands
Eurizon Capital SGR Italy
Evangelical Lutheran Church in Canada Pension Plan for Clergy and Lay Workers Canada
Evli Bank Plc Finland
F&C Management Ltd UK
Faelba Brazil
FAELCE – Fundação Coelce de Seguridade Social Brazil
Fédéris Gestion d'Actifs France
First Affirmative Financial Network US
First Swedish National Pension Fund (AP1) Sweden
FirstRand Ltd. South Africa
Fishman & Co. Israel
Five Oceans Asset Management Pty Limited Australia
Florida State Board of Administration (SBA) US
Folksam Sweden
Fondaction CSN Canada
Fonds de Réserve pour les Retraites – FRR France
Fortis Bank Nederland Netherlands
Fortis Investments Belgium
Forward Management, LLC US
Fourth Swedish National Pension Fund, (AP4) Sweden
Frankfurter Service Kapitalanlagegesellschaft mbH Germany
FRANKFURT-TRUST Investment Gesellschaft mbH Germany
Franklin Templeton Investment Services Gmbh Germany
Frater Asset Management South Africa
Friends Provident UK
Front Street Capital Canada

Fukoku Capital Management Inc Japan

Fundação AMPLA de Seguridade Social – Brasiletros Brazil

Fundação Atlântico de Seguridade Social Brazil

Fundação Banrisul de Seguridade Social Brazil

Fundação CEEE de Seguridade Social – ELETROCEEE Brazil

Fundação Codesc de Seguridade Social – FUSESC Brazil

Fundação de Assistência e Previdência Social do BNDES – FAPES Brazil

Fundação Forluminas de Seguridade Social – FORLUZ Brazil

Fundação Promon de Previdência Social Brazil

Fundação São Francisco de Seguridade Social Brazil

Fundação Vale do Rio Doce de Seguridade Social – VALIA Brazil

FUNDIÁGUA - Fundação de Previdência da Companhia de Saneamento e Ambiental do Distrito Federal Brazil

Gartmore Investment Management Ltd UK

Generation Investment Management UK

Genus Capital Management Canada

Gjensidige Forsikring Norway

GLG Partners LP UK

Goldman Sachs & Co. US

Governance for Owners UK

Government Employees Pension Fund ("GEPF"), Republic of South Africa South Africa

Green Cay Asset Management Bahamas

Green Century Funds US

Groupe Investissement Responsable Inc. Canada

GROUPE OFI AM France

GrowthWorks Capital Ltd. Canada

Grupo Banco Popular Spain

Grupo Santander Brasil Brazil

Gruppo Monte Paschi Italy

Guardian Ethical Management Inc Canada

Guardians of New Zealand Superannuation New Zealand

Hang Seng Bank Hong Kong

HANSAINVEST Hanseatische Investment GmbH Germany

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Hastings Funds Management Limited Australia

Hazel Capital LLP UK

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Helaba Invest Kapitalanlagegesellschaft mbH Germany

Henderson Global Investors UK

Hermes Fund Managers UK

HESTA Super Australia

Hospitals of Ontario Pension Plan (HOOPP) Canada

HSBC Holdings plc UK

Hyundai Marine & Fire Insurance Co, Ltd South Korea

IDBI Bank Limited India

Ilmarinen Mutual Pension Insurance Company Finland

Impax Group plc UK

Industrial Bank China

Industry Funds Management Australia

Infrastructure Development Finance Company Ltd. (IDFC) India

ING Netherlands

Inhance Investment Management Inc Canada

Insight Investment Management (Global) Ltd UK

Instituto de Seguridade Social dos Correios e Telégrafos- Postalis Brazil

Instituto Infraero de Seguridade Social – INFRAPREV Brazil

Insurance Australia Group Australia

Internationale Kapitalanlagegesellschaft mbH Germany

Investec Asset Management UK

Itaú Unibanco Banco Múltiplo S.A. Brazil

J.P. Morgan Asset Management US

Janus Capital Group Inc. US

Jarislowsky Fraser Limited Canada

Jubitz Family Foundation US

Jupiter Asset Management UK

K&H Investment Fund Management/K&H Befektetési Alapkezelö Zrt Hungary

KB Kookmin Bank South Korea

KBC Asset Management NV Belgium

KCPS and Company Israel

KDB Asset Management Co., Ltd. South Korea

Kennedy Associates Real Estate Counsel, LP US

KfW Bankengruppe Germany

Kibo Technology Fund South Korea

KLP Insurance Norway

Korea Investment Trust Management Co., Ltd. South Korea

KPA Pension Sweden

Kyobo Investment Trust Management Co., Ltd. South Korea

La Banque Postale Asset Management France

La Financiere Responsable France

LBBW – Landesbank Baden-Württemberg Germany

LBBW Asset Management GmbH Germany

LD Lønmodtagernes Dyrtidsfond Denmark

Legal & General Group plc UK

Legg Mason, Inc. US

Lend Lease Investment Management Australia

Libra Fund, L.P. US

Light Green Advisors, LLC US

Living Planet Fund Management Company S.A. Switzerland

Local Authority Pension Fund Forum UK

Local Government Superannuation Scheme Australia

Local Super SA-NT Australia

Lombard Odier Darier Hentsch & Cie Switzerland

London Pensions Fund Authority UK

Lothian Pension Fund UK

Macif Gestion France

Macquarie Group Limited Australia

Magnolia Charitable Trust US

Maine State Treasurer US

Man Group plc UK

Maple-Brown Abbott Limited Australia

Marc J. Lane Investment Management, Inc. US

Maryland State Treasurer US

McLean Budden Canada

MEAG Munich Ergo Asset Management GmbH Germany

MEAG Munich Ergo Kapitalanlagegesellschaft mbH Germany

Meeschaert Gestion Privée France

Meiji Yasuda Life Insurance Company Japan

Merck Family Fund US

Mergence Africa Investments (Pty) Limited South Africa

Meritas Mutual Funds Canada

Metzler Investment Gmbh Germany

Midas International Asset Management South Korea

Miller/Howard Investments US

Mirae Investment Asset Management South Korea

Mistra, Foundation for Strategic Environmental Research Sweden

Mitsubishi UFJ Financial Group (MUFG) Japan

Mitsui Sumitomo Insurance Co.,Ltd. Japan

Mizuho Financial Group, Inc. Japan

Mn Services Netherlands

Monega Kapitalanlagegesellschaft mbH Germany

Morgan Stanley Investment Management US

Motor Trades Association of Australia Superannuation Fund Pty Ltd Australia

MP Pension – Pensionskassen for Magistre og Psykologer Denmark

Munich Re Group Germany

Mutual Insurance Company Pension-Fennia Finland

Natcan Investment Management Canada

Nathan Cummings Foundation, The US

National Australia Bank Limited Australia

National Bank of Canada Canada

National Bank of Kuwait Kuwait

National Grid Electricity Group of the Electricity Supply Pension Scheme UK

National Grid UK Pension Scheme UK

National Pensions Reserve Fund of Ireland Ireland

Natixis France

Needmor Fund US

Nest Sammelstiftung Switzerland

Neuberger Berman US

New Alternatives Fund Inc. US

New Jersey Division of Investment US

New Mexico State Treasurer US

New York City Employees Retirement System US

New York City Teachers Retirement System US

New York State Common Retirement Fund (NYSCRF) US

Newton Investment Management Limited UK

NFU Mutual Insurance Society UK

NH-CA Asset Management South Korea

Nikko Asset Management Co., Ltd. Japan

Nissay Asset Management Corporation Japan

Nordea Investment Management Sweden

Norfolk Pension Fund UK

Norges Bank Investment Management (NBIM) Norway

Norinchukin Zenkyouren Asset Management Co., Ltd Japan

North Carolina State Treasurer US

Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC) UK
Northern Trust US
Northwest and Ethical Investments LP Canada
Oddo & Cie France
Old Mutual plc UK
OMERS Administration Corporation Canada
Ontario Teachers Pension Plan Canada
Opplysningsvesenets fond (The Norwegian Church Endowment) Norway
Oregon State Treasurer US
Orion Asset Management LLC US
Pax World Funds US
PBU – Pension Fund of Early Childhood Teachers Denmark
Pension Fund for Danish Lawyers and Economists Denmark
Pension Protection Fund UK
Pensionskassen for Jordbrugsakademikere og Dyrlæger Denmark
PETROS – The Fundação Petrobras de Seguridade Social Brazil
PFA Pension Denmark
PGGM Netherlands
Phillips, Hager & North Investment Management Ltd. Canada
PhiTrust Active Investors France
Pictet Asset Management SA Switzerland
Pioneer Alapkezelö Zrt. Hungary
Pioneer Investments Kapitalanlagegesellschaft mbH Germany
PKA Denmark
Portfolio 21 Investments US
Portfolio Partners Australia
Porto Seguro S.A. Brazil
PPM Premiepensionsmyndigheten Sweden
PRECE Previdência Complementar Brazil
PREVI Caixa de Previdência dos Funcionários do Banco do Brasil Brazil
Principle Capital Partners Limited UK
PSP Investments Canada
QBE Insurance Group Limited Australia
Q Capital Partners South Korea
Railpen Investments UK
Rathbones/Rathbone Greenbank Investments UK
Real Grandeza Fundação de Previdência e Assistência Social Brazil
Rei Super Australia
Rhode Island General Treasurer US
RLAM UK
Robeco Netherlands
Rose Foundation for Communities and the Environment US
Royal Bank of Canada Canada
RREEF Investment GmbH Germany
Russell Investments UK
SAM Group Switzerland
Sanlam Investment Management South Africa
Santa Fé Portfolios Ltda Brazil
Sauren Finanzdienstleistungen Germany
Savings & Loans Credit Union (S.A.) Limited. Australia
Schroders UK
Scotiabank Canada
Scottish Widows Investment Partnership UK
SEB Sweden
SEB Asset Management AG Germany
Second Swedish National Pension Fund (AP2) Sweden
Seligson & Co Fund Management Plc Finland
Sentinel Funds US
SERPROS Fundo Multipatrocinado Brazil
Service Employees International Union Benefit Funds US
Seventh Swedish National Pension Fund (AP7) Sweden
Shinhan Bank South Korea
Shinhan BNP Paribas Investment Trust Management Co., Ltd South Korea
Shinkin Asset Management Co., Ltd Japan
Shinsei Bank Limited Japan
Siemens Kapitalanlagegesellschaft mbH Germany
Signet Capital Management Ltd Switzerland
Skandia Nordic Division Sweden
SMBC Friend Securities Co., LTD Japan
Smith Pierce, LLC US
SNS Asset Management Netherlands
Social(k) US
Société Générale France
Sompo Japan Insurance Inc. Japan
Souls Funds Management Limited Australia
SPF Beheer bv Netherlands
Sprucegrove Investment Management Ltd Canada
Standard Chartered PLC UK
Standard Life Investments UK
State Street Corporation US
Statewide Superannuation Trust Australia
Storebrand ASA Norway
Strathclyde Pension Fund UK
Stratus Group Brazil
Sumitomo Mitsui Banking Corporation Japan
Sumitomo Mitsui Card Company, Limited Japan
Sumitomo Mitsui Finance & Leasing Co., Ltd Japan
Sumitomo Mitsui Financial Group Japan
Sumitomo Trust & Banking Japan
Sun Life Financial Inc. Canada
Superfund Asset Management GmbH Germany
Svenska Kyrkan, Church of Sweden Sweden
Swedbank Sweden
Swiss Reinsurance Company Switzerland
Swisscanto Holding AG Switzerland
Syntrus Achmea Asset Management Netherlands
TD Asset Management Inc. and TDAM USA Inc. Canada
Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA-CREF) US
Tempis Capital Management South Korea
Terra Forvaltning AS Norway
TfL Pension Fund UK
The Bullitt Foundation US
The Central Church Fund of Finland Finland
The Collins Foundation US
The Co-operators Group Ltd Canada
The Daly Foundation Canada
The Dreyfus Corporation US
The Japan Research Institute, Limited Japan
The Joseph Rowntree Charitable Trust UK
The Local Government Pensions Insitution (LGPI)(keva) Finland
The Presbyterian Church in Canada Canada
The RBS Group UK
The Russell Family Foundation US
The Shiga Bank, Ltd. Japan
The Standard Bank of South Africa Limited South Africa
The Sustainability Group at the Loring, Wolcott & Coolidge Office US
The Travelers Companies, Inc. US
The United Church of Canada – General Council Canada
The University of Edinburgh Endowment Fund UK
The Wellcome Trust UK
Third Swedish National Pension Fund (AP3) Sweden
Threadneedle Asset Management UK
Tokio Marine & Nichido Fire Insurance Co., Ltd. Japan
Toronto Atmospheric Fund Canada
Trillium Asset Management Corporation US
Triodos Bank Netherlands
TrygVesta Denmark
UBS AG Switzerland
Unibanco Asset Management Brazil
UniCredit Group Italy
Union Asset Management Holding AG Germany
Union Investment Institutional GmbH Germany
Union Investment Privatfonds GmbH Germany
Union Investment Service Bank AG Germany
Union PanAgora Asset Management GmbH Germany
UniSuper Australia
Unitarian Universalist Association US
United Methodist Church General Board of Pension and Health Benefits US
United Nations Foundation US
Universal Investment Gesellschaft mbH Germany
Universities Superannuation Scheme (USS) UK
Vancity Group of Companies Canada
VERITAS SG INVESTMENT TRUST GmbH Germany
Vermont State Treasurer US
VicSuper Pty Ltd Australia
Victorian Funds Management Corporation Australia
Visão Prev Sociedade de Previdencia Complementar Brazil
Waikato Community Trust Inc New Zealand
Walden Asset Management, a division of Boston Trust and Investment Management Company US
Warburg-Henderson Kapitalanlagegesellschaft für Immobilien mbH Germany
West Yorkshire Pension Fund UK
WestLB Mellon Asset Management (WMAM) Germany
Westpac Investment Management Australia
Winslow Management Company US
WOORI BANK South Korea
YES BANK Limited India
York University Pension Fund Canada
Youville Provident Fund Inc. Canada
Zurich Cantonal Bank Switzerland

Commentary for the Carbon Disclosure Project

Bank of America Merrill Lynch

As a Global Sponsor of the Carbon Disclosure Project (CDP), Bank of America is committed to supporting CDP's core mission of creating the most accurate database of corporate carbon emissions worldwide. I would like to thank all of CDP's 475 institutional investor signatories — representing a combined asset base of $55 trillion — for encouraging disclosure on this important issue.

In our capacity as Global Sponsor of CDP, I am pleased to present the CDP 2009 S&P 500 report, the most comprehensive compilation to-date of the specific emissions, risk-assessments and strategies of 332 of the S&P 500 companies.

This report builds on the current momentum surrounding the issue of climate change — delegates from 192 countries will gather to work toward a new global climate treaty at the upcoming UN Climate Change Conference in Copenhagen, and legislation continues to gain traction in the US Congress.

Now more than ever, there is a critical need for a clear, consistent way to disclose and understand the risks and opportunities associated with climate change across industries.

Sincerely,

Brian Brille

Head of Americas Corporate and Investment Banking

Bank of America Merrill Lynch

Executive summary

Introduction

It is often said that a business can manage only what it measures. Since 2000, the Carbon Disclosure Project (CDP) has, on behalf of institutional investors, challenged the world's largest companies to measure and report their carbon emissions, integrating the long-term value and cost of climate change into their assessment of the financial health and future prospects of their businesses.

In 2009, CDP received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations regarding climate change mitigation and adaptation. This is testament to realization of the need to respond to an increasingly pressing issue.

Since the first CDP report in 2003, the quantity and quality of data disclosed have advanced significantly — a credit to those investors and companies participating in the initiative. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis. Again, this is a notable achievement.

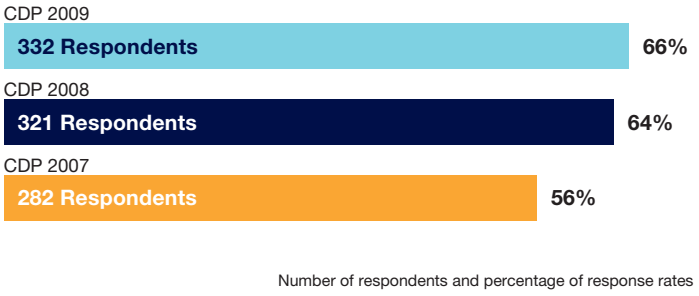
This year, CDP (backed by 475 institutional investors representing more than $55 trillion of funds under management) sent questionnaires to more than 3,700 of the world's largest corporations, including the S&P 500, requesting information on greenhouse gas (GHG) emissions, on the potential risks and opportunities related to climate change and on strategies for managing those risks and opportunities. The corporations' responses, in addition to reports assessing the results of the responses, will be published in more than 20 countries around the world and are freely available at www.cdproject.net.

CDP continues to be the global leader in data that records the business response to climate change — whether the data covers risks and opportunities, absolute emissions levels, performance over time or governance. This report, prepared by CDP's global adviser, PricewaterhouseCoopers (PwC), analyzes responses from the S&P 500 corporations.

In the past year, climate change has risen in prominence as a major strategic concern for businesses globally, as operational and reputational climate-change-related risks and opportunities intensify. Where GHG mitigation efforts were traditionally the focus of environmental managers and directors, we see intensified attention from the C-suite. Climate-change-related commitments, investments and activities — including some innovative cross-industry alliances — are under way at America's largest companies. This shift is best characterized by a sharp spike in the number of respondents reporting emissions reduction targets, which increased to 169 (52%) of all respondents from 102 (32%) last year.

Indeed, growing certainty of some form of carbon-emissions-capping regulation is a significant factor but not the sole force. Climate change policies are emerging as potentially brand defining, helping differentiate companies in a world moving swiftly toward attaching a cost to carbon. Many respondents underscore the increasing need to meet consumers' expectations for climate change action. The apparent strengthening of emissions reporting this year also suggests a sense of urgency, in anticipation of possible mandatory reporting requirements.

Fig. A: S&P 500 responses over time



Number of respondents and percentage of response rates

Report highlights: Key findings

Response rates and disclosure quality

This year's responses provided a wealth of detail on new and increasingly substantive efforts to capture climate-change-related opportunities, as the nation's agenda to cut GHGs plays out. CDP received 332 responses this year, representing 66% of the S&P 500, up from 64% (321) last year. That increase occurred despite the extraordinary economic conditions over the past 12 months and substantial changes in the composition of the S&P 500 due largely to acquisitions and bankruptcies. Of the 332 responses, 328 were submitted by the deadline and are included in this year's analysis.

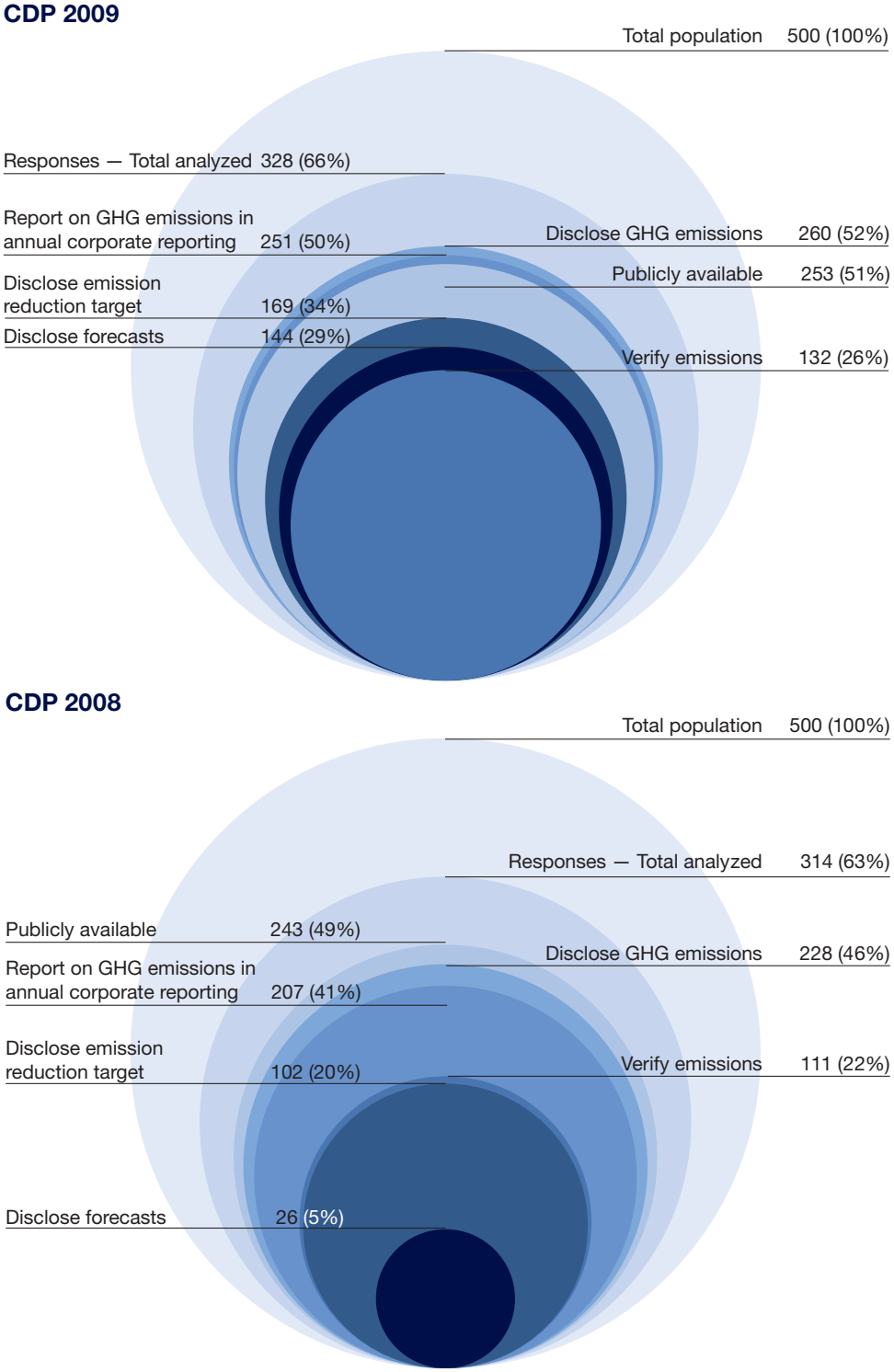
Emission disclosures expand

GHG emissions disclosure rose markedly — to 79% (260) of all respondents, up from 73% (228) in 2008. This increase in emissions disclosure and more aggressive emissions targets provides investors, stakeholders and consumers with an understanding of the direction the country's largest public companies are taking in this increasingly carbon-constrained world. The three sectors with the highest percentages of emissions data disclosures in 2009 were Utilities, with 93% (26); Materials, with 91% (21); and Consumer Staples, with 91% (29). All of these sectors are facing potential challenges should carbon regulations be implemented.

Reduction targets nearly double

The number of respondents disclosing emissions reduction targets (percentage of CO_2-equivalent basis [CO_2-e][1] reduction targeted over given time periods) expanded to 52% (169) from 32% (102) last year, a 66% increase. Additionally, respondents are disclosing ever more ambitious targets.

Fig. B: Proportion of S&P 500 at each disclosure level — year-on-year*



1 GHGs are reported on a carbon dioxide equivalent (CO_2-e) basis — a measure used to indicate the global warming potential of each GHG.

* The circle for responses and "publicly available" are based on data at time of printing. Data for the other circles are based on data for those companies scored.

Fig. C: The highest scoring S&P 500 companies in CDP's CDLI 2009

Sector	Company	Score
Financials	Comerica	91
Consumer Staples	Wal-Mart Stores	89
Energy	Chevron	88
Information Technology	Cisco Systems	88
Utilities	PG&E	88
Utilities	Public Service Enterprise Group	88
Energy	Spectra Energy	88
Industrials	Boeing	87
Consumer Discretionary	Carnival	87
Consumer Staples	Dean Foods	87
Utilities	Pepco Holdings	87

While disclosure of Scope 1 emissions remained flat, disclosure of both Scope 2 and Scope 3 increased significantly[2]

Given that many carbon-intensive companies have been reporting their direct emissions to regulators for some time, it is not unexpected that Scope 1 (direct) emissions reported did not change appreciably from 2008 (from 1.69 billion metric tons to 1.65 billion metric tons in 2009). Importantly, respondents made great strides in reporting Scope 2 and Scope 3 emissions. Scope 2 (purchased-electricity) emissions reported rose by 50% (from 0.24 to 0.36 billion metric tons) and Scope 3 (other indirect) emissions reported increased by 215.5% (from 0.24 to 0.75 billion metric tons).

Scope 3 importance is better understood

Respondents disclosing Scope 3 emissions increased 55% from 26% (83) to 39% (129), due to a sharp increase in those tracking employee travel, up 63% from 23% (71) to 35% (116). Reports of indirect supply chain emissions rose nearly 63%, from 3% (8) to 5% (17), reflecting a rise in companies asking their suppliers to report on carbon through the CDP Supply Chain Project and other initiatives. Financials, at 43% (21), and Information Technology, at 59% (30), had the greatest number of companies reporting Scope 3 emissions. These two non-carbon-intensive sectors traditionally focus on Scope 3 emissions sources because this is where the biggest impact resides.

Utilities and Information Technology are best represented in the Carbon Disclosure Leadership Index (CDLI)

There were 8 respondents each (16% each of the CDLI) and average CDLI scores of 84 and 81, respectively. The relative maturity of Utilities on the emissions reporting continuum, coupled with the attention given by Information Technology to cutting energy consumptions made for robust disclosure by each of the sectors this year. The table above lists the 11 highest scoring respondents for 2009.

Risks and opportunities in the new climate change economy

Respondents see more climate change opportunities than risks

This year's respondents are identifying and anticipating business opportunities emerging from regulatory, physical and other climate change events. In fact, more respondents (281, or 86%) perceived opportunity than risks (269, or 82%).

Regulatory risks loom large in a fast-moving legislative environment

Compliance costs were cited repeatedly as a significant risk. The concerns are not surprising in light of proposed GHG legislation and emissions trading schemes in the past 12 months. Sectors with the highest number reporting exposure to regulatory risks were Utilities at 96% (27), Energy at 84% (21), Materials at 83% (19) and Consumer Discretionary at 62% (29).

> The regulatory opportunities related to climate change concerns have changed with the new US administration and the enhanced focus and pressure to respond to climate change concerns through legislative or regulatory mechanisms in a tighter time frame than previously anticipated.
>
> **Boeing**

2 Scopes 1, 2 and 3 emissions are terms used under the GHG Protocol. For a full description, see GHG Protocol: A Corporate Accounting and Reporting Standard, available at www.ghgprotocol.org/files/ghg-protocol-revised.pdf.

Respondents cite physical risks associated with a changing climate

A broad range of physical climate risks were raised by respondents, from potential raw material shortages to business continuity and supply chain disruptions driven by changing and more severe weather patterns. Financials topped the list noting physical risk concerns at 84% (41), up from 77% (37) in 2008. This relatively high response rate reflects a broad exposure across the respondents' client bases.

Climate change and the consumer factor

Respondents reported that consumers are increasingly seeking out and buying environmentally-friendly products that also decrease the overall cost of ownership and operations such as fuel-efficient vehicles, which require less gasoline to drive a given distance, or more energy efficient appliances.

The link between climate change actions and Wall Street valuations

Some respondents illuminated how climate change business strategy and emissions efforts may begin to influence company valuations. **Comerica** drew the connection: *"There is some evidence that other investors, although not primarily motivated by ESG [environmental, social and governance] performance, may be beginning to view companies with both a climate change strategy and a broader sustainability focus as better long-term managers of risk and opportunity and therefore as better investment choices."*

Governance and communication

Companies continue to embed client change policies and practices enterprise wide

Climate change strategies are more widely embraced at the top as well as more deeply embedded, or institutionalized according to this year's responses. Across all sectors, 68% (222) of respondents reported Board or executive-level responsibility for climate change oversight, up from 65% (204) last year. Sectors with the highest percentages were Materials at 91% (21), Utilities at 86% (24) and Consumer Staples at 84% (27).

Incentives for action increase

Of particular note is a trend toward linking compensation incentives programs to the achievement of climate-change-related goals (115, or 35%). Programs varied from impacting annual and long-term bonuses to offering company-wide recognition achievement awards for reducing GHG emissions, to directly affecting compensation of those employees with specific climate-change-related objectives (**Air Products & Chemicals**). **Google** reported, *"We provide incentives for employees to make choices that have a better overall climate impact, primarily around transportation and commuting, food and beverage packaging waste, and composting...Employees in eligible offices who bike, walk, pogo-stick, unicycle, or otherwise self-power to work can earn points that translate into a donation from Google to their charity of choice."*

External stakeholders raising the bar on carbon disclosure

The global investor community continues to request more data on direct and indirect emissions as well as climate change progress, effectively raising the carbon disclosure bar. Institutional investors are moving beyond corporate commitments, assessing investments in forward-looking, climate-change-related business strategies. In addition, CDP respondents noted that increasingly educated consumers, as well as other stakeholders, including their own employees, are contributing to the higher profile for emissions disclosure. The heightened standards expected by investors were applied to this year's CDP questionnaire, which included numerous new — and more detailed — questions requiring more rigorous disclosure than in prior years.

Future challenges

Balancing new risks and responsibilities while seizing climate-related opportunities

Respondents enumerated many challenges to meeting emerging emissions-related regulations and standards. However, they are seeking to strengthen their financial conditions, growth prospects and competitiveness in a carbon-constrained global economy; examples of how respondents are approaching these challenges are:

1. Launching new products tied to GHG emissions mitigation and natural resource conservation;
2. Building out electricity smart grids;
3. Leveraging tax and utility incentives to develop renewable and alternative energy and fuels; and,
4. Innovating an efficient and lower-carbon-intensive transportation systems and fleet vehicles.

With attention to climate change challenges moving squarely onto the C-suite agenda and with preparation for the monetization of carbon afoot, the US seems to be at its tipping point, where access to reliable emissions information will become a necessity.

Contents

1 Overview of CDP

The turmoil in the financial markets and the global economy over the last year has highlighted the importance of effective disclosure and high-quality risk management. The financial crisis of 2008 suggests we need to better understand systemic risks that can cause significant de-stabilizing impacts in the global economy. Climate change has the potential to cause disruption in the form of unforeseen, high-impact events (such as extreme weather) as well as a longer term reassignment of value across countries, industries and corporations.

The Intergovernmental Panel on Climate Change (IPCC) predicts that 'future climate impacts show that the consequences could vary from disruptive to catastrophic'.[3] So it is vital that policymakers, companies and investors have a full understanding of the associated risks and opportunities. According to **HSBC** research,[4] governments around the world have allocated $430 billion in fiscal stimulus to key climate change themes. Those providing the low carbon solutions are very well positioned to benefit, while those who ignore the risks gamble on being left behind.

By convening the collective power of the investment community, represented in 2009 by more than 475 investors, with $55 trillion in assets under management, CDP motivates more than 1800 companies globally to report their climate change strategies and greenhouse gas emissions. This global system provides the market, investors, policymakers and procurement directors with a clear understanding of how companies are positioned as we move towards a low-carbon economy and ensures corporations provide full transparency on climate change.

This year has seen considerable growth in responses from emerging economies such as China, South Africa and Korea, and CDP expanded in Russia in 2009 where major companies such as **Gazprom** and **Novatek** reported. CDP's reach continues to grow with the launch of the first CDP Europe report, covering the largest 300 European listed companies, as well as expansion into countries within Central and Eastern Europe. We have also opened new offices in Germany and Brazil, both key economies in the fight against climate change.

While the quantity and quality of data available has increased significantly, so has the use of the data, which is acting as a catalyst for changing business behavior. CDP data is increasingly being integrated into mainstream financial analysis, is available through **Bloomberg Professional Services**, and used to provide sector based analysis to CDP signatory members. A recent report produced by Mercer supports this view.

Some CDP signatories, such as **CalSTRS** are going a step further, using shareholder resolutions to encourage companies to report through CDP and implement climate change management strategies. We are also working with the Principles of Responsible Investment (PRI) to drive awareness and improve climate change reporting. CDP has recently entered a new partnership with financial information services company **Markit** to build a suite of indices based on the Carbon Disclosure Leadership Index, which will be licensed to exchange-traded fund (ETF) and structured product providers.

CDP now works with more than 55 organizations including **Dell**, **Unilever**, **Wal-Mart Stores** and departments of the **British Government** to measure and assess climate change risk and opportunity through the supply chain. More than 800 companies report their climate change strategies through the CDP system to their customers and as a result we have seen a significant increase in the use of CDP data in procurement operations. Now procurement professionals can understand how their supply chains may be impacted and as a result begin to future-proof their procurement systems against climate change.

The process of measuring emissions is central to emissions management and reduction. As regulatory frameworks develop to mandate emission reductions, CDP's role will expand. We will continue to work with corporations, policymakers and information users to produce practical and robust results that complement the development of mandatory reporting rules.

In order to continue to provide the global hub for carbon reporting, CDP is currently undergoing a significant systems upgrade designed to improve data comparability, facilitate benchmarking services and ultimately deliver data that is appropriate for investment analysis and regulatory submissions. In countries like the US and UK, where mandatory carbon reporting is on the horizon, CDP's systems will help companies prepare for such requirements and will eventually integrate with existing national registries to enable corporations to disclose more detailed and standardized data. Climate change is a global problem, which requires a global solution and by bridging the gaps between national governments and international businesses across the globe, CDP will help to connect the national and international climate change ecosystem.

3 http://unfccc.int/essential_background/feeling_the_heat/items/2905.php

4 HSBC Global Research. "A Climate for Recovery: The colour of stimulus goes green," February 25, 2009.

Fig. D: Key trends snapshot[5]

This table outlines some of the key findings from CDP 2009 by geography and industry data-set.[6]

Sample: Geography/ number of companies	% of sample answering CDP 2009	% of sample answering CDP6 (2008)[7]	% of responders with Board level responsibility for climate change	% of responders seeing regulatory risks	% of responders seeing regulatory opportunities	% of responders seeing physical risk	% of responders seeing physical opportunities	% of responders disclosing Scope 1 emissions	% of responders disclosing Scope 2 emissions	% of responders externally verifying emissions disclosures	% of responders engaged/considering participation in emissions trading	% of responders with an emissions reduction/energy reduction plan	% of responders engaging with policy makers on climate change
Asia-ex JICK 100[8]	31	[35]	76	55	76	66	55	66	69	31	17	59	62
Australia 200	52	48	80	79	81	82	56	81	83	46	50	67	73
Brazil 80	76	[83]	49	61	73	73	53	61	55	22	25	61	49
Canada 200	49	55	70	57	68	56	46	81	76	27	34	49	61
Central and Eastern Europe 100	8	-	75	50	50	75	25	75	25	75	50	100	50
China 100	10	5	56	67	78	67	44	22	22	22	11	67	44
Europe 300	82	-	85	80	90	75	63	91	85	77	58	89	79
France 120	58	63	77	69	84	66	61	79	77	63	47	81	66
Germany 200	51	55	65	58	70	44	47	63	57	45	33	63	55
Global 500	81	77	80	78	84	78	63	85	80	63	54	80	74
Global Electric Utility 250	49	52	71	79	84	75	62	81	50	61	57	60	77
Global Transport 100	67	58	84	81	84	79	50	79	68	50	43	72	74
India 200	18	19	52	14	66	62	48	48	48	17	17	55	38
Ireland 40	33	-	71	71	71	64	43	71	50	50	43	57	43
Italy 60	35	[46]	52	67	86	67	48	81	62	71	33	67	57
Japan 500	37	[72]	85	87	83	80	64	77	72	33	90	49	49
Korea 100	50	[32]	61	67	76	69	57	55	55	33	35	63	55
Latin America 50	50	[52]	58	79	79	58	47	79	68	37	26	47	58
Netherlands 50	62	52	97	74	90	65	61	90	90	58	42	81	71
New Zealand 50	52	50	65	69	77	69	65	58	54	35	27	58	54
Nordic 200	65	[58]	77	76	81	63	54	83	77	46	33	78	59
Portugal 20	38	-	75	88	75	88	63	100	88	88	25	63	75
Russia 50	13	-	33	0	33	33	33	33	33	0	33	33	33
South Africa 100	68	58	86	73	86	89	68	83	86	38	33	68	65
Spain 85	41	[71]	80	66	77	63	54	91	83	86	34	80	74
Switzerland 100	56	57	74	44	72	48	48	72	67	35	19	65	43
UK FTSE 100	95	90	83	89	91	83	66	98	95	73	77	88	79
UK FTSE 250	57	58	79	78	76	72	53	81	80	36	43	61	49
US S&P 500	66	64	68	70	77	70	52	77	74	41	31	65	61

5 The numbers in this table are based on the total respondents on July 10, 2009. They may therefore vary from numbers in the rest of the report which are based on the number of companies who responded on time (e.g. June 30th for Global 500).

6 In some cases, the number of responses analyzed is slightly less than the number answering CDP 2009 due to takeovers, mergers and acquisitions.

7 Percentages in square brackets reflect a different sized sample in 2008, e.g.: in 2008 we wrote to 75 companies in Brazil, not 80; and in Japan we wrote to 150 companies in 2008, not 500. A dash (-) shows that sample was not in CDP6 (2008).

8 Asia excluding Japan, India, China and Korea.

Highlights in carbon regulation and outlook for Copenhagen

2009 has witnessed significant progress in the global approach to climate change. The Obama administration has introduced a new era in climate change policy in the US and, as a result, a global deal in Copenhagen this December appears more tangible. China, so integral to the success of Copenhagen, is set to meet ambitious renewable energy and energy efficiency targets and hosts some of the world's largest renewable energy companies. Brazil entered the new year with a new National Plan on Climate Change and national governments in industrialized countries including Japan and Australia are introducing new legislation to reduce emissions.

While the July G8 meeting agreed to prevent global temperatures rising beyond 2º Celsius (3º-4º Fahrenheit) against pre-industrial levels, and agreed on aims to cut greenhouse gas emissions by between 50 and 80% by mid-century they disappointed many by ducking the issue of medium term targets. Although the multilateral architecture still needs work, there is much to report on at a regional level.

In Europe, the Energy and Climate Change package was approved in December 2008, which sets out the policy framework and accompanying measures to reduce emissions through the continuation (and expansion) of the EU Emissions Trading Scheme (EU ETS); targets for non-ETS sectors and new targets for the promotion of renewable energy.

In the US, the Obama administration moved early to set out its ambitions around climate change mitigation: "We will harness the sun and the winds and the soil to fuel our cars and run our factories."[9]

The Waxman-Markey bill was finally put before the House of Representatives in June and passed by a narrow margin. The proposed legislation would commit the US to reduce greenhouse gas emissions by 17% below 2005 levels by 2020 through a cap-and-trade system beginning in 2012. The bill will pass through various Senate Committees where amendments will be debated, before being put to a vote; most likely in October.

In Australia, further work has progressed on the detail of the Carbon Pollution Reduction Scheme (CPRS) despite political challenges over possible competitive impacts in the face of the economic downturn. The Scheme, which would cover around 75% of total Australian emissions, is due to face a key vote later this year.

Given the multinational nature of many companies, the evolution of these policies is likely to have significant implications on strategic direction and operations and many of the world's largest companies want to seize early mover advantage.

Of course, the role of government is crucial in providing the regulatory frameworks. But investors and businesses will also play an essential role by driving capital flows towards the technologies which will allow economies to flourish and innovation to thrive as we transition to a low-carbon economy.

Already these same investors and businesses are being directly affected by climate change. Many companies report to CDP the material impacts of climate change on their operations, through increased flooding, water shortage, spread of disease and changing local weather patterns. Within the public sector, cities reporting through CDP also explain how they are planning to adapt to changes in weather patterns such as extreme heat and extreme precipitation.

Investors, policymakers, procurement directors and other stakeholders need to build up the necessary comparable datasets in order to monitor and analyze changes; both in terms of the response to mitigation measures (such as carbon regulation) and adaptation policies and programs. Integral to the success of the deal in Copenhagen will be the availability of this accurate reported data: if businesses don't measure current emissions now, it will be impossible for them to manage and reduce them in the future. This is where CDP's role is crucial.

Progress on reporting standards

While CDP has set the tone on matters of disclosure over the years and, for the first time this year, is now widening its approach to encompass performance, there are other valuable and complementary initiatives underway to address the clear requirement for the creation of a global carbon measurement and reporting system.

While the financial accounting system has taken several hundred years to develop, carbon accounting is in its infancy. In order to achieve a coherent global system CDP is leading the work of the Climate Disclosure Standards Board (CDSB), working with **Deloitte**, **Ernst & Young**, **KPMG** and **PricewaterhouseCoopers** to develop robust accounting standards to enable carbon reporting through annual financial reports. CDP and CDSB will also work with the World Economic Forum to advise the G20 group of nations on climate change accounting in 2010.

The CDP process demonstrates that corporations can lead the way in taking action that can be Measured, Reported & Verified (MRV). It also shows how international companies can reduce their emissions across the entirety of their operations on a global basis, even when subject to a range of different regulatory requirements. As more and more countries introduce climate change regulation, the CDP system supports companies by bridging the gap between international business and national reporting requirements and helps reduce the reporting burden on companies.

The CDP Global Forum is part of the inaugural Climate Week NYC, when business leaders, heads of state and the world's major investors congregate in New York to prepare for negotiations at COP15. An agreement there will be a vital step towards success, but it is just as important to look beyond Copenhagen and to build the global systems required to combat dangerous climate change. CDP remains focused on and dedicated to this work and thanks all of the organizations that work with us to help realize this goal.

9 Obama inauguration speech, January 21, 2009.

"Seizing the clean economy with Clean Energy Technologies"

By Senator John F. Kerry

The way America uses energy can either be the keystone of twenty-first century job creation, or a millstone that holds back our entire economy. The choice is ours.

The businesses who have contributed to the Carbon Disclosure Project aren't just toeing the line — they are leading the charge. By publicly disclosing so much information about their carbon emissions, they are going above and beyond what the law requires to help policymakers and businesses understand the road ahead.

The truth is, for too long, while many of America's corporate leaders moved forward, Washington stood still. That's over now. The stimulus represented the biggest investment in clean energy in American history. The House of Representatives has passed climate legislation, and Senator Boxer and I are writing a Senate companion that will give businesses the certainty they need to plan for the future. Internationally, we are making real strides in advance of December's make-or-break climate talks in Copenhagen.

Even in Washington, people are beginning to understand that addressing climate change by developing clean energy pathways won't be a brake on economic growth in the years ahead — it will be the engine.

Of course, some will argue that in tough economic times, we cannot afford to act. But the fact is that, if we do this right, we will not only enjoy significant long-term economic benefits — but the short-term costs will be small. According to a 2007 McKinsey & Company study, nearly 40% of the emissions cuts we need to stave off catastrophic climate change can be achieved at "negative" marginal costs. In other words, these small changes will yield a massive return on our investment. This will save us money.

Beyond energy efficiency, we have the opportunity to become leaders in wind, solar, and entirely new professions and industries. When a nation like ours puts its creative genius and entrepreneurial skills on the line — and backs up the bet with money to meet the challenge and set our innovators loose — the rewards can be tremendous.

America has innovated on a massive scale before. We were the engine of the IT Revolution, which created a $1 trillion new economy, with about 1.5 billion users worldwide. The energy economy is even larger: a $6 trillion market, with 4 billion users worldwide. The opportunities for an energy innovation revolution could dwarf any other sector that we can imagine. We tend to think into the future linearly, when in reality, innovation often happens exponentially.

When California passed a law requiring 20% of the state's electricity be generated by clean, renewable sources, investments in clean technologies flourished. But when California took the next step and passed legislation requiring an 80% cut in CO_2 emissions by 2050 — that's when these investments went through the roof. An already high 20% growth rate in clean technology investments shot up to 98%. This isn't hype — these are real products that will bring real profits.

This year's responses to the Carbon Disclosure Project show a consensus among disclosing companies that taking stock of GHG emissions and carrying out reduction schemes have become central, bottom-line business priorities. Simply put, for leading disclosers, climate change is no longer just an environmental issue, but increasingly has significant operational, financial, strategic, reputational, and practical implications

The question is not whether the 21st century economy will be the green economy. It has to become one and will. The question is whether the United States will reap the rewards of leading the charge, and whether we will act in time to prevent a catastrophe.

We have a tremendous opportunity to create millions of new jobs here at home, a chance to help spark a global recovery that brings clean growth to the developing world and lasting benefits to all of us. It's up to us to seize it.

2 The S&P 500 Carbon Disclosure Leadership Index

The businesses who have contributed to the Carbon Disclosure Project aren't just toeing the line — they are leading the charge. By publicly disclosing so much information about their carbon emissions, they are going above and beyond what the law requires to help policymakers and businesses understand the road ahead.

Senator John F. Kerry

The Carbon Disclosure Leadership Index (CDLI) includes the companies with the highest scores and provides a valuable perspective on the range and quality of responses to CDP's questionnaire. This year's CDLI includes the top-scoring 10% of the S&P 500: 50 companies in total.

All companies that responded to CDP in 2009 have been scored on the quality of their disclosures by using a standardized, transparent methodology; see www.cdproject.net. The Carbon Disclosure Leadership Index (CDLI) includes the companies with the highest scores and provides a valuable perspective on the range and quality of responses to CDP's questionnaire. In contrast to CDP 2008, this year's CDLI makes no distinction between companies in carbon-intensive sectors or non-carbon-intensive sectors.

This year's CDLI includes the top-scoring 10% of the S&P 500: 50 companies in total. In order to aid comparison between companies, the CDLI table also includes information on the three emission Scopes and carbon intensity (relative to $million revenue) to provide a fuller picture of the emissions profile of each of the leaders.

The relevance and meaning of the CDLI can be summarized as follows:

- It is based entirely on the disclosure information provided in companies' CDP responses;
- It suggests good internal data management and understanding of the issues climate change presents to companies' businesses;
- It does not consider other efforts undertaken by companies to provide carbon or wider sustainability disclosure such as corporate responsibility reporting or climate statements in annual reports or through meetings and engagement with stakeholders and policymakers; and,
- It is not a complete metric of a company's performance in relation to climate change management, as it does not currently make any judgment over absolute levels of emissions, emission reduction achievements or carbon intensity.

An introduction to this year's CDLI

Combined table for 2009 — what this means and why it has changed

The CDLI continues to be based on disclosure, and companies are ranked by their disclosure scores alone. Although a section on performance scores[10] was included in this year's CDLI methodology, they were not taken into account in compiling the CDLI for this year. However, performance scores are likely to become integrated into CDLI scoring in the near future.

Eligibility for inclusion in the CDLI in 2009 depended on the following conditions being satisfied:

- The company must score in the highest 10% of companies overall (across all industries);
- The response must be publicly available; and,
- The response must have been submitted using CDP's Online Response System.

The single table, combining those industries previously split and defined as carbon-intensive and non-carbon-intensive,[11] follows CDP's transition to a parity-of-sectors approach for 2009. The rationale behind the transition is that as the wide-ranging implications of climate change become clearer for companies and as all sectors develop a response, there is a less clear distinction between disclosure expectations of companies in different sectors. Hence, during CDP 2009, questions were scored on the same basis for all companies and all sectors.

10 The performance score is a CDP pilot initiative to assess actions taken by companies to manage their response and reduce their contribution to, climate change. This performance score is separate and distinct from the disclosure score and has no current impact on the CDLI. See Chapter 3 for a complete discussion of this pilot.

11 CDP 2008 distinguished between disclosure expectations of companies in different sectors, in particular between those classified as carbon-intensive and non-carbon-intensive.

Fig. E: Carbon Disclosure Leadership Index by sectors

Sector	Company	CDLI Score	Intensity*	Scope 1	Scope 2**	Scope 3***
Consumer Discretionary	Carnival	87	703	10,248	51	19
	News Corporation	75	19	109	528	178
	Stanley Works	75	48	51	162	533
	Limited Brands	74	38	32	353	255
Consumer Staples	Wal-Mart Stores	89	56	5,566	15,501	–
	Dean Foods	87	132	884	766	188
	Colgate-Palmolive	77	46	272	430	88
	H.J. Heinz	75	86	525	339	–
Energy	Chevron	88	267	62,979	5,216	382,000
	Spectra Energy	88	2,175	9,614	1,422	4
	Hess	86	274	10,715	574	78,038
	Anadarko Petroleum	79	610	8,284	641	–
	Transocean	79	170	2,148	5	1,804
Financials	Comerica	91	18	14	56	26
	Simon Property Group	86	189	26	690	3
	Hartford Financial Services	81	13	34	88	16
	Allstate	79	7	34	179	57
	Bank of New York Mellon	78	13	10	204	28
	Franklin Resources	77	5	10	21	6
	JPMorgan Chase	74	9	70	883	129
Health Care	Allergan	85	24	46	59	33
	Schering-Plough	85	54	447	557	32
	Biogen Idec	83	24	49	47	4
	Johnson & Johnson	83	21	357	971	370
	Bristol-Myers Squibb	75	40	378	454	56
	Pfizer	75	42	1,018	1,001	121
Industrials	Boeing	87	28	575	1,104	280
	Burlington Northern Santa Fe	85	844	14,890	323	28
	Eaton	85	55	122	726	–
	United Parcel Service	82	257	12,149	1,105	2,357
Information Technology	Cisco Systems	88	15	52	547	198
	Hewlett-Packard	86	21	304	2,146	5,927
	Advanced Micro Devices	82	76	85	355	394
	EMC	82	25	36	336	61
	Intel	78	93	1,000	2,500	43,670
	Autodesk	77	10	2	20	25
	IBM	77	29	580	2,381	–
	LSI	76	34	8	84	7
Materials	Praxair	83	1,244	3,696	9,733	265
	PPG Industries	81	394	4,443	1,806	19
	E.I. du Pont de Nemours	80	437	9,337	4,003	78
	Air Products & Chemicals	74	2,036	12,900	8,900	–
Utilities	PG&E	88	235	1,904	1,536	22,569
	Public Service Enterprise Group	88	1,962	24,288	1,851	42,593
	Pepco Holdings	87	284	2,959	80	1
	Xcel Energy	85	5,598	62,650	59	27
	DTE Energy	84	4,528	41,800	445	–
	FPL Group	82	2,813	46,008	159	15
	Consolidated Edison	79	351	4,212	558	–
	Entergy	78	3,734	33,187	15,704	–

* Disclosed Scopes 1 and 2 emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

** Only Scope 2 grid average data is included here. See Appendix 1 for data on Scope 2 contractual arrangements.

*** The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure.

Companies that are new to the CDLI this year are marked in red.

Furthermore, this year's scoring methodology took into account that some questions apply to all companies, whereas the applicability of other questions depends on the responding company's individual business circumstances. The CDLI scoring methodology should therefore not penalize companies that are unable to respond to a question if it is not relevant to their businesses.

The transition to parity of sectors in CDP 2009 means that some companies in non-carbon-intensive sectors may have received a lower overall score (in absolute terms) than they did in CDP 2008, notwithstanding that the quality of their response may have improved or remained the same. This is because the total available score against which the companies in non-carbon-intensive sectors have been assessed in CDP 2009 is greater than the total available score that was available for comprehensive questions in CDP 2008.

However, it is important to note that although absolute scores may differ, this should not affect companies' relative performance within their respective sectors. Those CDLI companies classified as non-carbon-intensive in 2008, which also feature in this year's CDLI, have seen an average score decrease of 10.7 points, or minus 11.7%. For the responding S&P 500 population overall, the sectors classed as non-carbon-intensive in 2008[12] and those equivalent sectors in 2009[13] have seen an average fall in scores of 7.8 points, or minus 13.5%.

CDLI highlights and trends

This year's average score for all respondents was 53.2 compared with an average score of 81.7 for the top 10% in the Carbon Disclosure Leadership Index.

Utilities and Information Technology best represented in 2009 CDLI

With eight respondents each (16% each of the CDLI) and average CDLI scores of 84 and 81, respectively, Utilities and Information Technology have the greatest number of respondents in this year's Carbon Disclosure Leadership Index. With a history of disclosing emissions, it is not surprising that the Utilities sector is well represented, with **PG&E** (88), **Public Service Enterprise Group** (88) and **Pepco Holdings** (87) in the CDLI. Information Technology — represented by **Cisco Systems** (88), **Hewlett-Packard** (86) and **Advanced Micro Devices** (82), among others — also had an impressive showing as a leading sector. Respondents in this sector provided robust disclosure on cutting energy consumption, a commonly noted industry challenge.

Financials are not far behind

Financials followed closely, with an impressive total of seven respondents (14%) in the CDLI and an average score of 81, demonstrating continued strength in climate change disclosure and reflecting the sector's awareness of the impacts that climate-change-related regulation and other risks have on clients and the companies in which they invest. The top-ranked respondent on the CDLI this year was **Comerica**, with a score of 91.

CDLI new arrivals

As mentioned, the respondents included in the CDLI are those with scores in the top 50, or top 10%, of the S&P 500 companies. Each year there are new respondents making it onto the index. In 2009, ten respondents were new to the CDLI. These new companies are highlighted in red on the CDLI table.

List of non-responders

The number of non-respondents to CDP out of the S&P 500 decreased to 168 (34%). Non-responding companies have therefore become increasingly visible. The table below lists the 10 largest non-responders of 2009 by market capitalization as of June 18, 2009.[14]

Fig. F: Largest non-respondents by market capitalization

Sector	Company Name
Consumer Staples	Philip Morris International
Consumer Staples	CVS Caremark
Consumer Discretionary	Comcast
Consumer Discretionary	Amazon.com
Industrials	Lockheed Martin
Consumer Discretionary	DIRECTV Group
Consumer Staples	Archer Daniels Midland
Health Care	Covidien
Industrials	Caterpillar
Industrials	General Dynamics

12 Non-carbon-intensive sectors in CDP 2008: Financial Services; Hospitality, Leisure and Business Services; Retail & Consumer; and Technology, Media and Telecommunications.

13 Equivalent non-carbon-intensive sectors in CDP 2009: Consumer Discretionary, Consumer Staples, Financials, Information Technology, and Telecommunications.

14 Based on data retrieved from Bloomberg.

3 CDP performance scores

The CDP 2009 scoring methodology included, for the first time, separate scores for performance. This performance score is a pilot initiative to assess the impact of climate change actions/activities and is distinct from the CDP questionnaire's Section 3 (which queries respondents on how they track their performance to stated goals and objectives). Whereas historically, scores have reflected the quality of disclosure, performance scores assess actions taken by companies to respond to, and reduce their contribution to, climate change. This helps provide investors with insight into the extent to which companies are preparing to compete in a low-carbon economy.

Certain questions in the CDP questionnaire were identified as being eligible for performance points. For example, where a company reports that it has a GHG emissions and/or energy reduction plan in place,[15] two performance points were awarded to acknowledge this as an indication of good performance in the management of emissions reductions — rather than one point awarded for disclosure whether the answer was that they have a plan or do not.

Performance-related questions are integrated throughout the questionnaire. Each section of the questionnaire provides respondents with an opportunity to demonstrate good performance.

It is important to note that because performance scores are being piloted, they had no impact on the CDLI score. Individual respondent performance scores were not made public in the CDP 2009 reports. Performance scores are aggregated and discussed both on an aggregated respondent basis and in a sector breakdown. The performance score system is integrated throughout the questionnaire. Each section of the questionnaire can therefore indicate good performance — action to mitigate climate change — in a variety of ways.

Strong performers take considered and effective action to manage risks and be agile to seize new opportunities

Performance points were awarded when respondents demonstrated that they had taken action to manage their perceived risks (physical, regulatory, or other) or maximize their perceived opportunities. Examples include designing business continuity plans, implementing regulation and policy monitoring teams, and introducing new products or services to capitalize on changes in consumer demand as a consequence of climate change.

As may be expected, a respondent that scores high on disclosure most often scores high on performance. There is an underlying bias, since companies cannot gain performance points if they do not disclose the information. Monitoring and managing impact increase the likelihood of understanding where a company can take action and the best way to do so. Average sector performance scores ranged from 37 to 58.

The reason for its introduction: Use by investors and policymakers

Introduction of performance scores in 2009 is an important step toward recognizing respondents' progress in addressing climate change through action, as well as scoring the respondents on their disclosure quality. The performance score aims to be a useful benchmarking tool for CDP signatories to evaluate how prepared their portfolio companies are to remain profitable in a low-carbon economy.

This performance score is a pilot initiative to assess the impact of climate change actions/activities and is distinct from the CDP questionnaire's Section 3 (which queries respondents on how they track their performance to stated goals and objectives). Whereas historically, scores have reflected the quality of disclosure, performance scores assess actions taken by companies to respond to, and reduce their contribution to, climate change.

15 This refers to Question 23.1.

The standard of disclosure over the past seven years since the first companies reported to CDP in 2003 has increased dramatically, which is a great credit to those companies that have participated in the initiative.

Performance scores serve to present a fuller picture to investors and policymakers of corporate commitment to mitigating the effects of climate change.

Fig. G: Top performance scoring companies in CDP 2009

Sector	Company
Consumer Discretionary	Best Buy
Consumer Discretionary	News Corporation
Energy	Transocean
Industrials	Boeing
Industrials	United Technologies Corporation
Information Technology	Cisco Systems
Information Technology	Dell
Information Technology	EMC
Information Technology	Hewlett-Packard
Materials	E.I. du Pont de Nemours
Materials	PPG Industries
Utilities	Consolidated Edison
Utilities	Exelon
Utilities	Pepco Holdings

The standard of disclosure over the past seven years since the first companies reported to CDP in 2003 has increased dramatically, which is a great credit to those companies that have participated in the initiative. This increase also reflects greater activity by companies in mitigating climate change, and it is for this level of this effort that CDP endeavors to measure and give recognition. Performance scores serve to present a fuller picture to investors and policymakers of corporate commitment to mitigating the effects of climate change.

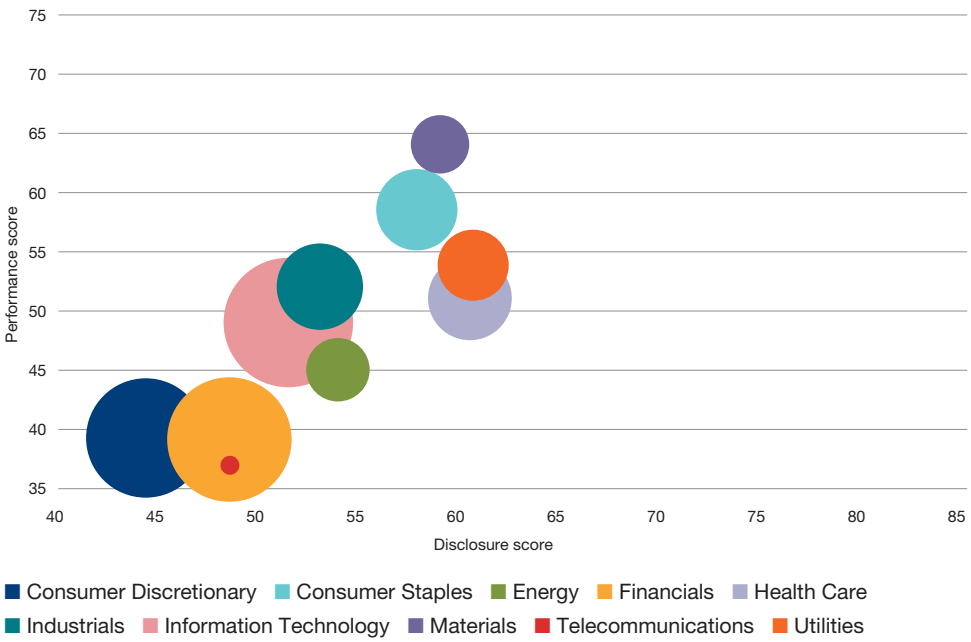
Materials sector captures top performance, suggesting maturing climate change strategies

The Materials sector received a performance score of 64 from 23 respondents — the highest average score of any sector — and also scored a relatively high average CDLI score of 80 with the inclusion of four respondents (8%). The sharp increase in the sector's emission reduction target disclosure rates — combined with its impressive performance score — strongly suggests a fast-maturing approach to GHG reporting and emissions reduction activity, independent of the stringent regulations that govern other sectors such as Utilities.

Consumer Staples performs well; Utilities close third mirroring high CDLI scores

The Consumer Staples sector received a performance score of 58 from 32 respondents and also scored a relatively high average CDLI score of 82 with the inclusion of four respondents (8%). Utilities, with an average performance score of 54 from 28 respondents is consistent with a strong average CDLI score of 84, and the highest number of respondents on the CDLI 16% (8). This sector scored well in both scoring systems, reflecting not only a demonstrated capacity for thorough and detailed disclosure but also the implementation of climate change strategies and actions. Additionally, Utility sector respondents operate in an industry that has the most mature climate change regulations and standards, which incentivize utilities to establish emission targets. Finally, numerous utilities provided detailed descriptions of emissions-cutting actions connected to diversifying into low-carbon energy generation, which help raise their performance scores.

Fig. H: Performance scores versus disclosure scores for all sectors in the S&P 500



Sizes of bubbles are based on number of respondents.

Incorporating performance into CDP 2009 has been a positive step; it has provided distinction between observing and rewarding good reporting versus positive action to mitigate climate change.

Current limitations

All companies that responded to CDP 2009 — irrespective of their industry, geography and level of emissions — were scored against the performance questions by using one common scoring methodology. It is important, however, to make a number of caveats in this regard.

The methodology for performance scores does not currently flex to account for a company's area of business and situation in the same way as the methodology for disclosure does. In addition, performance scores are awarded only when the underlying disclosure is provided by the respondent. No additional research or analysis is undertaken independent of the company responses. There is, therefore, an inherent link between performance scores and disclosure scores. However, that link is consistent across companies, and so the focus of interest is on how sectors perform relative to one another. Also, it is sensible to suggest that the more companies monitor and manage their impact, the more they are likely to understand where they can take action and the best way in which to do it — and hence "perform" to a higher standard.

Evolution of performance scoring

Incorporating performance into CDP 2009 has been a positive step; it has provided distinction between observing and rewarding good reporting versus positive action to mitigate climate change. The exercise has highlighted that a performance score may be a valuable additional component of report analysis and of the CDLI league table in the future. It would provide guidance and incentives for respondents to take positive action and also highlight to the CDP signatories where this is being done; that is, risks are being managed, and opportunities maximized. The degree to which performance scoring is integrated into the CDLI score and the timeline for this are yet to be determined, and stakeholders will be informed of developments in this area.

Fig. I: A diversity of perspectives: Views on key climate change issues across Industries

Sector	Outlook 1	Outlook 2
Industrials Is your company exposed to regulatory risks related to climate change? (Question 1.1)	*"We consider our company to be exposed to regulatory risks...[including] emissions compliance costs associated with a downstream approach to [GHG] reductions...CSXT [CSX Transportation] has programs in place to reduce fuel consumption and greenhouse gas emissions while still meeting the freight transportation demands of the nation."* **CSX**	*"BNSF does not currently view the company to be exposed to regulatory risks posed by climate change because…we believe that rail continues to be in a competitive position when compared to other transport modes. Specifically, rail transport of freight has significantly lower GHG emissions when compared with other modes of land transportation…BNSF envisions US regulations eventually resulting in the development of a system to comprehensively report GHG emissions."* **Burlington Northern Santa Fe**
Industrials Is your company exposed to physical risks from climate change? (Question 2.1)	*"The predicted consequences of climate change include extreme weather events, such as storms, droughts, floods and the health effects of increased pest infestations...Our business activities and the well-being of our employees could be significantly affected, depending on location and local conditions...UTC also requires key suppliers to develop and document risk mitigation plans, to ensure business continuity in the event of an emergency."* **United Technologies Corporation**	*"As a company not directly dependent on large quantities of natural resources, nor with facilities located in higher-risk areas, ITT expects minimal direct specific exposure to the physical risks of climate change. However, like most other global companies of its size and scale, ITT may be affected in the event of significant disruptions to global supply chains as a result of climate change."* **ITT**
Energy Is your company exposed to physical risks from climate change? (Question 2.1)	*"We do not believe climate change poses an imminent physical risk to our assets. We understand the issue of climate change has prompted ongoing discussions among scientists and others concerning potential impacts on weather, sea level and habitat...Obviously, these issues are complex, and our early findings are further complicated by a growing magnitude of variables as we gain knowledge of our discoveries. Based on the uncertainty of the available science and the actual impact of climate change, we are not in a position to make an accurate assessment of physical risk pertaining to our company."* **Devon Energy**	*"The 2005 hurricane season in the Gulf of Mexico demonstrated the potential damage and business impact that severe weather can have on the oil and natural gas industry...These extreme weather events, particularly hurricanes, have the ability to shut down operations and halt oil and natural gas production from affected areas. This not only impacts Anadarko's revenue stream, but also the flow of natural gas and crude oil to marketers and refiners of fuels for heating, transportation, and electricity."* **Anadarko Petroleum**
Consumer Discretionary Do regulatory requirements on climate change present opportunities for your company? (Question 4.1)	*"Voluntary initiatives by our customers in certain segments (Cities, Universities and States with climate commitments) have already resulted in increased demand for the large number of environmentally preferable products in our assortment, notably Energy Efficient technology, lighting and recycled papers...Opportunities have increased in the past 12 months."* **Office Depot**	*"Due to the fact that Limited Brands will not likely be impacted directly by any proposed legislation, we do not anticipate any opportunities to be gained as a result of the regulatory requirements. And, because the retail sector as a whole is unlikely to be impacted directly by current proposed legislation, there are likely to be no opportunities presented or realized by any of our competitors."* **Limited Brands**

4 Climate change economy: Strategies for recovery and competitiveness

With government commitment and consumer preference as primary drivers, corporate America is actively pursuing strategies and investments to adapt to a new economic reality. Indeed, mitigating GHG emissions is a national priority, as the raft of legislative initiatives make clear (see Figure J). Collectively, these forces support the green shoots of a new climate change economy, as clearly demonstrated in this year's CDP responses.

Comerica is an example of a respondent poised to take advantage of incentives embedded in the federal stimulus package, noting that *"Climate-change-related opportunities are already beginning to emerge in all of our major US markets...Many of the opportunities we see emerging...are related to energy-efficiency, renewable energy, and green buildings...The funding provided for such projects in the 2009 federal stimulus package, make these opportunities far more tangible and less theoretical than they were one year ago."* In addition, there is an awareness that Wall Street is watching, as demonstrated by **Juniper Networks**. *"Companies perceived as part of the [climate change] solution will be rewarded in the stock market versus those perceived to be in risky positions in addressing the challenges."*

Efforts to achieve emission goals accelerated. **United Parcel Service** is investing in alternative fuel and hybrid technology, while **American Express** disclosed *"initiatives to reduce energy and water consumption...expanding our capabilities to maximize free cooling programs at one US data center."*

Plugging in: Economic activity around renewable energy

Respondents are looking to strategically incorporate more efficient forms of electricity generation and distribution. National Renewable Portfolio Standards could serve to support those efforts in the way state renewable portfolio standards and bioethanol production mandates have influenced energy strategies. **FPL Group**, North America's largest generator of wind-powered electricity and operator of the world's largest solar facility, sees renewable and advanced efficiencies as *"the best near-term solutions to the challenges faced in reducing greenhouse gases. A renewable electricity standard would provide additional value to FPL Group's nearly $10 billion investment made over the past decade in its wind and solar energy business."*

Respondents are also engaging by piggybacking on the growth in wind, solar and biofuels. **Corning** is *"exploring how we can leverage our flat glass for solar energy applications."* **IBM** cited offerings in hardware and software systems aimed at, among other areas, *"smart electricity grids"* and *"intelligent transport"* technology. **Progressive** took another approach by incentivizing innovation through its $10 million challenge to produce the first car that gets more than 100 miles per gallon. **Boeing** *"has extensively researched and tested the development of advanced 2nd generation biofuels."*

Innovative alliances

Climate initiatives unite sectors in innovative ways. Utilities described ventures with automakers to build infrastructures that increase the viability of electric vehicles — and with software companies and electronics companies to build out smart grids. **Progress Energy** backed Advanced Transportation Energy at North Carolina State University to develop *"technologies that will facilitate the advancement of plug-in vehicles."* **Weyerhaeuser**, a timber company, and **Chevron** formed Catchlight Energy in 2008 to *"research and develop*

The IT industry is responsible for 2% of the world's GHG emissions. However, we have the potential to help reduce significantly the other 98% of emissions...The greatest potential is seen in smart vehicles and transport and e-commerce, but substantial savings are also estimated in sectors ranging from buildings to energy supply.

Hewlett-Packard

Climate initiatives unite sectors in innovative ways. Utilities described ventures with automakers to build infrastructures that increase the viability of electric vehicles — and with software companies and electronics companies to build out smart grids.

Changes in the regulatory environment, consumer attitudes and the technology landscape yield new opportunities for investment in companies and industries that serve a role in mitigating or addressing climate change, or [for] those companies that are most effective in managing their operations and navigating the evolving regulatory environment. Likewise, careful analysis of sectors and companies not prepared for climate change may help mitigate risk in our portfolio holdings.

Franklin Resources

Fig. J: Climate change policy heats up

Date	Policy update
December 19, 2007	President Bush signs the Energy Independence and Security Act of 2007 into law. It includes a suite of new energy standards, including raising the corporate average fuel economy to 35 miles per gallon for cars, trucks and sport-utility vehicles and raising the renewable fuel standard to 36 billion gallons by 2022, including 21 billion gallons of advanced biofuels such as cellulosic ethanol.
February 17, 2009	President Obama signs the American Recovery and Reinvestment Act, which includes $83 billion in tax credit/grant provisions for clean technology and energy efficiency industries promoting a green economy.
March 17, 2009	The National Association of Insurance Commissioners adopts a mandatory disclosure standard, requiring all insurance companies with annual premiums of more than $500 million to complete an Insurer Climate Risk Disclosure Survey annually, with an initial reporting deadline of May 1, 2010.
April 10, 2009	The US Environmental Protection Agency (EPA) proposes national mandatory greenhouse gas reporting rule under authority of the Clean Air Act, affecting some 13,000 facilities emitting at least 25,000 metric tons of CO_2 equivalent per year. Under the proposal, initial reports would be submitted to the EPA in 2011 for the 2010 year.
April 24, 2009	Proposed rule for the Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act is published in the *Federal Register*, proposing to find that six greenhouse gases "threaten the public health and welfare of future generations" and that four greenhouse gases "contribute to the threat of climate changes."
May 26, 2009	The US EPA publishes 'Regulation of Fuels and Fuel Additives: Changes to the Renewable Fuel Standard Program' in the *Federal Register*, proposing rules to carry out the Security Act of 2007 by establishing a new program, RFS2, including all transportation fuels.
June 26, 2009	The US House of Representatives passes the American Clean Energy and Security Act (by a 219-212 vote), including proposing a national cap-and-trade system requiring companies to purchase permits to emit greenhouse gases, and also sets a goal to cut US greenhouse gases by 17% from a 2005 baseline by 2020 and by 83% by mid century. It also mandates that 15% of the nation's electricity be generated by renewable sources by 2020.
July 10, 2009	At G8 summit, leaders agreed to commit to prevent global temperatures from rising beyond 2° Celsius (or 3° to 4° Fahrenheit) against preindustrial levels and agreed on aims to cut their greenhouse gas emissions by 50% and 80% by mid century.

technology for converting cellulose-based biomass into economical, low-carbon fuels."

Customer preferences drive climate change economy

Consumers, clients and employees alike increasingly encourage emissions strategies. *"The population is increasingly educated, aware, and concerned about climate issues. With customers beginning to make purchasing decisions with environmental concerns in mind, it will be helpful to be seen as a positive environmental actor,"* noted **Biogen Idec**. **Sara Lee** is *"evaluating ways to add certain [carbon] footprint details to select packaging. Likewise, consumers are becoming more vocal in their packaging preferences."* **Bemis Company** noted a growing interest in sustainable packaging, helping drive alternatives to glass and metal packaging.

Climate concerns are beginning to influence supply chain operations and vendor relations. *"Clients want to do business with environmentally responsible companies, and this objective generally includes seeking suppliers that are addressing climate change in their operations and providing energy efficient products, services and solutions,"* according to **IBM**. Emissions data may weigh in on the purchasing process. *"Some of our key customers such as Wal-Mart...have begun requesting information from their vendors on climate change programs and GHG emissions. This data is used by Wal-Mart...to make product buying decisions,"* said **Allergan**, citing the *"potential financial risk."*

Is your business prepared to monetize carbon?

By Liz Logan and Matt Arnold, US Sustainability and Climate Change, PricewaterhouseCoopers

Each year, voluntary reporting to the Carbon Disclosure Project reveals how steadily climate change issues are reaching the C-suite. Many companies comply with environmental regulations, promote energy efficiency or work to substantiate the eco-friendly positioning of their brands, but more are beginning to assess long-term strategic objectives, as the prospects increase for comprehensive climate change legislation in the United States.

A federal system to cap greenhouse gas emissions undoubtedly would affect the US economy, although the impact would vary by industry, region and company. To determine how climate change could affect its business, each company must look at the nature and size of the existing and future regulatory impact and its reliance on environmental performance as a component of its business strategy. Both assessments require a fundamental understanding of greenhouse gas emissions.

Because the risks related to greenhouse gases are increasing and a price would be set for emissions under a cap-and-trade system, many companies are asking how they can do more to understand the risks and take advantage of the opportunities. Overall, they want to increase their knowledge of which facilities and processes have the highest intensity or the largest volume of emissions and use that information to make management decisions. In general, the objectives are to monetize the value of saved emissions and to prepare to meet the new reporting and disclosure standards expected amid growing investor concerns.

To meet these objectives, industry leaders are starting to move away from complex, point-in-time spreadsheets and databases toward smart systems, which can identify important fluctuations in emissions levels as the business flexes and changes. With new and agile Web-enabled tools, managers are beginning to see how they can improve the quality of their environmental reporting and present more meaningful information to the C-suite. With more efficient methods to collect emissions data, senior managers will be better equipped to implement value-seeking activities — from finding ways to drive down energy and supplier costs to smarter tax planning and allowance trading, to corporate valuations.

The second objective — preparing for more rigorous reporting and disclosure standards — is a reflection of the legislative and regulatory activity at the federal, regional and state levels. Many US businesses are already subject to regulation of greenhouse gas emissions at the state or regional level, and many investors are considering the risks of investing in companies that either are participating in a cap-and-trade system or may be subject to future legislation.

In May, the Climate Disclosure Standards Board[16] (CDSB) announced proposals to include climate change data in companies' financial reporting, with the view that "this cannot happen fast enough if the world is moving towards a low-carbon economy."[17] At the same time, the US Securities and Exchange Commission (SEC) has indicated it will review existing environmental disclosure requirements as early as this year to determine if more specific guidance for disclosure is needed.[18]

The level of preparedness an organization should achieve to monetize carbon depends on the nature and size of the future regulatory impact on the business and how much the business strategy relies on environmental performance. This strategic assessment ultimately drives the company to produce the quality information that management and investors demand. With efforts in Congress to regulate greenhouse gas emissions, more businesses are taking this step to ensure they are prepared.

Because the risks related to greenhouse gases are increasing and a price would be set for emissions under a cap-and-trade system, many companies are asking how they can do more to understand the risks and take advantage of the opportunities.

16 CDP provides the secretariat for CDSB. The CDSB is a consortium of business and environmental organizations focused on the development of a global framework to facilitate the corporate disclosure of climate-change-related data in mainstream reports. See www.cdsb-global.org.

17 The Carbon Disclosure Standards Board, press release, "Groundbreaking proposals unveiled for the inclusion of climate change in annual reports" (May 25, 2009).

18 SEC Chairwoman Mary Schapiro, "House Financial Services Subcommittee Hearing with SEC Chair Schapiro," www.CSPAN.org (accessed July 14, 2009).

5 Carbon reduction targets gain traction

[Corning] focuses on reduction of energy intensity...by improving energy efficiency in our processes, raising awareness of energy use and sharing best practices across Corning globally.

Corning

Clearly, the target bar for emissions reduction is being raised, with commitments of 1% to 1.5% per annum no longer indicators of "leadership." The upward trend in annualized targets — especially in the higher range — indicates more ambitious long-term planning across all sectors.

Far more companies reported adoption of emissions reduction targets this year, and notably, more revealed they are setting aggressive annualized targets. The marked shift toward the setting of targets and disclosure of that information opens a window for investors, employees and other stakeholders to glimpse plans for managing emissions-linked risks at some of America's largest companies.

Disclosure of emissions targets jumps precipitously

The number reporting emissions reduction targets rose sharply in 2009 — from 32% (102) last year to 52% (169), a 66% leap. The significance of that shift transcends mere cost-cutting expectations; the disclosures reveal that emissions strategies are clearly moving from a nice-to-have to a need-to-do.

Consumer Staples leads sectors in setting targets

Across all sectors, Consumer Staples captured the highest percentage of respondents reporting emissions reduction targets, at 72% (23), up from 38% (11), a predictable trend for this consumer-facing sector. Materials followed closely at 65% (15), disclosing emissions targets, from 55% (12) last year, supporting the view that focus and attention on emissions reporting from suppliers continue to rise.

Annualized targets more aggressive in 2009

This year, the number of companies with annualized reduction targets greater than 5% grew from 1% (4) of respondents to 9% (30) (see Figure K). Clearly, the target bar for emissions reduction is being raised, with commitments of 1% to 1.5% per annum no longer indicators of "leadership." The upward trend in annualized targets — especially in the higher range — indicates more ambitious long-term planning across all sectors.

Fig. K: Number of companies by reduction targets

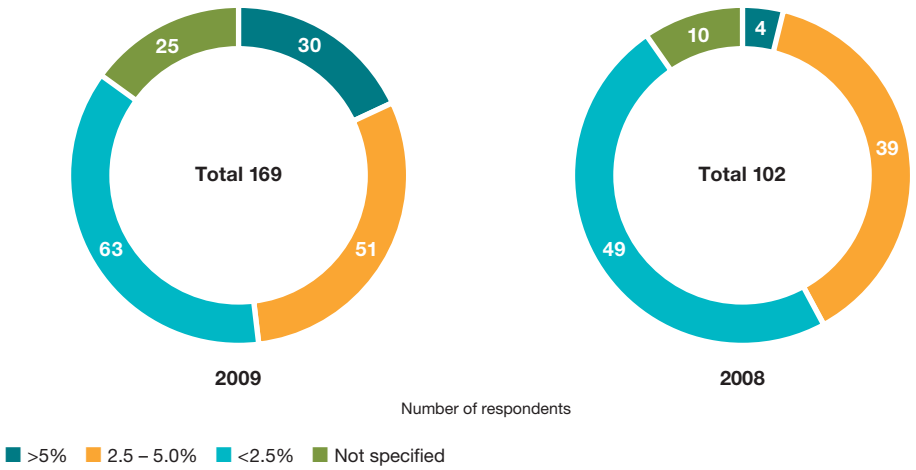
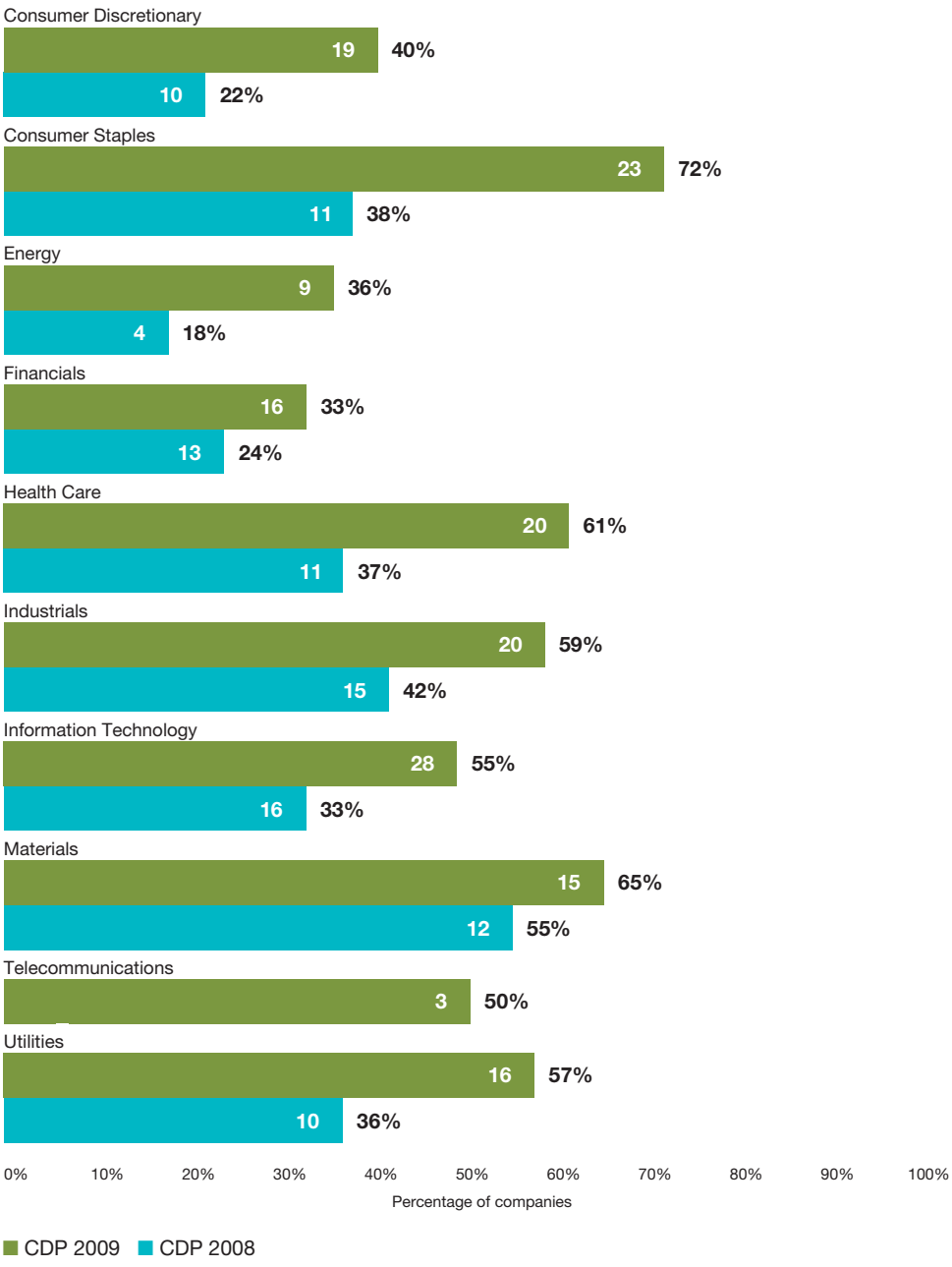


Fig. L: Percentage of companies with emissions reduction targets



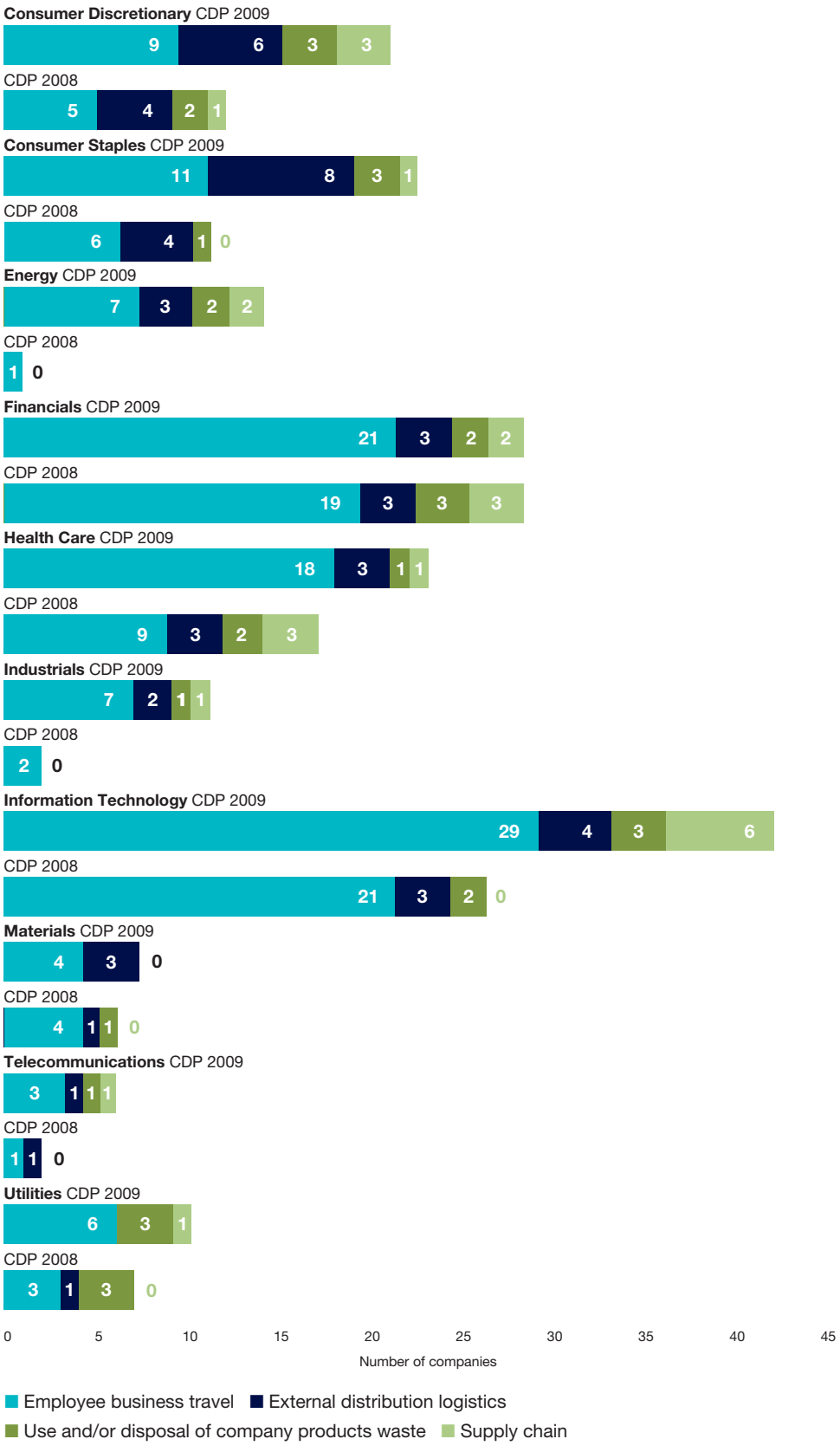
Union Pacific is committed to seeking reduced emissions through its practices and company-wide training, including voluntary agreements with federal, state and local governments. These efforts include a commitment to technological improvements, acquisition of newer locomotives, a commitment to rebuild older locomotives, company-wide training regarding fuel conservation, idle control program, maintenance of equipment, smoke inspection program and stewardship outreach to employees.

Union Pacific

Marked increases in disclosed Scope 3 emissions were noted this year, particularly in non-carbon-intensive sectors such as Information Technology and Financials.

The debate continues among respondents and their stakeholders over the merits and drawbacks of tracking and reporting their "downstream" emissions from use and disposal of their products and services.

Fig. M: Type of Scope 3 emissions tracked by sector



Steep rise in Scope 3 emissions disclosure

Respondents demonstrated concerted efforts to track Scope 3 emissions, which are more challenging to capture than Scope 1 and Scope 2 emissions. Marked increases in disclosed Scope 3 emissions were noted this year, particularly in non-carbon-intensive sectors such as Information Technology and Financials. In addition, the range of Scope 3 emissions tracked was broadened beyond employee business travel — the easiest to measure and most commonly reported Scope 3 emissions source.

The success of CDP's Supply Chain project is evidenced by the participation of over 600 responding suppliers, which through their disclosures demonstrated their commitment to emissions reporting. The debate continues among respondents and their stakeholders over the merits and drawbacks of tracking and reporting their "downstream" emissions from use and disposal of their products and services. Some respondents recognized that the bulk of energy use and corresponding carbon emissions results from use of their product, while others are unwilling to publicly disclose emissions from downstream energy use because of the inherent uncertainty around estimates.

In 2009, Information Technology remained the leading sector in reporting Scope 3 emissions, with 57% (29) of respondents, up from 48% (23) last year. **Google's** Scope 3 data included *"employee commuting, business travel, data center construction and manufacturing of our servers."* **Cisco Systems** disclosed targets on employee air travel: *"reduce Scope 1, 2 and business air travel Scope 3 GHG emissions by 25% absolute by CY2012."* Additionally, more respondents reported on Scope 3 external distribution logistics.

The Energy sector saw 36% (9) of respondents tracking emissions across all three Scope sources, up from 4.5% (1) last year. This suggests that within the past year, respondents in this sector integrated Scope 3 emissions reporting — and disclosure — in their climate change policies and procedures, as the sector prepares for continued GHG legislation through 2009 and beyond.

Harmonization continues around WRI Reporting Protocol

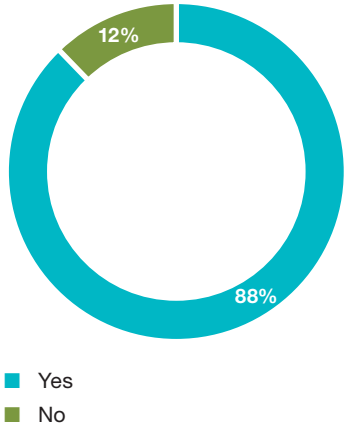
The World Resources Institute (WRI)/World Business Council on Sustainable Development (WBCSD) GHG Protocol remains the most common reporting methodology. The number of respondents using the WRI/WBCSD GHG Protocol increased to 88% (252) of companies this year from 73% (204) last year. Some respondents use multiple methodologies to track emissions — for example, leveraging the US EPA Climate Leaders program or the California Action Registry — above and beyond the WRI/WBCSD GHG Protocol. For others, tracking is already incorporated into existing requirements, such as the Clean Air Act. In the US, **Duke Energy's** coal-fired generating units are equipped with continuous emissions monitors that meet EPA requirements. **Exxon Mobil** uses guidance provided in the *Compendium of Greenhouse Gas Emissions Estimation Methodologies for the Oil and Gas Industry* (American Petroleum Institute), among others.

Carbon trading with an eye on Europe

In the US, the EPA, through its proposed mandatory GHG rule, would create, in effect, a national carbon inventory. Meanwhile, business leaders, Congress and the Obama administration are deliberating on a framework for a cap-and-trade system. Additionally, European regulatory efforts continue to influence US company reporting: In 2009, 55 respondents (17%) reported they participate in the EU ETS, up from 30 (10%) last year. As each iteration of the EU ETS includes more entities — it's now working on phase III — more US companies with operations in Europe will likely be required to participate.

The number of respondents using the WRI/WBCSD GHG Protocol increased to 88% (252) of companies this year from 73% (204) last year.

Fig. N: Percentage of companies using WRI/WBCSD GHG Protocol



6 Governance: Climate change and C-suite strategy

We believe global climate change will likely have a significant long term financial impact on the capital markets... Enhanced transparency on environmental externalities as well as climate regulation may allow portfolio managers to uncover investment opportunities, as well as identify companies with poor positioning relative to their peers.

State Street

Our strategy to address climate change is comprehensive, including the involvement of our Emerging Issues Group, internal Risk Committee and Risk Committee of the board along with all business areas throughout the company.

Travelers Companies

A number of factors, including new organizational structures and employee incentives, are helping to integrate climate change goals into US business strategy. *"A sure sign that environmental sustainability is gaining traction in the business world is the increased inclusion of 'green' in corporate planning, requests for proposals...and other transactions. In fact, language about environmental compliance is starting to appear in some contracts and — for the first time — in Service Level Agreements...between [Information Technology] providers and their clients,"* reported **Hewlett-Packard.**

Respondents from more carbon-intensive sectors had the highest percentages of Board or executive-level responsibility for climate change, with 91% (21) of Materials and 86% (24) of Utilities. The less carbon-intensive sectors such as Financials and Information Technology had the lowest percentages of respondents indicating any executive-level responsibilities, with only 61% (31) of Information Technology respondents and 53% (26) of Financials.

More respondents award climate change progress

There was a notable increase in respondents reporting incentive structures to reward climate change progress, from 30% (93) last year to 35% (115) in 2009. **PepsiCo**, noted it has begun "operationalizing" climate change policy, preparing Quarterly Performance Scorecards for senior executives that *"reflect leading indicators of GHG emissions."*

Programs varied from impacting annual and long-term bonuses (**Capital One Financial**) to offering company-wide recognition achievement awards for reducing GHG emissions (**Monsanto**), to directly affecting the compensation of employees with specific climate-change-related objectives (**Air Products & Chemicals**). **Google** reported: *"We provide incentives for employees to make choices that have a better overall climate impact, primarily around transportation and commuting, food and beverage packaging waste, and composting... Employees in eligible offices who bike, walk, pogo-stick, unicycle, or otherwise self-power to work can earn points that translate into a donation from Google to their charity of choice."*

Intel offered this example of climate goals tethered to performance: *"In 2009, a portion of each employee's variable pay will be based on meeting key conservation and greenhouse gas reduction goals. In addition, managers who have responsibility for the major climate change goals such as PFC [perfluorocompound] reductions or energy efficiency are held accountable for their performance to those goals."* **Alcoa,** too, incentivizes climate change progress: *"Alcoa business unit's leaders have various incentive mechanisms in place to reward both managers and associates for meeting key non-financial indicators such as EHS [environment, health and safety] and energy performance targets."*

Shaping public policy

Respondents are deepening their involvement in public policy as regulatory activity heats up. Nearly all sectors had more respondents reporting some level of participation, reflecting an urgency — and expediency — on the part of companies to work closely with legislators and regulators in shaping climate change policies. Utilities had the highest percentage participating in public policy discussions, with 100% (28), of all respondents. Information Technology had the highest number of respondents involved in policy discussions, with 61% (31), of all respondents, up from 51% (24) last year.

7 Navigating risks, seizing opportunities

Respondents sent a strong message in 2009: they are jockeying for competitive advantages — while mitigating risks — in anticipation of costs attached to greenhouse gases. Regulatory, physical and other risks were highly detailed and multifaceted, ranging from drought affecting tomato yields to potential litigation. Yet while future costs remain uncertain, there is a clear trend toward identifying opportunities in energy-saving products and services. In such a fast-changing market, companies are grappling with making the right moves at the right time. Across all sectors, more respondents saw business opportunities emerging from climate change — 86% (281) — than risks 82% (269).

Regulatory risks and opportunities

Utilities, Financials, Information Technology and Consumer Discretionary were the most vocal about regulatory risks. A central concern was ensuring risk management processes are appropriately attuned to pending regulation. Much of the regulatory risk described by respondents involves potential costs, investments or often both. Some respondents indicated costs may be material or likely to impact customers.

In July 2009, the SEC Commissioner stated that climate change disclosure reporting rules for corporations are under consideration. The agency was taking *"another very serious look at the [climate change] disclosure system in this area."*[19] A disclosure system would likely obligate companies to report the effects of GHG output on their financial condition.

Energy, Utilities: Compliance costs potentially significant

Utilities, particularly those with coal-fired plants, cited a host of operational cost concerns related to compliance. **Constellation Energy Group** listed concerns for electricity generators as *"increased costs in emissions allowances, installation of emissions control equipment, fuel switching, development of new technologies and curtailment of permanent retirement of existing generation assets in order to comply with regulations."* **Progress Energy** cautioned that switching from fossil-fuel-based sources may distort natural gas markets. **Apache** anticipates regulatory actions may narrow some business margins: *"Our analysis of GHG regulatory proposals suggests that all will result in higher operating costs for our core business,"* adding, *"...it seems prudent to anticipate some narrowing of margins, especially for globally traded commodities such as oil and gas."*

Manufacturing: Competitive concerns, opportunities from tougher building codes

Carbon-intensive producers underscored far-reaching risks to their businesses. **United States Steel** noted: *"Any international, national, state or regional policy that would suggest that US Steel or any integrated steel producer reduce CO_2 FPEs (fixed process emissions) would reduce the viability of the steel sector in the United States and worldwide."* Yet the company reported the drive toward energy efficiencies will *"increase the need for high performance steels"* and cited opportunities in high-strength steels used to reduce vehicle weight, steel pipe and tubing needed for alternative fuel distribution and CO_2 transportation.

> In the rapidly changing carbon regulatory environment, over the last 12 months our view is that even in the United States, regulatory 'risk' has become a reality.
>
> **Citigroup**

19 E&E Publishing. "SEC Turnaround Sparks Sudden Look at Climate Disclosure," July 12, 2009.

As a changing climate weighs more heavily on supply chains, particularly in food and agricultural businesses, companies and developing and investing in solutions to counter physical risks.

Respondents from both the Consumer Staples and Consumer Discretionary sectors both caution that regulation costs may ultimately pass to consumers.

United Technologies Corporation also cited potential benefits. *"New building codes that demand higher energy efficiencies, or greenhouse gas emission reductions, are set to boost customer demand for highly efficient products. We are determined to provide those products."*

Information Technology: Manufacturing risks, smart grid opportunities

Respondents see demand for Information Technology products and solutions that help companies manage their carbon risk exposure. **EMC** *"believes there are substantial business opportunities to provide equipment, solutions, services and software to companies affected by and seeking to protect themselves from climate related business risks."* **Symantec** concurred: *"With energy costs in a typical data center doubling every five years, there is a growing demand for software and systems that can reduce the need for electricity and make more efficient use of existing resources."* **Cisco Systems** pointed out opportunities in remote collaboration tools, data center virtualization, and smart grid solutions, stating: *"it is likely that more opportunity will be realized as regulations are finalized in major markets as the post-Kyoto negotiations are completed."*

Information Technology companies cited risks within component manufacturing and assembly; opportunities included broadband and other innovations that act as the "connective tissue" critical to climate change initiatives. **National Semiconductor** said global emissions caps could *"impose significant costs and require major changes to semiconductor fabrication processes."* Likewise, **Texas Instruments** cited similar risks of restrictions or even bans on the process chemicals used in Information Technology manufacturing.

Sourcing supply chain risks, carbon-related marketing opportunities

Retailers fall across two sectors — Consumer Staples and Consumer Discretionary — and respondents from both cautioned that costs may ultimately pass to consumers, since regulations could impact the *"cost and/or location of sourcing our products, which could reduce our profitability, increase costs to consumers, or both,"* said **J.C. Penney**. Still, **Wal-Mart Stores** noted, *"...potential opportunities exist, under a well designed cap-and-trade system, to use the financial value of carbon to 'roll back' the price of low-carbon products. Such a mechanism would create and encourage meaningful technology adoption by addressing the first cost premium often associated with these products."*

Physical risks and opportunities

As a changing climate weighs more heavily on supply chains, particularly in food and agricultural businesses, companies are developing and investing in solutions to counter physical risks.

Utilities and Energy: Stormy weather

The threat of higher temperatures and extreme weather patterns has respondents guarding against potential damage and "hardening" their facilities. **Consolidated Edison** — as New York's primary electricity provider — is strengthening systems to withstand possible intensifying weather. *"Although the full extent of potential weather-related impacts and sea level rise associated with climate change remains uncertain, Con Edison is beginning to plan for weather-related contingencies,"* adding that the company is purchasing *"submersible transformers for use in areas that are most susceptible to flooding during hurricanes and nor'easters."*

Food and agriculture: Supply chain risks, longer growing seasons

Respondents in this sector cited risks to crop yields and water scarcity stemming from severe weather patterns. **H.J. Heinz**, which uses 2.5 million tons of tomatoes each year, instituted drip irrigation, yet noted *"when drought reduces the availability of water, Heinz is at risk despite our focus on sustainable agricultural practices."* **ConAgra Foods**, too, reported the *"greatest physical risk from climate change remains in our supply chain."*

Bio refinery demand for corn and soybeans may further pressure the traditional food supply chain. Yet the food companies also reported they may benefit from rising temperatures in parts of the world where growing seasons may lengthen.

Higher temperatures: Potential to influence vaccine demand, create mineral extraction opportunity

Health Care companies noted that changing weather patterns may increase the need for medications and vaccines, including those that target tropical disease and pandemics.

Natural resources companies may find remote regions more accessible. **Newmont Mining** reported that as the Arctic Ocean sea ice melts, "a vast store of mineral wealth becomes more available for extraction." **Alcoa** cited a partnership with Iceland to receive electricity for its new aluminum smelter from hydroelectricity based on melting glacier flows.

Physical climate change risks: Raising insurance premiums

"Simply put, increased weather related risks could lead to higher rates and limited coverage," said **American International Group** indicating that changing weather patterns could potentially force insurance companies to cancel coverage, ultimately impacting the bottom line and growth prospects. **Chubb** notes several new product and service opportunities that respond to *"customers' increased environmental awareness and desires to limit climate change,"* including increased coverage offered to customers in some states who *"rebuild after a covered loss with environmentally-friendly materials and energy-efficient systems."*

Other risks and opportunities

Eco-friendly demand fosters product development

Respondents noted consumer demand for environmentally-friendly products as a driver of new market opportunities. **KB Home** said, *"growing consumer interest in reducing individual or household carbon footprints"* led to *"increasing the range of environmentally friendly products and interior design options we make available to our home buyers in large part to address this consumer interest."* **Bemis Company,** as a producer of light, flexible packaging, saw a competitive advantage over producers of glass or metal cans. **Clorox** cited *"enhanced opportunity"* in its sustainable product lines.

Financials report tailoring products and services for environmentally aware customers. **Chubb** conducts around 600 infrared scans a year checking customers' homes for energy leaks. **American Express** reports programs for customers with *"'green' interests,"* including a travel reporting program that measures environmental impacts.

Allstate said it *"continues to examine actuarial data to identify any situations where lower emissions and lower risk may converge."* The insurer invested in bonds for solar energy, wind power and biomass.

Some respondents detailed new, climate-related applications for existing products, or even by-products. **IBM's** "Big Green Initiative" applies existing technologies to water innovations. **Molson Coors Brewing** produced 1.7 million gallons of fuel-grade ethanol in the US from waste beer and other liquids.

The threat of higher temperatures and extreme weather patterns has respondents guarding against potential damage and "hardening" their facilities.

Changing weather patterns could also potentially force insurance companies to cancel coverage, ultimately impacting their bottom line and growth prospects.

8 A global perspective: Industry snapshot

Bank of America cited expected upcoming regulatory changes globally, including Japan's plans for a cap-and-trade system, new carbon emission constraints in Australia and Canada, as well as possible climate change regulation in emerging markets such as Brazil, Russia, India, China and South Africa: "In Europe, the regulatory framework post-2012 is being debated, and topics such as the increase in the amount of Clean Development Mechanism (CDM) that will be allowed in the event that there is not a broader acceptable international agreement on climate change to replace the Kyoto Protocol, and the potential creation of a market for trading renewable energy certificates, all represent regulatory risks and opportunities."

The big picture: Global trends

In this section, we take a look at responses across the S&P 500, FTSE 350 and Global 500. More detailed analysis for each industry is available for free in the Industry Snapshots at www.cdproject.net. With this global lens, we see certain overarching climate change messages and actions emerge across these geographies despite different levels of maturity and implementation of regulation and market forces. Clearly, trends toward a consistent climate change policy are in motion, as investors — and companies — build strategies to adapt to this fast-changing global regulatory landscape.

Some of the more commonly cited sector issues are described as follows.

Global industry response

S&P 500 versus global scorecard: comparing trends by sector

Figure O shows that while the US is clearly moving in the right direction, respondents across sectors appear to be playing catch-up with other geographies in the maturity of their emissions disclosure and reporting. As the red shading indicates, almost without exception US companies lag across the majority of disclosure areas.

Response rates

The leaders

It is no surprise that Utilities had the highest response rate globally — 88% (59) — consistent with the trend observed in the S&P 500. Consumer Staples followed, with 85% (71), in part due to reputational, customer-facing pressures to carry out climate change policies, as well as current and emerging regulation, such as the EPA proposal in the US and the Department of Environment, Food & Rural Affairs emerging regulations in the UK.

The laggards

Globally, the Energy sector had a relatively low response rate of 62% (57), suggesting a wait-and-see approach with regard to climate change legislation and regulations. However, this may simply reflect a reluctance to share its climate change plans, viewed as competitive data the respondents prefer not to disclose. The Health Care sector's relatively low global response rate of 63% (51) supports the notion that this sector is currently less impacted than others by carbon regulations. Interestingly, a global view of the Financials sector reveals one of the lowest response rates, at 66% (176), perhaps reflecting lack of regulatory pressure to track its own carbon footprint. In the S&P 500, the sectors demonstrating low response rates were Health Care 60% (33), Industrials 60% (35) and Consumer Discretionary 59% (47).

Sectors eye regulatory risks

Across most sectors, respondents consistently reported regulatory risks — more than both physical risks (such as extreme weather) and other risks. This may be due to the quickened pace of more stringent and imminent GHG regulations. The Financials sector included the most companies citing all categories of risk. Respondents in this sector are particularly attuned to the risks and regulatory environments facing their diverse and global client bases. Industrials expressed concerns that regulatory risks might negatively impact its margins — from rising energy costs or additional compliance and record-keeping costs — to a drop in exports when competing with countries not subject to the same regulatory challenges.

Fig. O: Global response scorecard by sector

CDP sector		Disclose emissions reduction targets	Disclose forecasts	Disclose GHG emissions	Publicly available	Report on GHG emissions in annual corporate reporting	Responded	Verify emissions
Consumer Discretionary	S&P 500	40%	26%	68%	62%	79%	59%	30%
	Global	54%	42%	82%	69%	84%	66%	43%
Consumer Staples	S&P 500	72%	66%	91%	91%	91%	76%	44%
	Global	73%	64%	94%	83%	92%	85%	56%
Energy	S&P 500	36%	36%	88%	76%	80%	64%	44%
	Global	47%	44%	87%	75%	85%	62%	56%
Financials	S&P 500	33%	33%	63%	63%	63%	61%	31%
	Global	48%	44%	76%	71%	78%	66%	49%
Health Care	S&P 500	61%	45%	88%	82%	70%	60%	27%
	Global	67%	53%	88%	80%	80%	63%	39%
Industrials	S&P 500	59%	41%	74%	76%	79%	60%	32%
	Global	55%	44%	84%	72%	87%	67%	44%
Information Technology	S&P 500	55%	41%	78%	78%	61%	72%	49%
	Global	57%	50%	84%	78%	70%	69%	50%
Materials	S&P 500	65%	52%	91%	87%	91%	79%	57%
	Global	73%	52%	93%	86%	95%	76%	66%
Telecommunications	S&P 500	50%	50%	83%	83%	67%	67%	17%
	Global	71%	50%	96%	89%	86%	67%	54%
Utilities	S&P 500	57%	75%	93%	96%	100%	88%	68%
	Global	71%	71%	95%	95%	100%	88%	79%

Red Areas where the S&P 500 companies lagged the global population of companies who responded to CDP 2009 for that sector

Green Areas where the S&P 500 companies exceeded the global population of companies who responded to CDP 2009 for that sector

Sharp rise in disclosure of emissions reduction targets: Consumer Staples, Materials and Telecommunications lead all sectors

The year 2009 saw a profound increase in emissions targets set by companies across all sectors globally, as they ramp up efforts to cut energy costs and position themselves for increasingly challenging carbon standards. Consumer Staples at 73% (48) up from 56% (34) last year, had the highest percentage disclosing emissions reduction targets, likely driven by the importance of brand and reputation in this sector and by demand for climate change policies from consumers. Materials was another impressive gainer in setting emissions reduction targets, with 73% (41) disclosing established targets up from 58% (32) last year. Not surprising, companies in this sector, which include construction materials, metals and mining, and paper products are carbon-intensive, and these targets may well increase in lockstep with a rise in cost containment measures.

Emerging sector trends

Industrials brace for climate change challenges

Heavy GHG emitters such as cement, steel, aluminum and automotive companies face exposure to increasingly stringent emissions regulations globally. The debate persists on whether manufacturers in regulated regions can remain competitive with companies in countries not subject to the same constraints (e.g., China and India).

Utilities and Energy: The push for a diversified fuel and energy mix

Governments across the globe continue to enact mandates to increase biofuels production and renewable and alternative electricity generation. In response, oil and gas companies and utilities are diversifying their fuel asset portfolios and actively seeking new strategies as part of a global rebranding to "energy" companies. **Endbridge** also described the benefits of diversification: *"With the recent announcement of the Green Ontario Energy Act in Ontario, designed to promote the generation of electricity from renewable sources, Endbridge is in a key position to become a major player under this Act."* Several oil and gas majors cited carbon capture and storage (CCS) as a key diversifying technology.

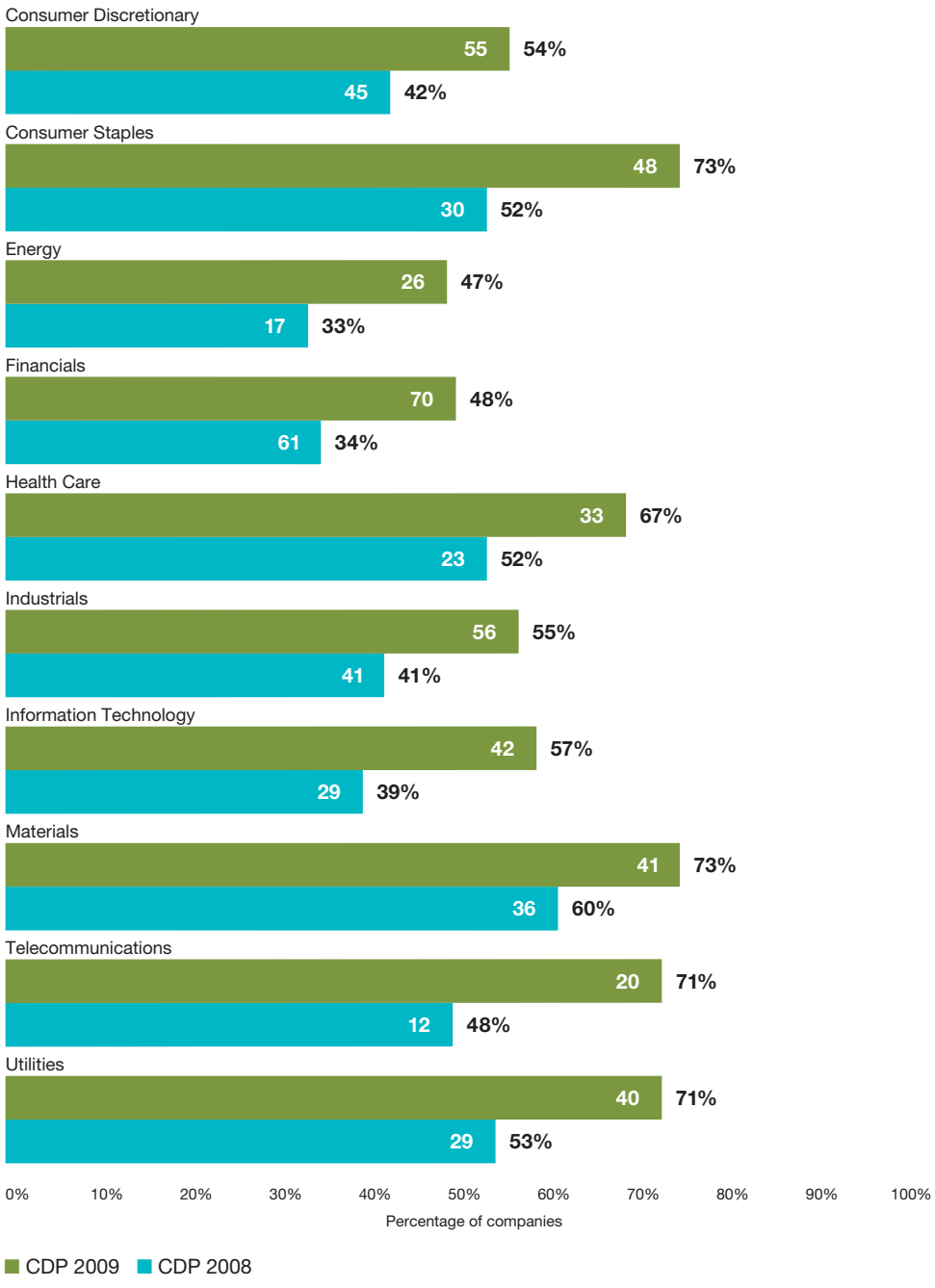
Royal Dutch Shell noted that *"CCS is one of the critical technologies needed to buy time in the race to prevent emissions from rising too far, too fast."*

The role of Information Technology: Building the smart grid, boosting energy efficiencies

Information Technology respondents sent a compelling message about their role in growing the new climate change economy — from building out the smart grid to helping companies increase efficiency with data servers, to teleconferencing capabilities. *"**EMC** helps our customers reduce GHG emissions in two ways: by delivering more energy-efficient Information Technology solutions directly into our customers' data centers; and by the significant role Information Technology plays in enabling an energy efficient information economy."*

The depth and quality of the CDP responses from the world's largest companies are a measure of shareholder and corporate engagement on the issue of climate change. Climate change is becoming an increasingly important issue for the majority of large businesses, and companies are keen to share information on their carbon performance and climate risks and opportunities with investors and other stakeholders. The corporate sector has a crucial role to play in addressing climate change, through investment and innovation. CDP 2009 has demonstrated clearly that the world's largest companies are preparing for this challenge.

Fig. P: Percentage of companies with emission reduction targets



9 Appendix

Key:

AQ: Answered questionnaire

AQ(L): Answered questionnaire late

IN: Provided information

DP: Declined to participate

NP: Answered questionnaire but response not made publicly available

NR: No response

– Company not in S&P 500 sample in that year

x: Yes

Fig. Q: Summary table in alphabetical order*

Sector	Company	2009	2008	CDLI Score	Non-public	Intensity[1]	Total Emissions[2]	Scope 1	Scope 2 Grid Average	Scope 2 Contract Arrangements[3]	Scope 3[4]	Business Travel	Logistics and Distribution	Use & Disposal of Products & Services	Supply Chain	Other
Industrials	3M	AQ	AQ	60		269	6,790,000	5,130,000	1,660,000							
Health Care	Abbott Laboratories	AQ	AQ	65		55	1,619,500	842,103	777,397		64,312	x				
Consumer Discretionary	Abercrombie & Fitch	NR	NR													
Information Technology	Adobe Systems	AQ	AQ	60		5	19,567	3,241	16,326		17,221	x				
Information Technology	Advanced Micro Devices	AQ	AQ	82		76	439,503	84,719	394,166		394,166†	x	x		x	
Utilities	AES	AQ	AQ	15		0	84	84								
Health Care	Aetna	AQ	AQ	60		3	81,691	18,706	62,985							
Financials	Affiliated Computer Services	NR	NR													
Financials	Aflac	AQ	AQ	62		2	32,656	6,225	26,431							
Information Technology	Agilent Technologies	AQ	AQ	62		22	124,318	14,134	110,184		35,000	x				
Materials	Air Products & Chemicals	AQ	AQ	74		2,141	21,200,000	12,300,000	8,900,000	*						
Materials	AK Steel Holding	NR	–													
Information Technology	Akamai Technologies	NR	DP													
Materials	Alcoa	AQ	AQ	63		2,175	58,521,999	29,933,645	28,588,354							
Utilities	Allegheny Energy	AQ	AQ	51		11,993	40,606,754	40,606,754								
Materials	Allegheny Technologies	AQ	AQ	11	NP											

* Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Sector	Company	2009	2008	CDLI Score	Nonpublic	Intensity[1]	Total Emissions[2]	Scope 1	Scope 2 Grid Average	Scope 2 Contract Arrangements[3]	Scope 3[4]	Business Travel	Logistics and Distribution	Use & Disposal of Products & Services	Supply Chain	Other
Health Care	Allergan	AQ	AQ	85		24	104,210	45,643	58,567		32,548	x				
Financials	Allstate	AQ	AQ	79		7	212,467	33,575	178,892		57,071	x	x			
Information Technology	Altera	IN	AQ													
Consumer Staples	Altria Group	AQ	AQ	55		45	713,474	398,232	315,242		34,675	x				
Consumer Discretionary	Amazon.com	NR	DP													
Utilities	Ameren	AQ	AQ	63		8,688	68,102,804	68,102,804								
Financials	American Capital	NR	DP													
Utilities	American Electric Power	AQ	AQ	52		10,347	149,415,000	149,415,000								
Financials	American Express	AQ	AQ	57		7	238,413	26,887	211,526		64,324	x				
Financials	American International Group	AQ	AQ	11												
Telecommunications	American Tower	AQ	DP	70		122	193,896	431	193,465		8,335	x				
Financials	Ameriprise Financial	AQ	DP	16												
Health Care	AmerisourceBergen	NR	AQ													
Health Care	Amgen	AQ	AQ	63	NP											
Information Technology	Amphenol	NR	–													
Energy	Anadarko Petroleum	AQ	AQ	79		610	8,925,871	8,284,413	641,458							
Information Technology	Analog Devices	AQ	DP	44	NP											
Financials	Aon	AQ	AQ	6	NP											
Energy	Apache	AQ	AQ	72		806	9,939,352	9,099,776	839,576							
Financials	Apartment Investment and Management	DP	DP													
Consumer Discretionary	Apollo Group	DP	NR													
Information Technology	Apple Inc.	AQ	AQ	73		4	135,324	22,633	112,691	*	9,912,394	x	x	x	x	
Information Technology	Applied Materials	AQ	AQ	57		25	199,944	30,897	169,047		45,206	x				
Consumer Staples	Archer Daniels Midland	NR	DP													
Financials	Assurant	AQ	NR	38	NP											
Telecommunications	AT&T	AQ	AQ	47		5	580,755	129,985	450,770							
Information Technology	Autodesk	AQ	AQ	77		10	22,067	2,272	19,795		25,115	x				
Information Technology	Automatic Data Processing	AQ	DP	32		4	36,312	15,849	20,463							
Consumer Discretionary	AutoNation	NR	DP													
Consumer Discretionary	AutoZone	NR	NR													
Financials	AvalonBay Communities	DP	NR													
Industrials	Avery Dennison	AQ	AQ	34												
Consumer Staples	Avon Products	AQ	AQ	51		13	140,972	35,941	105,031							
Energy	Baker Hughes	AQ	AQ	57		36	422,000	200,000	222,000		113,000	x				
Materials	Ball	AQ	AQ	50		199	1,508,225	388,845	1,119,380							
Financials	Bank of America	AQ	AQ(L)	73		13	1,483,431	121,549	1,361,882	*	156,587	x				
Financials	Bank of New York Mellon	AQ	AQ	78		13	213,985	9,550	204,435	*	28,166	x				
Health Care	Barr Pharmaceuticals	NR	IN													
Health Care	Baxter International	AQ	AQ	69		59	726,428	256,828	469,600	*	1,531,000	x	x	x	x	x
Financials	BB&T	AQ	AQ	61		9	92,444	2,134	90,310							
Health Care	Becton, Dickinson and Co.	AQ	AQ	45		68	490,003	68,896	421,107							
Consumer Discretionary	Bed Bath & Beyond	AQ	AQ	25	NP											

Sector	Company	2009	2008	CDLI Score	Non-public	Intensity[1]	Total Emissions[2]	Scope 1	Scope 2 Grid Average	Scope 2 Contract Arrangements[3]	Scope 3[4]	Business Travel	Logistics and Distribution	Use & Disposal of Products & Services	Supply Chain	Other
Materials	Bemis Company	AQ	AQ	60		176	664,394	157,262	507,132							
Consumer Discretionary	Best Buy	AQ	AQ	54	NP											
Consumer Discretionary	Big Lots	AQ	AQ	30		99	460,886		460,886							
Health Care	Biogen Idec	AQ	AQ	83		24	96,897	49,459	47,438		4,234†	x				x
Energy	BJ Services	AQ	DP	39	NP											
Consumer Discretionary	Black & Decker	AQ	AQ	50		37	223,226	38,449	184,777							
Information Technology	BMC Software	NR	AQ													
Industrials	Boeing	AQ	AQ	87		28	1,679,000	575,000	1,104,000	*	280,140	x			x	
Financials	Boston Properties	NR	NR													
Health Care	Boston Scientific	AQ	AQ	45		22	178,500	28,500	150,000							
Health Care	Bristol-Myers Squibb	AQ	AQ	75		40	832,135	377,825	454,310		55,686	x				
Information Technology	Broadcom	AQ	DP	48		6	27,057	2,162	24,895		875	x				
Consumer Staples	Brown-Forman	AQ	AQ	69		71	184,566	111,125	73,441		4,767	x				
Industrials	Burlington Northern Santa Fe	AQ	AQ	85		844	15,213,194	14,889,927	323,267		27,715	x	x			
Information Technology	CA	AQ	AQ	69		21	88,621	3,828	84,793	*	16,109	x				
Materials	Cabot	AQ	–	69		4,670	4,402,000	4,040,000	362,000							
Energy	Cameron International	NR	–													
Consumer Staples	Campbell Soup	AQ	DP	63		112	899,537	499,149	400,388							
Financials	Capital One Financial	AQ	AQ	54		11	198,797	13,260	185,537	*						
Health Care	Cardinal Health	AQ	DP	49		3	314,864	90,528	224,336		25,011	x				
Consumer Discretionary	Carnival	AQ	AQ	87		703	10,298,265	10,247,517	50,748	144	19,150		x	x	x	
Industrials	Caterpillar	IN	AQ													
Financials	CB Richard Ellis Group	AQ	AQ	53	NP											
Consumer Discretionary	CBS	AQ	AQ	21	NP											
Health Care	Celgene	AQ	DP	64		6	13,689	4,331	9,358							
Utilities	CenterPoint Energy	AQ	AQ	45												
Consumer Discretionary	Centex	IN	IN													
Telecommunications	CenturyTel	NR	NR													
Health Care	Cephalon	DP	–													
Materials	CF Industries Holdings	NR	–													
Industrials	C.H. Robinson Worldwide	AQ	AQ	34	NP											
Financials	Charles Schwab	AQ	AQ	3	NP											
Energy	Chesapeake Energy	IN	IN													
Energy	Chevron	AQ	AQ	88		267	68,195,321	62,978,970	5,216,351	*	382,000,000			x		x
Financials	Chubb	AQ	AQ	30												
Information Technology	Ciena	DP	DP													
Health Care	CIGNA	AQ	AQ	43	NP											
Financials	Cincinnati Financial	AQ	NR	26	NP											
Industrials	Cintas	NR	NR													
Information Technology	Cisco Systems	AQ	AQ	88		15	598,382	51,620	546,762	307,143	197,951	x				
Financials	CIT Group	DP	NR													
Financials	Citigroup	AQ	AQ	70		13	1,371,954	40,990	1,330,964		146,019	x			x	
Information Technology	Citrix Systems	NR	AQ													
Consumer Staples	Clorox	AQ	AQ	69		80	422,632	98,244	324,388							
Financials	CME Group	AQ	NR	14	NP											
Utilities	CMS Energy	AQ	AQ	43		3,322	22,659,483	22,659,483								

Sector	Company	2009	2008	CDLI Score	Non-public	Intensity[1]	Total Emissions[2]	Scope 1	Scope 2 Grid Average	Scope 2 Contract Arrangements[3]	Scope 3[4]	Business Travel	Logistics and Distribution	Use & Disposal of Products & Services	Supply Chain	Other
Consumer Discretionary	Coach	DP	DP													
Consumer Staples	Coca-Cola	AQ	AQ	70		162	5,160,436	1,951,041	3,209,395		59,000†	x				x
Consumer Staples	Coca-Cola Enterprises	AQ	AQ	56		70	1,532,967	967,410	565,557		4,578,069	x	x	x		
Information Technology	Cognizant Technology Solutions	AQ	NR	53		52	146,574	22,981	123,593		35,964	x				
Consumer Staples	Colgate-Palmolive	AQ	AQ	77		46	701,591	271,599	429,992	*	87,572	x	x			
Consumer Discretionary	Comcast	IN	IN													
Financials	Comerica	AQ	AQ	91		18	69,208	13,614	55,594		26,052	x			x	
Information Technology	Compuware	AQ	AQ	7	NP											
Consumer Staples	Conagra Foods	AQ	AQ	73		194	2,254,356	1,163,215	1,091,141		546,135		x			
Energy	ConocoPhillips	AQ	AQ	52	NP											
Energy	CONSOL Energy	NR	DP													
Utilities	Consolidated Edison	AQ	AQ	79		351	4,769,429	4,211,511	557,918		†					x
Consumer Staples	Constellation Brands	AQ	IN	72		65	244,883	151,114	93,769		298,151	x	x	x		
Utilities	Constellation Energy Group	AQ	AQ	59		952	18,875,860	17,900,347	975,513		5,694	x				
Information Technology	Convergys	DP	AQ													
Industrials	Cooper Industries[5]	AQ(L)	NR													
Information Technology	Corning	AQ	AQ	57		212	1,262,281	329,629	932,652	*						
Consumer Staples	Costco Wholesale	AQ	AQ	17	NP											
Health Care	Coventry Health Care	NR	NR													
Health Care	Covidien	NR	DP													
Health Care	C.R. Bard	DP	AQ													
Information Technology	CSC	NR	NR													
Industrials	CSX	AQ	AQ	68		570	6,419,342	6,046,277	373,065	*						
Industrials	Cummins	AQ	AQ	61		58	834,193	387,421	446,772							
Consumer Staples	CVS Caremark	NR	NR													
Consumer Staples	D.R. Horton	NR	NR													
Industrials	Danaher	AQ	AQ	24	NP											
Consumer Discretionary	Darden Restaurants	AQ	AQ	69		162	1,075,223	324,835	750,388	*	6,226	x				
Health Care	DaVita	NR	–													
Consumer Staples	Dean Foods	AQ	AQ	87		132	1,650,053	884,448	765,605		187,757†	x	x			
Industrials	Deere	AQ	AQ	66		56	1,578,558	511,976	1,066,582							
Information Technology	Dell	AQ	AQ	66		7	406,252	30,780	375,472	313,837	93,382	x				
Health Care	DENTSPLY International	NR	–													
Financials	Developers Diversified Realty	NR	NR													
Energy	Devon Energy	AQ	AQ	47		271	4,170,000	3,680,000	490,000							
Consumer Discretionary	DIRECTV Group	NR	DP													
Financials	Discover Financial Services	IN	IN													
Utilities	Dominion Resources	AQ	AQ	67		3,303	53,798,568	53,798,568		*						
Industrials	Dover	DP	NR													
Materials	Dow Chemical	AQ	AQ	63		614	35,299,000	27,773,000	7,526,000		5,020,000	x	x			
Consumer Staples	Dr Pepper Snapple Group	NR	–													
Utilities	DTE Energy	AQ	AQ	84		4,528	42,245,000	41,800,000	445,000	*						
Utilities	Duke Energy	AQ	AQ	64		7,482	98,811,000	98,811,000								

Sector	Company	2009	2008	CDLI Score	Non-public	Intensity[1]	Total Emissions[2]	Scope 1	Scope 2 Grid Average	Scope 2 Contract Arrangements[3]	Scope 3[4]	Business Travel	Logistics and Distribution	Use & Disposal of Products & Services	Supply Chain	Other
Industrials	Dun & Bradstreet	NR	–													
Utilities	Dynegy	NR	AQ													
Financials	E*TRADE FINANCIAL	NR	NR													
Materials	E.I. du Pont de Nemours	AQ	AQ	80		437	13,339,560	9,336,753	4,002,807	*	74,957	x				
Materials	Eastman Chemical	AQ	AQ	46												
Consumer Discretionary	Eastman Kodak	AQ	AQ	50	NP											
Industrials	Eaton	AQ	AQ	85		55	848,000	122,000	726,000	*						
Information Technology	eBay	AQ	AQ	59		14	116,618	6,210	110,408		10,198	x				
Materials	Ecolab	AQ	AQ	59		31	189,431	134,089	55,342	*						
Utilities	Edison International	AQ	AQ	39	NP											
Energy	El Paso	AQ	AQ	61		2,778	14,897,502	13,939,795	957,707							
Information Technology	Electronic Arts	NR	NR													
Health Care	Eli Lilly	AQ	AQ	53		98	1,991,946	599,536	1,392,410		95,202†	x	x			x
Telecommunications	Embarq	DP	AQ													
Information Technology	EMC	AQ	AQ	82		25	371,620	35,850	335,770		60,500	x				
Industrials	Emerson Electric	AQ	AQ	21		24	603,723	603,723								
Energy	Ensco International	NR	DP													
Utilities	Entergy	AQ	AQ	78		3,734	48,891,292	33,186,984	15,704,308	*						
Energy	EOG Resources	AQ	AQ	41		25	159,119		159,119							
Industrials	Equifax	NR	AQ													
Financials	Equity Residential	NR	NR													
Consumer Staples	Estée Lauder	AQ	DP	73		16	128,000	36,600	91,400	76,452	40,800	x		x		
Utilities	Exelon	AQ	AQ	71		512	9,664,883	9,431,588	233,295		10,234	x				x
Consumer Discretionary	Expedia	NR	NR													
Industrials	Expeditors International of Washington	NR	NR													
Health Care	Express Scripts	NR	DP													
Energy	Exxon Mobil	AQ	AQ	62		341	145,000,000	131,000,000	14,000,000	*						
Consumer Discretionary	Family Dollar Stores	DP	DP													
Industrials	Fastenal	NR	–													
Financials	Federated Investors	NR	DP													
Industrials	FedEx Corporation	AQ	AQ	59		395	14,983,506	14,983,506								
Financials	Fidelity National Information Services	AQ	DP	13	NP											
Financials	Fifth Third Bancorp	AQ	AQ	62	NP											
Financials	First Horizon National	NR	NR													
Utilities	FirstEnergy	AQ	AQ	65		3,587	48,877,547	48,877,547								
Information Technology	Fiserv	AQ	AQ	17	NP											
Industrials	Flowserve	NR	–													
Industrials	Fluor	IN	DP													
Consumer Discretionary	Ford Motor	AQ	AQ	51	NP											
Health Care	Forest Laboratories	AQ	AQ	52	NP											
Consumer Discretionary	Fortune Brands	NR	IN													
Utilities	FPL Group	AQ	AQ	82		2,813	46,166,488	46,007,608	158,880	*	14,987	x				
Financials	Franklin Resources	AQ	AQ	77		5	30,967	9,616	21,351		5,511	x				
Materials	Freeport-McMoRan Copper & Gold	AQ	AQ	59		539	9,586,200	5,108,000	4,478,200							
Telecommunications	Frontier Communications	NR	–													

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Consumer Discretionary	GameStop	NR	NR													
Consumer Discretionary	Gannett	NR	DP													
Consumer Discretionary	Gap	AQ	AQ	25						*						
Industrials	General Dynamics	IN	IN													
Industrials	General Electric	AQ	AQ	58	NP											
Consumer Staples	General Mills	AQ	AQ	63		79	1,077,057	283,275	793,782	*	16,369	x				
Consumer Discretionary	General Motors	AQ	AQ	48		669	99,700,000	24,300,000	75,400,000							
Consumer Discretionary	Genuine Parts	DP	NR													
Financials	Genworth Financial	AQ	AQ	62		2	17,084	220	16,864		6,224	x				
Health Care	Genzyme	AQ	AQ	57	NP											
Health Care	Gilead Sciences	AQ	AQ	74	NP											
Financials	Goldman Sachs	AQ	AQ	54	NP											
Industrials	Goodrich	NR	NR													
Consumer Discretionary	Goodyear Tire & Rubber	NR	AQ													
Information Technology	Google	AQ	AQ	53												
Consumer Discretionary	H&R Block	AQ	AQ	19	NP											
Energy	Halliburton	AQ	AQ	57		208	3,798,400	3,618,200	180,200		75	x				
Consumer Discretionary	Harley-Davidson	NR	NR													
Consumer Discretionary	Harman International Industries	NR	NR													
Information Technology	Harris	NR	–													
Financials	Hartford Financial Services	AQ	AQ	81		13	122,333	34,238	88,095	*	16,255†	x				
Consumer Discretionary	Hasbro	DP	NR													
Financials	HCP	NR	–													
Consumer Staples	H.J. Heinz	AQ	AQ	75		86	863,132	524,606	338,526	*						
Consumer Staples	The Hershey Company	AQ	DP	64		71	366,847	126,991	239,856							
Energy	Hess	AQ	AQ	86		274	11,288,872	10,714,780	574,092		78,037,693		x	x	x	
Information Technology	Hewlett-Packard	AQ	AQ	86		21	2,449,378	303,844	2,145,534	2,094,321	5,926,506	x	x	x	x	
Consumer Discretionary	Home Depot	AQ	AQ	11	NP											
Industrials	Honeywell International	AQ	AQ	7												
Health Care	Hospira	AQ	NR	53	NP											
Financials	Host Hotels & Resorts	DP	NR													
Financials	Hudson City Bancorp	IN	IN													
Health Care	Humana	AQ	AQ	69		5	137,218	12,238	124,980	*	18,200	x				
Financials	Huntington Bancshares	AQ	AQ	1												
Industrials	Illinois Tool Works	AQ	AQ	59	NP											
Health Care	IMS Health	NR	DP													
Industrials	Ingersoll-Rand	AQ	AQ	50		44	577,864	148,446	429,418							
Utilities	Integrys Energy Group	NR	AQ													
Information Technology	Intel	AQ	AQ	78		93	3,500,000	1,000,000	2,500,000	1,800,000	43,670,000	x	x	x	x	
Financials	IntercontinentalExchange	NR	DP													
Information Technology	IBM	AQ	AQ	77		29	2,961,791	580,344	2,381,447	2,214,000						
Materials	International Flavors & Fragrances	AQ	NR	56	NP											
Consumer Discretionary	International Game Technology	NR	NR													

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Materials	International Paper	AQ	AQ	57		641	15,916,055	10,961,781	4,954,274		2,000,000		x			
Consumer Discretionary	Interpublic Group of Companies	AQ	AQ	36	NP											
Information Technology	Intuit	AQ	AQ	23		14	41,525	6,840	34,685		30,088	x			x	
Health Care	Intuitive Surgical	NR	–													
Financials	Invesco	NR	–													
Industrials	ITT	AQ	AQ	67		26	302,609	85,156	217,453	*	21,509	x				
Information Technology	Jabil Circuit	AQ	NR	66		38	488,145	23,811	464,334		16,021	x				
Industrials	Jacobs Engineering Group	NR	NR													
Financials	Janus Capital Group	AQ	AQ	32	NP											
Consumer Discretionary	J.C. Penney	AQ	AQ	52		61	1,216,850	103,850	1,113,000		7,251	x				
Information Technology	JDS Uniphase	AQ	AQ	43		39	59,797	8,376	51,421		5,466	x				
Consumer Staples	J.M. Smucker	IN	–													
Health Care	Johnson & Johnson	AQ	AQ	83		21	1,327,272	356,729	970,543	*	369,673	x				
Consumer Discretionary	Johnson Controls	AQ	AQ	69		45	1,714,631	458,324	1,256,307	*	72,813	x				
Consumer Discretionary	Jones Apparel Group	NR	NR													
Financials	JPMorgan Chase	AQ	AQ	74		9	952,646	69,709	882,937		129,251	x				
Information Technology	Juniper Networks	AQ	AQ	66		16	55,655	3,592	52,063		19,045	x				
Consumer Discretionary	KB Home	AQ	AQ	58		14	42,204	0	42,204	*						
Consumer Staples	Kellogg Company	AQ	AQ	45		105	1,339,949	602,131	737,818							
Financials	KeyCorp	DP	NR													
Consumer Staples	Kimberly-Clark	AQ	AQ	64		309	5,994,424	2,682,694	3,311,730		693,211	x	x			
Financials	Kimco Realty	NR	NR													
Health Care	King Pharmaceuticals	NR	NR													
Information Technology	KLA-Tencor	DP	NR													
Consumer Discretionary	Kohl's	AQ	AQ	68		50	816,144	27,156	788,988	*	182,154		x			
Consumer Staples	Kraft Foods	AQ	AQ	68		61	2,581,279	1,339,442	1,241,837		1,032,810	x	x			
Consumer Staples	Kroger	AQ	AQ	18	NP											
Industrials	L-3 Communications Holdings	DP	NR													
Health Care	Laboratory Corporation of America	NR	NR													
Financials	Legg Mason	AQ	AQ	37						*						
Consumer Discretionary	Leggett & Platt	AQ	DP	42	NP											
Consumer Discretionary	Lennar	DP	DP													
Financials	Leucadia National	DP	NR													
Information Technology	Lexmark International	AQ	AQ	53		43	196,454	19,353	177,101		10,916	x				
Health Care	Life Technologies	AQ	–	67		55	89,102	38,592	50,510	*						
Consumer Discretionary	Limited Brands	AQ	AQ	74		38	385,008	31,631	353,377		254,767	x	x			
Financials	Lincoln National	NR	NR													
Information Technology	Linear Technology	NR	NR													
Industrials	Lockheed Martin	IN	DP													
Consumer Discretionary	Loews	NR	DP													
Consumer Staples	Lorillard	NR	–													
Consumer Discretionary	Lowe's	AQ	NR	57	NP											
Information Technology	LSI	AQ	AQ	76		34	91,651	7,623	84,028		7,491	x				
Consumer Discretionary	Macy's	AQ	AQ	14	NP											

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Industrials	Manitowoc	DP	NR													
Energy	Marathon Oil	AQ	AQ	59		259	18,640,000	14,010,000	4,630,000	*	8,000	x				
Consumer Discretionary	Marriott International	AQ	AQ	44		217	2,800,122	568,938	2,231,184							
Financials	Marsh & McLennan	AQ	AQ(L)	32	NP											
Financials	Marshall & Ilsley	AQ	AQ(L)	19	NP											
Industrials	Masco	AQ	AQ	53		68	657,454	289,170	368,284							
Energy	Massey Energy	NR	–													
Information Technology	MasterCard	AQ	–	51	NP											
Consumer Discretionary	Mattel	AQ	AQ	30		39	233,494	21,155	212,339							
Financials	MBIA	NR	AQ													
Consumer Staples	McCormick & Company	AQ	AQ	61		19	60,469	11,997	48,472							
Consumer Discretionary	McDonald's	AQ	AQ	38	NP											
Consumer Discretionary	McGraw-Hill	AQ	AQ	36		16	99,331	13,967	85,364							
Health Care	McKesson	AQ	AQ	37							32,892	x				
Materials	MeadWestvaco	AQ	AQ	62		426	2,827,865	2,120,126	707,739							
Health Care	Medco Health Solutions	AQ	AQ	68		1	69,914	3,230	66,684							
Health Care	Medtronic	AQ	AQ	58		18	249,335	25,229	224,106							
Information Technology	MEMC Electronic Materials	NR	NR													
Health Care	Merck & Co.	AQ	AQ	71		50	1,187,582	663,506	524,076	*	60,595	x				
Consumer Discretionary	Meredith	AQ	AQ	0												
Financials	Merrill Lynch (see Bank of America)	AQ	AQ													
Financials	MetLife	AQ	NR	57	NP											
Information Technology	Microchip Technology	NR	NR													
Information Technology	Micron Technology	AQ	DP	17		314	1,836,563	779,055	1,057,508							
Information Technology	Microsoft	AQ	AQ	70		14	845,925	46,066	799,859	*	347,738†	x			x	x
Health Care	Millipore	AQ	AQ	57		91	145,398	100,976	44,422							
Information Technology	Molex	AQ	AQ	33						*						
Consumer Staples	Molson Coors Brewing	AQ	AQ	73		234	1,118,636	680,831	437,805							
Materials	Monsanto	AQ	AQ	49		183	2,081,000	1,287,000	794,000							
Industrials	Monster Worldwide	NR	NR													
Financials	Moody's	AQ	AQ(L)	23	NP											
Financials	Morgan Stanley	AQ	AQ	54		6	350,024	7,609	342,415		71,711	x				
Information Technology	Motorola	AQ	AQ	52		18	531,661	38,768	492,893		136,866	x				
Financials	MT&T Bank	AQ	AQ	74	NP											
Energy	Murphy Oil	DP	DP													
Health Care	Mylan	NR	NR													
Energy	Nabors Industries	NR	DP													
Financials	NASDAQ OMX Group	NR	–													
Financials	National City	DP	AQ													
Energy	National-Oilwell Varco	NR	NR													
Information Technology	National Semiconductor	AQ	NR	55		181	340,884	168,495	172,389							
Information Technology	NetApp	AQ	AQ(L)	23												
Consumer Discretionary	New York Times	AQ	AQ	17	NP											
Consumer Discretionary	Newell Rubbermaid	NR	AQ													

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Materials	Newmont Mining	AQ	AQ	70		859	5,325,543	4,138,189	1,187,354	268,947						
Consumer Discretionary	News Corporation	AQ	AQ	75		19	637,274	108,931	528,343		177,650	x			x	x
Utilities	Nicor	NR	DP													
Consumer Discretionary	NIKE	AQ	AQ	41		6	109,284		109,284		1,526,404	x	x		x	
Utilities	NiSource	AQ	AQ	50		3,303	29,314,067	29,054,546	259,521		2,459,491			x		
Energy	Noble Corporation	NR	DP													
Energy	Noble Energy	AQ	NR	21		669	2,493,869	2,493,869								
Consumer Discretionary	Nordstrom	AQ	NR	22	NP											
Industrials	Norfolk Southern	AQ	AQ	11												
Financials	Northern Trust	AQ	AQ	50		14	74,936	7,759	67,177		10,483	x				
Industrials	Northrop Grumman	AQ	AQ	42												
Information Technology	Novell	NR	NR													
Information Technology	Novellus Systems	AQ	AQ	56	NP											
Materials	Nucor	DP	NR													
Information Technology	NVIDIA	AQ	AQ	34		6	23,296	1,318	21,978		4,379	x				
Financials	NYSE Euronext	NR	NR													
Energy	Occidental Petroleum	AQ	AQ	41		665	16,100,000	10,100,000	6,000,000							
Consumer Discretionary	Office Depot	AQ	AQ	55		33	485,600	96,300	389,300		49,000		x			
Consumer Discretionary	Omnicom Group	AQ	AQ	49		15	198,227	52,651	145,576		154,007	x				
Information Technology	Oracle	AQ	AQ	35												
Industrials	PACCAR	DP	DP													
Materials	Pactiv	NR	DP													
Industrials	Pall	AQ	AQ	59		61	156,779	44,147	112,632							
Industrials	Parker-Hannifin	AQ	AQ	48	NP											
Health Care	Patterson Companies	NR	NR													
Information Technology	Paychex	NR	NR													
Energy	Peabody Energy	NR	IN													
Financials	People's United Financial	NR	–													
Utilities	Pepco Holdings	AQ	AQ	87		284	3,038,868	2,959,112	79,756		1,488	x				
Consumer Staples	Pepsi Bottling Group	AQ	AQ	68		52	717,020	447,547	269,473		59,238		x			
Consumer Staples	PepsiCo	AQ	AQ	63		98	4,252,973	2,878,433	1,374,540		263,300				x	x
Health Care	PerkinElmer	AQ	AQ	44		32	61,747	20,723	41,024		8,461	x				
Health Care	Pfizer	AQ	AQ	75		42	2,018,769	1,017,810	1,000,959		120,820	x				
Utilities	PG&E	AQ	AQ	88		235	3,439,406	1,903,901	1,535,505		22,569,017			x		
Consumer Staples	Philip Morris International	NR	–													
Utilities	Pinnacle West Capital	AQ	AQ	51		4,844	16,310,917	16,290,019	20,898							
Energy	Pioneer Natural Resources	NR	–													
Industrials	Pitney Bowes	AQ	AQ	50		16	97,242	23,126	74,116							
Financials	Plum Creek Timber	AQ	AQ	67		107	173,407	42,276	131,131	2,000	89,256	x	x			
Financials	PNC Financial Services	DP	AQ(L)													
Consumer Discretionary	Polo Ralph Lauren	DP	NR													
Materials	PPG Industries	AQ	AQ	81		394	6,248,264	4,442,743	1,805,521		19,281	x				
Utilities	PPL	NR	AQ													
Materials	Praxair	AQ	AQ	83		1,244	13,428,346	3,695,830	9,732,516	*	265,292	x	x			
Industrials	Precision Castparts	NR	IN													

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Financials	Principal Financial Group	IN	IN													
Consumer Staples	Procter & Gamble	AQ	AQ	55		76	6,384,000	2,782,000	3,602,000							
Utilities	Progress Energy	AQ	AQ	67		5,445	49,918,840	49,918,840								
Financials	Progressive	AQ	AQ	56		19	237,688	146,873	90,815							
Financials	ProLogis	AQ	AQ	70		2	9,731	1,283	8,448		6,563	x				
Financials	Prudential Financial	AQ	AQ	64		3	95,456	7,176	88,280		15,730	x				
Utilities	Public Service Enterprise Group	AQ	AQ	88		1,962	26,138,959	24,287,856	1,851,103	*	42,593,087	x		x	x	
Financials	Public Storage	DP	DP													
Consumer Discretionary	Pulte Homes	AQ	NR	31												
Information Technology	QLogic	AQ	DP	44	NP											
Information Technology	Qualcomm	AQ	AQ	48		8	90,616	43,922	46,694							
Health Care	Quest Diagnostics	IN	IN													
Utilities	Questar	AQ	AQ	56		776	2,690,222	2,571,101	119,121							
Telecommunications	Qwest Communications International	AQ	AQ	58		102	1,372,627	168,467	1,204,160		9,324	x	x			
Industrials	R.R. Donnelley & Sons	NR	DP													
Consumer Discretionary	RadioShack	NR	NR													
Energy	Range Resources	AQ	AQ	12	NP											
Industrials	Raytheon	AQ	AQ	48		27	617,445	117,112	500,333							
Financials	Regions Financial	NR	NR													
Industrials	Republic Services	NR	–													
Consumer Staples	Reynolds American	AQ	AQ	59		39	349,377	144,979	204,398	*						
Industrials	Robert Half International	IN	IN													
Industrials	Rockwell Automation	AQ	AQ	64		17	96,150	9,980	86,170		17,870	x				
Industrials	Rockwell Collins	AQ	AQ(L)	61		28	132,231	12,764	119,467							
Materials	Rohm and Haas	AQ	AQ	39	NP											
Energy	Rowan Companies	AQ	AQ	21												
Industrials	Ryder System	AQ	AQ	61		109	675,216	565,488	109,728							
Consumer Staples	Safeway	IN	IN													
Information Technology	salesforce.com	NR	–													
Information Technology	SanDisk	DP	DP													
Consumer Staples	Sara Lee	AQ	AQ	61		71	940,350	341,057	599,293							
Health Care	Schering-Plough	AQ	AQ	85		54	1,004,144	446,987	557,157		32,416	x				
Energy	Schlumberger	AQ	AQ	64		70	1,890,000	1,500,000	390,000	*	1,332,000	x	x		x	
Consumer Discretionary	Scripps Networks Interactive	NR	–													
Materials	Sealed Air	AQ	AQ	58		155	751,346	258,456	492,890							
Consumer Discretionary	Sears Holdings	AQ	NR	53		95	4,818,277	218,679	4,599,598							
Utilities	Sempra Energy	AQ	NR	41		971	10,441,679	9,906,141	535,538							
Consumer Discretionary	Sherwin-Williams	AQ	AQ	57		77	615,848	286,293	329,555							
Materials	Sigma-Aldrich	AQ	AQ	36		76	168,031	37,831	130,200							
Financials	Simon Property Group	AQ	AQ	86		189	715,982	26,068	689,914	*	2,876	x				x
Financials	SLM	DP	NR													
Energy	Smith International	AQ	AQ	40	NP											
Consumer Discretionary	Snap-on	AQ	DP	12	NP											
Utilities	Southern	AQ	AQ	48		8,241	141,137,000	141,137,000								

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Industrials	Southwest Airlines	IN	DP													
Energy	Southwestern Energy	NR	–													
Financials	Sovereign Bancorp (See Banco Santander)	AQ	–													
Energy	Spectra Energy	AQ	AQ	88		2,175	11,035,854	9,614,164	1,421,690		4,419	x				
Telecommunication	Sprint Nextel	AQ	AQ	57		58	2,083,274	68,057	2,015,217		37,307	x				
Health Care	St. Jude Medical	DP	DP													
Consumer Discretionary	Stanley Works	AQ	AQ	75		48	212,936	50,746	162,190		533,119	x	x	x		
Consumer Discretionary	Staples	AQ	AQ	60		20	396,600	62,400	334,200							
Consumer Discretionary	Starbucks	AQ	AQ	48		88	913,000	228,250	684,750							
Consumer Discretionary	Starwood Hotels & Resorts Worldwide	AQ	AQ	52	NP											
Financials	State Street	AQ	AQ	63		9	120,000	5,000	115,000	90,000	13,500	x				
Industrials	Stericycle	DP	–													
Health Care	Stryker	IN	NR													
Information Technology	Sun Microsystems	AQ	AQ	55		17	241,702	9,670	232,032		81,926	x				
Energy	Sunoco	NR	NR													
Financials	SunTrust Banks	AQ	AQ(L)	29												
Consumer Staples	SUPERVALU	AQ	NR	32	NP											
Information Technology	Symantec	AQ	AQ	52		28	163,243	0	163,243	*	54,000	x				
Consumer Staples	Sysco	IN	AQ													
Financials	T. Rowe Price Group	AQ	AQ	69	NP											
Consumer Discretionary	Target	AQ	AQ	48		46	2,938,374	243,440	2,694,934							
Utilities	TECO Energy	AQ	IN	70		4,077	13,762,234	13,762,234								
Information Technology	Tellabs	AQ	AQ	48	NP											
Health Care	Tenet Healthcare	NR	DP													
Information Technology	Teradata	AQ	AQ	38	NP											
Information Technology	Teradyne	AQ	AQ	53		22	24,208	2,468	21,740		8,398	x				
Energy	Tesoro	NR	DP													
Information Technology	Texas Instruments	AQ	AQ	56												
Industrials	Textron	AQ	AQ	32	NP											
Health Care	Thermo Fisher Scientific	AQ	AQ	50												
Consumer Discretionary	Tiffany & Co.	AQ	AQ	50	NP											
Consumer Discretionary	Time Warner	AQ	AQ	41		9	428,833	39,244	389,589		57,363	x				
Materials	Titanium Metals	DP	DP													
Consumer Discretionary	TJX Companies	IN	IN													
Financials	Torchmark	NR	NR													
Information Technology	Total System Services	AQ	AQ	22	NP											
Energy	Transocean	AQ	AQ	79		170	2,152,970	2,148,208	4,762		1,803,735	x	x			
Financials	Travelers Companies	AQ	AQ	57		4	94,623	41,841	52,782							
Information Technology	Tyco Electronics	AQ	AQ	31												
Industrials	Tyco International	AQ	AQ	55	NP											
Consumer Staples	Tyson Foods	NR	DP													
Financials	U.S. Bancorp	AQ	AQ	59		20	384,143	35,809	348,334		22,107	x				
Industrials	Union Pacific	AQ	AQ	39												
Industrials	United Parcel Service	AQ	AQ	82		257	13,254,000	12,148,866	1,105,134		2,357,467	x	x	x		
Materials	United States Steel	AQ	AQ	67		2,081	49,427,981	45,086,791	4,341,190							

Sector	Company	2009	2008	CDLI Score	Non-public	Intensity[1]	Total Emissions[2]	Scope 1	Scope 2 Grid Average	Scope 2 Contract Arrangements[3]	Scope 3[4]	Business Travel	Logistics and Distribution	Use & Disposal of Products & Services	Supply Chain	Other
Industrials	United Technologies Corporation	AQ	AQ	70		35	2,081,907	968,080	1,113,827	*	76,028	x				
Health Care	UnitedHealth Group	AQ	AQ	33												
Financials	Unum Group	AQ	AQ	56		4	40,121	10,394	29,727							
Consumer Staples	UST (See Altria)[6]	AQ	NR													
Consumer Discretionary	V.F. Corporation	DP	DP													
Energy	Valero Energy	AQ	NR	51	NP											
Health Care	Varian Medical Systems	NR	NR													
Information Technology	Verisign	NR	NR													
Telecommunications	Verizon Communications	AQ	AQ	41		64	6,270,714	527,802	5,742,912							
Consumer Discretionary	Viacom	AQ	AQ	14	NP											
Financials	Vornado Realty Trust	NR	AQ													
Materials	Vulcan Materials	IN	NR													
Industrials	W. W. Grainger	AQ	AQ	42	NP											
Financials	Wachovia	AQ	AQ													
Consumer Staples	Wal-Mart Stores	AQ	AQ	89		56	21,066,956	5,566,006	15,500,950	3,563						
Consumer Staples	Walgreens	AQ	AQ	46		37	2,180,000	268,000	1,912,000							
Consumer Discretionary	Walt Disney	AQ	AQ	46		44	1,649,042	566,042	1,083,000							
Consumer Discretionary	Washington Post	IN	NR													
Industrials	Waste Management	AQ	AQ	60												
Health Care	Waters	IN	IN													
Health Care	Watson Pharmaceuticals	NR	NR													
Energy	Weatherford International	AQ	NR	56	NP											
Health Care	WellPoint	AQ	DP	71		3	181,100	8,539	172,561		100,962	x				
Financials	Wells Fargo & Company (See Wachovia)	AQ	AQ	17												
Information Technology	Western Union	DP	NR													
Materials	Weyerhaeuser	AQ	AQ	56		376	3,017,352	1,700,061	1,317,291							
Consumer Discretionary	Whirlpool	AQ	AQ	55		46	866,334	259,193	607,141	*	133,000,000			x		
Consumer Staples	Whole Foods Market	AQ	AQ	30												
Energy	Williams Companies	AQ	AQ	36		1,449	17,900,000	16,900,000	1,000,000							
Telecommunications	Windstream	AQ	AQ	16	NP											
Utilities	Wisconsin Energy	AQ	–	31												
Health Care	Wyeth	AQ	AQ	57		50	1,144,236	567,580	576,656							
Consumer Discretionary	Wyndham Worldwide	IN	AQ													
Consumer Discretionary	Wynn Resorts	DP	–													
Utilities	Xcel Energy	AQ	AQ	85		5,598	62,709,863	62,650,466	59,397		27,375	x				
Information Technology	Xerox	AQ	AQ	59		23	408,862	154,493	254,369							
Information Technology	Xilinx	AQ	AQ	47	NP											
Financials	XL Capital	AQ	AQ	10	NP											
Energy	XTO Energy	AQ	AQ	35		725	5,575,267	4,922,450	652,817							
Information Technology	Yahoo!	AQ	AQ	22	NP											
Consumer Discretionary	Yum! Brands	IN	NR													
Health Care	Zimmer Holdings	AQ	AQ	45												
Financials	Zions Bancorporation	AQ	AQ	29	NP											

1 Scopes 1 and 2 emissions totals divided by annual US$ million revenues, based on revenue figures retrieved from the Bloomberg database as of June 18, 2009.

2 Scope 1 and Scope 2 grid average reported emissions.

3 Where there is a * in this column, the company did provide detail in relation to its contractual Scope 2 emissions. Please refer to the company response.

4 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †) the company did provide data for non-transfer emissions under 13.5 and CDP advises you to look at their full response for details of these emissions.

5 A few companies also submitted amended responses after the analysis cut-off date; these and other late responses, if public, appear on the CDP web site. As of this publishing date, this included Cooper Industries."

6 UST was acquired by Altria on January 6, 2009. For the purposes of this analysis, UST submitted a separate survey.

Consumer Discretionary sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

At the moment, there are three different institutions to regulate fuel economy standards in the United States. First, there is a federal standard released by the US Environmental Protection Agency. Beneath that, there are National Highway Traffic Safety Administration standards and a California Air Resources Board standard. The last one is the most stringent one for BMW. Because of the economic crisis, especially for the Big Three in Detroit, and the new US president, it is not very clear how strict the new laws will be.

BMW Bayerische Motoren Werke

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Consumer Discretionary companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Consumer Discretionary
Response rate[1]	**66% (103 of 156)**
Global 500	76% (28 of 37)
S&P 500	59% (47 of 80)
FTSE 350	72% (44 of 61)
Overall sector rank (1-10)[2]	**10th**
Highest disclosure score	87
Lowest disclosure score	0
Average disclosure score	50
Overall emissions disclosure[3]	
Scope 1 emissions	81% (68 million Mt/CO_2-e)
Scope 2 emissions[4]	82% (139 million Mt/CO_2-e)
Scope 3 emissions	52% (425 million Mt/CO_2-e)
Average emissions intensity[5]	99 (Mt CO_2-e/US$ million revenue)

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

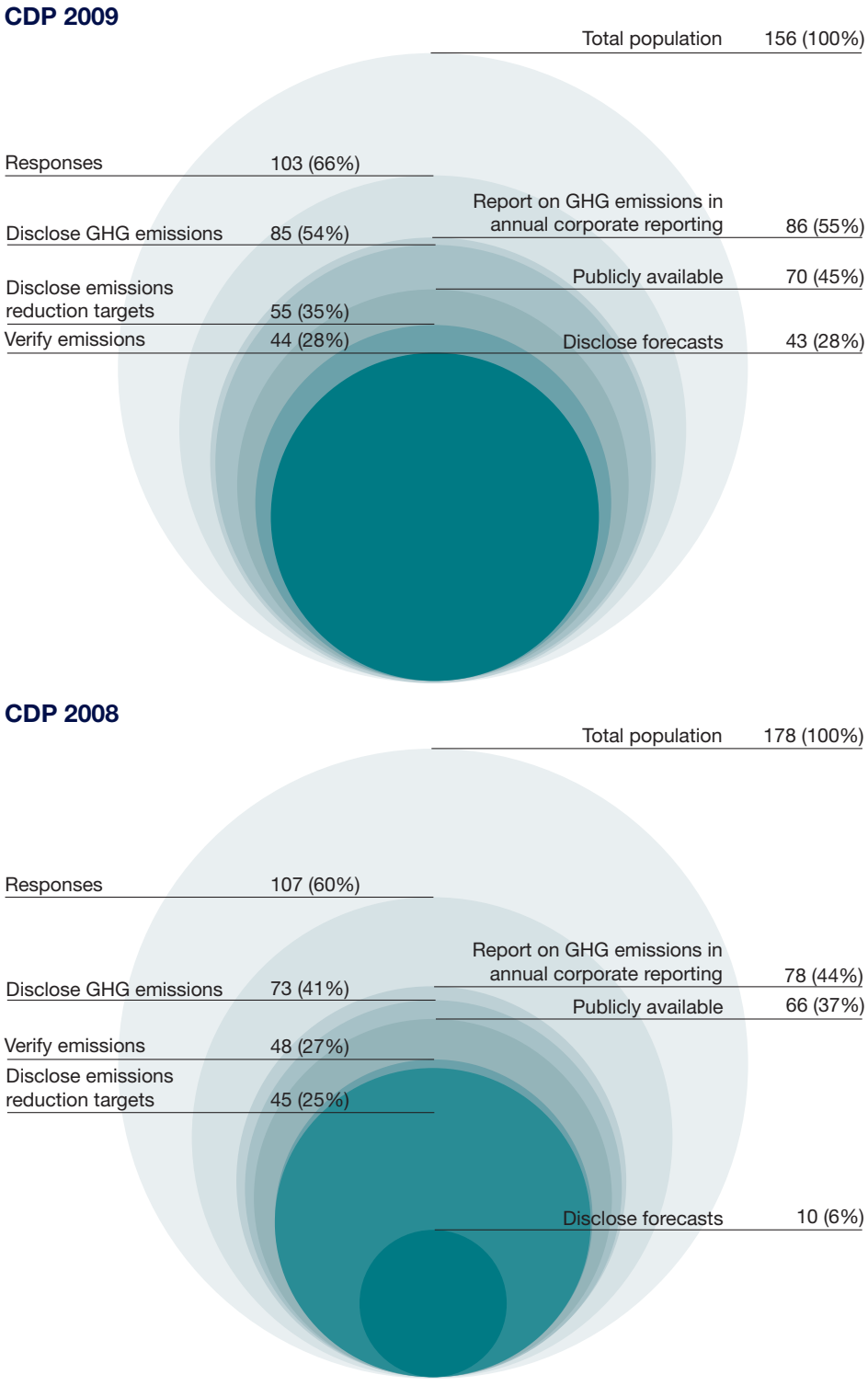
2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

Fig. A: Year-on-year disclosure rates, as a proportion of total Consumer Discretionary companies (Global 500, S&P 500 and FTSE 350)



Carbon disclosure trends in the Consumer Discretionary sector

Diversity is a hallmark of the Consumer Discretionary sector. Respondents represent businesses ranging from advertising agencies to big-box retailers and cruise lines, to windshield wiper manufacturers. Consequently, industry views on energy efficiency and climate change issues vary according to the unique idiosyncrasies, demands and expectations of each industry.

A look at the types of respondents that make up the Consumer Discretionary sector reveals the sector's variety. The five Consumer Discretionary industries are automobiles and components (auto and motorcycle manufacturers, auto parts); consumer durables and apparel (household items including electronics, appliances, home furnishings, clothing and accessories, luxury items); consumer services (restaurants and leisure, diversified services); media (advertising, TV, movies and entertainment, publishing); and retailing (distributors, Internet and catalog retail, multiline and specialty retailers).

Many companies within the Consumer Discretionary sector operate or rely on extensive retail networks or own large real estate portfolios and therefore recognize the physical risks related to severe-weather events. Many also operate within razor-thin margins that make minor price increases in utilities or raw material costs significant concerns.

Although the Consumer Discretionary sector as a whole had the lowest average carbon disclosure score among all ten sectors reporting and the third-lowest response rate, a closer look at the individual company scores that make up the sector reveals a more complex picture. Within the group, respondents that manufacture automobiles and consumer durables along with Internet and catalog retailers have higher disclosure scores than their sector peer group does.

Across geographies, a higher percentage of Consumer Discretionary companies responded[6] to the CDP in 2009, up six percentage points from 2008. The proportion of Consumer Discretionary companies responding at each disclosure level also increased in 2009 for all key areas of disclosure (see Figure A).

6 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

The US Congress and several states are currently pursuing climate change legislation. NIKE is working at both the state and federal levels to secure their passage, preferably in advance of the COP15 United Nations Climate Change Conference in Copenhagen in 2009. NIKE also works with bodies to monitor and support legislation. In 2008, NIKE worked with CERES to create a coalition of businesses called Business for Innovative Climate & Energy Policy (BICEP), which presses for the passage of comprehensive climate change and energy legislation in the United States

NIKE

Few Consumer Discretionary respondents reported that the poor economy was causing them to delay carbon reduction plans. In fact, the anticipated increase in utility costs seemed to justify spending more now to reduce future energy needs. Also, some respondents noted that they committed to carbon reduction plans in 2006 or 2007 and had already made the majority of their capital expenditures before the recession began.

A number of respondents are addressing climate change issues proactively from both internal and external perspectives. Internally, those respondents may calculate the carbon footprint of their operations and their supply chains to help identify and track opportunities for increased energy efficiency, or they may form office programs to help shift employee behaviors to effectively reduce overall carbon emissions. Externally, some respondents are working with nongovernmental organizations to actively monitor and support relevant legislation.

Consumer Discretionary leaders for carbon disclosure are listed below in the order of their disclosure score. While the remaining Consumer Discretionary respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

Fig. B. Disclosure score leaders for the sector[7]

Global 500 leaders

Company name	Disclosure score
Carnival	87
BMW Bayerische Motoren Werke	79
Toyota Motor	77
Reed Elsevier	76
News Corporation	75

S&P 500 leaders

Company name	Disclosure score
Carnival	87
News Corporation	75
Stanley Works	75
Limited Brands	74
Darden Restaurants	69
Johnson Controls	69

FTSE 350 leaders

Company name	Disclosure score
Carnival	87
Reed Elsevier	76
N Brown Group	75
Wetherspoon	75
Berkeley Group Holdings	72

7 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the CDLI for the index overall when all ten sectors are considered.

One-third of Consumer Discretionary companies (34%, or 53 companies) chose not to participate. The largest non-respondents are listed in Fig. C based on their market capitalization.

When compared with a cross section of global leaders for carbon disclosure, Consumer Discretionary companies' disclosure scores closely follow global leaders in the quality of their climate-related efforts; including their Scopes 1 and 2 emissions and the accountability structures and employee incentives they have in place to reduce greenhouse gas (GHG) emissions. However, they lag in nearly all other areas, particularly in the reporting of Scope 3 emissions and the disclosing of emissions reduction targets. US S&P 500 companies, the largest number of companies in the sector, also continue to lag their peers in other geographic regions (see Figure D).

Risks and opportunities

In 2009, 81% (83) of Consumer Discretionary respondents reported at least one significant risk related to climate change, and 83% (85) reported business opportunities – primarily opportunities to meet changing consumer demand. Consumer Discretionary respondents frequently noted the rising costs of utilities and natural resources as significant risks.

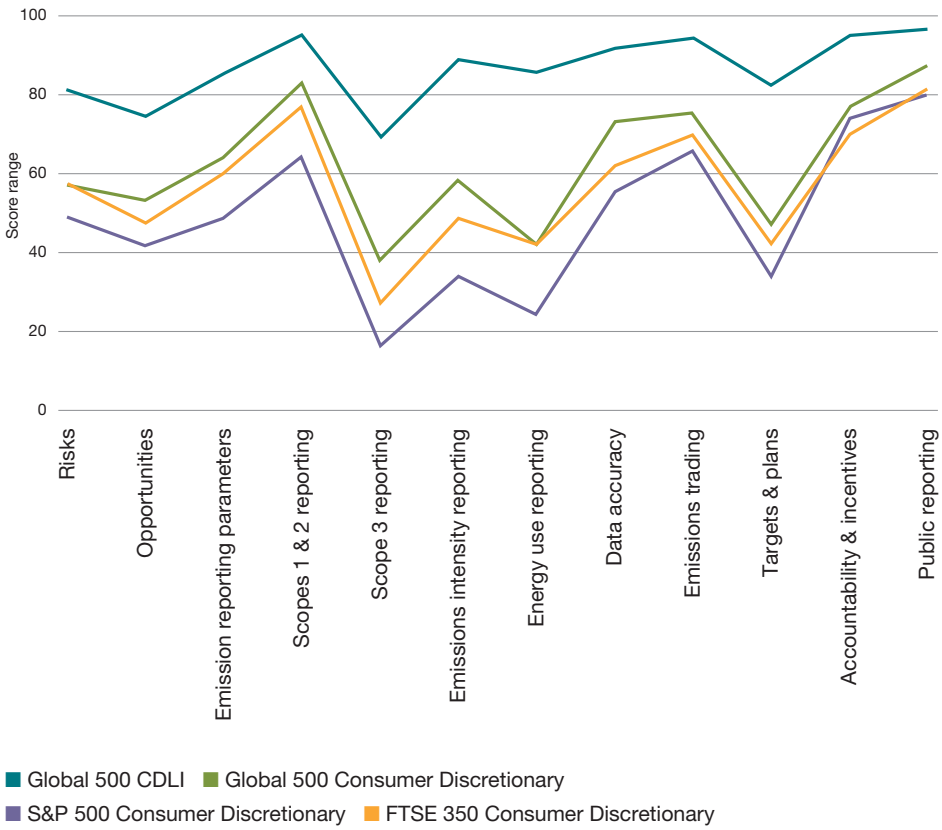
Physical risks that could disrupt a company's supply chain or operational efficiency were reported by 79% (22) of Global 500 respondents, 66% (31) of S&P 500 respondents and 74% (32) of FTSE 350 respondents. Physical risks for this sector concerned the impacts of adverse weather conditions and/or natural disasters – specifically, increased storm and hurricane activity followed closely by drought or flood occurrences and operational disruptions due to severe weather events.

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization[8]

Company name	Index
Comcast	Global 500, S&P 500
Amazon.com	Global 500, S&P 500
DIRECTV Group	Global 500, S&P 500
DENSO Corporation	Global 500
Hermes International	Global 500

Fig. D: Score breakdown for Consumer Discretionary within each index versus the global leaders[9]



8 Market data retrieved from Bloomberg as of June 18, 2009.

9 The 2009 Global 500 Carbon Disclosure Leadership Index is an index of the top 10% of companies with the highest disclosure scores in the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net.

Costs of business travel and goods transportation may also increase due to cap-and-trade programs. The aviation sector will likely be included in the EU ETS [European Union's Emissions Trading System] as of 2012, and shipping is discussed for inclusion in the EU ETS in the longer term. Increasingly stringent vehicle emission standards also increase costs of road transportation by pushing transport service providers to invest in new vehicles that meet requirements.

H&M
Hennes & Mauritz

The costs of raw materials – primarily energy and paper [are risks]. We manage this by arranging long-term fixed-price contracts our paper and energy procurement. Storm damage and extreme cold can affect tree harvests, impacting virgin fiber supply and availability of printed directories. Extreme cold, flooding, or snowfall could affect our ability to visit customers and deliver our products.

Yell

The CRC [Carbon Reduction Commitment] system provides us with a good opportunity to compare ourselves with our peers and companies of the same size. Over time, we will be able to improve our efficiency and reduce our spending on the system relative to the size of our operations. There is also the added incentive to improve our performance so that we receive larger revenue from recycling payments.

Compass

Regulatory risks related to climate change were reported by 79% (22) of Global 500 respondents, 62% (29) of S&P 500 respondents and 84% (36) of FTSE 350 respondents.

Though many respondents indicated they would not be directly impacted by regulatory risks, a significant percentage mentioned indirect risk related to statutory emissions limits or emissions trading systems, as well as meeting changing energy efficiency standards. These risk factors may result in increased costs or may change consumers' buying behaviors.

Many UK Consumer Discretionary respondents said the Carbon Reduction Commitment (CRC)[10] and its potential cash flow requirements to purchase carbon allowances were risks.

Though the CRC affects only respondents operating in the United Kingdom, several non-UK respondents noted that the uncertainty of anticipated climate change legislation within their local jurisdictions was a factor in identifying carbon reduction plans.

Some Consumer Discretionary industries, such as the automotive industry, must comply with a plethora of international and national standards and regulations. Though compliance with these existing requirements may be standard operating procedure for automotive respondents, the ongoing costs required to maintain compliance and the uncertainty related to pending legislation remain formidable challenges.

Overall, respondents expressed the need to reduce emissions and realize cost savings through energy efficiency strategies.

These strategies also include making investments to replace existing equipment with new, more efficient models and realigning distribution networks to reduce transportation costs.

Some respondents disclosed how multiple climate change risks could potentially cascade into one another and eventually impact their brands and reputations.

"There is a potentially significant risk arising from general damage to the economy and prolonged recession caused by a combination of high energy prices, high carbon prices, high levels of climate-related taxation or regulation, and the direct effects of a changed climate. The final risk relates to the public goodwill wrapped up in our corporate reputation and brands. As climate change becomes more of an accepted public fact, we are seeing companies' responses to it being used as something of a litmus test of their commitment to other social and environmental matters. There is, therefore, a risk to our reputation and brand equity – from being seen to be laggardly or reluctant in our response or from inappropriate or insincere communications on the topic."
Home Retail Group

The duality of risks presented by climate change was noted by some respondents, who viewed current and pending climate regulations not as limitations but as opportunities for innovation.

While carbon trading continues to evolve globally, a number of respondents noted that they are participating in the voluntary carbon markets to help fund additional reduction programs.

NIKE has participated in the emerging voluntary market by procuring a total of 111,000 tons of CO_2 to offset nearly one-half of the CO_2 emissions from our business travel during that period. We now have an opportunity to sell excess carbon credits to fund efforts to reduce our supply chain's greenhouse gas emissions footprint in underserved or excluded communities.

NIKE

Complete company responses to CDP can be downloaded from www.cdproject.net

10 For more about the Carbon Reduction Commitment, see http://www.defra.gov.uk/environment /climatechange/uk /business/crc/about.htm.

Insights from the performance score pilot

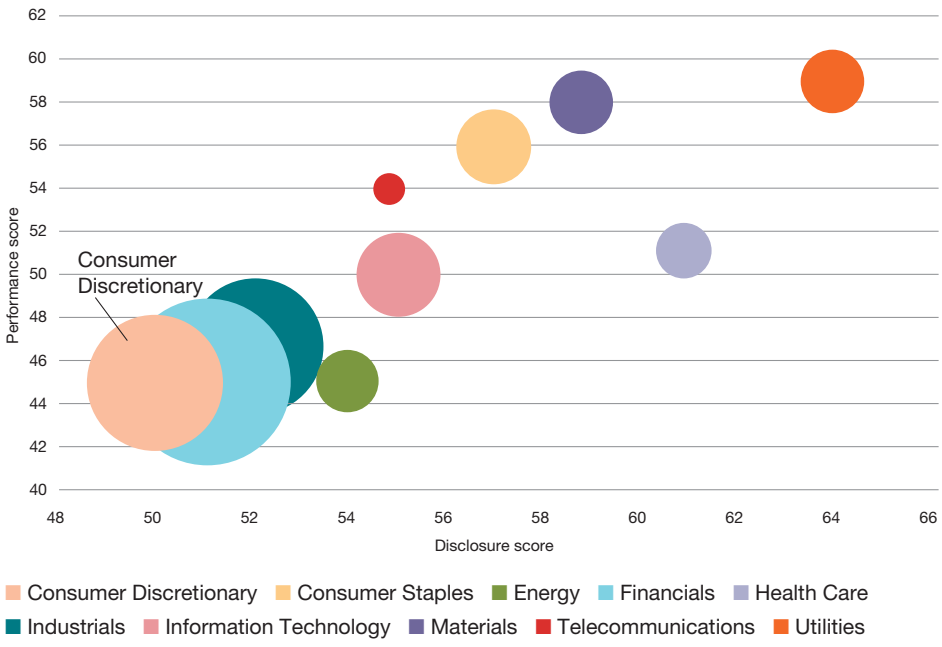
The CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Consumer Discretionary sector scored tenth overall for disclosure and tenth for performance. The chart below shows how the sector compares with the other sectors for performance.

As 2009 is the first year of use of the performance scoring methodology,[11] individual company performance scores are not shown in the CDP 2009 reports, but we provide comment on initial findings below.

- Three Consumer Discretionary respondents – **BMW Bayerische Motoren Werke**, **Sony Corporation** and **Toyota Motor** – tied for the top-performing respondent.
- Consumer Discretionary Global 500 respondents generally outperform their S&P 500 and FTSE 350 peers in all areas scored for performance. They show stronger performance than their industry peers in the development of goods and services that enable customers to reduce GHG emissions, in establishing emissions reduction targets and plans and in having accountability structure incentives in place for employees to meet those targets.
- Consumer Discretionary S&P 500 respondents generally outperformed their FTSE 350 industry peers in the areas of maximizing the opportunities related to climate change, identifying risks associated with climate change, and developing goods and services that enable customers to reduce GHGs.
- Consumer Discretionary FTSE 350 respondents showed stronger performance than their S&P 500 peers in making progress towards meeting emissions reduction targets and plans, in having accountability structures and incentives in place for employees to meet those targets, and in making investments in lower-carbon technologies that improve operational efficiency.

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

11 For more about the performance scoring methodology, see http://www.cdproject.net/ 2009CDLImethodology.asp

Regulatory requirements can generally be seen as incentives for innovation – specifically, innovation in production processes and products. Innovation advances the acceptance for new, more efficient car models and creates new markets. An early picking and implementing of these incentives can lead to competitive advantage.

Volkswagen

As evidenced by severe weather events that have occurred throughout the world in the past few years, when those events impact areas where there is heavy oil production, supplies can be disrupted or reduced, and cost may increase dramatically.

Limited Brands

The majority of Consumer Discretionary respondents have assigned a Board member or senior executive body with overall responsibility for climate change (72%, or 73 respondents). Half have GHG emissions and/or energy reduction plans in place 54% (55), but only 35% (36) incorporate emissions reduction targets into accountability/incentive structures.

Overall, Consumer Discretionary respondents have relatively high rates of disclosing GHG emissions to the public in annual reports or other mainstream filings (84%, or 86 respondents), publishing corporate social responsibility reports (79%, or 81 respondents), and engaging regularly with stakeholders on climate-related 60%, 61 respondents for engaging with stakeholders on climate related issues.

Conclusion

Across geographies, Consumer Discretionary respondents are improving their disclosures in nearly every area and setting a faster pace for competitors to follow. Leaders for disclosure can be found in all geographies, yet Global 500 respondents lead the pack compared with FTSE 350 and S&P 500 industry peers. By continuing to monitor potential legislation, improve energy efficiency, and respond to changing market and consumer expectations related to climate change, savvy Consumer Discretionary companies can mitigate the associated risks and gain market advantage.

As consumers increasingly demand lower-carbon products and services, investors should continue to look for companies that balance the needs of the marketplace with the needs of the climate. How those companies leverage their reputations as trusted, socially responsible corporate citizens provides important insights into their future success.

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Consumer Discretionary scores and emissions by company[12]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
888 Holdings	F	AQ	AQ	24	NP											
Abercrombie & Fitch	S	NR	NR													
Aegis Group	F	AQ	AQ	64		14	18,170		18,170		13,530				x	x
Amazon.com	G, S	NR	DP													
Apollo Group	G, S	DP	NR													
AutoNation	S	NR	DP													
AutoZone	S	NR	NR													
Bed Bath & Beyond	S	AQ	AQ	25	NP											
Bellway	F	AQ	AQ	60		7	8,467	5,076	3,391	*						
Berkeley Group Holdings	F	AQ	AQ	72		5	5,228	684	4,544		2,742				x	
Best Buy	S	AQ	AQ	54	NP											
Big Lots	S	AQ	AQ	30		99	460,886		460,886							
Black & Decker	S	AQ	AQ	50		37	223,226	38,449	184,777							
BMW Bayerische Motoren Werke	G	AQ	AQ	79		17	1,250,461	375,425	875,036	*	395,297		x		x	
Bovis Homes Group	F	AQ	AQ	40		6	1,711	976	735		847				x	
Bridgestone	G	AQ	–	54	NP											
British Sky Broadcasting	G, F	AQ	AQ	42		9	45,068	23,793	21,275		31,547	x		x	x	
Burberry Group	F	AQ	AQ	57		24	23,542	2,191	21,351		1,843				x	
Carnival	G, S, F	AQ	AQ	87		703	10,298,265	10,247,517	50,748	144	19,150	x	x	x		

12 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Carpetright	F	NR	NR													
Carphone Warehouse	F	NR	AQ													
CBS	S	AQ	AQ	21	NP											
Centex	S	IN	IN													
Coach	S	DP	DP													
Comcast	G, S	IN	IN													
Compass	F	AQ	AQ	46		8	91,870	82,700	9,170							
Daily Mail & General Trust	F	AQ	AQ	49		39	90,076	18,940	71,136		28,159		x		x	
Daimler	G	AQ	AQ	65	NP											
Darden Restaurants	S	AQ	AQ	69		162	1,075,223	324,835	750,388	*	6,226				x	
Debenhams	F	AQ	DP	54		98	180,632	18,063	162,569	*	1,519				x	x
Denso	G	NR	AQ													
Dignity	F	AQ	NR	67		140	24,650	13,727	10,923							
DIRECTV Group	G, S	NR	DP													
Dominos Pizza	F	DP	–													
DSG International	F	NR	NR													
Dunelm Group	F	NR	–													
Eaga	F	NR	AQ													
Eastman Kodak	S	AQ	AQ	50	NP											
Enterprise Inns	F	AQ	AQ	22	NP											
Euromoney Institutional Investors	F	AQ	AQ	53		14	4,680	1,865	2,815		5,635				x	
Expedia	S	NR	NR													
Family Dollar Stores	S	DP	DP													
Fast Retailing	G	NR	–													
Ford Motor	S	AQ	AQ	51	NP											
Fortune Brands	S	NR	IN													
Game Group	F	NR	NR													
GameStop	S	NR	NR													
Gannett	S	NR	DP													
Gap	S	AQ	AQ	25						*						
General Motors	S	AQ	AQ	48		669	99,700,000	24,300,000	75,400,000							
Genuine Parts	S	DP	NR													
GKN	F	AQ	AQ	53	NP											
Goodyear Tire & Rubber	S	NR	AQ													
Greene King	F	AQ	AQ	44		170	163,523	54,247	109,276							
H&M Hennes & Mauritz	G	AQ	AQ	58		16	178,616	5,273	173,343	100,792	174,570		x		x	
H&R Block	S	AQ	AQ	19	NP											
Halfords Group	F	NR	AQ													
Harley-Davidson	S	NR	NR													
Harman International Industries	S	NR	NR													
Hasbro	S	DP	NR													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Hermes International	G	DP	–													
HMV Group	F	NR	DP													
Home Depot	G, S	AQ	AQ	11	NP											
Home Retail Group	F	AQ	AQ	49		48	285,000	138,400	146,600	73,000						
Honda Motor Company	G	AQ	AQ	56		33	3,591,000	1,220,000	2,371,000		74,893		x			
Inchcape	F	AQ(L)	AQ(L)		NP											
Inditex	G	AQ	AQ	59		22	316,668	25,182	291,486		37,878		x			
Informa	F	AQ	AQ	47	NP											
InterContinental Hotel Group	F	AQ	NR	43		2540	4,600,000		4,600,000		4,400,000				x	
International Game Technology	S	NR	NR													
Interpublic Group of Companies	S	AQ	AQ	36	NP											
ITV	F	AQ	AQ	23	NP											
J.C. Penney	S	AQ	AQ	52		61	1,216,850	103,850	1,113,000		7,251				x	
Johnson Controls	G, S	AQ	AQ	69		45	1,714,631	458,324	1,256,307	*	72,813				x	
Jones Apparel Group	S	NR	NR													
KB Home	S	AQ	AQ	58		14	42,204		42,204	*						
Kesa Electricals	F	AQ	AQ	9	NP											
Kingfisher	F	AQ	AQ	67		61	549,382	148,621	400,761		63,000		x		x	x
Kohl's	G, S	AQ	AQ	68		50	816,144	27,156	788,988	*	182,154		x			
Ladbrokes	F	AQ	AQ	35	NP											
Leggett & Platt	S	AQ	DP	42	NP											
Lennar	S	DP	DP													
Limited Brands	S	AQ	AQ	74		38	385,008	31,631	353,377		254,767		x		x	
Loews	G, S	NR	DP													
Lowe's	G, S	AQ	NR	57	NP											
LVMH	G	AQ	AQ	72		10	238,498	46,358	192,140		370,348		x	x		x
Macy's	S	AQ	AQ	14	NP											
Marks & Spencer Group	F	AQ	AQ	65		65	589,126	126,283	462,843	215,502	5,121,023	x	x	x	x	
Marriott International	S	AQ	AQ	44		217	2,800,122	568,938	2,231,184							
Marstons	F	AQ	AQ	47	NP											
Mattel	S	AQ	AQ	30		39	233,494	21,155	212,339							
McDonald's	G, S	AQ	AQ	38	NP											
McGraw-Hill	S	AQ	AQ	37		16	99,331	13,967	85,364							
Meredith	S	AQ	AQ	0												
Millennium & Copthorne Hotels	F	DP	IN													
Mitchells & Butlers	F	AQ	AQ	21	NP											
Mothercare	F	AQ	–	57		41	28,000	2,500	25,500		9,219		x		x	
N Brown Group	F	AQ	AQ	75		16	9,633	2,810	6,823	*	420				x	x
New York Times	S	AQ	AQ	17	NP											
Newell Rubbermaid	S	NR	AQ													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
News Corporation	G, S	AQ	AQ	75		19	637,274	108,931	528,343		177,650			x	x	x
Next	F	AQ	AQ	67	NP											
NIKE	G, S	AQ	AQ	41		6	109,284		109,284		1,526,404		x	x	x	
Nissan Motor	G	AQ	AQ	69		29	2,440,000	909,000	1,531,000	*	170,862,000	x	x		x	
Nordstrom	S	AQ	NR	22	NP											
Office Depot	S	AQ	AQ	55		33	485,600	96,300	389,300		49,000		x			
Omnicom Group	S	AQ	AQ	49		15	198,227	52,651	145,576		154,007				x	
Panasonic	G	AQ	AQ	67		43	3,673,095	904,898	2,768,197		76,880,000	x	x			
Partygaming	F	NR	NR													
Pearson	F	AQ	AQ	57		40	193,608	43,811	149,797		27,886				x	x
Persimmon	F	AQ	AQ	40		7	11,900	10,000	1,900							
Polo Ralph Lauren	S	DP	NR													
Pulte Homes	S	AQ	NR	31												
Punch Taverns	F	AQ	AQ	56		85	133,429	36,617	96,812							
RadioShack	S	NR	NR													
Rank Group	F	NR	–													
Redrow	F	NR	AQ													
Reed Elsevier	G, F	AQ	AQ	76		16	126,212	18,559	107,653	93,512	131,703		x	x	x	
Restaurant Group	F	NR	NR													
Rightmove	F	NR	NR													
Scripps Networks Interactive	S	NR	–													
Sears Holdings	S	AQ	NR	53		95	4,818,277	218,679	4,599,598							
Serco Group	F	AQ	DP	50		81	253,693	65,029	188,664		10,114				x	
Sherwin-Williams	S	AQ	AQ	57		77	615,848	286,293	329,555							
Snap-on	S	AQ	DP	12	NP											
Sony Corporation	G	AQ	AQ	66		22	1,884,460	434,116	1,450,344	1,350,000	24,338,000	x	x		x	
Sports Direct International	F	DP	NR													
Stanley Works	S	AQ	AQ	75		48	212,936	50,746	162,190		533,119	x	x		x	
Staples	G, S	AQ	AQ	60		20	396,600	62,400	334,200	*						
Starbucks	S	AQ	AQ	48		88	913,000	228,250	684,750							
Starwood Hotels & Resorts Worldwide	S	AQ	AQ	52	NP											
Target	G, S	AQ	AQ	48		46	2,938,374	243,440	2,694,934							
Thomas Cook Group	F	AQ	DP	69		456	4,019,360	3,985,071	34,289							
Thomson Reuters	G, F	AQ	AQ	36	NP											
Tiffany & Co.	S	AQ	AQ	50	NP											
Time Warner	G, S	AQ	AQ	41		9	428,833	39,244	389,589		57,363				x	
TJX Companies	S	IN	IN													
Toyota Motor	G	AQ	AQ	77		38	8,540,000	3,480,000	5,060,000	*	484,353		x		x	
TUI Travel	F	AQ	AQ	71		475	6,617,498	6,564,026	53,472	*	70,597		x	x	x	

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
United Business Media	F	AQ	NR	52		5	4,369	506	3,863		1,073				x	
V.F. Corporation	S	DP	DP													
Viacom	S	AQ	AQ	14	NP											
Vivendi Universal	G	AQ	AQ	54		6	209,000	19,000	190,000		9,000				x	
Volkswagen	G	AQ	AQ	69		44	6,908,704	1,678,407	5,230,297		8,827,000	x			x	
Walt Disney	G, S	AQ	AQ	46		44	1,649,042	566,042	1,083,000							
Washington Post	S	IN	NR													
Wetherspoon	F	AQ	AQ	75		186	168,535	44,049	124,486		48,518	x	x		x	
WH Smith	F	AQ	AQ	65	NP											
Whirlpool	S	AQ	AQ	55		46	866,334	259,193	607,141	*	133,000,000	x				
Whitbread	F	AQ	AQ	66		170	206,800	57,363	149,437		24,981	x	x		x	x
William Hill	F	NR	NR													
WPP	F	AQ	AQ	56		15	112,901	4,344	108,557	94,376	117,087		x		x	
Wyndham Worldwide	S	IN	AQ													
Wynn Resorts	S	DP	–													
Yell	F	AQ	AQ	47		14	31,323	985	30,338		241,101		x	x	x	
Yum! Brands	G, S	IN	NR													

13 Disclosed Scopes 1 and 2 emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

14 Company reported total emissions (Scope 1 and 2).

15 Where there is a * in this column, the company did not provide a numerical figure for its contractual Scope 2 emissions but did describe some use of renewable energy. Please see the company response for more detail.

16 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

Consumer Staples sector report
Covering Global 500, S&P 500 and FTSE 350 listed respondents

Kimberly-Clark has been affected by the European Union's Emissions Trading Scheme and is closely following the development of proposed climate emissions cap-and-trade legislation in the United States and Australia. We see the financial impacts being the future increases in energy costs, with estimates as high as 30% increases within the next 3 years as well as the costs of emissions allowances for our affected manufacturing facilities.

Kimberly-Clark

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Consumer Staples companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Consumer staples
Response rate[1]	**(85%) 71 out of 84**
Global 500	(88%) 45 out of 51
S&P 500	(76%) 32 out of 42
FTSE 350	(86%) 19 out of 22
Overall sector rank (1-10)[2]	**4th**
Highest disclosure score	89
Lowest disclosure score	0
Average disclosure score	57
Overall emissions disclosure[3]	
Scope 1 emissions	87% (66 million Mt CO_2-e)
Scope 2 emissions[4]	82% (67 million Mt CO_2-e)
Scope 3 emissions	48% (249 million Mt CO_2-e)
Average emissions intensity[5]	81 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues for those sectors respondents who disclosed emissions. Revenues based on data retrieved from Bloomberg on June 18, 2009.

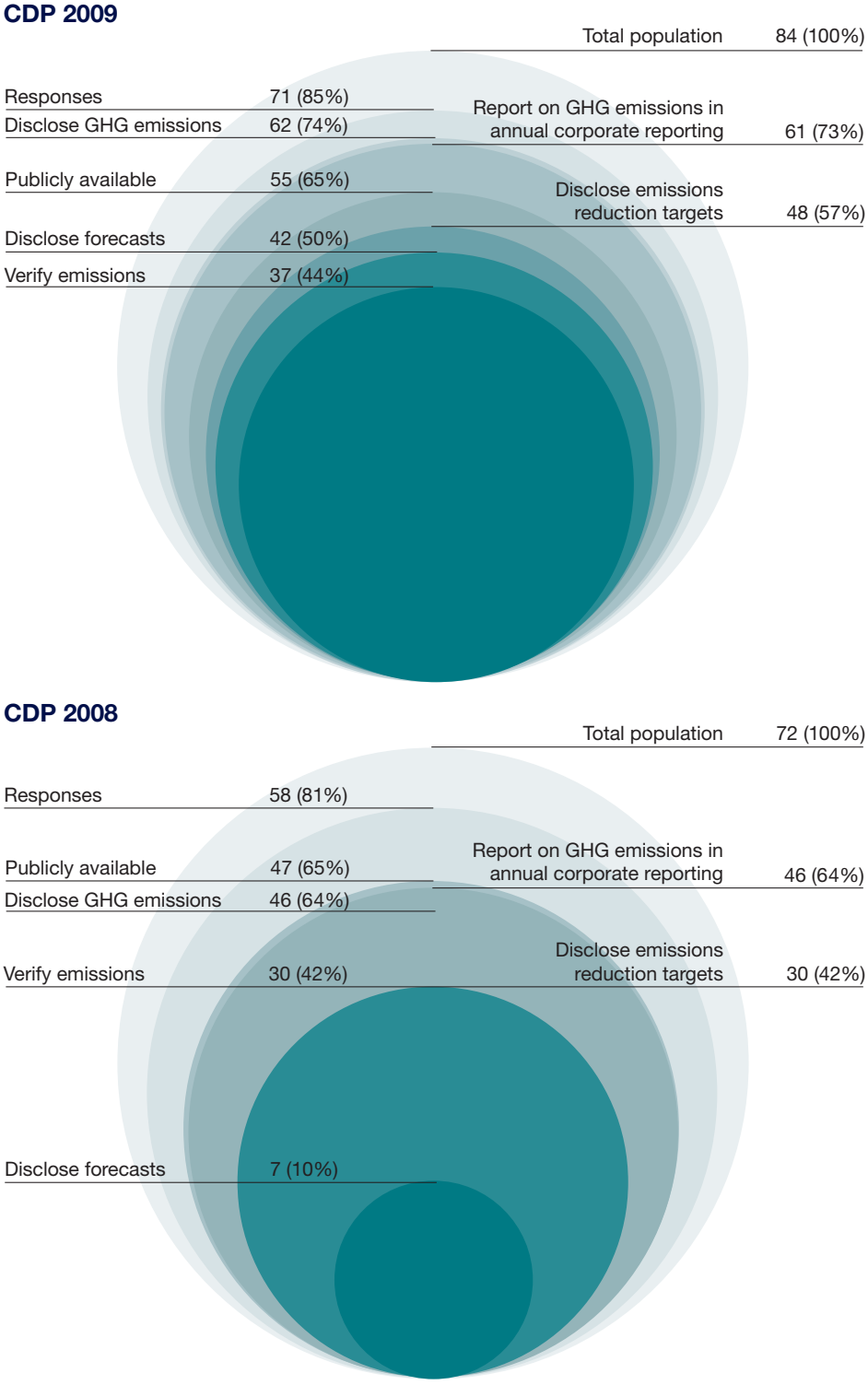
Carbon disclosure trends in the Consumer Staples sector

The Consumer Staples sector in CDP 2009 comprises a broad range of companies, the greatest concentration of which – 31% (26 companies) – is within the food products category. Remaining respondents are involved in a range of businesses, including food and staples retailing 21% (18), beverages 20% (17), tobacco 12% (10), household products 11% (9), and personal products 5% (4). For purposes of comparison, the GICS industry classification for Consumer Staples is broadly the same as the Retail and Consumer sector used in CDP 2008.

Although not as carbon-intensive as the Utilities, Materials, and Energy sectors, many of the businesses within this sector involve industrial production and raw materials processing. This year's responses show that key pressure points for the sector include the extension of carbon regulation at the global and regional levels, carbon cost pass-through from energy companies, extreme climatic events causing operational and supply chain disruption and changing consumer demand forcing action on climate change.

Notwithstanding today's economic challenges, the overall response rate[6] for Consumer Staples is an impressive 85% (71) overall placing the sector second only to Utilities (88% or 59 companies). This figure also represents an increase compared to CDP 2008 and may reflect concern that brand values are becoming more sensitive to a range of factors, including the corporate stance on sustainability issues.

Fig. A: Year-on-year disclosure rates, as a proportion of total Consumer Staples companies (Global 500, S&P 500 and FTSE 350)



6 This response rate represents companies that responded after the deadline for analysis. Statistics and figures found throughout the rest of this report are based on the number analyzed rather than the final number responding.

We have identified those production sites which are most likely to become water stressed over the next couple of decades and have prioritised these within our water efficiency programme. There are currently ten such sites, and we have set these the target of reducing the use of non-ingredient water by 50% by 2015.

Diageo

Fig. B: Disclosure score leaders for the sector[7]

Global 500 leaders

Company name	Disclosure score
Wal-Mart Stores	89
Woolworths	82
Reckitt Benckiser	80
Colgate-Palmolive	77
Unilever	76

S&P 500 leaders

Company name	Disclosure score
Wal-Mart Stores	89
Dean Foods	87
Colgate-Palmolive	77
H.J. Heinz	75
Estée Lauder	73
Molson Coors Brewing	73

FTSE 350 leaders

Company name	Disclosure score
Reckitt Benckiser	80
Unilever	76
Cadbury	72
Northern Foods	72
Tesco	69

Consumer Staples companies improved across the board on all disclosure metrics in 2009. Most impressively, they showed significant progress in the areas of disclosing emissions reduction targets and forecasting emissions (see Fig. C). This may be due to the question in the CDP Information Request (23.13) which allows companies to explain their forecasting plans this year (qualitative, as opposed to quantitative disclosure), thus removing some of the commercial sensitivity. Disappointingly, however, less than half of respondents verify their emissions data through an independent third party. This remains an area where progress is limited across all sectors.

Consumer Staples leaders for carbon disclosure are listed above in the order of their carbon disclosure scores. While the remaining Consumer Staples respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

7 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the CDLI for the index overall when all 10 sectors are considered.

Several Consumer Staples companies (15% or 13 companies) chose not to participate. The largest non-respondents are listed below based on their market capitalization.[8]

Notwithstanding the strong representation of the Consumer Staples sector in the Global 500 and a high response rate, only three respondents (**Wal-Mart Stores**, **Woolworths** and **Reckitt Benckiser**) made the Carbon Disclosure Leadership Index (CDLI) for the Global 500. This suggests that while the Consumer Staples sector has an impressive response rate, it is less effective in delivering leading disclosures.

The sector leaders go beyond simply identifying risks and opportunities in their CDP responses, they provide examples of the steps they are taking to change their businesses. In particular, these companies understand the potential impacts of climate change on their supply chains and are seeking ways to work with suppliers to address them. Many of these leaders also participate in CDP Supply Chain, which helps procurement professionals better understand how their supply chains may be impacted by climate change and thereby begin the exercise of futureproofing. More information on CDP Supply Chain can be found at www.cdproject.net.

"...using preliminary macroeconomic assessments, we believe Wal-Mart's supply chain is likely to have an annual carbon footprint that is at least 100 times greater than our total Scope 1 and 2 emissions. We are working with our suppliers to make their products more sustainable, but we are also helping them become more sustainable businesses."
Wal-Mart Stores

"For Woolworths to manage the physical impacts of climate change, significant investment in infrastructure will be required. Extensive investment has occurred in green store design and construction, particularly in areas of refrigeration plant and cases, lighting, and air-conditioning."
Woolworths

"Our carbon reduction commitments and strategy focuses across the complete life cycle of our products. With consumer use being over 60% of our total carbon footprint, identifying opportunities to reduce energy and water use during the use-phase of our products is going to become an increasingly important element of research and development and product innovation."
Reckitt Benckiser

Whilst the precise impacts of climate change on crop yields are still unclear, we have already seen that drought in Australia reduced the availability of milk, resulting in a significant price increase. We have an active sustainable agriculture programme in place, working with our supply chain partners to make our key agricultural raw materials more sustainable.

Cadbury

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization	
Company name	**Index**
Philip Morris International	Global 500, S&P 500
CVS Caremark	Global 500, S&P 500
British American Tobacco	FTSE 350, Global 500
Archer Daniels Midland	Global 500, S&P 500
Sysco	Global 500, S&P 500

8 Market data retrieved from Bloomberg as of June 18, 2009.

Because of the disparity between countries and the fact that our global network includes 78 manufacturing facilities in 23 countries as well as a global supply chain, the exposure to risk is tremendous. Heinz believes that if consistent regulations were implemented and enforced on a global scale, everyone would benefit from the increased communication and coordination that would result.

H. J. Heinz

Recent EU and US biofuel legislation has already had a tangible impact on corn prices which has been passed through the supply chain via the cost of corn-derived sugar syrups, and similar pressure is expected on vegetable oil and sugar prices.

Cadbury

As a group, Consumer Staples respondents significantly lagged the global leaders in the quality of their disclosures, particularly in the areas of Scope 3 emissions reporting, energy use and disclosing targets and plans. They scored better in Scopes 1 and 2 reporting, emissions trading, having accountability structures and incentives in place for management/staff to meet climate related targets and public reporting.

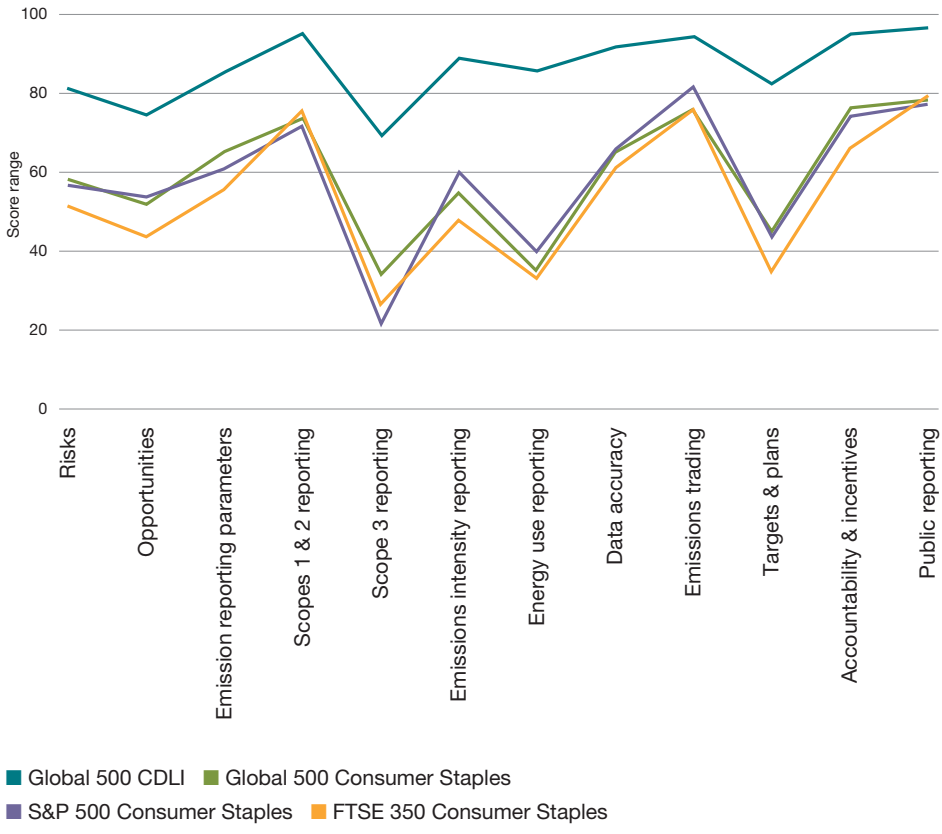
In most areas, the S&P 500 respondents from this sector scored higher than their FTSE 350 counterparts. Overall, the Consumer Staples sector is ranked fourth across all sectors, behind Utilities, Health Care and Materials.

Risks and opportunities

Despite the economic challenges and the sector's relatively low carbon impact, Consumer Staples companies appear to be strongly engaged in assessing the implications of climate change on their businesses. Current and future regulation is recognized as a business risk, with 80% of Global 500 (32), 75% of S&P 500 (24), and 95% of FTSE 350 (18) respondents considering themselves to be exposed.

Among European respondents there is an expectation of higher compliance costs in the future for assets covered by the existing European Union's Emissions Trading System (EU ETS), and the introduction of the UK's Carbon Reduction Commitment is a concern of FTSE 350 respondents.

Fig. D: Score breakdown for Consumer Staples within each index versus the global leaders[9]



9 The 2009 Global 500 Carbon Disclosure Leadership Index (CDLI), is an index of the top 10% of companies with the highest disclosure scores in the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net.

For S&P 500 respondents, emissions limits (or caps) represented the second most-frequently identified regulatory risk, after emissions trading.

Interestingly, a final issue flagged by some respondents is the possible impact of policies to promote greater development of biofuels on food commodity prices, the implication being that greater demand for land and crops for fuels could put pressure on prices for food-grade inputs. As a result, many multinational respondents expressed a desire for energy and climate policies to be coherent, and, ideally, harmonized in order to avoid perverse incentive structures and market distortions.

Physical risks from climate change were noted by 78% of both the Global 500 (31) and the S&P 500 (25) Consumer Staples respondents, and by 84% (16) of the FTSE 350 respondents. Resource scarcity is the prime concern in this respect, as is the increased incidence of storms, flooding and droughts resulting in operational and supply chain disruptions. Many respondents are undertaking activities with their suppliers to mitigate these risks; examples include risk analysis, diversification of supplier countries and input sources, and alternative production techniques for certain products.

Other commonly stated risks facing the Consumer Staples sector include changing consumer demand and preferences, reputational risk (especially around the sourcing of inputs or employee conditions) and the merits, or otherwise, of carbon labeling. Many respondents were concerned over the accuracy and consistency of carbon labeling (given that there is no universal standard in place) and the potential costs involved for companies that have a wide range of products.

This concern supports recent research undertaken with UK consumers that suggests that consumer confusion is increasing and acting as a hindrance to the purchase of more sustainable products and services. A related concern here is the issue of trust: when asked whom they trust to tell them the truth about the climatic impact of a product, research suggests that scientists and non-governmental organizations rank much higher than producers and retailers.[10]

In addition to the risks outlined above, 85% (34) of the Global 500, 82% (26) of the S&P 500 and 100% (19) of the FTSE 350 Consumer Staples sector respondents said regulation also presents opportunities. Key areas of opportunity includes:

- Revenue generation from participation in emissions trading systems;
- Cost savings due to improved energy efficiency (due to mandatory or voluntary initiatives);
- Technological advancements being brought to market faster due to demand for energy-efficient products; and
- The ability to increase market share for some products through the provision of information for customers (e.g., carbon labeling).

> Regulatory programs addressing labeling schemes are becoming more prevalent unfortunately during a time when the technology to provide this information to consumers is not yet mature. This has the potential to lead to conflicting and misleading communication on labels.
>
> **Kellogg Company**

10 Research undertaken by YouGov plc for PricewaterhouseCoopers LLP (total online sample size 2,145 adults and fieldwork undertaken July 20–22, 2009.)

Unilever believes that its reputation and those of its competitors will be judged largely by their response to climate change, which is widely recognized as the most critical challenge facing our planet.

Unilever

In the United Kingdom and Ireland, longer periods of sunshine mean shorter growing times for raw ingredients.

H. J. Heinz

"As governments worldwide decide how to implement their GHG regulations, there is a possibility that growers could be paid for sequestering carbon. Agricultural carbon sequestration can occur by adding more organic matter to soil as cover crops or compost, or by reducing or eliminating tillage."
Constellation Brands

"...we have participated in the construction of an anaerobic digester project with Big Sky Dairy, in Gooding, Idaho. Using the rigorous Gold Standard for carbon reduction project quantification, the digester converts biogas into electricity that is sold to the local power grid."
Dean Foods

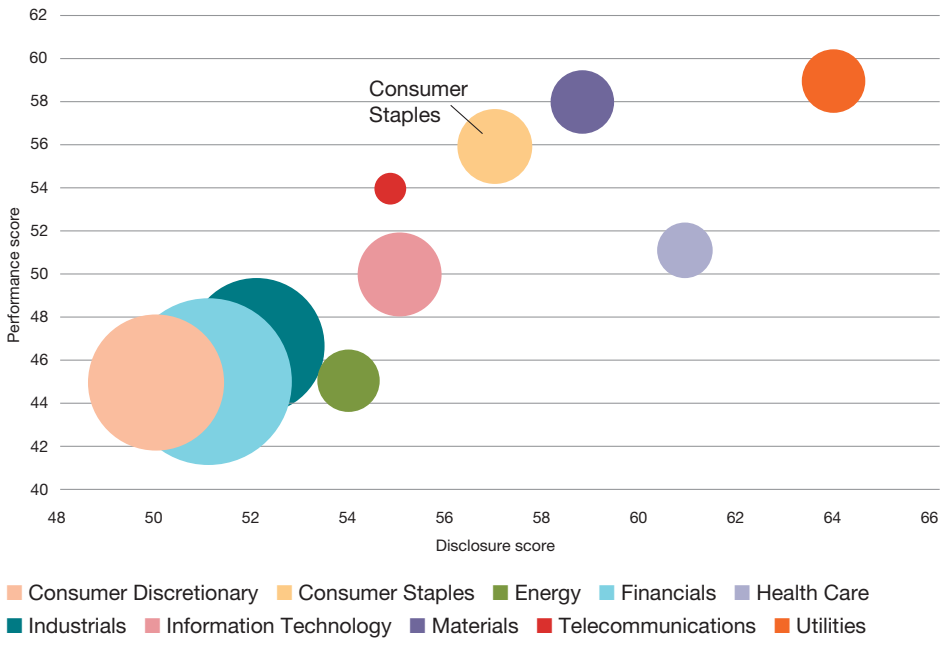
Climate change presents opportunities to the Consumer Staples sector that can either erode or enhance company value depending on the approach taken and the timing of any capital commitments. For some respondents, climate change is presenting opportunities in the form of extended growing seasons and increasing crop yields. Others recognized the opportunity to work with their suppliers to ensure that they are collectively prepared for climate change in order to achieve competitive advantage.

Insights from the performance scores pilot

The CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Consumer Staples sector scored fourth overall for disclosure and third for performance. The chart below shows how the Consumer Staples sector compares with the other industry groups for performance.

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

As 2009 is the first year of use of the performance scoring methodology,[11] individual company performance scores are not shown in the CDP 2009 reports, though comment on initial findings is provided below:

- The three Consumer Staples companies scoring highest in the performance score pilot (in alphabetical order) are **Carrefour, Reckitt Benckiser**, and **Wal-Mart Stores**;
- Generally, Consumer Staples respondents performed in line with the average performance of other sectors across the three CDP populations. However, they significantly underperformed in the provision of goods and services that enable customers to reduce emissions and in having targets and plans for climate change; and
- In aggregate, Consumer Staples respondents within the S&P 500 tended to consistently underperform compared with their peers in the Global 500 and FTSE 350.

Overall, the Consumer Staples sector has established strong governance through board committees that have overall responsibility for climate change: 88% (58); staff incentives to reduce emissions: 71% (47); and publication of the climate change impact on the business: Publication of climate change impact on business is 92% (61).

Conclusion

On the basis of CDP 2009, "agility" would seem to be the attribute that the Consumer Staples sector must foster in order to deal effectively with the climate change challenge. Whether it is a changing cost base due to physical climate risks or shifting consumer preferences, Consumer Staples businesses will need to be responsive in order to preserve value and, ideally, enhance it. Many are already making good progress in this regard and diversification is a key strategic element, providing a hedge that should underpin greater operational resilience, particularly in the supply chain.

The attribute that may take a little longer to develop, however, is one of trust. CDP 2009 responses suggest that developing effective communication strategies with consumers, either through general stakeholder dialogue or through the products they sell, will be a challenge for the Consumer Staples sector over the years to come.

With anticipated increases in atmospheric carbon dioxide and surface temperatures, it is possible that tree growth rates and geographic distribution of certain trees that K-C uses to make its products will increase, leading to increased wood fiber availability in the future.

Kimberly-Clark

We have also seen increasing sales as a result of installing a waste-to-energy anaerobic digestion system in our Lowville, NY, Philadelphia Cream Cheese factory. The facility is converting whey, a by-product of cream cheese production, into methane and subsequently using the methane in the facility's boilers to produce energy. We started leveraging this fact with customers and consumers and as a result, sold more products.

Kraft Foods

11 For more about the performance scoring methodology, see http://www.cdproject.net/ 2009CDLImethodology.asp.

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Consumer Staples scores and emissions by company[12]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Altria Group	G, S	AQ	AQ	55		45	713,474	398,232	315,242		34,675				x	
Ambev – Cia. Bebidas das Americas	G	AQ	AQ	51		65	586,239	497,348	88,891	*						
Anheuser Busch InBev	G	AQ	AQ	50		276	6,177,963	3,716,881	2,461,082							
Archer Daniels Midland	G, S	NR	DP													
Associated British Foods	F	AQ	AQ	53		437	3,595,292	2,609,346	985,946							
Avon Products	S	AQ	AQ	51		13	140,972	35,941	105,031							
Barr (A.G.)	F	NR	–													
Beiersdorf	G	AQ	AQ	45		9	74,874	24,689	50,185							
British American Tobacco	F, G	IN	AQ													
Britvic	F	AQ	AQ	58	NP											
Brown-Forman	S	AQ	AQ	69		71	184,566	111,125	73,441		4,767				x	
Cadbury	F, G	AQ	AQ	72		155	836,052	385,901	450,151		2,700,000		x	x	x	
Campbell Soup	G, S	AQ	DP	63		112	899,537	499,149	400,388							
Carrefour	G	AQ	AQ	73		36	4,306,784	1,873,299	2,433,485	*	1,175,572	x	x		x	
Clorox	S	AQ	AQ	69		80	422,632	98,244	324,388							
Coca-Cola	G, S	AQ	AQ	70		162	5,160,436	1,951,041	3,209,395		59,000†				x	x
Coca-Cola Enterprises	S	AQ	AQ	56		70	1,532,967	967,410	565,557		4,578,069	x	x		x	
Colgate-Palmolive	G, S	AQ	AQ	77		46	701,591	271,599	429,992	*	87,572		x		x	

12 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Conagra Foods	S	AQ	AQ	72		194	2,254,356	1,163,215	1,091,141		546,135		x			
Constellation Brands	S	AQ	IN	72		65	244,883	151,114	93,769		298,151	x	x		x	
Costco Wholesale	G, S	AQ	AQ	17	NP											
Cranswick	F	AQ	–	56	NP											
CVS Caremark	G, S	NR	NR													
D.R. Horton	S	NR	NR													
Dairy Crest Group	F	AQ	AQ	67		170	266,075	178,665	87,410	*	3,176,302		x	x	x	
Danone	G	AQ	AQ	42		36	758,996	387,155	371,841							
Dean Foods	S	AQ	AQ	87		132	1,650,053	884,448	765,605		187,757†		x		x	
Diageo	F, G	AQ	AQ	66		90	729,000	625,000	104,000	*	384,300		x	x	x	
Dr Pepper Snapple Group	S	NR	–													
Estée Lauder	S	AQ	DP	73		16	128,000	36,600	91,400	76452	40,800	x			x	
General Mills	G, S	AQ	AQ	63		79	1,077,057	283,275	793,782	*	16,369				x	
Greggs	F	AQ	AQ	48		150	94,514	29,222	65,292		9,708	x				
Heineken	G	AQ(L)	AQ				1,986,800	1,238,000	748,800							
The Hershey Company	S	AQ	DP	64		71	366,847	126,991	239,856							
H.J. Heinz	G, S	AQ	AQ	75		86	863,132	524,606	338,526	*						
Hindustan Unilever (see Unilever)	G	AQ	AQ													
Imperial Tobacco Group	F, G	AQ	AQ	62		11	114,925	46,740	68,185	*						
ITC	G	AQ	AQ	42	NP											
J Sainsbury	F	AQ	AQ	49		49	873,464	205,765	667,699							
Japan Tobacco[17]	G	AQ(L)	AQ(L)													
J.M. Smucker	S	IN	–													
KAO	G	AQ	AQ	68		81	1,162,500	1,162,500			6,394,000	x	x	x		
Kellogg Company	G, S	AQ	AQ	45		105	1,339,949	602,131	737,818							
Kimberly-Clark	G, S	AQ	AQ	64		309	5,994,424	2,682,694	3,311,730		693,211		x		x	
Kirin Holdings[17]	G	AQ	AQ													
Kraft Foods	G, S	AQ	AQ	68		61	2,581,279	1,339,442	1,241,837		1,032,809		x		x	
Kroger	G, S	AQ	AQ	18	NP											
L'Oreal	G	AQ	AQ	63		8	203,799	80,823	122,976		2,214,936	x	x	x	x	
Lorillard	G, S	NR	–													
McBride	F	NR	–													
McCormick & Company	S	AQ	AQ	61		19	60,469	11,997	48,472							
Metro	G	AQ	AQ	50												
Molson Coors Brewing	S	AQ	AQ	73		234	1,118,636	680,831	437,805							
Morrison Supermarkets	F, G	AQ	AQ	43		95	1,233,351	632,857	600,494		39,675				x	
Nestle	G	AQ	AQ	60		71	7,374,453	4,217,927	3,156,526	*	2,150,000		x			
Northern Foods	F	AQ	AQ	72		254	236,570	118,285	118,285		84,904	x	x	x		
Pepsi Bottling Group	S	AQ	AQ	68		52	717,020	447,547	269,473		59,238		x			
PepsiCo	G, S	AQ	AQ	63		98	4,252,973	2,878,433	1,374,540		263,300			x		x
Pernod-Ricard	G	AQ	AQ	59		46	420,965	311,461	109,504	105,728	621,548			x		
Philip Morris International	G, S	NR	–													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Premier Foods	F	AQ	AQ	52	NP											
Procter & Gamble	G, S	AQ	AQ	55		76	6,384,000	2,782,000	3,602,000							
PZ Cussons	F	AQ	NR	45	NP											
Reckitt Benckiser	F, G	AQ	AQ	80		44	291,059	125,795	165,264		18,215,832†	x	x	x	x	x
Reynolds American	G, S	AQ	AQ	59		39	349,377	144,979	204,398	*						
Robert Wiseman Dairies	F	AQ	–	62	NP											
Royal Ahold	G	AQ	IN	45		69	2,474,427	1,150,964	1,323,463							
SABMiller	F, G	AQ	AQ	54		109	2,343,184	1,513,037	830,147		404,533		x			
Safeway	S	IN	IN													
Sara Lee	S	AQ	AQ	61		71	940,350	341,057	599,293							
Seven & I Holding	G	AQ	AQ(L)	45	NP											
SUPERVALU	S	AQ	NR	32	NP											
Sysco	G, S	IN	AQ													
Tate & Lyle	F	AQ	NR	8		1,138	3,261,824	3,261,824								
Tesco	F, G	AQ	AQ	69		105	4,957,470	1,877,340	3,080,130		58,744				x	
Tyson Foods	S	NR	DP													
Unilever	F, G	AQ	AQ	76		69	2,785,882	1,167,662	1,618,220		110,600,000	x	x	x	x	
UST (see Altria)	G, S	AQ	AQ													
Wal Mart de Mexico (see Wal-Mart Stores)	G	AQ	AQ													
Wal-Mart Stores	G, S	AQ	AQ	89		56	21,066,956	5,566,006	15,500,950	3,563						
Walgreens	G, S	AQ	AQ	46		37	2,180,000	268,000	1,912,000							
Whole Foods Market	S	AQ	AQ	30												
Wilmar International	G	AQ	–	47	NP											
Woolworths	G	AQ	AQ	82		95	3,108,719	675,991	2,432,728		85,313,090†	x	x		x	x

13 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

14 Scope 1 and Scope 2 grid average reported emissions.

15 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

16 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

17 This company answered CDP 2009 in Japanese and was therefore not scored.

Energy sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

Policy approaches that promote the usage of nonhydrocarbon electricity sources such as renewables, biofuels, hydroelectric power, and nuclear power may have an impact on BG Group's ability to maintain its position in key markets. Additionally, new regulatory regimes intended to establish emissions trading schemes could alter hydrocarbon production economics....BG Group's strategy takes account of the fact that many governments are now seeking increased natural gas utilisation as a lower-carbon alternative to coal or oil...

BG Group

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions, and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Energy companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Energy
Response rate[1]	**62% (57 of 92)**
Global 500	72% (39 of 54)
S&P 500	64% (25 of 39)
FTSE 350	57% (12 of 21)
Overall sector rank (1-10)[2]	**7th**
Highest disclosure score	88
Lowest disclosure score	12
Average disclosure score	54
Overall emissions disclosure[3]	
Scope 1 emissions	82% (895 million Mt CO_2-e)
Scope 2 emissions[4]	75% (98 million Mt CO_2-e)
Scope 3 emissions	46% (3,053 million Mt CO_2-e)
Average emissions intensity[5]	330 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues for those sector respondents who disclosed emissions. Revenues based on data retrieved from Bloomberg on June 18, 2009.

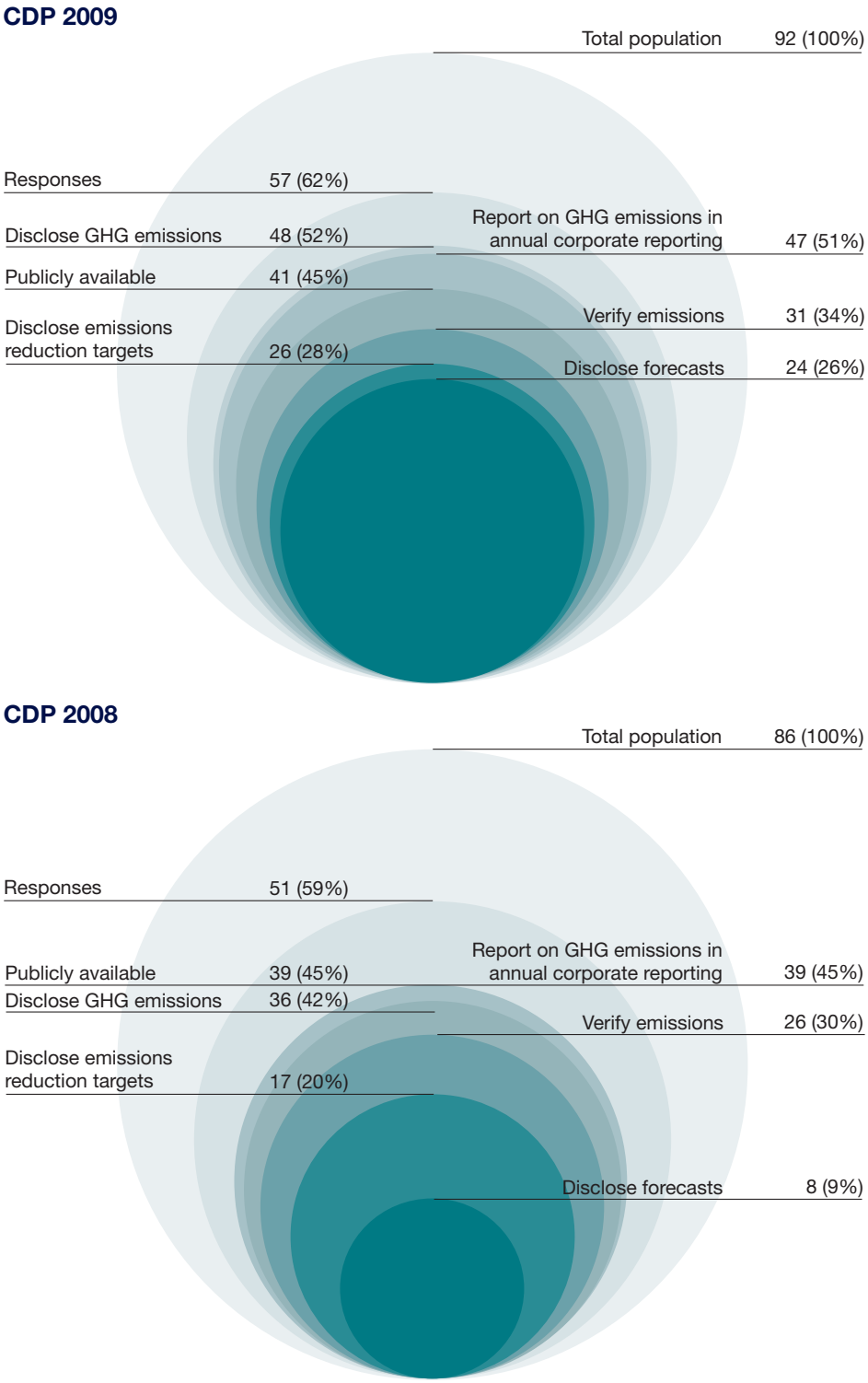
Carbon disclosure trends in the Energy sector

The Energy sector represents a range of industries that focus on oil and gas, coal and combustible fuels, and energy equipment and services. This includes oil and gas exploration and production, drilling, refining and marketing and storage and transportation.

Overall, 62% (57) of Energy companies responded to CDP in 2009, up from 59% (51) in 2008. This moderate increase in response rate[6] is accompanied by improvements in disclosures from nearly all Energy respondents. Despite these increases, the Energy sector still has great opportunities to improve. While the sector clearly has leaders for carbon disclosure, nearly half of the participating companies from this sector scored lower than the overall CDP 2009 average – meaning this carbon-intensive sector lags many other sectors in the quality of their disclosures.

An uncertain global policy framework continues to contribute to a wait-and-see approach by the Energy sector in several areas related to climate change. Growing international attention has turned the debate toward adaptation, and Energy companies face increasing responsibility to identify solutions that will reduce greenhouse gas (GHG) emissions at an acceptable cost. While policies are debated, this asset-intensive sector must continue its focus on keeping production running in the short term while it balances long-term and large-scale capital planning with changing regulatory requirements, standards and technologies.

Fig. A: Year-on-year disclosure rates, as a proportion of total Energy companies (Global 500, S&P 500 and FTSE 350)



6 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

Paradoxically, even if physical changes from climate change represent, primarily, a risk for the oil and gas industry (for instance, damaging fundamental infrastructures situated in critical areas), on the other hand, it is evident that some extreme events could force up oil and gas prices (e.g. Hurricane Katrina in 2005) and, therefore, increase oil producers' revenues.

ENI

Fig. B: Disclosure score leaders for the sector[7]

Global 500 leaders

Company name	Disclosure score
Chevron	88
Spectra Energy	88
Hess	86
Total	81
Anadarko Petroleum	79
Transocean	79

S&P 500 leaders

Company name	Disclosure score
Chevron	88
Spectra Energy	88
Hess	86
Anadarko Petroleum	79
Transocean	79

FTSE 350 leaders

Company name	Disclosure score
Royal Dutch Shell	75
BG Group	66
BP	66
Cairn Energy	63
AMEC	53

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization

Company name	Index
PetroChina	Global 500
China Petroleum & Chemical	Global 500
Reliance Industries	Global 500
Rosneft	Global 500
Lukoil	Global 500

Energy leaders for carbon disclosure are listed above in the order of their disclosure scores.[8] While the remaining Energy respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

More than one-third of Energy companies (38%, or 35 companies) chose not to participate. The largest non-respondents are listed above based on their market capitalization.[9]

When compared with a cross section of global leaders for disclosure, companies in the Energy sector closely followed the global leaders in the quality of their disclosures for reporting their climate-related efforts, including Scopes 1 and 2 emissions and participation in emissions trading activities. However, they lag in nearly all other areas, particularly in Scope 3 reporting and the disclosure of emissions reduction targets (see Fig. D).

7 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the Carbon Disclosure Leadership Index overall when all ten sectors are considered.

8 For more information on the disclosure score methodology, see www.cdproject.net/2009CDLImethodology.asp.

9 Market data retrieved from Bloomberg as of June 18, 2009.

In the future, in order to help meet the world's energy demand, we will produce more oil from unconventional sources. Therefore, in the long term, it is expected that the CO_2 intensity of our production will increase. If we are unable to find CO_2 solutions for new and existing projects, future government regulation could lead to additional costs and compliance risks. These risks, if realized, could affect our operational performance and financial position.

Royal Dutch Shell

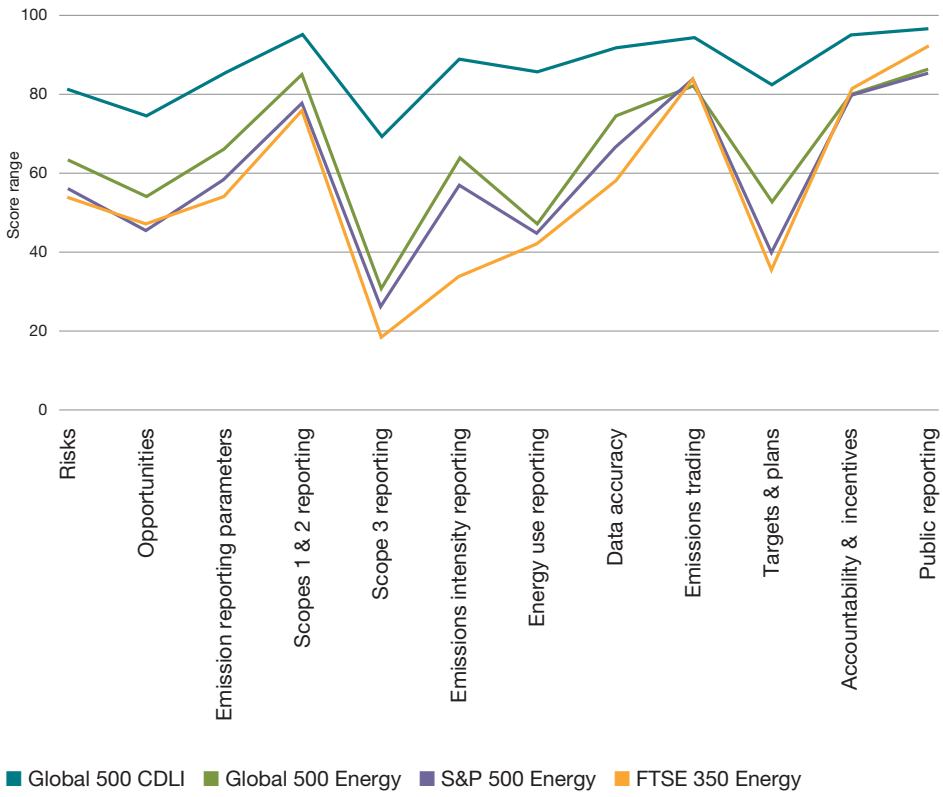
Despite the lag behind the global leaders in disclosure scores for these areas, response rates show that more Energy respondents disclosed greenhouse gas emissions reduction targets in 2009 than ever before – a signal that the leaders in this sector are responding to investor concerns. In 2009, 47% (26) of Energy respondents disclosed GHG emissions reduction targets; in 2008 this was 33% (17).

In addition, more Energy companies are reporting Scope 3 emissions, which include estimates of emissions from business travel, supply chain, logistics and distribution and downstream product use. In 2009, five of the top ten Energy respondents by market capitalization reported Scope 3 emissions: **BP**, **Chevron**, **ENI**, **Royal Dutch Shell** and **Total**.

In their responses, Energy companies made few mentions of the global economic recession. One company indicated that statutory emissions limits would place it in a position to raise large amounts of capital, which could present financial risk. Several respondents noted that a decrease in demand has enabled them to reduce emissions, but it also has resulted in a decline in revenue. At least two respondents (**Nexen** and **Total**) acknowledged that long-term economic uncertainty alongside regulatory ambiguity makes forecasting difficult.

Others, including **Royal Dutch Shell**, indicated that future demand would drive up emissions intensity. As a result, new technologies will be required to adapt to any future scenario in which regulation places a price on carbon emissions.

Fig. D: Score breakdown for Energy within each index versus the global leaders[10]



10 The 2009 Global 500 Carbon Disclosure Leadership Index (CDLI), is an index of the top 10% of companies with the highest disclosure scores in the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net.

Risks and opportunities

91% (50) of respondents reported at least one significant risk related to climate change and 85% (47) reported opportunities.

Regulatory risks related to climate change were reported by 92% (34) of Global 500 respondents 84% (21) of S&P 500 respondents, and 100% (12) of FTSE 350 respondents. These include a host of regulatory risks – from statutory emissions limits to compliance with energy efficiency standards and participation in emissions trading systems.

Energy respondents also expressed concern about regulatory disparities across the globe, which could hurt profitability or give some competitors an advantage. Specifically, energy-intensive entities that operate in less restrictive regulatory environments may avoid costly and difficult adaptation measures if they are not subject to carbon constraints.

While companies in some geographies have a clear understanding of their regulatory risks, most Energy companies continue to grapple with layers of regulation and uncertainty about future policy developments.

"Spectra Energy expects pending [US] federal climate change regulations will affect a number of its assets and operations, but the materiality of any potential compliance costs is unknown because policy makers have yet to determine the regulations' final form or compliance options."
Spectra Energy

BP reports that its obligations under the European Union's Emissions Trading System are growing at the same time that they are being subject to the European Union's Climate Action and Renewable Energy Package[11] and the Australian government's proposed Carbon Pollution Reduction Scheme.[12]

Some US respondents said materiality of regulatory risk related to climate change is unknown at this time because more comprehensive legislation is not expected until 2014. They expect a potential impact from the US Environmental Protection Agency's (EPA's) proposed mandatory greenhouse gas reporting rule that would require companies to report GHGs as early as 2011. They are also watching the EPA closely after it issued a proposed endangerment finding for greenhouse gas emissions under the authority of the US Clean Air Act.[13] The endangerment finding does not automatically trigger regulation but lays the groundwork for regulatory action by the EPA. Meanwhile, the US Congress is focused on legislation to address climate change: the House of Representatives has passed the American Clean Energy and Security Act[14] and the Senate is preparing to debate a bill during the Fall legislative session.

While Husky accepts that it will be operating in a carbon-constrained world, until there is regulatory certainty, it is difficult to assess how the company's emissions will be constrained, monitored, and measured; when they will be constrained; and ultimately, what the price of carbon will be.

Husky Energy

Complete company responses to CDP can be downloaded from www.cdproject.net

11 See http://ec.europa.eu/environment/climat/climate_action.htm

12 See http://www.climatechange.gov.au/emissionstrading/index.html

13 See http://www.epa.gov/climatechange/endangerment.html

14 H.R. 2454, American Clean Energy and Security Act of 2009 (ACESA).

Occidental's businesses may experience catastrophic events, including the occurrence of natural disasters, such as earthquakes, hurricanes, and floods. Third-party insurance may not provide adequate coverage, or Occidental may be self-insured with respect to the related losses. Occidental has several facilities located near the Texas and Louisiana coasts that have been in the path of hurricanes, which have at times resulted in the interruption of some operations.

Occidental Petroleum

To help determine potential regulatory impacts, Energy respondents are investing in modeling systems to evaluate the ways that comprehensive climate change legislation could affect them. Companies are investing in the development of tailored internal processes and working to collaborate with external experts such as research bodies and non-governmental organizations.

Energy companies acknowledge that technologies will be required to realize reductions in GHG emissions and that the costs of these new and non-hydrocarbon technologies – such as wind turbines, photovoltaic panels and biofuels – are unknown. It is uncertain whether technological developments will be effective or timely enough to enable Energy companies to meet any statutory emissions limits at an acceptable cost.

As such, many respondents are anticipating long-term changes yet are uncertain of the impacts in the near term to midterm.

Despite the uncertainty, 84% (31) of Global 500 respondents, 76% (19) of S&P 500 respondents and 83% (10) of FTSE 350 respondents reported that regulation presents opportunities for their businesses, which is a sign that some Energy respondents are exploring their options to adapt to the identified risks.

With a goal of increasing the diversity of supply, many Energy companies continue to invest in technologies for alternative and renewable fuels – including manufacturing, blending and distributing biofuels – which are growing components in the transportation fuel mix. Those that supply cleaner natural gas and nuclear power also see an advantage.

Several companies reported their efforts to pioneer underground storage – also known as geologic storage or sequestration – of carbon dioxide in an effort to make this a commercially viable approach to help control GHGs.

Physical risks that could disrupt a company's supply chain or operational efficiency were reported by 78% (29) of Global 500 respondents, 64% (16) of S&P 500 respondents and 83% (10) of FTSE 350 respondents. The most frequently mentioned physical risk is increased storm and hurricane activity, which requires investment in both equipment and procedures to promote safe shutdown of operations and to prevent potential supply disruptions.

In terms of the physical risks of climate change, coastal facilities are most vulnerable to floods, hurricanes, and other storms. In addition, severe weather events can cause temporary shutdowns and result in lost or damaged equipment, which would hinder production. Some respondents acknowledged that third-party insurance, which is becoming increasingly expensive, may not provide adequate coverage for losses due to severe weather events. Others reported that costs related to disruptions in supply may be offset by increased prices.

Insights from the performance score pilot

CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

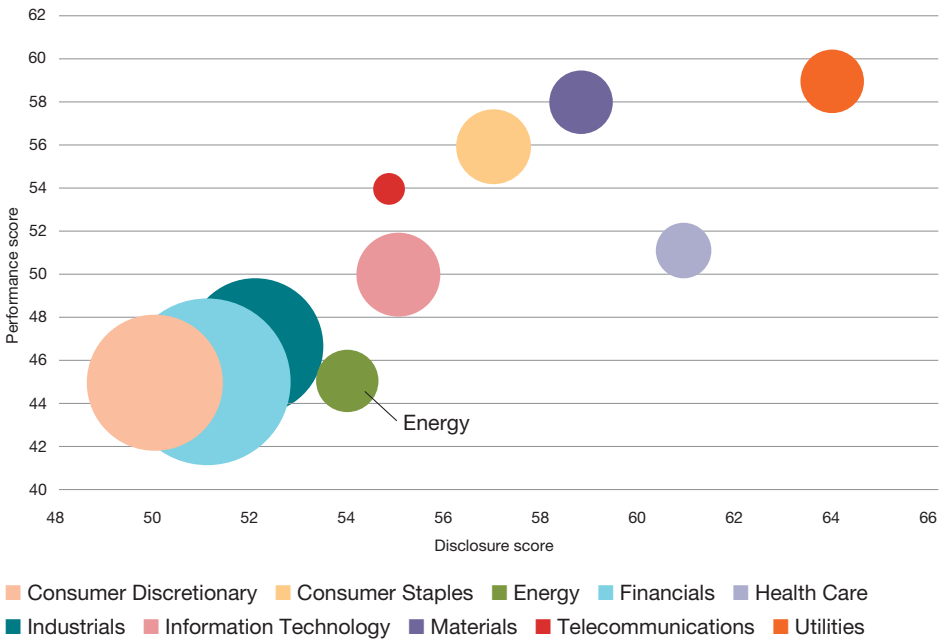
The Energy sector scored seventh overall for disclosure and eighth for performance. The chart below shows how the Energy sector compares with other sectors for performance.

As 2009 is the first year of use of the performance scoring methodology,[15] individual company performance scores are not shown in the CDP 2009 reports, but we provide comment on initial findings below.

- The top three scoring Energy companies (in alphabetical order) on the performance score pilot are **Royal Dutch Shell**, **Total** and **Transocean**.
- Generally, Energy respondents have lower performance scores than respondents in all other sectors. Scores for maximizing opportunities and establishing emissions reduction targets and plans represent the largest disparities.
- A sector comparison shows that Global 500 Energy respondents typically outperform Energy companies in the FTSE 350 and S&P 500 in most areas. In particular, Global 500 Energy companies stand out as the most progressive by clearly describing emission reduction targets and their plans to dedicate investments to reach their targets.

> Beginning in 2014, possible US regulatory approaches to GHG mitigation such as emissions allocations, cap-and-trade schemes, carbon taxes, and low-carbon fuel standards have the potential to reshape our business.
>
> **Hess**

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

15 For more about the performance scoring methodology, see http://www.cdproject.net/2009CDLImethodology.asp.

Despite overall below-average disclosure scores, most Energy respondents have a Board member or executive body with overall responsibility for climate change (76%, or 42 companies) and engage stakeholders regularly on climate-related issues (76%, or 42 companies).

These companies have a high rate of disclosing GHG emissions to the public (85%, or 47 companies) and of publishing corporate social responsibility reports (82%, or 45 companies), which is expected of the sector.

Most Energy respondents demonstrate strong awareness of the implications of climate change and what would be required for their businesses to adapt. They also know that the nature and size of the changes necessary will come at significant cost. Despite this, we see fewer but still important numbers of respondents with GHG emissions and/or energy reduction plans in place (47%, or 26 companies) and even fewer incorporating reduction targets into incentives and accountability structures (36%, or 20 companies).

Conclusion

The actions of Energy companies are critical to establishing a global economy that is lower carbon yet still provides access to affordable fuels. To date, the sector has worked to shape the policy debate and underscore the importance of the necessary technological advancements that would be required to meet global emission reduction commitments.

Lower-than-average disclosure scores, however, show that significant opportunity exists for the sector to improve. The sector provides robust disclosures in understanding the immediate and future issues, but due to a host of uncertainties, it remains challenged to provide overall long-term targets and plans. Investors should note how well the respondents to this year's Carbon Disclosure Project are adapting to climate-related risks and identifying opportunities and should encourage non-participating companies to respond in future years.

The global push to reduce carbon emissions has made nuclear power generation a more viable option with governments such as Canada, the UK, France, Finland, etc. As an established nuclear service supplier there is an obvious potential revenue stream from this service and AMEC's other renewable portfolio.

AMEC

For our company, the balance between risks and opportunities arises from a combination of global trends related to climate change and others factors, and it is not straightforward to find obvious links between regulatory developments and opportunities. However, the more stringent technical and managerial requirements resulting from climate change-related policies might favour a company with high technical, financial and project management expertise.

Total

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Energy scores and emissions by company[16]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[17]	Total Emissions[18]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[19]	Scope 3[20]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
AMEC	F	AQ	AQ	53		14	36,256	6,625	29,631	*	15,330				x	
Anadarko Petroleum	G, S	AQ	AQ	79		610	8,925,871	8,284,413	641,458							
Apache	G, S	AQ	AQ	72		806	9,939,352	9,099,776	839,576							
Baker Hughes	G, S	AQ	AQ	57		36	422,000	200,000	222,000		113,000				x	
BG Group	G, F	AQ	AQ	66		704	8,843,443	8,821,241	22,202	*	86,859,899	x			x	
BJ Services	S	AQ	DP	39	NP											
BP	G, F	AQ	AQ	66		199	70,630,000	61,400,000	9,230,000		515,000,000	x				
Cairn Energy	F	AQ	AQ	63		100	29,861	29,339	522		216,502				x	
Cameron International	S	NR	–													
Canadian Natural Resources	G	AQ(L)	AQ(L)													
Chesapeake Energy	G, S	IN	–													
Chevron	G, S	AQ	AQ	88		267	68,195,321	62,978,970	5,216,351	*	382,000,000	x				x
China Petroleum & Chemical	G	NR	NR													
Cia Espanola De Petroleos	G	NR	NR													
CNOOC (Red Chip)	G	AQ	AQ	33	NP											
ConocoPhillips	G, S	AQ	AQ	52	NP											
CONSOL Energy	S	NR	DP													
Dana Petroleum	F	AQ	AQ	44		35	18,027	17,369	658		60				x	
Devon Energy	G, S	AQ	AQ	47		271	4,170,000	3,680,000	490,000							
Diamond Offshore Drilling	G	NR	–													

16 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[17]	Total Emissions[18]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[19]	Scope 3[20]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
El Paso	S	AQ	AQ	61		2,778	14,897,502	13,939,795	957,707							
Emerald Energy	F	DP	–													
Enbridge	G	AQ	AQ	68		390	5,096,400	2,559,800	2,536,600		23,405,000	x			x	
Encana	G	AQ	AQ	70		422	10,917,978	9,644,166	1,273,812	*	3,451				x	
ENI	G	AQ	AQ	63		442	66,200,812	62,428,000	3,772,812	*	318,000,000	x				
Ensco International	S	NR	DP													
EOG Resources	G, S	AQ	AQ	41		25	159,119		159,119							
Exxon Mobil	G, S	AQ	AQ	62		341	145,000,000	131,000,000	14,000,000	*						
Fisher (James) & Sons	F	DP	–													
Formosa Petrochemical	G	NR	NR													
Gazprom	G	AQ	NR	44	NP											
Halliburton	G, S	AQ	AQ	57		208	3,798,400	3,618,200	180,200		75				x	
Heritage Oil	F	NR	–													
Hess	G, S	AQ	AQ	86		274	11,288,872	10,714,780	574,092		78,037,693	x	x	x		
Hunting	F	AQ	AQ	26	NP											
Husky Energy	G	AQ	IN	22		402	8,039,000	8,039,000								
Imperial Energy Corporation	F	NR	DP													
Imperial Oil	G	AQ	AQ	63		437	11,047,000	10,224,000	823,000	*						
Inpex Corporation	G	AQ	NR	60		36	473,458	473,458			12,700		x			
JKX Oil and Gas	F	AQ	AQ	52	NP						10				x	
Lukoil	G	NR	NR													
Marathon Oil	G, S	AQ	AQ	59		259	18,640,000	14,010,000	4,630,000	*	8,000				x	
Massey Energy	S	NR	–													
Melrose Resources	F	AQ	–	32	NP											
Murphy Oil	S	DP	DP													
Nabors Industries	S	NR	DP													
National-Oilwell Varco	G, S	NR	NR													
Nexen	G	AQ	AQ	68		599	3,830,000	3,610,000	220,000							
Noble Corporation	S	NR	DP													
Noble Energy	S	AQ	NR	21		669	2,493,869	2,493,869								
Occidental Petroleum	G, S	AQ	AQ	41		665	16,100,000	10,100,000	6,000,000							
Oil & Natural Gas	G	AQ	AQ	34												
Peabody Energy	S	NR	IN													
Petro Canada	G	IN	AQ													
PETROBRAS	G	AQ	AQ	44	NP											
PetroChina	G	IN	IN													
Petrofac	F	NR	DP													
Pioneer Natural Resources	S	NR	–													
Premier Oil	F	AQ	AQ	45		327	214,304	214,304			5,500,000	x				
PTT	G	AQ	AQ	53	NP											
Range Resources	S	AQ	AQ	12	NP											
Reliance Industries	G	NR	NR													
Repsol YPF	G	AQ	AQ	75		356	28,570,000	26,550,000	2,020,000		173,427,031	x	x	x	x	

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[17]	Total Emissions[18]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[19]	Scope 3[20]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Rosneft	G	DP	NR													
Rowan Companies	S	AQ	AQ	21												
Royal Dutch Shell	G, F	AQ	AQ	75		185	85,000,000	75,000,000	10,000,000		691,401,000	x	x		x	
Salamander Energy	F	DP	–													
Sasol	G	AQ	AQ	71		5,171	72,680,000	62,966,000	9,714,000		570,992			x		
Schlumberger	G, S	AQ	AQ	64		70	1,890,000	1,500,000	390,000	*	1,332,000		x	x	x	
Smith International	S	AQ	AQ	40	NP											
Soco International	F	AQ	NR	34	NP											
Southwestern Energy	G, S	NR	–													
Spectra Energy	G, S	AQ	AQ	88		2,175	11,035,854	9,614,164	1,421,690		4,419				x	
StatoilHydro	G	AQ	AQ	40		164	15,300,000	15,100,000	200,000		46,000				x	
Suncor Energy	G	AQ	AQ	72		465	11,115,120	10,783,441	331,679		11,373				x	
Sunoco	S	NR	NR													
Surgutneftegas	G	NR	NR													
Talisman Energy	G	AQ	AQ	62		1,376	10,769,000	10,401,000	368,000							
Tenaris	G	NR	NR													
Tesoro	S	NR	DP													
Total	G	AQ	AQ	81		275	61,400,000	57,900,000	3,500,000		603,100,000	x	x		x	
TransCanada Corporation	G	NR	AQ(L)													
Transocean	G, S	AQ	AQ	79		170	2,152,970	2,148,208	4,762		1,803,735		x		x	
Tullow Oil	F	AQ	AQ	43		249	172,260	172,260								
Valero Energy	S	AQ	NR	51	NP											
Venture Production	F	NR	AQ													
Weatherford International	S	AQ	NR	55	NP											
Wellstream Holdings	F	NR	IN													
Williams Companies	S	AQ	AQ	36		1,449	17,900,000	16,900,000	1,000,000							
Wood Group	F	IN	DP													
Woodside Petroleum	G	AQ	AQ	64	NP											
XTO Energy	G, S	AQ	AQ	35		725	5,575,267	4,922,450	652,817							

17 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

18 Scope 1 and Scope 2 grid average reported emissions.

19 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

20 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

Financials sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

Stakeholder research commissioned in early 2008 showed that climate change was the third most important sustainability issue overall for stakeholders to HSBC in four key regions. In the 12 markets surveyed in HSBC's 2008 Climate Confidence Monitor, 43% of the consumers surveyed chose climate change ahead of global economic stability when asked about their top three concerns in September-October 2008.

HSBC Holdings

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Financials companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Financials
Response rate[1]	**66% (176 of 266)**
Global 500	83% (90 of 109)
S&P 500	61% (52 of 85)
FTSE 350	63% (69 of 109)
Overall sector rank (1-10)[2]	**9th**
Highest disclosure score	92
Lowest disclosure score	0
Average disclosure score	51
Overall emissions disclosure[3]	
Scope 1 emissions	63% (2 million Mt CO_2-e)
Scope 2 emissions[4]	61% (16 million Mt CO_2-e)
Scope 3 emissions	53% (3 million Mt CO_2-e)
Average emissions intensity[5]	6 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues based on data retrieved from Bloomberg on June 18, 2009.

Carbon disclosure trends in the Financials sector

The Financials sector comprises banks, insurers, diversified financials and real estate companies. Responses indicate that the sector perceives relatively little direct exposure to climate change, by virtue of its low carbon intensity. Instead, the sector is focused on its indirect exposure from the sectors it chooses to invest in, lend to and insure.

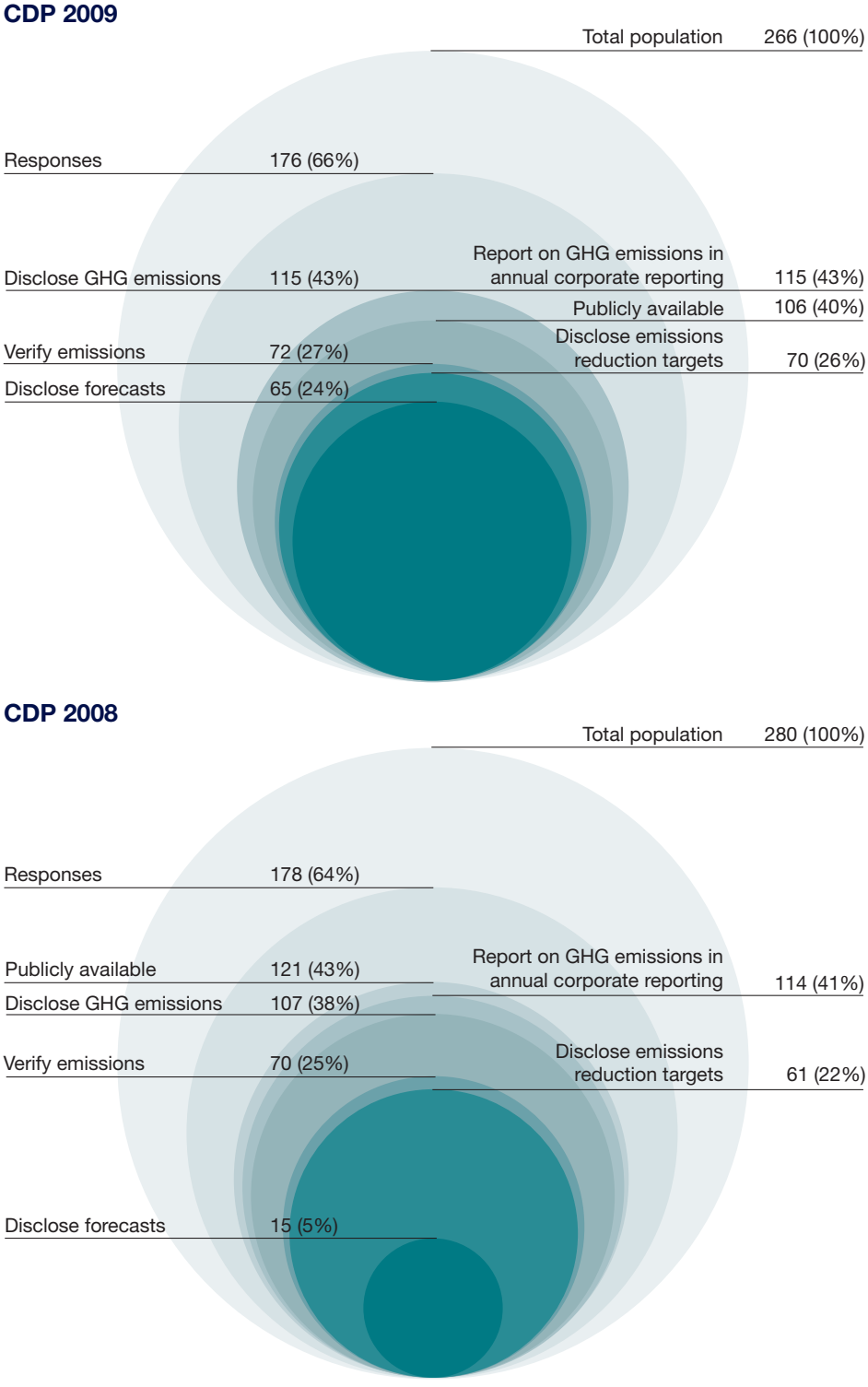
The Intergovernmental Panel on Climate Change's (IPCC) Second Working Group paper described the Financials sector as "a unique qualitative indicator of the potential socioeconomic impacts of climate change because the sector is sensitive to climate change and offers an integrator of effects on other sectors."[6] In its role as an integrator, Financials companies face a broad range of climate-related risks and opportunities. Those with a strong awareness of these risks and opportunities are likely to make better capital allocation decisions in the coming years.

Financials accounts for 22% (109) of the Global 500, 17% (85) of the S&P 500 and 31% (109) of the FTSE 350 invitees. On this basis, it has the greatest representation of any sector participating in the Carbon Disclosure Project.

The overall response rate[7] of 66% (176) is markedly lower than the top sector (Utilities, 88%), and its average disclosure score of 51 places the sector ninth (out of ten) across all sectors in CDP 2009. Given that Financials companies are closely interlinked with all sectors, this relatively low level of response indicates that much needs to be done in quantifying, managing and reporting on the impacts of climate change.

The sector shows modest improvements in nearly all the disclosure metrics from last year, with a notable improvement in the disclosure of emission forecasts (up 19 percentage points from 2008). Disappointingly, however, the proportion of companies choosing to make their responses public declined slightly and stands at 40% for CDP 2009 (see Fig. A).

Fig. A: Year-on-year disclosure rates, as a proportion of total Financials companies (Global 500, S&P 500 and FTSE 350)



6 Source: http://www.ipcc.ch/ipccreports/tar/wg2/index.php?idp=322.

7 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

Fig. B: Disclosure score leaders for the sector[8]

Global 500 leaders	
Company name	**Disclosure score**
HSBC Holdings	92
Bank of Montreal	87
Simon Property Group	86
Allianz	83
Australia and New Zealand Banking Group	82
National Australia Bank	82

S&P 500 leaders	
Company name	**Disclosure score**
Comerica	91
Simon Property Group	86
Hartford Financial Services	81
Allstate	79
Bank of New York Mellon	78

FTSE 350 leaders	
Company name	**Disclosure score**
HSBC Holdings	92
Hammerson	84
Aviva	80
Lloyds Banking Group	80
Legal and General Group	78

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization[9]	
Company name	**Index**
Bank of China	Global 500
Berkshire Hathaway	Global 500
Sun Hung Kai Properties	Global 500
Generali	Global 500
Sberbank	Global 500

Comerica believes that climate change regulation will create opportunities for us to provide financial products and services to enable our customers to reduce their emissions; increase the energy efficiency of their homes, commercial buildings, and operating facilities; and reduce their overall dependence on fossil fuel energy sources.

Comerica

Climate change affects an estimated 35% to 40% of all global insured property risks, which presents both challenges and opportunities to Amlin's business.

Amlin

When compared with a cross section of global leaders for carbon disclosure, Financials respondents provided relatively basic disclosures. They significantly lag behind the global leaders in the disclosure of Scope 3 emissions and targets/plans to reduce emissions. S&P 500 respondents fall behind their Global 500 and FTSE 350 peers in the areas of Scopes 1 and 2 emissions reporting, emissions trading and public reporting (see Fig. D).

Financials leaders for carbon disclosure are listed in the order of their disclosure scores. While the remaining Financials respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

One-third of Financials companies (34%, or 90 companies) chose not to participate. The largest non-respondents are listed in Fig. C based on their market capitalization.

8 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the CDLI for the index overall when all 10 sectors are considered.

9 Market data retrieved from Bloomberg as of June 18, 2009.

...opportunities exist for us by supporting our customer base in their climate change mitigation or adaptation efforts. To this end, BMO was one of the first financial institutions to finance the development of wind power generation in Canada. Today, we are a leader in the financing of renewable energy projects. Since 2001, BMO has been involved in over $3 billion of financing transactions, including wind, hydroelectric, and biomass projects. As the regulatory environment in Canada and the US evolves, we will continue to monitor developments in the various emissions trading systems and when needed, will support our client base in this respect as well.

Bank of Montreal

Complete company responses to CDP can be downloaded from www.cdproject.net

The responses of the top three disclosers – **HSBC Holdings**, **Comerica** and **Bank of Montreal** – demonstrate an acute awareness of the range of risks and opportunities presented by climate change, with each company recognizing how the impacts of climate change are interrelated across different areas of business.

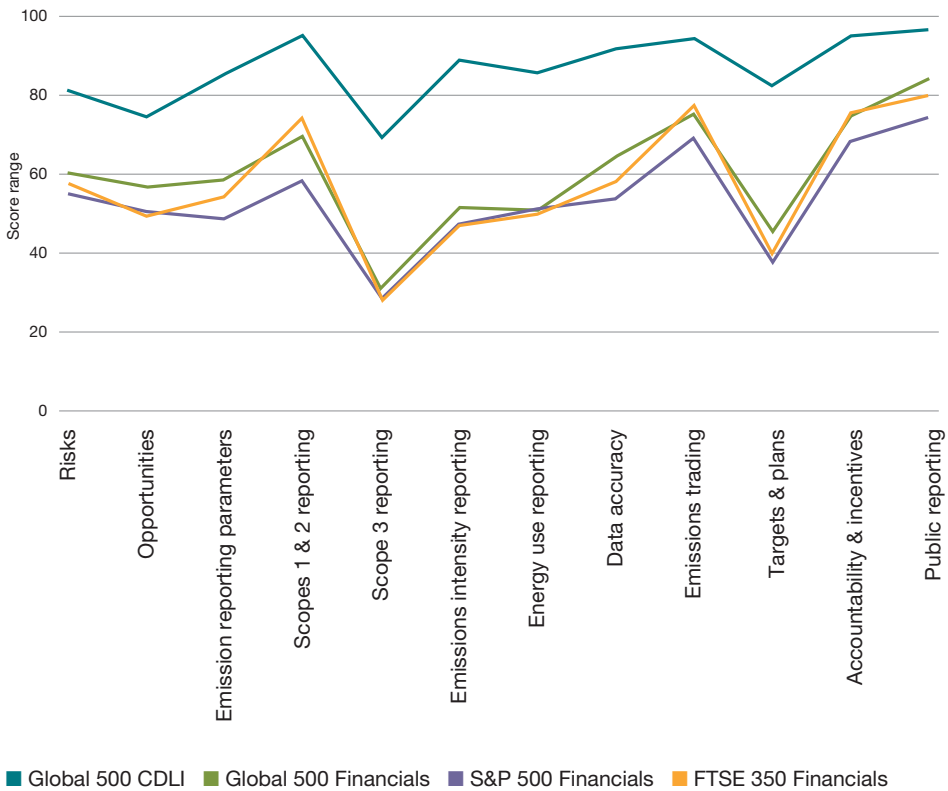
It is clear that there are a small number of Financials respondents that have provided very thorough responses. These companies recognize climate change risks and opportunities, have action plans in place, and communicate regularly with their stakeholders. However, a considerable portion of respondents fail to identify these same risks and opportunities. This should be of some concern to institutional investors and other stakeholders.

Risks and opportunities

Most Financials sector respondents across the Global 500, S&P 500 and FTSE 350 populations report limited exposure to direct regulatory risks in relation to climate change but express a high degree of concern over the risks faced by their client base.

An example of a concern for the client base around regulatory and commercial risks is rising energy costs as policymakers seek to internalize the costs of carbon. In the US, respondents are concerned about the possible introduction of a cap-and-trade regime as proposed under the Waxman-Markey bill[11] and how federal and state policies for the promotion of renewable energy and energy efficiency will evolve and interact.

Fig. D: Score breakdown for Financials within each index versus the global leaders[10]



10 The 2009 Global 500 Carbon Disclosure Leadership Index is an index of the top 10% of companies with the highest disclosure scores in the Global 500 and is used here as a global benchmark. For more information, see www.cdproject.net.

11 H.R. 2454, American Clean Energy and Security Act of 2009 (ACESA).

In Europe, some are concerned that wholesale energy prices may rise as the European Union's Emissions Trading System (EU ETS) becomes more stringent during Phase III (2013 –2020) and, in common with views expressed by Utilities respondents, the uncertainty around how the EU ETS may be modified in the light of any international commitments agreed to at Copenhagen in December 2009.

Nearly half of all UK respondents from the diversified financials, insurance and real estate industries identified the introduction of the Carbon Reduction Commitment (CRC) in April 2010 as a risk. Aside from the financial costs, the administrative obligations and reputational risk aspects of this policy instrument were highlighted.

Relatively high-risk areas of financial services such as project finance and emerging-market investment have been strongly impacted by the economic downturn. Indeed, some Financials respondents noted that their exposure to some regulatory and physical risks associated with climate change would cease as a result of their decision to withdraw from certain markets and/or asset classes. Others suggested that current market sentiment would impact the appetite to finance certain low-carbon technologies and activities which tend to have higher risk profiles.

It is clear, therefore, that carbon creates a new commercial risk which needs to be carefully appraised when evaluating lending and investment decisions

Aside from regulatory and commercial risks, physical risks from climate change were noted by 86% (71) of the Global 500, 84% (41) of the S&P 500 and 73% (35) of the FTSE 350 Financials sector respondents.

The most commonly identified physical risk is the increased incidence of extreme weather events, with the Financials respondents from the S&P 500 ascribing a higher importance to storms and hurricane activity, whereas FTSE 350 respondents are more concerned with floods and droughts. It is unclear whether this reflects recent experience in domestic markets/core customer bases or perhaps the geographic exposure of the investment portfolios of the companies concerned.

Insurance companies, in particular, recognize that they will be presented with a relatively higher exposure to the physical risks of climate change, although most view this, on balance, as an opportunity. Nevertheless, a number of companies commented on the need for a reappraisal of underwriting models in order to develop a coherent strategy on the issue.

The perspective of the real estate sector is less clear, with comparatively few respondents identifying physical risks as a concern. Emphasis here was placed instead on the impact of new building legislation (especially in Europe) to promote energy efficiency and the changing requirements of local planning bodies and tenants prompted by awareness of sustainability issues.

Climate policy /regulation affects Allianz almost immediately through the risks we accept for our businesses and our customers across the insurance, banking and asset management business lines, as well as the risks Allianz faces as an investor through the company's holdings.

Allianz

In the approach to the UNFCCC meetings in Copenhagen in December 2009... there is an expectation that regulation will increasingly affect our markets, presenting both risks and opportunities. It is encouraging that the negotiating progress will likely lead to a post-2012 international agreement on climate change, but there is still little clarity on elements of the post-Kyoto framework.

Standard Chartered

The most promising opportunities for us are to offer products and services to hedge or diversify the risks of current and anticipated physical changes – for instance, weather derivatives. From another perspective, there are also opportunities in adaptation. We see opportunities to increase our lending in the maintenance and upgrade of levees or other physical infrastructures.

Mitsubishi UFJ Financial Group

We believe the physical impacts of climate change will create business opportunities for companies which provide products and services that help others to mitigate and adapt, e.g. reduce the vulnerability of infrastructure to flooding; provide consultancy advice, offer technologies that help manage water more effectively etc.

Henderson Group

As part of our business offers life assurance, we are mindful of the impacts on the health of our clients due to climate change. Shifting disease vectors will have an impact on mortality rates, with knock-on effects for actuarial tables, of which the life assurance business remains sensitive to changes in trend lines.

Old Mutual

Eight of the ten biggest natural catastrophes in US history have occurred in the last decade. Recent hurricane seasons have caused unprecedented damage and affected millions of Americans throughout the Gulf Coast and Florida. These infrequent but extraordinarily devastating natural catastrophes present serious risks for consumers, for insurers and for the economy. It's one of the reasons insurance in catastrophe-prone areas is growing more expensive – and less available.

Allstate

We believe that regulatory change is accelerating and hence is creating more opportunities for companies. However, this has been tempered somewhat over the past 12 months by the lack of credit availability and the fall in the carbon price, both of which have seriously constrained opportunities for companies. Hence we have a long-term positive view but are more cautious short-term.

F&C Asset Management

Lloyds Banking Group will have to participate fully in the Carbon Reduction Commitment. The proposed nature of the scheme will have a projected £5m-per-annum cash flow impact upon the Group. It is in the Group's interest, therefore, to seek every opportunity to reduce emissions where practicable, to maximise the return from recycled payments.

Lloyds Banking Group

The strategic review of RBS indicates that we will gradually reduce our exposure to project finance transactions, especially those in emerging economies over the next three years. As such, it is likely that many of our project finance risks, including those related to climate change, will gradually diminish over the coming years.

Royal Bank of Scotland Group

In the 2009 budget announcement the UK Government announced a raft of initiatives to accelerate the deployment of renewables... The size of the opportunity in the market is considerable, with annual capital expenditure requirement of circa £4bn per annum over the next 13 years in order to meet Government targets.

Lloyds Banking Group

In addition to the risks outlined above, 95% (79) of the Global 500, 88% (43) of the S&P 500 and 85% (41) of the FTSE 350 Financials respondents said climate change also presents opportunities. Although some Financials respondents commented that climate change issues have diminished in importance given difficult market conditions in the short term, many said the issue will not go away and will remain near the top of most stakeholders' agendas for the long term. In this context, key areas of opportunity included:

- The impact that the various fiscal (and green) stimulus packages announced over the last year will have upon the transition to a low-carbon future;
- Existing and proposed regulations to promote renewable energy, energy efficiency in industrial applications, and green buildings; and
- The anticipated expansion in coverage of cap-and-trade programs that will underpin trading, structuring, and principal investment activity, with carbon as a commodity.

Regarding green stimulus packages, Financials respondents provided little detail on which elements (and in which countries) would have the most meaningful impacts. This may reflect the fact that at the time the CDP questionnaire was completed, such details had not been released by the respective governments involved.

Regulatory instruments – whether in the form of technology push, favorable off-take tariffs for renewable energy, or tax incentives and certification schemes to promote greener buildings, are all expected to continue and expand in reach. Banks cited examples at various scales, from the provision of debt finance for large infrastructure projects for the purposes of climate change adaptation, to branch-level support for customers and small businesses looking to undertake energy efficiency improvements.

Many of the large banks within Financials are already established players in the carbon market, with dedicated front-office and research teams responsible for much of the traded volume within the EU ETS. Others are keeping a close watch on regulatory developments in other key regions (US, Japan, Australia and Canada), with the expectation that eventually, the world may move to regionally linked carbon markets that will present interesting arbitrage and investment opportunities. Insurance respondents are also aware of this and hope to extend their profiles to the provision of such products as project finance insurance and carbon credit guarantees.

Insights from the Performance Scores Pilot

The CDP 2009 included, for the first time, separate scores for performance. While the CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Financials sector scored ninth overall for disclosure and ninth for performance. The chart below shows how Financials compares with the other sectors for performance.

As 2009 is the first year of use of the performance scoring methodology,[12] individual company performance scores are not shown in the CDP 2009 reports, though comment on initial findings is provided below.

- The top three Financials companies scoring highest in performance in alphabetical order are **Allianz**, **Deutsche Bank** and **Swiss Re**.
- Generally, Financials respondents performed slightly lower than the average performance of the other sectors across the three CDP populations. They significantly underperformed in the provision of goods and services that enable customers to reduce emissions and having targets and plans over climate change.
- In aggregate, Financials respondents within the S&P 500 tended to consistently underperform compared with their peers in the Global 500 and FTSE 350.

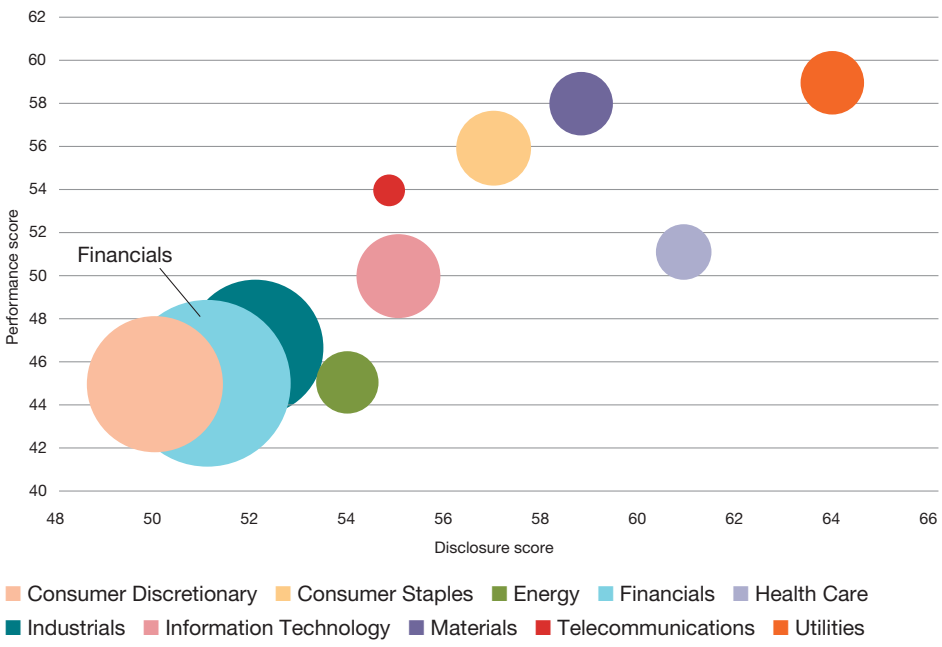
Cap-and-trade legislation and governmental incentives will promote low-carbon investments, and this demand may provide Capital One with lending opportunities to both consumer and commercial customers.

Capital One Financial

Given its recent ruling that carbon dioxide emissions pose a threat to the planet, we expect the Environmental Protection Agency (EPA) will play an increasingly active role in the regulation of greenhouse gas (GHG) emissions in the US. Failure to anticipate and adapt to the changing regulatory environment in the US may put the Bank at a competitive disadvantage versus other financial service firms.

Bank of America Merrill Lynch

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

12 For more about the performance scoring methodology, see http://www.cdproject.net/2009CDLImethodology.asp.

We recognise that tenants are raising the level of sustainability requirements needed within their developments. As a consequence, they have higher expectations concerning the energy efficiency of buildings, especially as energy prices are on the rise and EPCs [Energy Performance Certificates] give greater clarity about the expected performance of a building. Therefore, providing buildings with high EPC and BREEAM [BRE Environmental Assessment Method] ratings will be very important in future.

Hammerson

…KBC also promotes loans for JI/CDM projects that generate CO_2 reduction certificates, Green loans, taking part to Public-Private Partnership loans directed towards government expenditures for infrastructure to tackle climate change risks.

KBC Group

Within the Global 500 Financials population, 75% of companies (62) reported having a Board level or overall committee to manage climate change, compared with 53% (26) in the S&P 500 and 73% (35) in the FTSE 350. However, only a third of the respondents reported having financial incentives in place to reward individuals and management teams for either reducing emissions or developing new business opportunities.

Where they are in place, examples of such incentives include bonuses for employees engaged in facilities management, energy management, or procurement or for those business divisions responsible for commercial product development. The strongest respondents in this area were able to clearly articulate how emissions targets were cascaded from the executive team downward through the organization.

Conclusion

While it is clear that the financial crisis has had a limited impact on the long-term risks and opportunities presented by climate change, the Financials sector remains vulnerable to emerging regulatory, physical, and other risks such as reputational damage as a result of the exposure of its portfolio companies. If these indirect risks are not managed adequately, it could result in significant erosion of value.

This necessitates the need for more transparent disclosure around both internal carbon management programs and the exposure of investment and lending portfolios.

The coming year will present opportunities for the Financials sector, with the likely emergence of new regulation and the various fiscal stimulus packages promoting investment in climate change mitigation and adaption, especially in the areas of energy efficiency, renewables and clean technology. The Financials sector holds great promise in the transition to a low-carbon economy and will be a driving force in helping its clients prepare for, and manage, the risks and opportunities presented by climate change.

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Financials scores and emissions by company[13]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
3i Group	F	AQ	AQ	51		4	5,535	1,233	4,302		2,790		x		x	
3i Infrastructure (see 3i Group)	F	AQ	AQ													
3i Quoted Private Equity (see 3i Group)	F	AQ	–													
Aberdeen Asset Management	F	AQ	AQ	46	NP											
Aberforth Smaller Companies Trust	F	DP	DP													
Absolute Return Trust	F	DP	–													
Ace Ltd	G	AQ	–	53		3	45,231	12,540	32,691		8,085				x	
Admiral Group	F	AQ	AQ	42		7	3,045	0	3,045		452				x	
Affiliated Computer Services	S	NR	NR													
Aflac	G, S	AQ	AQ	62		2	32,656	6,225	26,431							
Alliance Trust	F	IN	IN													
Allianz	G	AQ	AQ	83		4	470,595	73,762	396,833	*	187,962			x	x	x
Allstate	G, S	AQ	AQ	79		7	212,467	33,575	178,892		57,071		x		x	
Alternative Investment Strategies	F	NR	–													
American Capital	S	NR	DP													
American Express	G, S	AQ	AQ	57		7	238,413	26,887	211,526		64,324				x	
American International Group	S	AQ	AQ	11												
Ameriprise Financial	S	AQ	DP	16												

13 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Amlin	F	AQ	AQ	53		2	2,323	312	2,011		1,726	x			x	
Aon	G, S	AQ	–	6	NP											
Apartment Investment and Management	S	DP	DP													
Ashmore Group	F	AQ	DP	14	NP											
Assurant	S	AQ	NR	38	NP											
Australia and New Zealand Banking Group	G	AQ	AQ	82		8	199,037	14,615	184,422		18,789				x	x
AvalonBay Communities	S	DP	NR													
Aviva	F, G	AQ	AQ	80		13	266,407	61,886	204,521	*	26,409				x	
AXA Group	G	AQ	AQ	65		2	294,988	101,814	193,174		116,907				x	x
Babcock & Brown Public Partnerships	F	DP	–													
Banca Monte dei Paschi di Siena Group	G	AQ	AQ	56		4	73,248	11,750	61,498	2,526	4,774				x	
Banco Bradesco	G	AQ	AQ	58	NP											
Banco do Brasil	G	AQ	AQ	48	NP											
Banco Itau	G	AQ	AQ	44		1	31,808	5,845	25,963	*	97,553		x		x	
Banco Santander	G	AQ	NR	59		0.4	43,668	4,637	39,031		26,579				x	
Bank of America	G, S	AQ	AQ(L)	73		13	1,483,431	121,549	1,361,882	*	156,587				x	
Bank of China	G	IN	IN													
Bank of Communications (H)	G	AQ	AQ	5												
Bank of Montreal	G	AQ	AQ	87		3	48,878	15,898	32,980	29,354	14,690†		x		x	x
Bank of New York Mellon	G, S	AQ	AQ	78		13	213,985	9,550	204,435	*	28,166				x	
Bank of Nova Scotia (Scotiabank)	G	AQ	AQ	56							15,235			x	x	
Bankers Investment Trust (see Henderson Group)	F	AQ	AQ													
Barclays	F, G	AQ	AQ	74		15	607,011	27,709	579,302	*	71,735				x	
BB&T	G, S	AQ	AQ	61		9	92,444	2,134	90,310							
BBVA	G	AQ	AQ	63		371	352,826	7,860	344,966	*	40,679				x	
Beazley Group	F	NR	NR													
Berkshire Hathaway	G	NR	NR													
BH Global (GBP)	F	DP	–													
BH Macro (GBP)	F	DP	–													
Big Yellow Group	F	IN	AQ													
BlackRock World Mining Trust	F	IN	–													
BNP Paribas	G	AQ	AQ	52		2	207,444	33,379	174,065	*	186,302				x	
BOC Hong Kong	G	NR	NR													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Boston Properties	S	NR	NR													
Brewin Dolphin Holdings	F	DP	–													
Brit Insurance Holdings	F	DP	IN													
British Assets Trust	F	AQ	–													
British Empire Sec & General Tst	F	IN	IN													
British Land	F	AQ	AQ	54		43	29,570	1,554	28,016							
Brixton	F	AQ	AQ	60		7	1,354	188	1,166	*	58			x	x	
Caledonia Investments	F	IN	DP													
Canadian Imperial Bank of Commerce (CIBC)	G	AQ	AQ	78		5	52,371	11,129	41,242		30,388			x	x	
Candover Investments	F	NR	NR													
Capital One Financial	G, S	AQ	AQ	54		11	198,797	13,260	185,537	*						
Cathay Financial Holding	G	AQ	NR	13	NP											
Catlin Group	F	AQ	IN	46	NP											
Cattles	F	AQ	AQ	20	NP											
CB Richard Ellis Group	S	AQ	AQ	53	NP											
Charles Schwab	G, S	AQ	AQ	3	NP											
Chaucer Holdings	F	AQ	–	12	NP											
Cheung Kong	G	NR	NR													
China Construction Bank (H)	G	IN	NR													
China Life Insurance (H)	G	IN	NR													
China Overseas Land & Investment	G	NR	–													
Chubb	G, S	AQ	AQ	30												
Cincinnati Financial	S	AQ	NR	26	NP											
CIT Group	S	DP	NR													
Citigroup	G, S	AQ	AQ	70		13	1,371,954	40,990	1,330,964		146,019			x	x	
City of London Investment Trust (see Henderson Group)	F	AQ	AQ													
Close Brothers Group	F	AQ	AQ	56	NP											
CLS Holdings	F	NR	–													
CME Group	G, S	AQ	NR	14	NP											
Comerica	S	AQ	AQ	91		18	69,208	13,614	55,594		26,052			x	x	
Commonwealth Bank of Australia	G	AQ	AQ	81		6	147,979	10,933	137,046		†					x
Credit Agricole	G	AQ	AQ	51		1	64,576	32,288	32,288	*	54,742				x	
Credit Suisse	G	AQ	AQ	68		4	190,646	17,108	173,538	*	83,888			x	x	
Criteria Caixa	G	NR	–													
Daejan Holdings	F	DP	DP													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Derwent London	F	AQ	AQ	54		9	1,062	42	1,020		10,546			x		
Deutsche Bank	G	AQ	AQ	66		3	230,414	27,815	202,599	*	87,441				x	
Deutsche Boerse	G	AQ	AQ	31	NP											
Developers Diversified Realty	S	NR	NR													
Dexion Absolute	F	DP	DP													
Discover Financial Services	S	IN	IN													
Dunedin Income Growth Investment Tst (see Aberdeen Asset Management)	F	AQ	–													
E*TRADE FINANCIAL	S	NR	NR													
Edinburgh Dragon Trust (see Aberdeen Asset Management)	F	AQ	–													
Edinburgh Investment Trust	F	NR	DP													
Edinburgh UK Tracker Trust	F	DP	–													
Electra Private Equity	F	AQ	AQ	0												
Electric & General Investment Trust	F	DP	–													
Equity Residential	S	NR	NR													
F&C Asset Management	F	AQ	AQ	53		2	681		681	*	938				x	
F&C Commercial Property Trust (see F&C Asset Management)	F	AQ	AQ													
Federated Investors	S	NR	DP													
Fidelity European Values	F	DP	DP													
Fidelity National Information Services	S	AQ	DP	13	NP											
Fidelity Special Values	F	DP	–													
Fifth Third Bancorp	S	AQ	AQ	62	NP											
Finsbury Worldwide Pharmaceutical	F	NR	–													
First Horizon National	S	NR	NR													
Foreign & Colonial Eurotrust Trust (see F&C Asset Management)	F	AQ	–													
Foreign & Colonial Invest Trust Trust (see F&C Asset Management)	F	AQ	AQ													
Franklin Resources	G, S	AQ	AQ	77		5	30,967	9,616	21,351		5,511				x	
Friends Provident	F	AQ	AQ	57		◆	12,028	3,276	8,752							

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
GBL (see Pernod-Ricard and GDF Suez)	G	AQ	DP													
Generali	G	NR	NR													
Genworth Financial	S	AQ	AQ	62		2	17,084	220	16,864		6,224				x	
Goldman Sachs	G, S	AQ	AQ	54	NP											
Great Portland Estates	F	AQ	AQ	61		22	1,910	1,910		3,531	12				x	
Great West Lifeco	G	DP	DP													
Hammerson	F	AQ	AQ	84		151	61,561	6,093	55,468	30,669	91,830	x	x		x	x
Hang Seng Bank	G	AQ	AQ	42	NP											
Hargreaves Lansdown	F	DP	DP													
Hartford Financial Services	S	AQ	AQ	81		13	122,333	34,238	88,095	*	16,255*				x	
HBOS – see Lloyds Banking Group	F	AQ	AQ													
HCP	S	NR	–													
Helical Bar	F	DP	–													
Henderson Group	F	AQ	AQ	62		2	517	197	320	*	1,766	x	x		x	
Hiscox	F	AQ	AQ	34	NP											
Host Hotels & Resorts	S	DP	NR													
HSBC Holdings	F, G	AQ	AQ	92		7	874,439	102,933	771,506	669,713	107,445		x		x	
Hudson City Bancorp	S	IN	IN													
Huntington Bancshares	S	AQ	AQ	1												
Icap	F	AQ	NR	19		2	3,046	907	2,139							
IG Group Holdings	F	AQ	AQ	47		10	1,818	2	1,816		585				x	
Impax Environmental Markets	F	AQ	–	41	NP											
Industrial and Commercial Bank of China	G	AQ	AQ	21	NP											
ING Group	G	AQ	AQ	56		1	126,868	34,085	92,783		53,245				x	
Intercontinental Exchange	S	NR	DP													
Intermediate Capital Group	F	NR	AQ													
International Personal Finance	F	AQ	AQ	45	NP											
Intesa Sanpaolo S.p.A	G	AQ	AQ	51		4	183,448	78,703	104,745	*	17,974				x	
Invesco	S	NR	–													
Investec	F	AQ	AQ	38							12,154				x	x
Janus Capital Group	S	AQ	AQ	32	NP											
Jardine Lloyd Thompson Group	F	NR	IN													
JPMorgan American IT	F	AQ	–													
JPMorgan Chase	G, S	AQ	AQ	74		9	952,646	69,709	882,937		129,251				x	
JPMorgan Emerging Mkts Inv Trust▲	F	AQ	AQ													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
JPMorgan Euro Fledgling Investment Tst▲	F	AQ	–													
JPMorgan IT Fleming Mercantile▲	F	AQ	AQ													
JPMorgan Indian Investment Trust▲	F	AQ	AQ													
JPMorgan Japanese Investment Trust▲	F	AQ	–													
KBC Group	G	AQ	AQ	64		3	79,547	79,547								
KeyCorp	S	DP	NR													
Kimco Realty	S	NR	NR													
Land Securities	F	AQ	AQ	62		90	73,514	11,629	61,885							
Law Debenture Corporation	F	AQ	AQ	28	NP											
Legal & General Group	F	AQ	AQ	78		◆	16,306	0	16,306		3,855				x	
Legg Mason	S	AQ	AQ	37						*						
Leucadia National	S	DP	NR													
Liberty International	F	AQ	AQ	49		72	43,989	6,366	37,623		1,070				x	
Lincoln National	S	NR	NR													
Lloyds Banking Group	F, G	AQ	AQ	80		22	455,651	97,709	357,942	*	25,129				x	
London Stock Exchange	F	AQ	AQ	22		5	2,687	631	2,056							
MT&T Bank	S	AQ	AQ	74	NP											
Man Group	F	AQ	AQ	65		2	7,262	1,375	5,887	1,144	3,296				x	
Manulife Financial	G	AQ	AQ	58		1	37,059	4,415	32,644							
Marsh & McLennan	G, S	AQ	AQ	32	NP											
Marshall & Ilsley	S	AQ	AQ(L)	19	NP											
MBIA	S	NR	AQ													
Merchants Trust (see Allianz)	F	AQ	AQ													
Merrill Lynch (see Bank of America Corporation)	G, S	AQ	AQ													
MetLife	G, S	AQ	NR	57	NP											
Mitsubishi Estate	G	AQ	AQ	25	NP											
Mitsubishi UFJ Financial Group	G	AQ	AQ	58		5	286,343	22,223	264,120		22,538				x	x
Mitsui Fudosan	G	NR	NR													
Mitsui Sumitomo Insurance[18]	G	AQ	AQ													
Mizuho Financial Group	G	AQ	AQ	42		5	236,966	12,995	223,971		93	x				
Monks Investment Trust	F	IN	IN													
Moody's	S	AQ	AQ(L)	23	NP											
Morgan Stanley	G, S	AQ	AQ	54		6	350,024	7,609	342,415		71,711				x	
Munich Re	G	AQ	AQ	72		2	156,648	8,891	147,757	28,744	67,395				x	
Murray Income Trust (see Aberdeen Asset Management)	F	AQ	AQ													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Murray International Trust (see Aberdeen Asset Management)	F	AQ	AQ													
NASDAQ OMX Group	S	NR	–													
National Australia Bank	G	AQ	AQ	82		6	223,805	15,337	208,468	176,244	16,107†				x	x
National City	S	DP	AQ													
Nomura Holdings	G	AQ	AQ	45		6	49,261	49,261								
Nordea Bank	G	AQ	AQ	58	NP											
Northern Trust	G, S	AQ	AQ	50		14	74,936	7,759	67,177		10,483				x	
Novae Group	F	DP	–													
NYSE Euronext	S	NR	NR													
Old Mutual	F	AQ	AQ	73		◆	525,253	5,822	519,431	*	39,202	x	x		x	
Overseas Chinese Banking	G	AQ	AQ	11	NP											
People's United Financial	S	NR	–													
Perpetual Income & Growth Inv Tst	F	NR	AQ													
PKO Bank Polski	G	NR	NR													
Plum Creek Timber	S	AQ	AQ	67		107	173,407	42,276	131,131	2,000	89,256		x		x	
PNC Financial Services	G, S	DP	AQ(L)													
Power Financial	G	IN	DP													
Principal Financial Group	S	IN	IN													
Progressive	G, S	AQ	AQ	56		19	237,688	146,873	90,815							
ProLogis	S	AQ	AQ	70		2	9,731	1,283	8,448		6,563				x	
Provident Financial	F	AQ	AQ	68		10	7,854	2,840	5,014	3,325	2,721				x	
Prudential	F, G	AQ	AQ	57		◆	74,139	19,337	54,802		19,271	x			x	
Prudential Financial	S	AQ	AQ	64		3	95,456	7,176	88,280		15,730				x	
Public Storage	G, S	DP	DP													
QBE Insurance Group	G	AQ	AQ	47		4	37,709	567	37,142		10,398				x	
Rathbone Brothers	F	AQ	AQ	53	NP											
Regions Financial	S	NR	NR													
Resona Holdings[18]	G	AQ	DP		NP											
RIT Capital Partners	F	DP	DP													
Royal & Sun Alliance Insurance Group	F	AQ	AQ	53		7	50,080	20,033	30,047		12,997				x	x
Royal Bank of Canada	G	AQ	AQ	74		4	137,390	27,619	109,771	*	23,219				x	
Royal Bank of Scotland Group	F, G	AQ	AQ	77		13	690,222	118,270	571,952	*	59,550				x	
Sampo	G	DP	DP													
Savills	F	AQ	DP	15												
Sberbank	G	NR	IN													
Schroders	F	AQ	AQ	63		9	9,289	733	8,556		5,738				x	

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Scottish Investment Trust	F	AQ	NR	30	NP											
Scottish Mortgage Investment Trust	F	IN	IN													
Segro	F	AQ	AQ	65		4	1,275	142	1,133	*	17				x	
Shaftesbury	F	AQ	AQ	69		18	1,188	0	1,188		1				x	
Simon Property Group	G, S	AQ	AQ	86		189	715,982	26,068	689,914	*	2,876				x	x
SLM	S	DP	NR													
Societe Generale	G	AQ	AQ	68		3	216,011	37,571	178,440		78,360			x	x	
Sovereign Bancorp (See Banco Santander)	S	AQ	–													
St. James Place	F	AQ	AQ	64		◆	3,617	1,606	2,011		5,123	x	x		x	
Standard Bank Group	G	AQ	AQ	51		10	165,332	6,107	159,225		3,492				x	
Standard Chartered	F, G	AQ	AQ	66		12	269,902	14,913	254,989		50,262				x	
Standard Life	F	AQ	AQ	57		◆	20,222	3,684	16,538		4,057				x	
State Bank of India	G	AQ(L)	AQ													
State Street	G, S	AQ	AQ	63		9	120,000	5,000	115,000	90,000	13,500				x	
Sumitomo Mitsui Financial Group[18]	G	AQ	AQ		NP											
Sun Hung Kai Properties	G	NR	NR													
Sun Life Financial	G	AQ	AQ	24	NP											
SunTrust Banks	G, S	AQ	AQ	29												
Svenska Handelsbanken	G	AQ	AQ	11	NP											
SVG Capital	F	NR	IN													
Swiss Re	G	AQ	AQ	76		2	57,783	6,761	51,022	*	160		x			
T. Rowe Price Group	S	AQ	AQ	69	NP											
Temple Bar Investment Trust (see Investec)	F	AQ	AQ													
Templeton Emerging Markets IT	F	IN	DP													
Thames River Multi Hedge PCC (GBP)	F	DP	–													
Tokio Marine Holdings	G	AQ	AQ	74		2	68,637	14,041	54,596	555	10,827				x	
Torchmark	S	NR	NR													
Toronto-Dominion Bank	G	AQ	AQ	62		9	197,720	40,337	157,383		30,976				x	
TR Property Investment Trust	F	IN	IN													
Travelers Companies	G, S	AQ	AQ	57		4	94,623	41,841	52,782							
Tullett Prebon	F	NR	NR													
U.S. Bancorp	G, S	AQ	AQ	59		20	384,143	35,809	348,334		22,107				x	
UBS	G	AQ	AQ	68		4	230,834	26,490	204,344		129,364	x		x	x	
UK Commercial Property Trust	F	DP	DP													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Unibail-Rodamco	G	AQ	DP	53		41	102,220	10,124	92,096	*						
Unicredit Group	G	AQ	AQ	48		2	188,640	59,387	129,253		54,930				x	
United Overseas Bank	G	NR	DP													
Unum Group	S	AQ	AQ	56		4	40,121	10,394	29,727							
Vornado Realty Trust	S	NR	AQ													
Wachovia (see Wells Fargo)	G, S	AQ	AQ													
Wells Fargo & Company	G, S	AQ	AQ	17												
Westfield Group	G	AQ	AQ	63		233	549,284	17,869	531,415		165,145			x	x	x
Westpac Banking	G	AQ	AQ	80		6	127,424	6,316	121,108	116,658	20,126	x			x	
Witan Investement Trust	F	DP	DP													
XL Capital	S	AQ	AQ	10	NP											
Zions Bancorporation	S	AQ	AQ	29	NP											
Zurich Financial Services	G	AQ	AQ	63	NP											

14 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

15 Scope 1 and Scope 2 grid average reported emissions.

16 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

17 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

18 This company answered CDP 2009 in Japanese and was therefore not scored.

▲ See JP Morgan Chase.

◆ Intensity was not calculated where reported revenue was a negative value.

Health Care sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

Novartis has developed an internal emissions trading strategy, which determines conditions for internal trading. As long as total shortage is below certain limits, sites are free to sell or buy allowances if needed. Experience so far has shown that sites were able to reduce their emissions considerably more than expected. Instead of a shortage as primarily forecast, emission reduction measures have resulted in a small surplus.

Novartis

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Health Care companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Health Care
Response rate[1]	**63% (51 of 81)**
Global 500	86% (37 of 43)
S&P 500	60% (33 of 55)
FTSE 350	55% (6 of 11)
Overall sector rank (1-10)[2]	**2nd**
Highest disclosure score	95
Lowest disclosure score	33
Average disclosure score	61
Overall emissions disclosure[3]	
Scope 1 emissions	86% (13 million Mt CO_2-e)
Scope 2 emissions[4]	84% (17 million Mt CO_2-e)
Scope 3 emissions	59% (31 million Mt CO_2-e)
Average emissions intensity[5]	34 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among 10 sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

Carbon disclosure trends in the Health Care sector

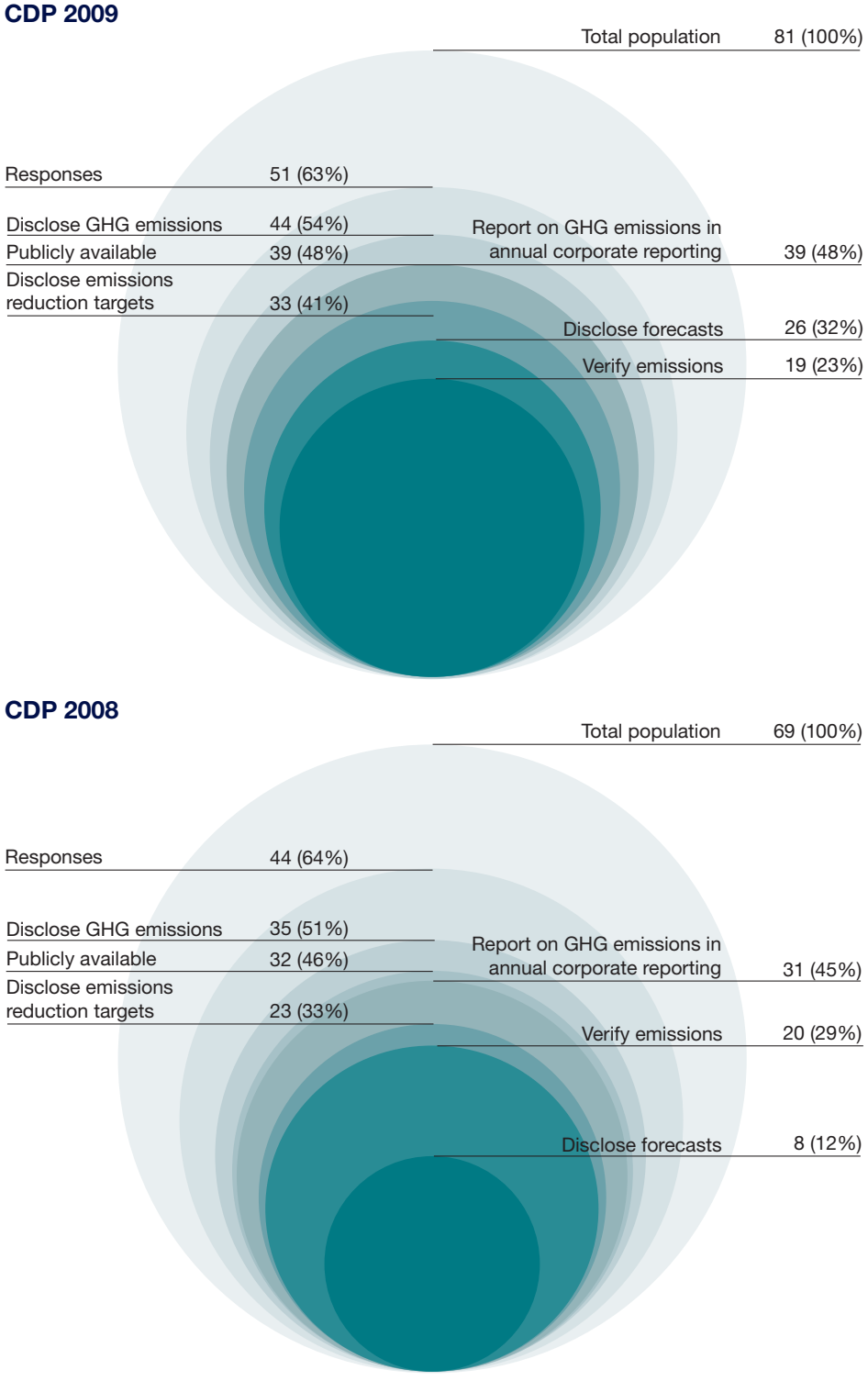
The impact of increased climate change is a double-edged sword for the Health Care sector. On one hand, respondents report that increased storm and hurricane activity can cause operational interruptions. On the other hand, the impact climate change can have on people's health and well-being can lead to increased consumer demand for health-care services and pharmaceuticals, on which the sector can potentially capitalize.

Some respondents noted that this increased incidence of disease and new viral strains brought about by changing climate conditions can also adversely affect their own company employees, crippling production. Also, the potential of decreased biodiversity brought about by changing regional climates, such as droughts or floods, can jeopardize pharmaceutical companies' access to the natural ingredients they need to produce new medicines.

The Health Care sector represents a wide range of health-care services divided into six industries: pharmaceuticals;[6] life sciences tools and services; health-care equipment and supplies; health-care providers and services, which includes distributors, services, facilities, and managed health care; health-care technology; and biotechnology. The sector is considered to be a carbon-intensive sector[7] due to the composition of companies with large operating and manufacturing facilities, which makes them subject to statutory emissions limits or voluntary reduction programs in some regions. Of Health Care respondents in 2009, 43% (22) represent the pharmaceuticals industry.

Across geographies, 63% (51) of Health Care companies responded[8] to the CDP in 2009. The proportion of Health Care companies responding at each disclosure level increased over last year's in several areas, including the disclosure of greenhouse gas (GHG) emissions reduction targets and forecasts and the reporting of GHG emissions in annual reports or other mainstream filings.

Fig. A: Year-on-year disclosure rates, as a proportion of total Health Care companies (Global 500, S&P 500 and FTSE 350)



6 Pharmaceuticals are included in the Health Care industry group in 2009 based on the GICS classifications, which is different from the 2008 CDP reports, where they were included as part of the Chemicals sector.

7 The sectors traditionally viewed as carbon-intensive according to GICS classifications are Energy, Health Care, Industrials, Materials and Utilities.

8 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

The EU ETS has already provided savings within the UK, and the same is to be hoped for the Carbon Reduction Commitment. However, the UK sites may be disadvantaged under that system in that a substantial energy reduction programme has been in place since 2002 and, depending on the base line set, most of the large reductions will have already been achieved with relatively small reduction left in the pipeline.

Smith & Nephew

Fig. B: Disclosure score leaders for the sector[9]

Global 500 leaders

Company name	Disclosure score
Bayer AG	95
Allergan	85
Schering-Plough	85
Biogen Idec	83
Johnson & Johnson	83

S&P 500 leaders

Company name	Disclosure score
Allergan	85
Schering-Plough	85
Biogen Idec	83
Johnson & Johnson	83
Bristol-Myers Squibb	75
Pfizer	75

FTSE 350 leaders

Company name	Disclosure score
GlaxoSmithKline	79
AstraZeneca	71
Shire	70
Smith & Nephew	63
Synergy Health	50

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization[10]

Company name	Index
Teva Pharmaceutical Industries	Global 500
Covidien	Global 500, S&P 500
Synthes	Global 500
Stryker	Global 500, S&P 500
St. Jude Medical	S&P 500

The respondents with the top five scores for each index from the Health Care sector are listed above in the order of their disclosure score.[11] While the remaining Health Care respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

More than one-third of Health Care companies (37%, or 30 companies) chose not to participate. The largest non-respondents are listed above based on their market capitalization

A number of Health Care respondents participated in the Carbon Disclosure Project for the first time in 2009. Two notable non-respondents in 2008 – **Shire** and **Takeda Pharmaceutical** – responded this year. Other first-time respondents were **CSL**, **Fresenius Medical Care KGaA**, **Life Technologies**, **Medco Health Solutions** and **Synergy Health**.

9 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the CDLI for the index overall when all 10 sectors are considered.

10 Market data retrieved from Bloomberg as of June 18, 2009.

11 For more about the disclosure scoring methodology, see www.cdproject.net/2009CDLImethodology.asp.

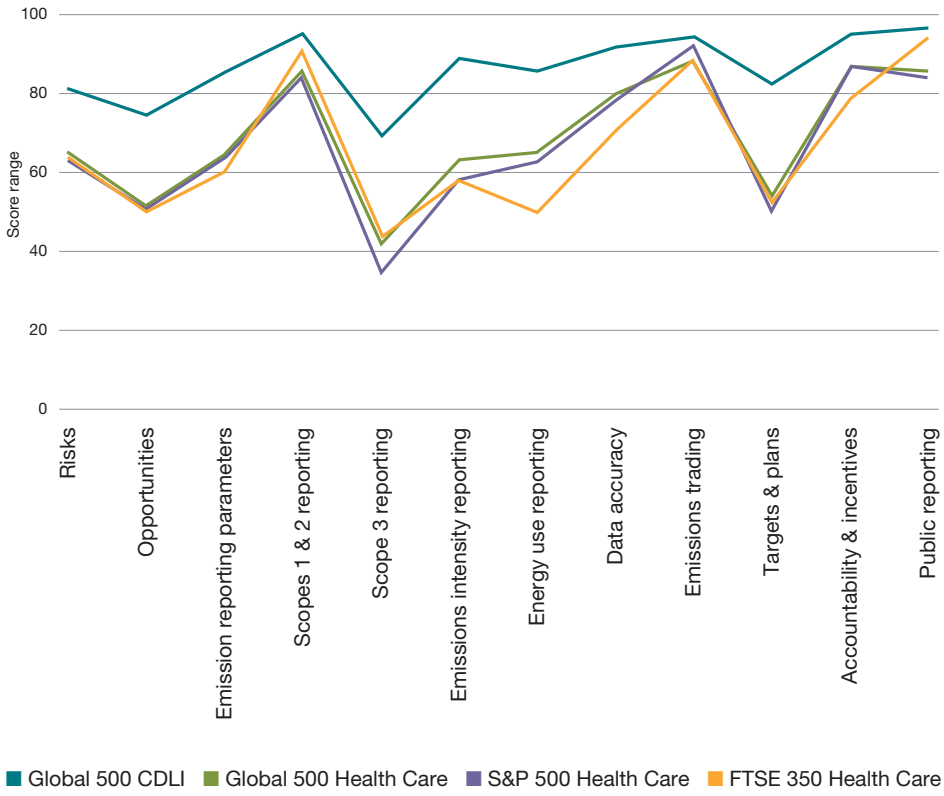
Because the sector includes a high level of respondents with global operations subject to emissions trading systems, the level of disclosures across the Global 500, S&P 500 and FTSE 350 companies did not vary significantly. As a sector, the average disclosure scores for Health Care respondents closely mirror those of global leaders in the reporting quality for Scopes 1 and 2 emissions, participation in emissions trading systems and having incentive structures in place to reduce emissions. However, respondents lag global leaders in disclosing information for nearly all other areas, particularly Scope 3 reporting and identification of emissions reduction targets (see Fig. D). Given that the sector is characterized by long-term planning and risk management procedures, it is not surprising that the Health Care sector has the second-highest average disclosure score among all sectors analyzed.

Health Care respondents reported a range of steps that contribute to overall emissions reduction goals. These include developing internal emissions trading systems to Leadership in Energy and Environmental Design (LEED) certification, switching from gasoline-powered vehicles to hybrid cars and creating employee energy reduction targets.

Respondents indicated that energy conservation can yield significant savings. **Baxter International's** global energy conservation (GHG reduction) activities resulted in energy savings and a cost avoidance of $18.9 million from 2005 to 2008.

Complete company responses to CDP can be downloaded from www.cdproject.net

Fig. D: Score breakdown for Health Care within each index versus the global leaders[12]



12 The 2009 Global 500 Carbon Disclosure Leadership Index (CDLI), is an index of the top 10% of companies with the highest disclosure scores in the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net.

Risks and opportunities

Health Care companies received higher-than-average disclosure scores for recognizing the risks and opportunities related to climate change. Of the respondents, 90% (44) reported at least one significant risk and 80% (39) reported opportunities.

Multiple risks were often reported, including increased susceptibility to disease, increased storm level and hurricane activity, droughts and floods, operational interruptions and increases in utility and other resource costs. The majority also reported regulatory risk.

The most significant climate-related risks and opportunities identified by respondents are the effects of climate change on consumers in the form of geographic or seasonal shifts in diseases, increased frequency of outbreaks and increased susceptibility to disease. Such situations can increase consumer need for existing and new treatments.

"CSL is a major supplier of seasonal influenza vaccine globally and has important strategic partnerships with governments to develop and supply pandemic influenza vaccines. There are indications that climate change may change the prevalence of seasonal influenza and the likelihood of future influenza pandemics. Influenza is a disease that is most prevalent in winter months, with the transmission of the virus linked to air temperature and humidity. As such, climate change has the potential to alter the prevalence and demographics of influenza across the globe. CSL's core capabilities and production capacity position the company well to assist governments and health authorities in countering and controlling seasonal influenza outbreaks and influenza pandemics."
CSL

Health Care respondents are increasingly aware of the significance of physical risks to the sector, as natural disasters associated with climate change become more frequent. Physical risks that could disrupt a company's supply chain or operational efficiency were reported by 77% (27) of Global 500 respondents, 76% (25) of S&P 500 respondents and 83% (5) of FTSE 350 respondents. Those physical risks can impact manufacturing facilities, suppliers, and distribution channels, depending on their geographic locations.

Another often-mentioned risk – and opportunity – is decreased biodiversity. For respondents dependent on natural ingredients to produce pharmaceuticals, climate change affecting the natural world can pose a threat to their ability to discover new treatments. At the same time, pharmaceutical respondents that use synthetic materials to produce their products view decreased biodiversity as an opportunity to surpass their competitors.

Other climate-related risks Health Care respondents reported include resource and utility cost increases, changing consumer demand, and their reputations as leaders in mitigating carbon emissions. (Notably, many Health Care respondents also perceive their commercial reputations as opportunities on which to capitalize.)

By anticipating rather than reacting to compliance requirements and emissions regulations, respondents can distinguish themselves from their competitors. It's also a way they can strengthen their employee recruitment and retention efforts, particularly their efforts to attract and retain younger workers who prize corporate responsibility.

Energy reduction targets are included in annual employee objectives. Bonuses (monetary rewards) are affected depending on whether the employees achieve their energy reduction goals.

Allergan

Aetna's Atrium Building in Hartford, Connecticut, is going green with the installation of roughly 1,000 solar panels on the roof and along the south-facing elevation, as well as numerous changes that are expected to earn the building prestigious LEED certification. Aetna's teleworkers are reducing Aetna's carbon footprint by saving more than 65 million miles per year, which saves more than 2 million gallons of gas and reduces carbon dioxide emissions by over 23,000 metric tons per year.

Aetna

We have decided to change all sales vehicles – which are used not only in Tokyo but in all areas – from gasoline vehicles to hybrid cars.

Astellas Pharma

Regulatory risks related to climate change were reported by 77% (27) of Global 500 respondents, 67% (22) of S&P 500 respondents and 83% (5) of FTSE 350 respondents. Among the specific regulatory issues related to statutory limits on emissions were the European Union's Emissions Trading System (EU ETS), the US Environmental Protection Agency's proposed endangerment finding,[13] regional and state requirements and proposed legislation in the US, which respondents say could impose higher energy and compliance costs.

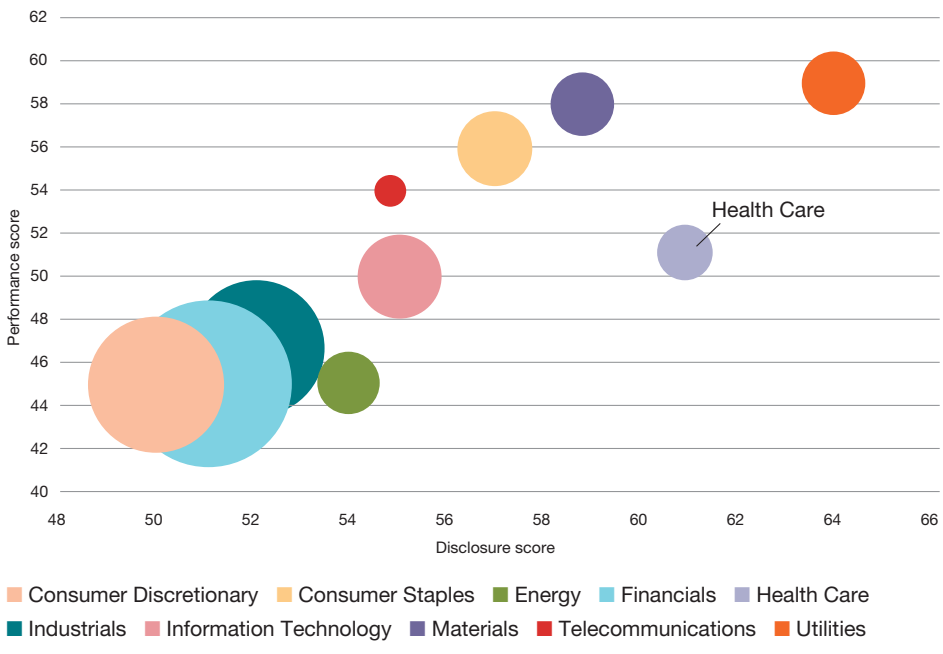
Although most UK and Western European respondents noted that prospective regulations such as phase II of the EU ETS and the Carbon Reduction Commitment[14] were unlikely to be issues given that they had already taken early, preemptive actions, others are anticipating a harder challenge ahead.

Insights from the performance score pilot

The CDP 2009 included, for the first time, separate scores for performance. While the CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Health Care sector scored second overall for disclosure and fifth for performance. The chart below shows how the sector compares with the other sectors for performance.

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

13 See http://www.epa.gov/climatechange/endangerment.html.

14 See http://www.defra.gov.uk/environment/climatechange/uk/business/crc/index.htm.

The key opportunity for Wyeth is the ability to minimize the cost impact of rising energy prices and the costs associated with carbon regulation. We anticipate that the approach Wyeth has adopted to implement energy efficiency and combined heat-and-power (CHP, also known as cogeneration) plants will serve us well as carbon regulation expands throughout the world. Wyeth sees our ability to reduce the amount of energy consumed as an opportunity to remain competitive in a dynamic marketplace. Additionally, this gives us the opportunity to demonstrate our role as a leader in the community.

Wyeth

As 2009 is the first year of use of the performance scoring methodology,[15] individual company performance scores are not shown in the CDP 2009 reports, though Health Care observations from the pilot are:

- The top three Health Care companies scoring highest in performance (in alphabetical order) are **Allergan**, **Johnson & Johnson** and **Merck & Co**.
- Global 500 and S&P 500 Health Care respondents have very similar performance scores for nearly all areas. S&P 500 companies lag in one area from their Global 500 peers: performance progress toward emissions reduction targets.
- FTSE 350 Health Care respondents scored lower on the performance scale in areas of identifying risk and maximizing opportunities related to climate change compared with industry peers. They also have lower scores for having accountability structures and incentives in place for employees to reduce GHG emissions.

The majority of Health Care respondents have assigned a board member or senior executive body with overall responsibility for climate change (69%, or 34 companies). They also have relatively high rates of disclosing GHG emissions to the public in annual reports or other mainstream filings (80%, or 39 companies) and of publishing corporate social responsibility reports (76%, or 37 companies).

Although 67% of respondents (33 companies) have GHG emissions and/or energy reduction plans in place, only 39% (19 companies) have incentive structures in place to reduce emissions.

Conclusion

Health Care companies are keenly aware of the importance of their roles in preventing the loss of life and health that could occur with global climate change, including geographic shifts in diseases, increased frequency of disease outbreaks, and increased susceptibility to disease. While their primary focus is on saving lives, Health Care companies also accept their responsibilities as good corporate citizens and are working to reduce greenhouse gas emissions. The sector clearly has a number of companies that are dedicated to transparency and to working to maintain the public's trust in all areas, including issues related to climate change.

Overall, the relatively high disclosure scores received by Health Care companies demonstrate that the sector is active in understanding climate-related risks to the sector and to the populations they serve. They show particular improvement in the practice of disclosing emissions reduction targets and emissions forecasts and rank as the second-highest-scoring group for disclosure among all 10 sectors analyzed, second only to Utilities.

Health Care companies participating in the Carbon Disclosure Project in the future should consider that their peer group has set a high standard for them. They should work together to further develop industry best practices for disclosure for the benefit of investors in the years to come.

15 For more about the performance scoring methodology, see http://www.cdproject.net 2009CDLImethodology.asp

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Health Care scores and emissions by company[16]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[17]	Total Emissions[18]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[19]	Scope 3[20]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Abbott Laboratories	G, S	AQ	AQ	65		55	1,619,500	842,103	777,397		64,312				x	
Aetna	G, S	AQ	AQ	60		3	81,691	18,706	62,985							
Alcon (see Nestle)	G	AQ	AQ													
Allergan	G, S	AQ	AQ	85		24	104,210	45,643	58,567		32,548				x	
Amerisource Bergen	S	NR	AQ													
Amgen	G, S	AQ	AQ	63	NP											
Astellas Pharma	G	AQ	AQ	41		18	194,210	82,531	111,679							
AstraZeneca	G, F	AQ	AQ	71		22	698,340	421,200	277,140		595,700	x	x	x	x	
Barr Pharmaceuticals	S	NR	IN													
Baxter International	G, S	AQ	AQ	69		59	726,428	256,828	469,600	*	1,531,000	x	x	x	x	x
Bayer	G	AQ	AQ	95		165	7,570,000	4,000,000	3,570,000	3,570,000	21,900,000	x	x	x	x	x
Becton, Dickinson & Co.	G, S	AQ	AQ	45		68	490,003	68,896	421,107							
Biogen Idec	G, S	AQ	AQ	83		24	96,897	49,459	47,438		4,234†				x	x
Boston Scientific	S	AQ	AQ	45		22	178,500	28,500	150,000							
Bristol Myers Squibb	G, S	AQ	AQ	75		40	832,135	377,825	454,310		55,686				x	
BTG	F	IN	–													
Cardinal Health	G, S	AQ	DP	49		3	314,864	90,528	224,336		25,011				x	
Celgene	G, S	AQ	DP	64		6	13,689	4,331	9,358							
Cephalon	S	DP	–													
CIGNA	S	AQ	AQ	43	NP											
Coventry Health Care	S	NR	NR													
Covidien	G, S	NR	DP													

16 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[17]	Total Emissions[18]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[19]	Scope 3[20]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
C.R. Bard	S	DP	AQ													
CSL	G	AQ	AQ	65		60	148,334	52,861	95,473							
Daiichi Sankyo	G	AQ	AQ	40	NP											
DaVita	S	NR	–													
Dechra Pharmaceuticals	F	NR	–													
DENTSPLY International	S	NR	–													
Eisai	G	NR	–													
Eli Lilly	G, S	AQ	AQ	53		98	1,991,946	599,536	1,392,410		95,202†		x		x	x
Express Scripts	G, S	NR	DP													
Forest Laboratories	S	AQ	AQ	52	NP											
Fresenius Medical Care KGaA	G	AQ	AQ	41	NP											
Genentech (see Roche Holding)	G	AQ	AQ													
Genus	F	DP	–													
Genzyme	G, S	AQ	AQ	57	NP											
Gilead Sciences	G, S	AQ	AQ	74	NP											
GlaxoSmithKline	G, F	AQ	AQ	79		85	2,079,227	945,678	1,133,549		4,911,482	x	x		x	
Hikma Pharmaceuticals	F	NR	NR													
Hospira	S	AQ	NR	53	NP											
Humana	S	AQ	AQ	69		5	137,218	12,238	124,980	*	18,200				x	
IMS Health	S	NR	DP													
Intuitive Surgical	S	NR	–													
Johnson & Johnson	G, S	AQ	AQ	83		21	1,327,272	356,729	970,543	*	369,673				x	
King Pharmaceuticals	S	NR	NR													
Laboratory Corporation of America	S	NR	NR													
Life Technologies	S	AQ	–	67		55	89,102	38,592	50,510	*						
McKesson	S	AQ	AQ	37							32,892				x	
Medco Health Solutions	G, S	AQ	AQ	67		1	69,914	3,230	66,684							
Medtronic	G, S	AQ	AQ	58		18	249,335	25,229	224,106							
Merck & Co.	G, S	AQ	AQ	71		50	1,187,582	663,506	524,076	*	60,595				x	
Millipore	S	AQ	AQ	57		91	145,398	100,976	44,422							
Mylan	S	NR	NR													
Novartis	G	AQ	AQ	70		36	1,501,730	575,589	926,141		182,200				x	
Novo Nordisk	G	AQ	AQ	73		25	214,727	43,196	171,531		120,000		x		x	
Patterson Companies	S	NR	NR													
PerkinElmer	S	AQ	AQ	44		32	61,747	20,723	41,024		8,461				x	
Pfizer	G, S	AQ	AQ	75		42	2,018,769	1,017,810	1,000,959		120,820				x	
Quest Diagnostics	S	IN	IN													
Roche Holding	G	AQ	AQ	45		21	917,133	439,509	477,624		136,343				x	x
Sanofi-Aventis	G	AQ	AQ	76	NP											
Schering-Plough	G, S	AQ	AQ	85		54	1,004,144	446,987	557,157		32,416				x	

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[17]	Total Emissions[18]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[19]	Scope 3[20]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Shire	F	AQ	NR	70		14	41,370	15,276	26,094		6,910				x	
Smith & Nephew	F	AQ	AQ	63		19	73,224	8,428	64,796							
Southern Cross Healthcare	F	IN	AQ													
SSL International	F	AQ	AQ	40		59	31,360	7,986	23,374							
St. Jude Medical	S	DP	DP													
Stryker	G, S	IN	NR													
Synergy Health	F	AQ	–	50	NP											
Synthes	G	DP	–													
Takeda Pharmaceutical	G	AQ	DP	54		27	456,774	323,575	133,199		10,469		x			
Tenet Healthcare	S	NR	DP													
Teva Pharmaceutical Industries	G	NR	NR													
Thermo Fisher Scientific	G, S	AQ	AQ	50												
UnitedHealth Group	G, S	AQ	AQ	33												
Varian Medical Systems	S	NR	NR													
Waters	S	IN	IN													
Watson Pharmaceuticals	S	NR	NR													
WellPoint	G, S	AQ	DP	71		3	181,100	8,539	172,561		100,962				x	
Wyeth	G, S	AQ	AQ	57		50	1,144,236	567,580	576,656							
Zimmer Holdings	S	AQ	AQ	45												

17 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

18 Scope 1 and Scope 2 grid average reported emissions.

19 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

20 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

Industrials sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

UTC has facilities and employees all over the world. Our business activities and the well-being of our employees could be significantly affected depending on location and local conditions… we have developed and documented emergency response plans for each of our facilities worldwide ...UTC also requires key suppliers to develop and document risk mitigation plans to ensure business continuity in the event of an emergency.

United Technologies Corporation

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Industrials companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Industrials
Response rate[1]	**(67%) 103 out of 154**
Global 500	(76%) 41 out of 54
S&P 500	(60%) 35 out of 58
FTSE 350	(71%) 47 out of 66
Overall sector rank (1-10)[2]	**8th**
Highest disclosure score	87
Lowest disclosure score	7
Average disclosure score	52
Overall emissions disclosure[3]	
Scope 1 emissions	83% (200 million Mt CO_2-e)
Scope 2 emissions[4]	76% (33 million Mt CO_2-e)
Scope 3 emissions	47% (468 million Mt CO_2-e)
Average emissions intensity[5]	155 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

Carbon disclosure trends in the Industrials sector

Industrials is a new sector classification for CDP 2009. It comprises an eclectic range of businesses across three industries, namely: capital goods (which includes aerospace and defense, machinery and building and construction companies), commercial and professional services (which includes service providers from waste management to security) and transportation (which includes surface and land transportation, logistics and transport infrastructure). On this basis, therefore, it can be viewed as a sector that has significant carbon intensity overall but that exhibits considerable variance at the industry level.

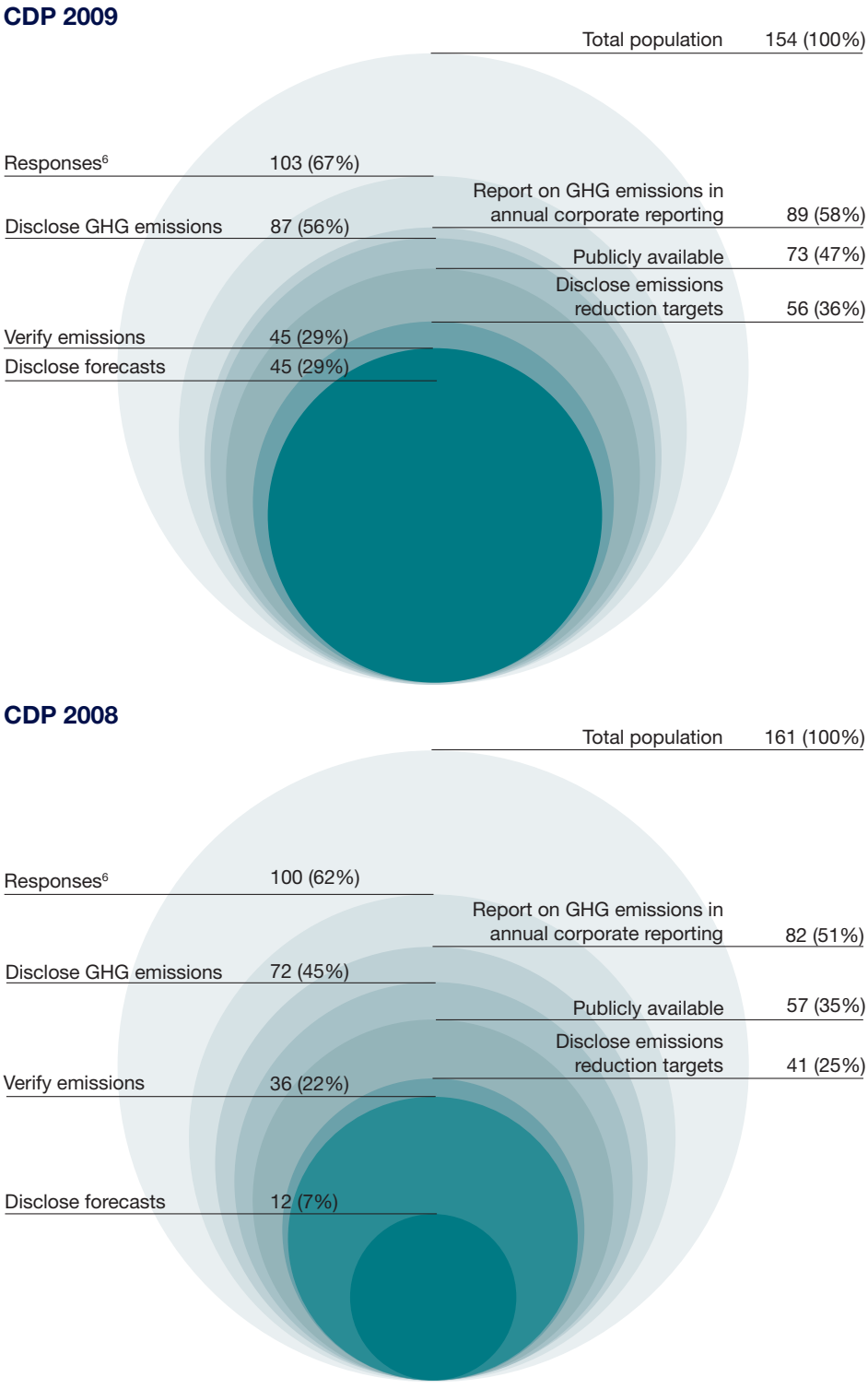
The overall response rate[6] for Industrials has risen to 67% (103 companies) for CDP 2009. This is markedly lower than the top-performing sector (Utilities, 88%, or 59 companies) and places the sector eighth (out of ten) for response rate across all sectors for CDP 2009.

Despite a lower than expected response rate in 2009, Industrials companies have increased disclosures significantly in several areas, including:

- Disclosing emissions figures (56% or an increase of 11 percentage points, year on year),
- Disclosing emission reduction targets (36% or an increase of ten percentage points, year on year), and
- Disclosing emissions forecasts (29% or an increase of 21 percentage points, year on year).

These increases are particularly encouraging, because they suggest the sector is adopting a longer-term view on climate change mitigation and that it recognizes the value of forward-looking information to its stakeholders.

Fig. A: Year-on-year disclosure rates, as a proportion of total Industrials companies (Global 500, S&P 500 and FTSE 350)



6 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

EasyJet supports the forthcoming inclusion of aviation into the EU ETS as a first step, and EasyJet has been pressing for a scheme that will cover the largest carbon footprint (i.e. include flights both within Europe and all departing and arriving flights) and reward airlines that are environmentally efficient and punish those that are not.

EasyJet

The physical risk assessment of three of our Florida-based business units identified similar levels of risk arising from hurricanes and flooding. As a result, flood defenses have been improved and roofing reinforced at these locations.

Cobham

Fig. B: Disclosure score leaders for the sector[7]

Global 500 leaders

Company name	Disclosure score
Boeing	87
Burlington Northern Santa Fe	85
Siemens	85
United Parcel Service	82
Vinci	78

S&P 500 leaders

Company name	Disclosure score
Boeing	87
Burlington Northern Santa Fe	85
Eaton	85
United Parcel Service	82
United Technologies Corporation	70

FTSE 350 leaders

Company name	Disclosure score
Interserve	76
Rolls-Royce	76
VT Group	75
Morgan Crucible	73
Go-Ahead Group	72

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization[8]

Company name	Index
Lockheed Martin	Global 500, S&P 500
Hutchison Whampoa	Global 500
Bharat Heavy Electricals	Global 500
FANUC	Global 500
Caterpillar	Global 500, S&P 500

Disappointingly, however, less than a third of respondents have their emissions verified by an independent third party. This remains an area where progress in many sectors is limited.

Industrials leaders for carbon disclosure are listed above in the order of their Carbon Disclosure Leadership Index scores[9]. The top-scoring companies' responses demonstrate acute awareness of the range of risks and opportunities presented by climate change, recognizing how the impacts of climate change are interrelated across different areas of business. While the remaining Industrials respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

One-third of Industrials companies (33% or 51 companies) chose not to participate. The largest non-respondents are listed above based on their market capitalization.

7 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the Carbon Disclosure Leadership Index (CDLI) for the index overall when all ten sectors are considered.

8 Market data retrieved from Bloomberg as of June 18, 2009.

9 For more about the disclosure scoring methodology, see www.cdproject.net/2009CDLImethodology.asp.

We anticipate increasing demand for more energy efficient products and services as well as the use of manufacturing processes that minimize the use of energy resources and greenhouse gas-emitting materials.

Boeing

Some form of federal climate change legislation is possible in the relatively near future, especially under the new leadership in the White House and on Capitol Hill… Until the timing, scope and extent of such regulation becomes known, we cannot predict its effect on our cost structure or our operating results. It is reasonably possible, however, that it could impose material costs on us.

FedEx Corporation

What is particularly encouraging is that some of the largest non-respondents by market capitalization during CDP 2008 have participated in CDP 2009. Notable companies in this category include Denmark's **A.P. Moller-Maersk** and Spain's construction and industrial services group **ACS Actividades de Construcción y Servicios**.

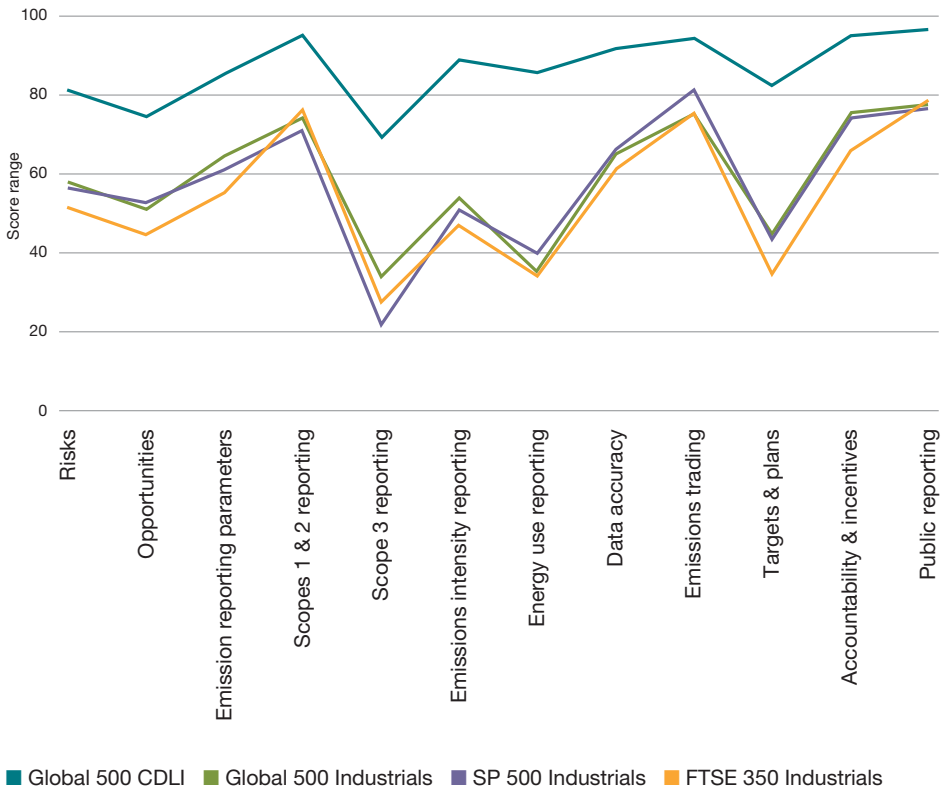
When compared with a cross section of global leaders for carbon disclosure, Industrials respondents significantly lagged the global leaders in the quality of disclosures, particularly in the areas of Scope 3 emissions reporting, energy use and intensity reporting, and disclosing targets and plans. They scored better in Scopes 1 and 2 reporting, emissions trading, having accountability structures and incentives in place for management/staff to meet climate related targets and public reporting. In most areas, the S&P 500 respondents from this sector scored higher than their FTSE 350 counterparts.

Risks and opportunities

Most respondents from the Industrials sector across the Global 500, S&P 500 and FTSE 350 populations report exposure to regulatory risks in relation to climate change. Respondents expressed concern around the form and timing of future regulation at both the national and international levels.

The overarching sentiment with respect to regulation was an expectation that operations costs would rise, creating competitive distortions in a global marketplace. This echoes the views of their peers within the Materials sector, who noted that measures such as the European Union's Emissions Trading System (EU ETS) – or other policy instruments, like carbon taxes – create the possibility of carbon leakage, whereby production is incentivized to relocate overseas.

Fig. D: Score breakdown for Industrials within each index versus the global leaders[10]



10 The 2009 Global 500 Carbon Disclosure Leadership Index (CDLI), is an index of the top 10% of companies with the highest disclosure scores for the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net

Among European respondents, there is an expectation of higher compliance costs in the future for assets covered by the existing EU ETS – particularly for the airline industry, which will be brought into the EU ETS in 2012. A trend within the S&P 500 group is that the current uncertainty surrounding forthcoming regulation is beginning to impact companies' ability to make long-term plans and investment decisions. Companies expressed concern that, in a low-carbon economy, there may simply be a lower overall demand for manufactured products.

The UK's Carbon Reduction Commitment (CRC) is a risk factor for FTSE 350 respondents; nearly two-thirds mentioned it explicitly as a regulatory risk, but views on the financial materiality of the policy vary, with some companies expecting that it will have a negligible financial impact.

Construction companies reported that they are already operating and delivering under specific standards such as the BRE Environmental Assessment Method (BREEAM) in the UK and Leadership in Energy and Environmental Design (LEED) in the US. Responses from the commercial and professional services industries were less detailed. In some cases, no regulatory risks were identified at all, whereas others were not able to cite specific legislation, but confirmed that they expected to have exposure at some point in the future.

Aside from regulatory and commercial risks from climate change 68% (28) of the Global 500, 62% (21) of the S&P 500 and 77% (36) of the FTSE 350 Industrials sector respondents expect physical risks.

The most significant physical risks identified were localized flooding and rising sea levels, followed closely by increased incidence of extreme weather events such as storms and hurricanes. The primary concern is operational interruptions from flooding and extreme weather patterns and the resulting financial implications in terms of both remediation costs and forgone revenue. To mitigate these risks, companies are preparing comprehensive contingency plans and considering climate risk in the selection of new sites – for example, by not locating new facilities within floodplains susceptible to 100-year-or-more flood events.

Changing consumer demand at the product level and greater scrutiny of the producers and retailers behind products are also risks and, to a lesser extent, opportunities. Interestingly, such risks were cited not only by companies in the sector that trade directly with the end consumer, but also by intermediary producers who recognize that supply chain emissions are coming under greater scrutiny.

Changing consumer demand is particularly pertinent in terms of the interplay between airlines and surface-based transportation and especially around the concept of a future modal shift away from air transport and toward rail for certain journeys.

"Changes in public opinion regarding products that emit GHG may result in greater pressure down the supply chain to component and part manufacturers such as Tomkins."
Tomkins

Transport infrastructure is clearly vulnerable to extreme weather conditions. Railways along the coast are vulnerable to cliff instability, flooding of tunnels, and landslips. Bus and rail depots close to rivers and coastal areas may be vulnerable to flooding. Damage to infrastructure prevents us from delivering our services and could lead to consequent loss of revenue – in particular, where the infrastructure may take time to repair.

FirstGroup

...carbon limitations will likely enhance the competitive position of rail transportation when compared to less efficient modes of moving freight…One BNSF intermodal train transports enough truck trailers and containers to remove more than 280 trucks from the highway.

Burlington Northern Santa Fe

We have observed changes in species distribution (such as termites, cockroaches and bedbugs) which have moved into areas that were previously too cold for them to breed and survive. Control of these species is offering opportunities in the more temperate parts of the world for our pest control division, which has already had to deal with them in warmer climates.

Rentokil Initial

Regulation is likely to increase the price of energy, due to energy production restrictions, energy taxes or mandated pollution control technologies on utility companies. Higher energy costs for Raytheon would increase Raytheon's production costs and decrease cost competitiveness in the global marketplaces.

Raytheon

British Airways supports the concept of carbon trading as the most environmentally effective instrument to control emissions from aviation. However, we have consistently proposed that the EU ETS should initially only apply to intra-EU flights prior to reaching a global multilateral agreement on aviation emissions. The EU decision to apply the system to all flights in and out of the EU will distort competition in many of our markets, leading to carbon leakage.

British Airways

Whilst we are well placed with regard to the CRC, the operational implications are around correct identification of boundaries on MOD [Ministry of Defence] – owned sites that we operate and data gathering and analysis to ensure the standards conform to the needs of CRC.

QinetiQ Group

Regulatory changes toward energy efficiency are also taking place in China. Siemens has entered into comprehensive agreements on energy saving and emissions reduction with local authorities – for example in Shandong, Zhejiang, Jiangshu and Shenzhen.

Siemens

Rockwell already offers its customers a large number of innovative products and technologies for climate protection and for energy and resource efficiency that help maintain regulatory requirements and internal environmental metrics. Examples of these include: Rockwell's Pavilion Technologies environmental applications have helped major manufacturers to enhance air quality and achieve environmental compliance goals.

Rockwell Automation

"In addition, the high visibility of climate change concerns has led to increased expectations from investor groups and the general public regarding industry's approach to GHG emissions. Further, we have had some customers express their expectations for increased focus on reduced energy use and GHG emissions."
Northrop Grumman

"Surface passenger transport is not currently covered by the EU Emissions Trading Scheme, but the possible extension of emissions trading schemes to surface-based passenger transport has the potential to increase the cost base of operators and divert consumer spending towards alternative forms of travel or non-travel-related expenditure."
Arriva

In addition to the risks outlined above, 95% (39) of the Global 500, 88% (30) of the S&P 500 and 96% (45) of the FTSE 350 Industrials sector respondents said climate change also presents opportunities. Key areas of opportunity include:

- New business-to-business or business-to-consumer markets underpinned by climate change risks or regulation;
- The effect of new regulation on solidifying existing competitive advantages for companies that have taken early-mover actions; and
- The impact of the various fiscal (and climate) stimulus packages announced over the past year.

Reflecting the broad scope of the sector, the opportunities identified as a result of physical changes to the climate vary, ranging from increased use of advanced technology such as satellites for helping model and track the physical impacts of climate change (in aerospace and defense) to more demand for security services in order to protect key resources, and the need for greater pest controls in response to changes in biodiversity.

As a global company, John Deere, our suppliers, and our customers face uncertain, uncoordinated regulation of greenhouse gas emissions at the state, region, and country levels. This environment does not provide certainty for long-term business planning.

Deere

The forthcoming incorporation of aviation into the EU Emissions Trading Scheme will complement existing commercial drivers related to fuel costs, potentially resulting in increased demand for advanced technology that can deliver improved fuel efficiency. Reducing fuel burn is central to our business, and this driver is well-aligned with the overarching need to reduce emissions.

Rolls-Royce

Because of ITT's energy efficient water and wastewater product line, climate change could provide a competitive advantage to ITT with regard to supply chain management, as customers preferentially select manufacturers with sustainable product lines.

ITT

We actively engage with policy makers and governments. We see the dialogue with stakeholders in politics as an opportunity to actively contribute and shape the future constructively, focused on stability and well-being of the international community. Solving the world's environmental and climate change problems is something we need to do together.

A.P. Moller-Maersk

Insights from the performance scores pilot

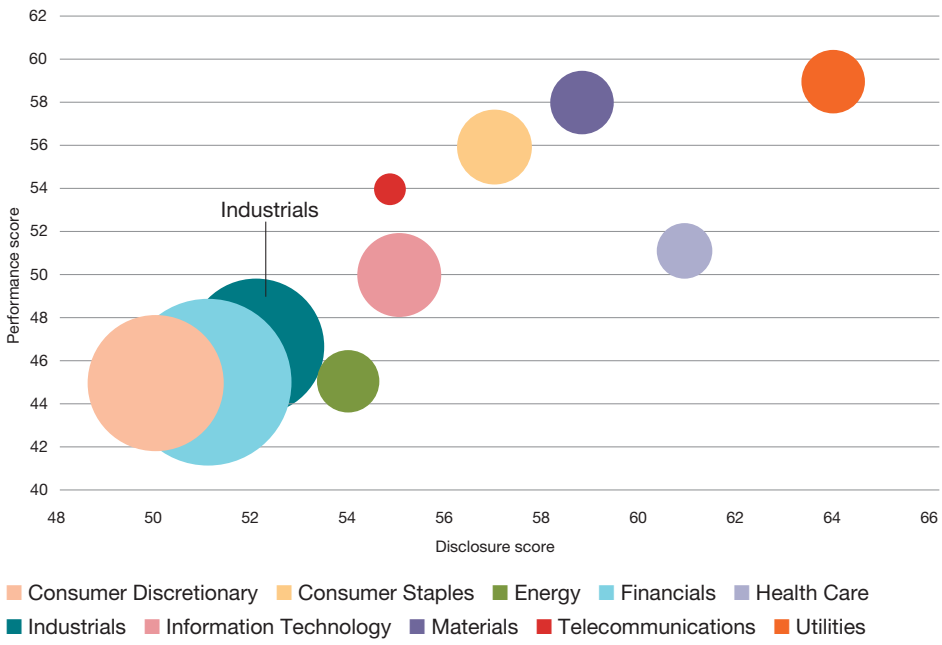
The CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Industrials sector scored eighth overall for disclosure and seventh for performance. The chart below shows how the Industrials sector compares with the other sectors for performance.

As 2009 is the first year of use of the performance scoring methodology,[11] individual company performance scores are not shown in the CDP 2009 reports, though comment on initial findings is provided below:

- The three Industrials companies scoring highest in the performance scoring pilot (in alphabetical order) are **Boeing**, **Interserve** and **Siemens**;
- Industrials respondents from all three CDP indexes outperformed the other sectors analyzed in the provision of goods and services that enable customers to reduce emissions; and
- The Global 500 and FTSE 350 Industrials respondents underperformed other sectors in nearly all areas of the questionnaire that attracted performance points, suggesting relatively poor management of the climate change risks they had identified.

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

11 For more about the performance scoring methodology, see http://www.cdproject.net/2009CDLImethodology.asp.

Cummins is engaged in two main ways in the public policy discussions surrounding climate change regulation. These include our active involvement in Washington groups and engagement on specific policies. As mentioned previously, four of Cummins's Climate Change principles specifically shape our partnerships with legislative and regulatory entities to develop sound public policy to address climate change.

Cummins

CN has been actively engaged at various levels through North America, engaging with policy makers on responses to climate change – specifically in the area of carbon trading regimes, rail industry GHG emission standards and biofuel specifications.

Canadian National Railway

- Industrials respondents within the S&P 500 typically performed better than other sectors. In addition to their strong performance around the provision of goods and services that enable customers to reduce emissions, S&P 500 Industrials respondents did well in maximizing the opportunities they identified.
- Overall, the Industrials sector provided mixed messages by establishing good governance through board committees that have overall responsibility for climate change 80% (82), but providing few staff incentives to reduce emissions 32% (33).

Evidence of companies' engaging with policy makers as well as local communities suggests a significant level of awareness and proactivity within the sector; and a large proportion, 62% (63) of companies engage with policy makers on a regular basis, although this is below the average overall for CDP respondents.

Conclusion

CDP 2009 responses suggest that, while there are clearly some areas where activity levels are high in terms of addressing the business implications of climate change, overall there is significant room for improvement among the Industrials sector. Respondents perform strongly in detailing the provision of goods and services that enable customers to reduce emissions, but disclosure in other areas is below average.

Interestingly, the motivation for action within this sector is weighted more towards creating new business-to-business opportunities and ensuring operational resilience, rather than any regulatory imperative, although this may change.

Transportation, in particular, is an area that has not been subject to extensive direct regulation to date, either in Europe or the US. However, the agenda is moving quickly and we can expect to see greater emphasis on transport emissions over the next five years with the extension of cap-and-trade programs and mandatory efficiency standards for vehicles. For equipment suppliers in these industries, there is the clear incentive to achieve competitive differentiation on the basis of low-carbon product performance. This year's responses show that aerospace and construction companies are making progress in this regard, but others have yet to develop a coherent strategy for maximizing the inherent opportunities.

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Industrials scores and emissions by company[12]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
3M	G, S	AQ	AQ	60		269	6,790,000	5,130,000	1,660,000							
A.P. Moller – Maersk	G	AQ	DP	67		840	48,921,315	48,198,000	723,315		201,375				x	
ABB	G	AQ	AQ	57		1,121	1,572,400	817,000	755,400							
Abertis Infraestructuras	G	AQ	AQ(L)	52		38	189,983	30,826	159,157	*						
ACS Actividades de Construccion y Servicios	G	AQ	IN	59	NP											
Aggreko	F	AQ	NR	22												
Alstom	G	AQ	AQ	63		19	496,000	216,000	280,000							
Arriva	F	AQ	AQ	51		486	1,479,660	1,374,927	104,733		7,267	x				
Ashtead Group	F	AQ	AQ	35	NP											
Atkins	F	AQ	AQ	60		11	15,071	2,081	12,990		23,351				x	
Avery Dennison	S	AQ	AQ	34												
Babcock International Group	F	AQ	AQ	28	NP											
BAE Systems	F, G	AQ	AQ	56	NP											
Balfour Beatty	F	AQ	AQ	48		37	307,187	249,425	57,762		12,374				x	
BBA Aviation	F	AQ	AQ	53		107	123,427	69,452	53,975							
Bharat Heavy Electricals	G	NR	NR													
Bodycote International	F	NR	IN													
Boeing	G, S	AQ	AQ	87		28	1,679,000	575,000	1,104,000	*	280,140			x	x	
Bouygues	G	AQ	AQ	31	NP											
British Airways	F	AQ	AQ	58		1,935	16,946,408	16,840,627	105,781		639,113		x		x	

12 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
BSS Group	F	AQ	AQ	19	NP											
Bunzl	F	AQ	AQ	58		◆	◆	◆	31,062		276,684		x		x	
Burlington Northern Santa Fe	G, S	AQ	AQ	85		844	15,213,194	14,889,927	323,267		27,715		x		x	
C.H. Robinson Worldwide	S	AQ	AQ	34	NP											
Canadian National Railway	G	AQ	AQ	77		630	4,330,945	4,330,945		*						
Capita Group	F	AQ	AQ	58		18	44,822	9,199	35,623		19,717				x	
Carillion	F	AQ	NR	56		21	92,869	81,754	11,115	*	7,019			x	x	
Caterpillar	G, S	IN	AQ													
Central Japan Railway	G	IN	NR													
Charter	F	NR	DP													
Chemring Group	F	AQ	IN	31	NP											
China Communications Construction (H)	G	IN	DP													
Chloride Group	F	IN	IN													
Cintas	S	NR	NR													
Cobham	F	AQ	NR	55		131	191,476	136,224	55,252		292,293		x			
Connaught	F	NR	NR													
Cookson Group	F	NR	IN													
Cooper Industries	S	AQ(L)	NR													
CSX	G, S	AQ	AQ	68		570	6,419,342	6,046,277	373,065	*						
Cummins	S	AQ	AQ	61		58	834,193	387,421	446,772							
Danaher	G, S	AQ	AQ	24	NP											
Davis Service Group	F	AQ	IN	14												
De La Rue	F	NR	AQ													
Deere	G, S	AQ	AQ	66		56	1,578,558	511,976	1,066,582							
Deutsche Post	G	AQ	AQ	63		88	6,700,000	6,700,000		*	25,600,000		x		x	
Dover	S	DP	NR													
Dun & Bradstreet	S	NR	–													
EADS	G	AQ	AQ	69	NP											
East Japan Railway	G	AQ	AQ	38	NP											
EasyJet	F	AQ	AQ	58		1,824	4,309,000	4,307,000	2,000							
Eaton	S	AQ	AQ	85		55	848,000	122,000	726,000	*						
Emerson Electric	G, S	AQ	AQ	21		24	603,723	603,723								
Equifax	S	NR	AQ													
Expeditors International of Washington	S	NR	NR													
Experian Group	F	AQ	AQ	55		18	63,445	9,255	54,190	*	12,556				x	
FANUC	G	NR	NR													
Fastenal	S	NR	–													
FedEx Corporation	G, S	AQ	AQ	59		395	14,983,506	14,983,506								
First Solar	G	NR	–													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
FirstGroup	F	AQ	AQ	58		682	3,209,695	2,926,775	282,920	*	1,217				x	
Flowserve	S	NR	–													
Fluor	S	IN	DP													
Forth Ports	F	DP	DP													
G4S	F	AQ	AQ	42		73	432,000	342,000	90,000		18,000				x	
General Dynamics	G, S	IN	IN													
General Electric	G, S	AQ	AQ	58	NP											
Go-Ahead Group	F	AQ	AQ	72	NP											
Goodrich	S	NR	NR													
Hays	F	AQ	AQ	26	NP											
Homeserve	F	AQ	AQ	49	NP											
Honeywell International	G, S	AQ	AQ	7												
Hutchison Whampoa	G	NR	NR													
Illinois Tool Works	G, S	AQ	AQ	59	NP											
IMI	F	AQ	AQ	45		54	102,550	26,800	75,750							
Ingersoll-Rand	S	AQ	AQ	50		44	577,864	148,446	429,418							
Interserve	F	AQ	AQ	76		20	35,621	29,649	5,972		971				x	
Intertek Group	F	AQ	AQ	23	NP											
Invensys	F	AQ	AQ	64		54	112,866	28,608	84,258		20,363				x	
ITE Group	F	NR	NR													
ITT	S	AQ	AQ	67		26	302,609	85,156	217,453	*	21,509				x	
Jacobs Engineering Group	S	NR	NR													
Jardine Matheson	G	DP	–													
Keller	F	NR	IN													
Kier Group	F	AQ	IN	59		11	26,723	19,978	6,745		733				x	
Komatsu	G	AQ	AQ	63		20	449,000	152,000	297,000		2,665,900	x	x	x	x	
L-3 Communications Holdings	S	DP	NR													
Lockheed Martin	G, S	IN	DP													
Manitowoc	S	DP	NR													
Masco	S	AQ	AQ	53		68	657,454	289,170	368,284							
Meggitt	F	AQ	AQ	46	NP											
Melrose	F	NR	–													
Michael Page International	F	IN	AQ													
MITIE Group	F	AQ	AQ	47		23	32,280	32,280								
Mitsubishi	G	AQ	AQ	46		0.1	4,238	0	4,238		95,100		x			
Mitsubishi Electric	G	NR	AQ													
Mitsubishi Heavy Industries	G	AQ	AQ	44							245,000		x			
Mitsui & Co	G	AQ	AQ	46	NP											
Monster Worldwide	S	NR	NR													
Morgan Crucible	F	AQ	AQ	73		546	455,708	166,647	289,061	*						
Morgan Sindall	F	AQ	NR	46		4	11,450	6,535	4,915							x

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Mouchel Group	F	IN	AQ													
MTR Corporation	G	AQ	AQ	48		478	1,087,954	21,775	1,066,179		1,129†				x	x
National Express Group	F	AQ	AQ	63		287	792,944	413,980	378,964	*	1,824				x	x
Norfolk Southern	G, S	AQ	AQ	11												
Northrop Grumman	G, S	AQ	AQ	42												
PACCAR	G, S	DP	DP													
Pall	S	AQ	AQ	59		61	156,779	44,147	112,632							
Parker-Hannifin	S	AQ	AQ	48	NP											
Paypoint	F	DP	DP													
Philips Electronics	G	AQ	AQ	73		35	1,288,665	483,584	805,081	720,509	308,443,296	x	x	x	x	
Pitney Bowes	S	AQ	AQ	50		16	97,242	23,126	74,116							
Precision Castparts	S	NR	IN													
Pv Crystalox Solar	F	IN	IN													
QinetiQ Group	F	AQ	AQ	53		53	71,832	18,108	53,724		7,158				x	
R.R. Donnelley & Sons	S	NR	DP													
Raytheon	G, S	AQ	AQ	48		27	617,445	117,112	530,333							
Regus Group	F	DP	DP													
Rentokil Initial	F	AQ	AQ	68		113	273,091	246,862	26,229		870				x	
Republic Services	S	NR	–													
Robert Half International	S	IN	IN													
Rockwell Automation	S	AQ	AQ	64		17	96,150	9,980	86,170		17,870				x	
Rockwell Collins	S	AQ	AQ(L)	61		28	132,231	12,764	119,467							
Rolls-Royce	F	AQ	AQ	76		73	665,078	292,679	372,399		100,034,000	x	x		x	
RPS Group	F	AQ	AQ	58		16	7,527	4,912	2,615		1,216				x	
Ryder System	S	AQ	AQ	61		109	675,216	565,488	109,728							
Saint-Gobain	G	AQ	AQ	67		304	18,500,571	14,029,930	4,470,641							
Schneider Electric	G	AQ	AQ	60		22	558,200	240,200	318,000		7,200,000†		x	x	x	x
Secom	G	NR	NR													
Shanks Group	F	AQ	AQ	41	NP											
Siemens	G	AQ	AQ	85		33	3,540,000	1,480,000	2,060,000		1,051,200		x		x	
SIG	F	AQ	AQ	58	NP											
Smiths Group	F	AQ	AQ	32		52	121,268	121,268								
Southwest Airlines	S	IN	DP													
Spice	F	DP	–													
Spirax-Sarco Engineering	F	AQ	AQ	54	NP											
Stagecoach Group	F	AQ	AQ	59		691	1,217,943	898,300	319,643		25,666	x			x	
Stericycle	S	DP	–													
Stobart Group	F	DP	–													
Sumitomo Corporation	G	AQ	AQ	43	NP											
Textron	S	AQ	AQ	32	NP											
Tomkins	F	AQ	AQ	44		32	176,839	176,839			32,511				x	
Travis Perkins	F	AQ	AQ	48		50	158,201	96,604	61,597		9,040				x	

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[13]	Total Emissions[14]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[15]	Scope 3[16]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Tyco International	G, S	AQ	AQ	55	NP											
Ultra Electronics Holdings	F	DP	DP													
Union Pacific	G, S	AQ	AQ	39												
United Parcel Service	G, S	AQ	AQ	82		257	13,254,000	12,148,866	1,105,134		2,357,467	x	x		x	
United Technologies Corporation	G, S	AQ	AQ	70		35	2,081,907	968,080	1,113,827	*	76,028				x	
Vinci	G	AQ	AQ	78		61	2,885,000	2,695,000	190,000		18,349,131†	x	x	x	x	x
VT Group	F	AQ	AQ	75		214	94,741	24,057	70,684		83				x	
W.W. Grainger	S	AQ	AQ	42	NP											
Waste Management	G, S	AQ	AQ	60												
Weir Group	F	NR	NR													
Wincanton	F	AQ	AQ	14	NP											
Wolseley	F	AQ	AQ	33	NP											

13 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

14 Scope 1 and Scope 2 grid average reported emissions.

15 Where there is a * in this column, the company did provide detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

16 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

◆ Reported Scope 1 data was removed at time of going to press due to miscalculation in the submission, therefore intensity and total emission data were also removed. Please see full company response at www.cdproject.net for updated Scope 1 emission data.

Information Technology sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

Climate change may impose limits to the growth of the physical economy, but the information and communication technology sector can grow without limit, providing services like video communications substituting for physical travel. This dematerialization of the economy is vital, and may provide massive opportunities for ICT companies like Cisco, Hewlett-Packard and Apple as well as content providers of every kind.

Paul Dickinson, CEO, **Carbon Disclosure Project**

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Information Technology companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Information Technology
Response rate[1]	**70% (78 of 111)**
Global 500	95% (38 of 40)
S&P 500	72% (51 of 71)
FTSE 350	43% (9 of 21)
Overall sector rank (1-10)[2]	**6th**
Highest disclosure score	88
Lowest disclosure score	7
Average disclosure score	55
Overall emissions disclosure[3]	
Scope 1 emissions	76% (14 million Mt CO_2-e)
Scope 2 emissions[4]	79% (30 million Mt CO_2-e)
Scope 3 emissions	63% (189 million Mt CO_2-e)
Average emissions intensity[5]	37 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 or emissions totals divided by annual US$ million revenues for those sector respondents who disclosed emissions. Revenues based on data retrieved from Bloomberg on June 18, 2009.

Innovative systems solutions [at IBM] include the Stockholm smart traffic solution. Stockholm has seen approximately 20% less traffic, a 12% drop in emissions, and reported 40% additional daily users of public transportation.

IBM

This past year, we took the innovative step of reporting all carbon emission on a per-product basis. Apple's Product Environmental Reports detail the emissions associated with the earliest stages of product design through manufacturing to customer use and recycling. As an example of the progress we've made in just one product generation, the current 20-inch iMac has an 18% smaller carbon footprint than its 2008 predecessor.

Apple Inc.

Carbon disclosure trends in the Information Technology sector

The Information Technology sector is characterized as a trendsetter in creating products and services designed to improve energy efficiency and reduce greenhouse gas (GHG) emissions. Respondents portray an innovative sector that is ready to deliver a range of information and communication technologies (ICT), including virtual alternatives to physical products or activities (dematerialization), services for more efficient power transmission and distribution and building efficiency (smart grids and smart buildings), and services that optimize motors, transport routes and logistics.[6]

While respondents identified a number of regulatory, physical and other risks related to climate change, they clearly sense a reason for optimism as they will play a central role in the low-carbon economy. The sector is not homogeneous, however, and respondents have not reached identical levels of maturity and sophistication in dealing with climate change. Of the ten sectors analyzed, the Information Technology sector ranks sixth, according to its average disclosure score.

The Information Technology sector consists of three industries:

- The semiconductor industry, which designs, markets and sells chips for use in computers and electronic devices
- The software and services industry, which includes companies that create and provide information technology products, consulting, data processing and outsourced data storage services, application software, systems software and home entertainment software
- The technology hardware and equipment industry, which includes companies that design, market and sell communications equipment, computers, peripherals, personal electronics, home electronics, office electronics and instruments

In 2009, 70% (78) of Information Technology companies responded to the Carbon Disclosure Project, down one percentage point from 71% (75) in 2008. This response rate includes seven new companies that had not previously responded to CDP's Information Request and seven companies that have historically participated, but chose not to respond this year. Despite a decrease in the overall response rate, the sector made improvements in all key areas of disclosure and notable improvements in disclosing emissions reduction targets and forecasts (see Fig. A).

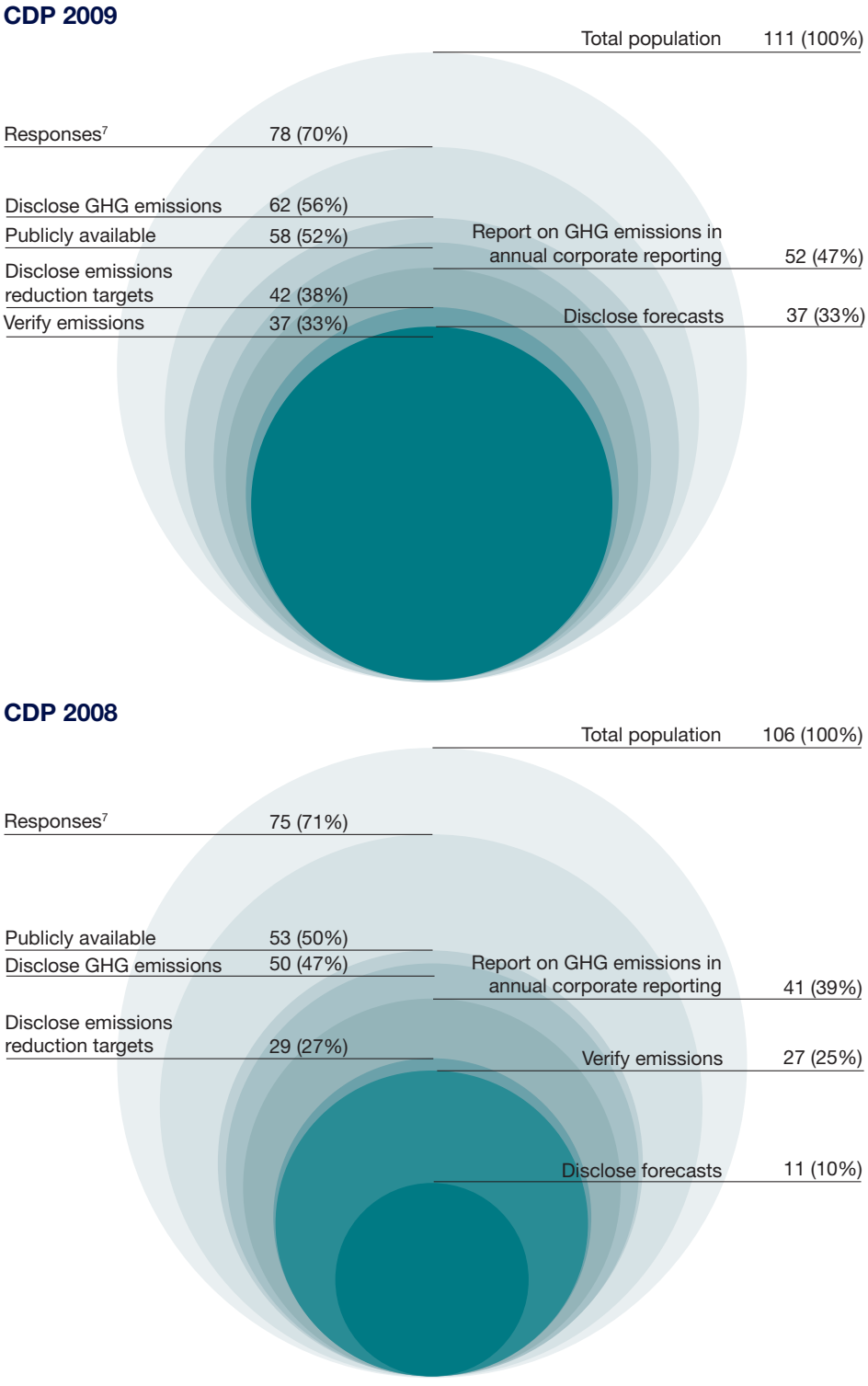
6 The Climate Group, *Smart 2020: Enabling the Low Carbon Economy in the Information Age (2008).*

Information Technology companies have a stronger rate of disclosing Scope 3 emissions compared with other non-carbon-intensive sectors. Their higher rate of Scope 3 tracking is attributed to semiconductor and hardware manufacturing companies that participate in supply chain coalitions and to the desire of software firms to track emissions reductions (e.g. employee commuting and business travel) that can help reduce costs, contribute to employee satisfaction and provide valuable experience in measuring the efficiency gains that industry innovations produce. Many respondents are members of the CDP Supply Chain and follow the code of conduct of the Electronic Industry Citizenship Coalition, an industry coalition that promotes climate stewardship throughout the supply chain.

European Union Information Technology respondents continue to show high levels of awareness of climate change, mirroring the strong agenda to curb GHG emissions in the region. Asian companies are responding to market research that shows consumer attitudes and behaviors have shifted toward more climate-friendly products; they are participating in voluntary carbon reduction programs in anticipation of regulation. In Silicon Valley – the epicenter of the US Information Technology industry – companies are subject to California's efforts to implement statewide climate regulations, and Information Technology employees are highly aware of climate concerns.

Among respondents, leading companies are actively working to meet customers' needs and empower them through the design of more-climate-sensitive and more-energy-efficient products and services.

Fig. A: Year-on-year disclosure rates, as a proportion of total Information Technology companies (Global 500, S&P 500 and FTSE 350)



7 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

At Cisco, worldwide utilization of Cisco TelePresence units remains near 50% based on a 10-hour day. The impact of increasingly pervasive TelePresence, WebEx, and MeetingPlace use is clear. Where changes in revenue and air travel once moved in sync, air travel in fiscal year 2008 was essentially flat compared with fiscal year 2006 even though revenue and head count increased 40%.

Cisco Systems

Fig. B: Disclosure score leaders for the sector[8]

Global 500 leaders

Company name	Disclosure score
Cisco Systems	88
Samsung Electronics	87
Hewlett-Packard	86
EMC	82
Intel	78
Nokia Group	78

S&P 500 leaders

Company name	Disclosure score
Cisco Systems	88
Hewlett-Packard	86
Advanced Micro Devices	82
EMC	82
Intel	78

FTSE 350 leaders

Company name	Disclosure score
Logica	77
Dimension Data Holdings	74
Premier Farnell	61
Electrocomponents	60
Xchanging	59

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization

Company name	Index
Activision Blizzard	Global 500
Paychex	Global 500, S&P 500
Western Union	S&P 500
BMC Software	S&P 500
Electronic Arts	S&P 500

Information Technology leaders for carbon disclosure are listed above in the order of their disclosure scores.[9] While the remaining Information Technology respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

One-third of Information Technology companies (30%, or 33 companies) chose not to participate. The largest non-respondents are listed above based on their market capitalization.[10]

When compared with a cross-sector group of global leaders for carbon disclosure,[11] Information Technology respondents closely followed the leaders in several key areas, including reporting climate-related information to the public, disclosures of Scopes 1 and 2 emissions and participation in emissions trading systems. However, their scores were far lower for nearly all other areas – particularly, energy intensity, energy use and the disclosure of emissions reduction targets (see Fig. D).

8 The companies included in this list are leaders in their sector for each of the indexes. However, they may not appear in the Carbon Disclosure Leadership Index (CDLI) for the index overall when all ten sectors are considered.

9 For more about the disclosure scoring methodology, see www.cdproject.net /2009CDLImethodology.asp.

10 Market data retrieved from Bloomberg as of June 18, 2009.

11 The 2009 Global 500 CDLI is an index of the top 10% of companies with the highest disclosure scores in the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net.

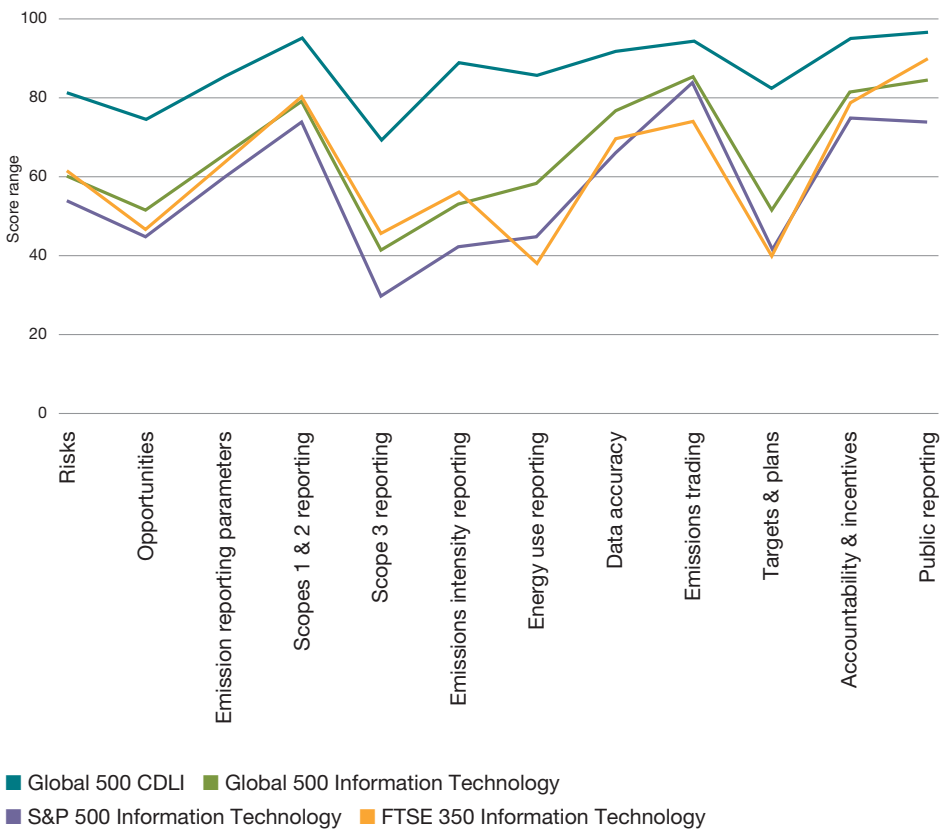
At least one large, global Information Technology company outlined why it does not use intensity metrics to measure CO_2 [carbon dioxide] reductions and why this metric should be used with caution. The company conducts business in more than 160 countries and manages a diverse range of businesses, which makes intensity difficult to measure with precision.

"IBM does not use intensity metrics (whether it is based on activity, production, financials, etc.) to measure its CO_2 emissions reduction. For instance, we could have two data centers with identically equipped, state-of-art hardware, producing the same revenue and subject to the same stringent company energy management goals and practices, yet they would have very different performances against a financial emissions intensity measurement simply due to the fact that one might be located in UK and one in Australia."
IBM

Japanese company FujiFilm Holdings Corporation mentioned that running a global operation presents difficulties in measuring and forecasting energy use.

"The Japanese government is currently preparing to amend the Energy Conservation Law to ascertain accurately the energy consumed by individual companies from the year 2010. In preparation for this amendment, since April 2009 companies have been required to ascertain energy use at all sites. Since FujiFilm has plants in the United States, Europe, and other areas in addition to Japan, even greater caution is needed with regard to these regulatory guidelines."
FujiFilm Holdings Corporation

Fig. D: Score breakdown for Information Technology within each index versus the global leaders



A subsidiary company of Toshiba(Vietnam) uses Toshiba's high concentration organic wastewater treatment technology to recover biogas, a flammable mixture of methane and carbon-dioxide gas resulting from bacterial decomposition of organic matter from wastewater discharged by starch factories in Vietnam. The project meets the CDM requirement of cutting greenhouse gas emissions, and also lowers the fuel costs of the starch factories. In FY2009, this company will construct a plant able to recover greenhouse gases equivalent to emission of approximately 70,000 tons of CO_2 a year.

Toshiba

As the economic position stabilizes, we anticipate that attention will turn to costs and efficiencies, which provides more opportunity for green technologies.

Electrocomponents

Risks and opportunities

Information Technology respondents received average disclosure scores for reporting risks and opportunities. Among them, 72% (53) anticipate regulatory, physical or general risk related to climate change, and 89% (66) said climate change presents opportunities.

Physical risks that could disrupt a company's supply chain or operational efficiency were reported by 62% (21) of Global 500 respondents, 53% (27) of S&P 500 respondents and 44% (4) of FTSE 350 respondents. Most cited increased storm and hurricane activity as well as drought, flooding and other water resource concerns.

Similar proportions of Information Technology companies reported regulatory risks as physical risks. Regulatory risks related to climate change were reported by 56% (19) of Global 500 respondents, 57% (29) of S&P 500 respondents and 67% (6) of FTSE 350 respondents. Respondents cited rising costs for energy, utilities and resources as an indirect risk related to regulatory change as well as risk involved in adapting to new energy efficiency standards.

Semiconductor and hardware companies, due to the nature of their industries, expect a more direct regulatory impact from statutory emissions limits and energy efficiency standards and are working side by side with policy makers to raise awareness of industry needs.

Taiwan Semiconductor Manufacturing, for example, stands out as active in policy discussions and in sharing its experience in measuring GHGs as a means of shaping the details of the Greenhouse Gas Reduction Act in Taiwan.

Intel has founded a consortium of ICT companies and climate-oriented non-governmental organizations called Digital Energy Solutions Campaign to advocate for the industry with government leaders.

Overall, the Information Technology sector is poised to provide a range of services and new technologies for other businesses striving to meet their emissions reduction targets. As a result, respondents often cited potential opportunities – particularly in the contexts of tighter energy efficiency standards, rising fuel costs and regulation that could drive shifts in consumer demand. Regulatory opportunities were noted by 91% (31) of Global 500 respondents, 80% (41) of S&P 500 respondents and 67% (6) of FTSE 350 respondents in the sector.

Innovation continues to drive the advances that lower power consumption, reduce carbon output and eliminate waste for Information Technology respondents and their customers.

"Hewlett-Packard is consolidating its 85 legacy data centers into 6 data centers in three cities, each equipped with the latest energy-efficient equipment and Dynamic Smart Cooling technology. This is saving enough electricity to power all the homes in the city of Palo Alto, California, for more than a year. When the initiative is complete and fully optimized, we anticipate yearly energy savings from data center consolidation up to 380 million kilowatt-hours and annual cost savings of up to $30 million."
Hewlett-Packard

"During fiscal year 2008, customers using a variety of Intuit's products (including QuickBooks, TurboTax, Intuit Payroll, etc.) avoided approximately 8,000 $MtCO_2$-e [metric ton carbon dioxide equivalent] by avoiding the printing and mailing of paper. Approximately 590 million sheets of paper were saved by e-mailing or e-filing through Intuit's products."
Intuit

Innovation also plays a role in how respondents approach manufacturing and design. **Motorola** has developed a carbon-free phone, incorporating recyclable materials and utilizing carbon offsets. **Apple Inc.** has engineered new techniques for charging batteries – extending their life to three times the industry norm – and reducing the number of batteries that need to be manufactured and shipped. Many semiconductor respondents are designing chips that use less energy than those of their predecessors.

Physical risks may affect not only our own operations but also the businesses of our suppliers and clients. This may mean, for example, the disruption of data center operations or the ability of suppliers to provide necessary [information technology] hardware. Directly or indirectly, such risk may affect the financial stability of suppliers and customers in different parts of the world and, in turn, reflect on Dimension Data's own business performance.

Dimension Data Holdings

At the headquarters site, we've already had to import large amounts of soil to raise the grades on the new building under development to be above the 100-year flood plain.

NetApp

Complete company responses to CDP can be downloaded from www.cdproject.net

Accenture is working with Xcel Energy to build the world's first Smart Grid City, in Boulder, Colorado. If Smart Grid allows consumers in Boulder to reduce their electricity usage by just 2.5 percent, Xcel Energy will be able to cut carbon emissions by more than 1 million tons annually.

Accenture

It is clear that customer purchasing behavior has changed toward environmentally friendly products such as energy saving and RoHS [reduction of hazardous substances]. If a company cannot follow this trend, the company will be out of business.

Samsung Electronics

Insights from the performance score pilot

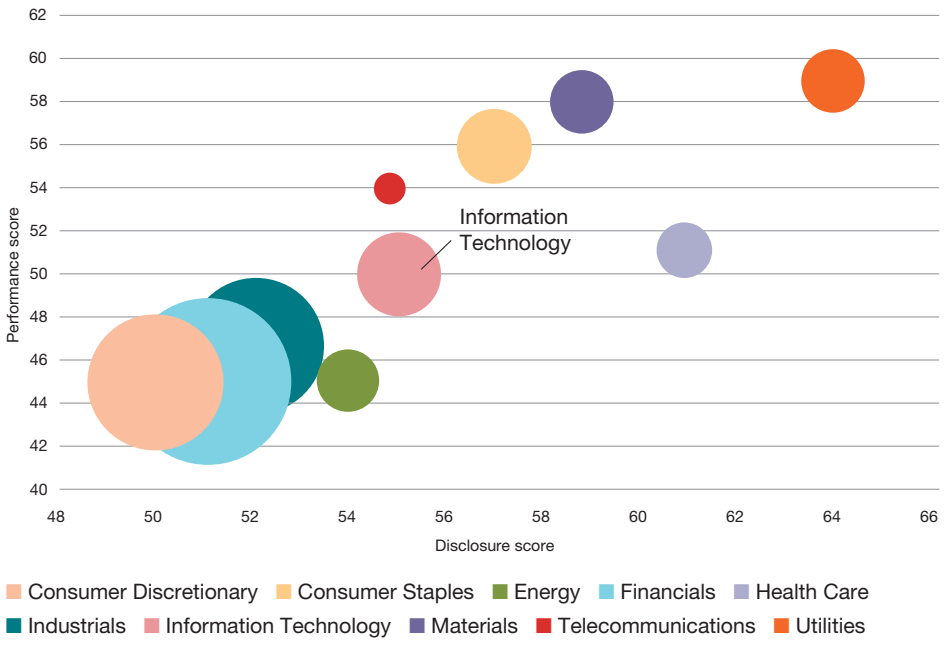
The CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Information Technology sector scored sixth overall for disclosure and performance. The chart below shows how the sector compares with the other sectors for performance.

As 2009 is the first year of use of the performance scoring methodology,[12] individual company performance scores are not shown in the CDP 2009 reports, but we provide comment on initial findings below:

- Four Information Technology respondents – **Accenture**, **Cisco Systems**, **EMC** and **Nokia Group** – tied for the top-performing companies;
- Compared with all other sectors, the Information Technology sector received comparable performance scores in all but one category: the development of products and services that help consumers reduce GHGs. Within that category, Information Technology companies excel; and
- Global 500 Information Technology companies also tend to outperform their sector peers in the S&P 500 and FTSE 350 in creating emissions reduction plans and having accountability and incentive structures in place to drive employees to meet those targets.

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

12 For more about the performance scoring methodology, see http://www.cdproject.net/2009CDLImethodology.asp

Other areas show signs that the Information Technology sector is improving its overall response to climate change. The majority of respondents have a Board member or executive body with overall responsibility for climate change (70%, or 52 companies). More than half have GHG emissions reduction targets (57%, or 42 companies) and 43% (32 companies) have incentives in place to encourage accountability to those targets.

Overall, Information Technology respondents have relatively high rates of disclosing GHG emissions to the public in annual corporate reports or other mainstream filings (70%, or 52 companies) and of publishing corporate social responsibility reports (66%, or 49 companies).

Conclusion

While Information Technology companies forecast that their emissions will increase with demand, the potential for this sector overall to reduce global emissions by industrializing technologies seems without limit. Videoconferencing could lead to significant reductions in business air travel, and consequently, significant reductions in emissions. Broadband networks can theoretically reduce energy consumption by making infrastructure smarter. Dematerialized products and services – those without physical limitations – may become important differentiators for companies in societies seeking to reduce their consumption and minimize waste. At the same time, broadband will grow consumption of communications, education, entertainment and other forms of information exchange.

Respondents from the Information Technology sector are optimistic that increasing awareness of carbon issues and new regulations will expand the marketplace for their products and services as businesses and consumers search for inventive and cost-effective methods to reduce, mitigate and measure their own carbon footprints. Despite this, carbon disclosure scores are only average for the Information Technology sector compared with other sectors in the economy. This provides a great opportunity for lower-scoring companies to learn from sector leaders and improve their disclosures in years to come.

Rising fuel costs and limits on organizations' overall carbon footprints could encourage large-scale telework initiatives such as Sun's in-house Open Work [flexible work] program and drive adoption and use of Sun's cloud-computing initiative.

Sun Microsystems

As a software developer, there is a major upside to regulatory risks associated with the climate. Some of Adobe's software provides Internet-based conferencing and training, which supports travel reduction.

Adobe Systems

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Information Technology scores and emissions by company[13]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Accenture	G	AQ	AQ	76		6	153,580	8,262	145,318	*	413,042				x	
Activision Blizzard	G	NR	–													
Adobe Systems	G, S	AQ	AQ	60		5	19,567	3,241	16,326		17,221				x	
Advanced Micro Devices	S	AQ	AQ	82		76	439,503	84,719	354,784		394,166		x	x	x	
Agilent Technologies	S	AQ	AQ	62		22	124,318	14,134	110,184		35,000				x	
Akamai Technologies	S	NR	DP													
Altera	S	IN	AQ													
Amphenol	S	NR	–													
Analog Devices	S	AQ	DP	44	NP											
Apple Inc.	G, S	AQ	AQ	73		4	135,324	22,633	112,691	*	9,912,394	x	x	x	x	
Applied Materials	G, S	AQ	AQ	57		25	199,944	30,897	169,047		45,206				x	
ARM Holdings	F	AQ	DP	54	NP											
Autodesk	S	AQ	AQ	77		10	22,067	2,272	19,795		25,115				x	
Automatic Data Processing	G, S	AQ	DP	32		4	36,312	15,849	20,463							
Autonomy Corporation	F	NR	NR													
Aveva Group	F	IN	DP													
Axon Group	F	DP	–													
BMC Software	S	NR	AQ													
Broadcom	S	AQ	DP	48		6	27,057	2,162	24,895		875				x	
CA	S	AQ	AQ	69		21	88,621	3,828	84,793	*	16,109				x	
Canon	G	AQ	AQ	66		881	1,116,983	179,964	937,019		5,449,000	x	x	x		
Ciena	S	DP	DP													

13 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Cisco Systems	G, S	AQ	AQ	88		15	598,382	51,620	546,762	307,143	197,951				x	
Citrix Systems	S	NR	AQ													
Cognizant Technology Solutions	S	AQ	NR	53		52	146,574	22,981	123,593		35,964				x	
CSC	S	NR	NR													
Compuware	S	AQ	AQ	7	NP											
Convergys	S	DP	AQ													
Corning	G, S	AQ	AQ	57		212	1,262,281	329,629	932,652	*						
CSR	F	AQ	AQ	46		6	4,243	255	3,988		3,714				x	
Dell	G, S	AQ	AQ	66		7	406,252	30,780	375,472	313,837	93,382				x	
Dimension Data Holdings	F	AQ	AQ	74		15	67,595	12,409	55,186		23,620				x	
Domino Printing Sciences	F	DP	–													
eBay	G, S	AQ	AQ	59		14	116,618	6,210	110,408		10,198				x	
Electrocomponents	F	AQ	AQ	60		23	20,994	2,698	18,296	*	1,902				x	
Electronic Arts	S	NR	NR													
EMC	G, S	AQ	AQ	82		25	371,620	35,850	335,770		60,500				x	
Ericsson	G	AQ	AQ	63		8	224,000	28,000	196,000	*	4,815,000	x	x	x	x	
Fiserv	S	AQ	AQ	17	NP											
FujiFilm Holdings Corporation	G	AQ	AQ	71		43	1,361,398	794,722	566,676		949,825	x	x			
Google	G, S	AQ	AQ	53												
Halma	F	NR	AQ													
Harris	S	NR	–													
Hewlett-Packard	G, S	AQ	AQ	86		21	2,449,378	303,844	2,145,534	2,094,321	5,926,506	x	x	x	x	
Hitachi	G	AQ	AQ	69	NP											
Hon Hai Precision Industries	G	AQ	AQ(L)	52	NP											
Infosys Technologies	G	AQ(L)	AQ(L)													
Intel	G, S	AQ	AQ	78		93	3,500,000	1,000,000	2,500,000	1,800,000	43,670,000	x	x	x	x	
IBM	G, S	AQ	AQ	77		29	2,961,791	580,344	2,381,447	2,214,000					x	
Intuit	S	AQ	AQ	23		14	41,525	6,840	34,685		18,548†			x	x	
Jabil Circuit	S	AQ	NR	66		38	488,145	23,811	464,334		16,021				x	
JDS Uniphase	S	AQ	AQ	43		39	59,797	8,376	51,421		5,466				x	
Juniper Networks	S	AQ	AQ	66		16	55,655	3,592	52,063		19,045				x	
KLA-Tencor	S	DP	NR													
Kyocera Corporation	G	AQ	AQ	56	NP											
Lexmark International	S	AQ	AQ	53		43	196,454	19,353	177,101		10,916				x	
Linear Technology	S	NR	NR													
Logica	F	AQ	AQ	77		27	97,668	45,814	51,854	51,854	46,158		x		x	
LSI	S	AQ	AQ	76		34	91,651	7,623	84,028		7,491				x	

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
MasterCard	G, S	AQ	–	51	NP											
MEMC Electronic Materials	S	NR	NR													
Micro Focus International	F	NR	NR													
Microchip Technology	S	NR	NR													
Micron Technology	S	AQ	DP	17		314	1,836,563	779,055	1,057,508							
Microsoft	G, S	AQ	AQ	70		14	845,925	46,066	799,859	*	347,738†			x	x	x
Misys	F	NR	DP													
Molex	S	AQ	AQ	33						*						
Moneysupermarket.com Group	F	AQ	AQ	34	NP											
Motorola	S	AQ	AQ	52		18	531,661	38,768	492,893		136,866				x	
National Semiconductor	S	AQ	NR	55		181	340,884	168,495	172,389							
NetApp	S	AQ	AQ(L)	23												
Nintendo	G	AQ	AQ	15	NP											
Nokia Group	G	AQ	AQ	78		4	279,300	14,700	264,600	*	5,252,500	x	x	x	x	
Novell	S	NR	NR													
Novellus Systems	S	AQ	AQ	56	NP											
NTT Data[18]	G	AQ	AQ													
NVIDIA	S	AQ	AQ	34		6	23,296	1,318	21,978		4,379				x	
Oracle	G, S	AQ	AQ	35												
Paychex	G, S	NR	NR													
Premier Farnell	F	AQ	AQ	61		32	23,926	4,909	19,017		1,194				x	
QLogic	S	AQ	DP	44	NP											
Qualcomm	G, S	AQ	AQ	48		8	90,616	43,922	46,694							
Renishaw	F	NR	AQ													
Research In Motion	G	AQ	DP	44		4	36,933	9,313	27,620		20,746				x	
Rotork	F	NR	AQ(L)													
Sage Group	F	AQ	AQ	46		12	15,091	3,575	11,516							
salesforce.com	S	NR	–													
Samsung Electronics	G	AQ	AQ	87		97	9,319,257	4,043,115	5,276,142	*	96,104,520	x	x	x	x	
SanDisk	S	DP	DP													
SAP	G	AQ	AQ	54		14	224,000	110,000	114,000		185,000†				x	x
Spectris	F	IN	IN													
Spirent Communications	F	NR	AQ													
Sun Microsystems	S	AQ	AQ	55		17	241,702	9,670	232,032		81,926				x	
Symantec	G, S	AQ	AQ	52		28	163,243	0	163,243	*	54,000				x	
Taiwan Semiconductor Manufacturing	G	AQ	AQ	71		410	4,158,205	2,016,969	2,141,236	*	2,081,072		x	x	x	
Tata Consultancy Services	G	AQ	AQ	69		51	290,436	36,509	253,927		51,539				x	
Telecity Group	F	NR	–													

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[14]	Total Emissions[15]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[16]	Scope 3[17]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Tellabs	S	AQ	AQ	48	NP											
Teradata	S	AQ	AQ	38	NP											
Teradyne	S	AQ	AQ	53		22	24,208	2,468	21,740		8,398				x	
Texas Instruments	G, S	AQ	AQ	56												
Toshiba	G	AQ	AQ	51		34	2,914,000	1,166,000	1,748,000		10,365,000	x	x			
Total System Services	S	AQ	AQ	22	NP											
Tyco Electronics	S	AQ	AQ	31												
Verisign	S	NR	NR													
Western Union	S	DP	NR													
Xchanging	F	AQ	AQ	59		18	9,853	1,097	8,756		887				x	
Xerox	S	AQ	AQ	59		23	408,862	154,493	254,369							
Xilinx	S	AQ	AQ	47	NP											
Yahoo Japan[18]	G	AQ	AQ													
Yahoo!	G, S	AQ	AQ	22	NP											

14 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

15 Scope1 and Scope 2 grid average reported emissions.

16 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

17 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

18 This company answered CDP 2009 in Japanese and was therefore not scored.

Materials sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

Increasing tropical cyclones and other extreme weather events potentially pose the greatest risk, especially in Asia, Australia, and Latin America. These present physical risks to our offshore petroleum operations, including impacts on personnel as well as loss of business continuity, production interruption, and damaged or lost facilities. Combined with local sea-level changes, such extreme weather events also increase the risk of damage and disruption to our onshore operations located near coastlines.

BHP Billiton

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions, and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Materials companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Materials
Response rate[1]	**77% (58 of 75)**
Global 500	89% (31 of 35)
S&P 500	79% (23 of 29)
FTSE 350	65% (15 of 23)
Overall sector rank (1-10)[2]	**3rd**
Highest disclosure score	94
Lowest disclosure score	11
Average disclosure score	59
Overall emissions disclosure[3]	
Scope 1 emissions	91% (907 million Mt CO_2-e)
Scope 2 emissions[4]	88% (240 million Mt CO_2-e)
Scope 3 emissions	36% (1,318 million Mt CO_2-e)
Average emissions intensity[5]	1,197 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

Carbon disclosure trends in the Materials sector

Materials companies account for 7% of the Global 500, 6% of the S&P 500 and 7% of the FTSE 350 invitees. The sector is both large and diverse, including companies involved in extractive industries (mining and metals), chemicals, heavy manufacturing and forestry.

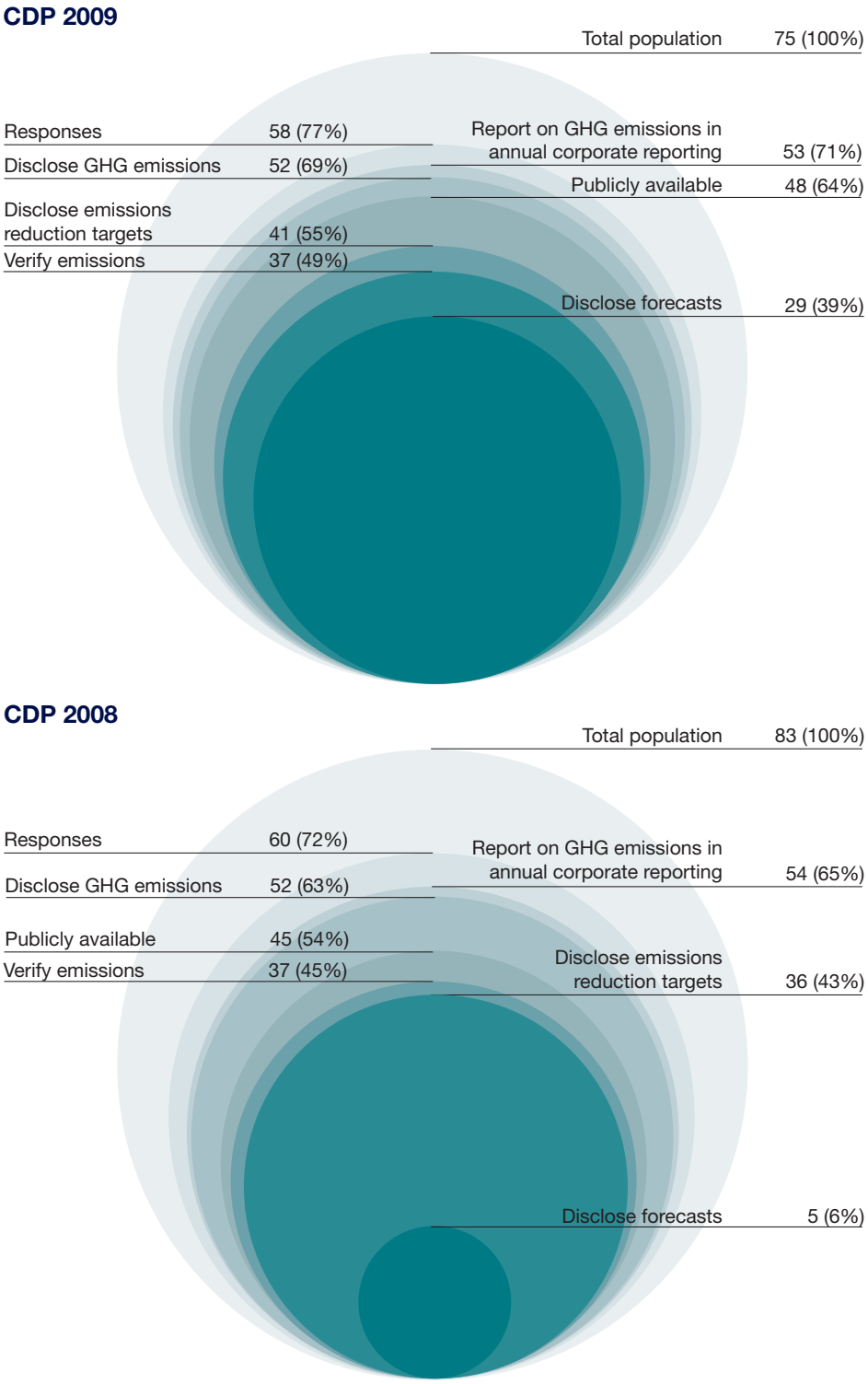
Respondents from the Materials sector typically operate in carbon-intensive industries that are relatively mature in terms of regulatory obligations around climate change (especially in Europe). On the basis of this year's responses, key pressure points for the sector include physical risks to fixed assets and raw material supplies, the extension of carbon regulation at a global/regional level, and the increasing customer focus on the level of embedded carbon in final products.

The effects of the economic downturn were cited in many company responses as having had a significant impact on the sector over the past year. This is underpinned by the fact that the Materials sector has seen the largest fall in the number of companies represented in the Global 500 compared with CDP 2008.

The economic slowdown has, however, had other consequences. For energy-intensive industries covered by the European Union's Emissions Trading System (EU ETS), a contraction of output has meant that many have accrued surplus carbon allowances. In steelmaking for example, **WorldSteel** estimates that EU steel production fell by more than 43% for the six months from January to June 2009 compared with the same period last year.[6] This equates to saving the equivalent of around 85 million metric tonnes of carbon dioxide (CO_2-e).

Notwithstanding the challenges facing the sector, the overall response rate[7] for Materials is an impressive 77% – a performance not dissimilar to CDP 2008.

Fig. A: Year-on-year disclosure rates, as a proportion of total Materials companies (Global 500, S&P 500 and FTSE 350)



6 See June 2009 Crude Steel Production statistics at http://www.worldsteel.org.

7 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

Through Climate Leaders, CCX, and EU ETS participation, IP has formed opinions about how emissions should be counted and registered. IP engages directly with our elected leaders on this topic. We have formed our opinions about climate change regulation over a number of years and are willing to share those opinions with others.

International Paper

The most significant impact of climate change on MONDI Group's operations is likely to arise from changes in the availability of water – in particular, in the incidence and duration of droughts.

Mondi

Fig. B: Disclosure score leaders for the sector[8]

Global 500 leaders

Company name	Disclosure score
BASF	94
Rio Tinto	87
Lafarge	84
Praxair	83
BHP Billiton	82

S&P 500 leaders

Company name	Disclosure score
Praxair	83
PPG Industries	81
E. I. du Pont de Nemours	80
Air Products & Chemicals	74
Newmont Mining	70

FTSE 350 leaders

Company name	Disclosure score
Rio Tinto	87
BHP Billiton	82
Xstrata	68
Mondi	67
Antofagasta	60

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization[9]

Company name	Index
Mosaic Company	Global 500
Southern Copper Corporation	Global 500
Vulcan Materials	S&P 500
CF Industries Holdings	S&P 500
Randgold Resources	FTSE 350

8 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the CDLI for the index overall when all ten sectors are considered.

9 Market data retrieved from Bloomberg as of June 18, 2009.

Materials companies show modest improvements in many of the disclosure metrics and a 10-percentage-point increase in those respondents choosing to make their CDP submission publicly available. The most significant progress, however, is in the areas of disclosing emission reduction targets and forecasting emissions. This may be due to the question (23.13), which allows companies to explain their forecasting plans this year, thus removing some of the commercial sensitivity. Disappointingly, less than half the respondents have their emissions verified by an external party, the overwhelming majority of which are US-based.

When compared with a cross section of global leaders for disclosure, Materials respondents closely followed the leaders in the quality of Scopes 1 and 2 emissions reporting, accountability, and incentive structures to reduce emissions and public reporting in annual reports or other mainstream filings. However, they lag in all other

Praxair is the technology lead on a state-of-the-art demonstration project for carbon capture and storage (CCS) with the City of Jamestown, New York, Board of Public Utilities and several other private and public entities.

Praxair

From a medium- and long-term perspective, we are likely to see changes in the margins of our greenhouse-gas-intensive assets as a result of regulatory impacts in the countries in which we operate...Inconsistency of regulations – particularly between developed and developing countries – may also change the attractiveness of the locations of some of our assets.

BHP Billiton

areas, particularly in reporting of Scope 3 emissions, emissions intensity, energy use, and disclosing targets and plans to reduce emissions (see Fig. D).

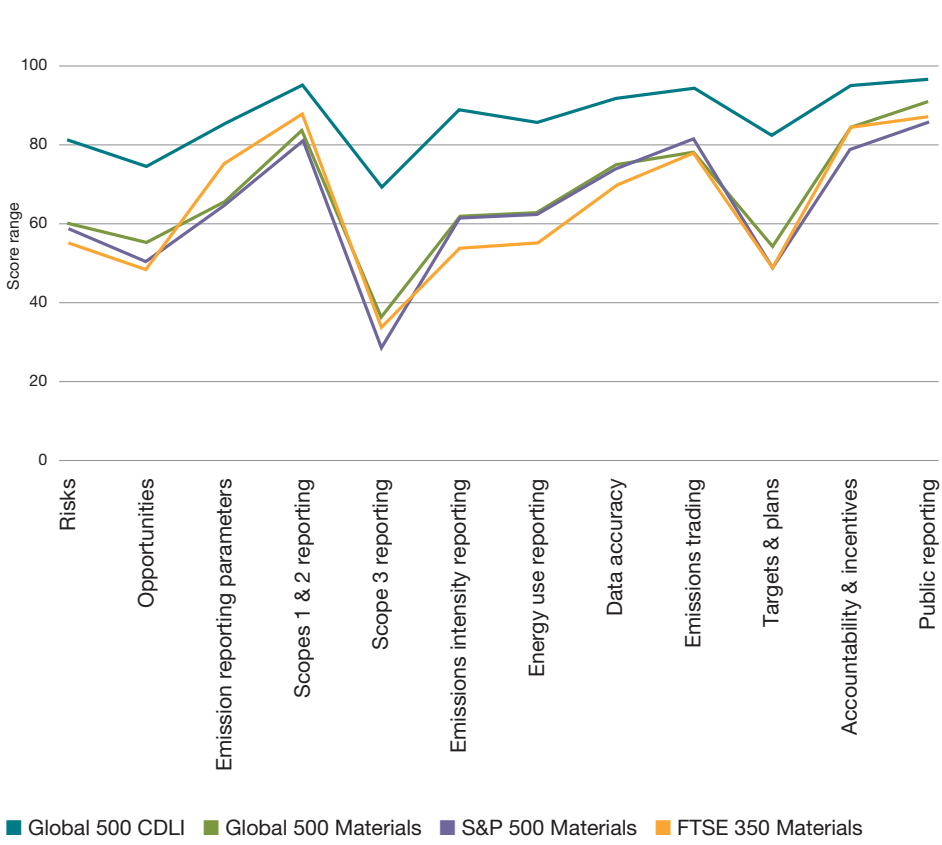
Materials leaders for carbon disclosure are listed in Fig. B in the order of their disclosure score.[10] While the remaining Materials respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

Several Materials companies (23%, or 17 companies) chose not to participate. The largest non-respondents are listed in Fig. C based on their market capitalization.

In 2009, Materials respondents account for 12% of the CDLI[11] for the Global 500; this clearly indicates that Materials is punching above its weight with respect to disclosure (relative to its weighting within the Global 500 population). **BASF** is the second-top-scoring company in the overall leadership table and among the Global 500 leaders. **Praxair** and **Rio Tinto** also appear in the leadership table.

All three companies note the development of new technology as crucial to gaining competitive advantage in the transition to a low-carbon economy. In order to achieve results in this area, the leaders are involved with next-generation production processes and the demonstration of new technology on a commercial scale and have developed strong financial incentives to innovate carbon abatement solutions. High-scoring companies have dedicated departments or cross-departmental working groups to focus on the climate change agenda.

Fig. D: Score breakdown for Materials within each index versus the global leaders[12]



10 For more about the disclosure scoring methodology, see www.cdproject.net/2009CDLImethodology.asp.

11 The Carbon Disclosure Leadership Index (CDLI) identifies the top 10% of each financial index with the highest disclosure scores. To view a complete list of the companies in the CDLI, see http://www.cdproject.net/carbon-disclosure-leadership-index.asp.

12 The 2009 Global 500 Carbon Disclosure Leadership Index is an index of the top 10% of companies with the highest disclosure scores in the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net.

Risks and opportunities

Despite the economic challenges, the sector appears very much engaged in emissions reduction activities. Respondents report that significant investment (in research and development and through capital investment programs) is already under way, and this will help position the sector well in a carbon-constrained environment over the long term.

Investments aiming to mitigate climate change through improvements to operations or products, but that have uncertain payback, may be driven by shifts in customer attitudes and behaviors toward climate change awareness and in demand for lower-carbon products. Responses to CDP 2009 also suggest that indirect impacts (such as water use and social aspects) are receiving scrutiny comparable to the direct emissions from production.

Respondents from all industries within Materials recognize that regulation, whether current or pending, poses a risk to their businesses. A third of Materials respondents cited increased energy and raw materials costs as a significant risk. The mining industry, in particular, expressed concern over the continued availability and cost of natural resources and the impact this may have on corporate strategy.

For European respondents, there is an expectation of higher compliance costs for assets covered by the existing EU ETS in the future. The introduction of the UK's Carbon Reduction Commitment was also mentioned, although this may create a smaller direct financial impact. The mind-sets among some Materials respondents differ markedly, with high-scoring companies seeing the imposition of new regulation as an opportunity to transfer knowledge from existing programs (such as the EU ETS), whereas those scoring less well are focused on potential penalties and impacts on their cost bases.

In mining, **BHP Billiton**, ranked second among Materials companies in the FTSE 350 leadership table, has been an active participant in the carbon markets and notes that *"to date, the costs of meeting our EU ETS compliance obligations have been met by the economic benefits of our trading activities."* Mining companies also stressed the climatic benefit derived by the use of platinum in the production of catalytic converters in the automotive industry.

Linde, the gases and engineering company, is supportive of market-based instruments for carbon mitigation but cautions that the design of such measures may impact the structure of the value chain for certain products.

Among the steel companies, two concerns are consistently raised by CDP respondents:

- Existing production processes are close to their technical limits, and new techniques will take time to develop; and
- Steel is sold in a global marketplace and the existence (and strengthening) of measures such as the EU ETS creates the possibility of carbon "leakage," where production is incentivized to relocate overseas.

This is something that the European Commission was cognizant of in its recent review of the EU ETS and remains a topic of much debate in Australia as plans are finalized for the introduction of the Carbon Pollution Reduction Scheme.

Aside from regulatory risks, physical risks from climate change were noted by 87% (26) of the Global 500, 65% (15) of the S&P 500 and 93% (13) of the FTSE 350 Materials sector respondents. Resource scarcity is the prime concern, as are the increased incidences of storms, flooding, and droughts. Understandably, the forestry industry stated that water availability was a key risk to the business both for forest growth and for pulp and paper operations.

Linde fundamentally supports the EU's goal of reducing greenhouse gas emissions in the medium term through the market-based system of emission trading. We are concerned, however, that the Commission's draft could generate adverse incentives amongst the major customers in our industry – refineries and customers from the steel and chemicals industry – which would lead to greater emissions of CO_2.

Linde

Rio Tinto Alcan is a leader in the development of energy-efficient aluminium smelting technology. In an energy- and carbon-constrained world, operating and selling this technology will become a competitive advantage.

Rio Tinto

Complete company responses to CDP can be downloaded from www.cdproject.net.

Significant changes to precipitation and temperature may cause instability in waste rock or tailings covers. We have just completed initial research and analysis in-house as to which sites may be at risk. Barrick's water supply may be compromised in areas that will be susceptible to increased drought.

Barrick Gold

Climate change has the potential to impact our assets, people, and operations through the long-term availability of water for operations, energy security, disruption to linear infrastructure, flooding affecting mines, storms affecting port availability and rail power supply, and changes in life-of-mine projections. Changes in precipitation patterns may reduce the amount of water available for business activities, increase competition for available water and increase the cost of water.

Anglo American

Disruption from adverse weather conditions is a risk identified by many respondents from the mining industry. Companies have responded to the threat of extreme weather events by developing emergency plans and also by enhancing the structural designs of their physical assets.

The final area of risk reported by Materials companies is reputation, although only 23% (13) of respondents from the sector identified this as a concern. This may reflect the fact that isolating the climate change element within a broader suite of sustainability issues is often difficult. For some industries, such as mining, reputational risks are more often associated with localized issues, such as mine tailings and water consumption.

In addition to the risks outlined above, 100% (30) of the Global 500, 87% (20) of the S&P 500 and 93% (13) of the FTSE 350 Materials sector respondents said regulation also presents opportunities. Key areas of opportunity include:

- New techniques and products to help other industries reduce emissions (chemicals);
- New markets for the forestry industry, which aims to create value by sequestering carbon and generating carbon credits/offsets (forestry); and
- Demand for upgraded physical infrastructure that is resilient to more extreme weather events (steel).

Respondents from the chemicals industry were particularly optimistic that the climate change imperative would require new production techniques to be developed that would present opportunities. Carbon capture and storage was one area cited, as were advanced processes for hydrocarbon refining.

"Regulatory requirements that enforce the application or use of energy-saving products or technologies in these sectors (e.g. building sector, automotive sector) lead to a market pull for existing and demand for new products of the chemical industry. Therefore current and future regulatory requirements are connected with business opportunities for BASF as they increase the demand for existing products, open up new markets, and boost access to market shares."
BASF

"The greatest opportunity for us is in making a contribution to reducing carbon emissions through the development of low-carbon, resource-efficient technologies to service the needs of our customers. We believe that Johnson Matthey's products will provide some of the key enabling technologies which will help in meeting global-warming-reduction targets."
Johnson Matthey

Although the forestry industry has endured a difficult year, with falling profitability and excess capacity, especially in Europe and North America, there are some indications that a few CDP respondents are looking at possible opportunities around carbon as part of their longer-term business strategy. Large timberland investors and integrated paper producers, for example, are looking to see whether markets evolve that would attach a long-term price to carbon storage or value the ecosystem functions provided by indigenous forests.[13]

"In recent years MONDI Group has been developing an approach called responsible forestry, a science-based method involving key stakeholders. The new-generation plantations that are resulting from this approach reflect the greatest improvement, because of their short, seven- to nine-year rotations (the time from planting to logging). The carbon sequestration ability of forests could result in favourable conditions for extension of forest plantations in South Africa."
Mondi

13 For further discussion, see Sukhdev (2008). The Economics of Ecosystems and Biodiversity: An Interim Report. Report to the European Commission.

Finally, the changing climate is likely to alter the performance specification of physical infrastructure – from bridges to power plants, to automobiles. Steelmakers are aware of this, and a number noted opportunities including greater demand for lightweight steels and high-strength steels. The steel industry is already doing much to promote the carbon credentials of its product, and it will be interesting to see whether green credentials (carbon related or otherwise) are able to command price premiums in the highly competitive commodity markets.

"The growing demands [for] high-energy-efficient products result in achieving sales benefits and advanced steelmaking technology."
POSCO

Insights from the performance score pilot

The CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Materials sector scored third overall for disclosure and second for performance. The chart below shows how Materials compares with the other sectors for performance.

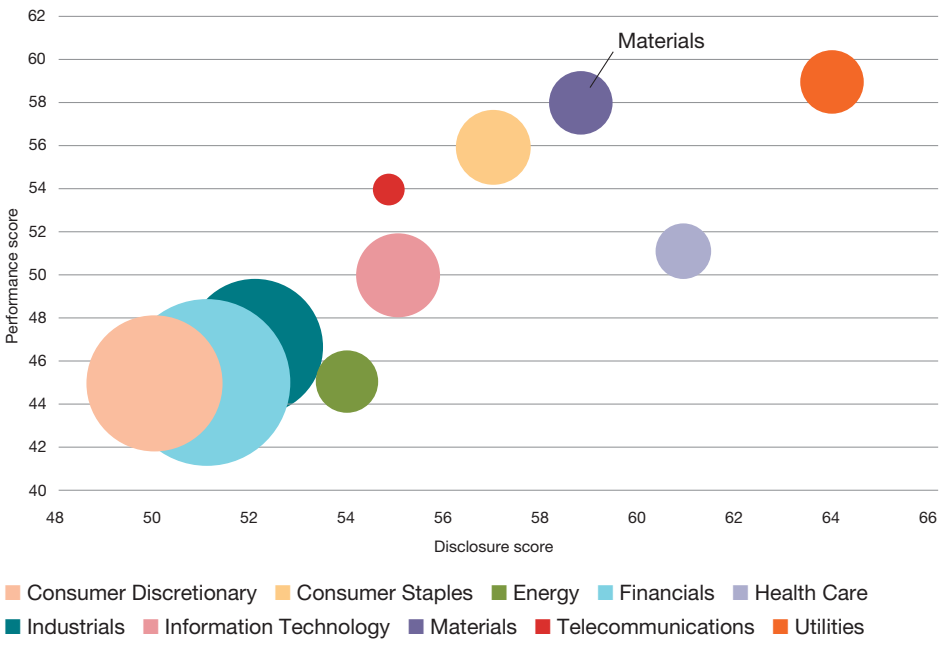
In the energy management growth cluster we are developing new materials for energy storage and energy conversion, including new materials for organic light-emitting diodes (OLED) in lighting technology, semiconductor organic materials for photovoltaics, or membrane systems for more-effective portable energy supply facilities such as fuel cells.

BASF

...electricity prices are escalating at a higher rate than in the past. Anglo Platinum as a large consumer of electricity will see its cost increase as a result. Platinum is a product with a positive impact on the environment in terms of its use, as in catalytic converters in cars. As the largest producer of this metal, Anglo Platinum must be seen to be environmentally sensitive, and this could expose it to a higher level of public scrutiny.

Anglo Platinum

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

As 2009 is the first year of use of the performance scoring methodology,[14] individual company performance scores are not shown in the CDP 2009 reports, though comments on initial findings are provided below:

- The top three Materials companies (in alphabetical order) scoring highest in performance in alphabetical order are **BASF**, **E. I. du Pont de Nemours** and **PPG Industries**;
- Within the Global 500, Materials respondents typically outperform other sectors in all areas of the questionnaire that attracted performance points. This was particularly evident in the areas of taking advantage of climate change opportunities, such as the provision of goods and services that enable customers to reduce emissions; having emissions reduction targets and plans; and assigning an executive body with responsibility over climate change;
- Materials respondents within the S&P 500 also performed better than other sectors in all areas of the questionnaire that attracted performance points. In addition to the performance areas noted for the Global 500 above, the S&P 500 Materials respondents also did well in the management of climate change risks and in dedicated investments to achieve emissions reductions and energy savings;
- Within the FTSE 350, Materials respondents performed comparably well with the sectors in maximizing opportunities they have identified but performed less well in managing the risks they have identified and in investing to achieve emissions reductions;

Overall, the Materials sector has established good governance arrangements, with 95% (53) having Board committees with responsibility for climate change, 54% (30) reporting staff incentives to reduce emissions, and 95% (53) producing publications discussing the effects of climate change on the business.

Evidence of companies' engaging with policy makers as well as local communities suggests a significant level of awareness and proactivity within the sector, and 84% (47) of respondents engage with policy makers on a regular basis.

Conclusion

Materials is an eclectic sector that contains some industries with relatively high direct emissions (e.g., steel, chemicals) and others where it is perhaps the indirect emissions and impacts of their activities that are of greater interest (e.g. mining, forestry). The potential responses to climate change are, therefore, quite different.

The overall performance by the sector this year is encouraging – particularly as the quality of disclosure provides evidence that many responding companies are beginning to take a longer-term view in respect of capital allocation and their interaction with suppliers and customers. How the Materials sector continues to meet the growing demand for its products whilst using natural resources in a sustainable manner and concurrently reducing emissions will be a key challenge for the sector in the years to come.

> Increasingly, investors look beyond bottom-line financial performance, focusing on corporate social responsibility [CSR] performance issues. Our performance in addressing CSR issues such as climate change may have an effect on share price, positively or negatively, depending on our performance, which in turn could affect our ability to compete for capital to develop new projects.
>
> **Kinross Gold**

> We actively engage with decision makers and governments either as an individual company or via a trade association or other organization. We see the dialogue with stakeholders in politics and NGOs [non-governmental organizations] as an opportunity to actively contribute and shape the future constructively, with the focus on sustainable development and well-being of the international community.
>
> **BASF**

14 For more about the performance scoring methodology, see http://www.cdproject.net/2009CDLImethodology.asp.

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Materials scores and emissions by company[15]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[16]	Total Emissions[17]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[18]	Scope 3[19]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Air Liquide	G	AQ	AQ	60		931	16,966,000	9,014,000	7,952,000	*	496,000			x	x	
Air Products & Chemicals	G, S	AQ	AQ	74		2,036	21,200,000	12,300,000	8,900,000	*						
AK Steel Holding	S	NR	–													
Alcoa	S	AQ	AQ	63		2,175	58,521,999	29,933,645	28,588,354							
Allegheny Technologies	S	AQ	AQ	11	NP											
Anglo American	F, G	AQ	AQ	58		752	19,797,000	9,620,000	10,177,000							
Anglo Platinum	G	AQ	AQ	73		999	5,486,448	493,312	4,993,136		4,134†			x	x	x
Antofagasta	F	AQ	NR	60	NP											
Aquarius Platinum	F	AQ	AQ	52		611	544,024	57,676	486,348							
Arcelor Mittal	G	AQ	AQ	35		1,758	207,799,000	184,408,000	23,391,000							
Ball	S	AQ	AQ	50		199	1,508,225	388,845	1,119,380							
Barrick Gold	G	AQ	AQ	56		676	4,604,427	2,780,977	1,823,450							
BASF	G	AQ	AQ	94		320	27,687,716	23,531,528	4,156,188	*	113,184,000	x		x	x	x
Bemis Company	S	AQ	AQ	60		176	664,394	157,262	507,132							
BHP Billiton	F, G	AQ	AQ	82		1,131	51,892,825	23,093,870	28,798,955		318,872,809	x			x	
Cabot	S	AQ	–	69		4,670	4,402,000	4,040,000	362,000							
CF Industries Holdings	S	NR	–													
CRH	G	AQ	AQ	54		500	14,503,000	13,049,000	1,454,000		1,000,000		x			
Croda International	F	AQ	AQ	52		312	298,301	198,507	99,794							
Dow Chemical	G, S	AQ	AQ	63		614	35,299,000	27,773,000	7,526,000		5,020,000		x		x	
E.I. du Pont de Nemours	G, S	AQ	AQ	80		437	13,339,560	9,336,753	4,002,807	*	78,457	x			x	
Eastman Chemical	S	AQ	AQ	46												

15 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[16]	Total Emissions[17]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[18]	Scope 3[19]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Ecolab	S	AQ	AQ	59		31	189,431	134,089	55,342	*						
Elementis	F	IN	–													
Eurasian Natural Resources Corporation	F	DP	–													
Ferrexpo	F	IN	IN													
Filtrona	F	AQ	AQ	59		134	70,332	9,744	60,588							
Freeport-McMoRan Copper & Gold	S	AQ	AQ	59		539	9,586,200	5,108,000	4,478,200							
Fresnillo	F	NR	–													
GMK Norilsk Nickel	G	DP	NR													
Goldcorp	G	AQ	AQ	41		310	645,800	424,900	220,900							
Hochschild Mining	F	NR	NR													
Holcim	G	AQ	AQ	61		4,501	106,373,585	99,521,814	6,851,771		1,072,740			x	x	
International Flavors & Fragrances	S	AQ	AQ	56	NP											
International Paper	S	AQ	AQ	57		641	15,916,055	10,961,781	4,954,274		2,000,000		x			
JFE Holdings	G	AQ	AQ	47	NP											
Johnson Matthey	F	AQ	AQ	56		49	371,000	160,000	211,000		23,815		x		x	
Kazakhmys	F	NR	NR													
Kinross Gold	G	AQ	AQ	59		502	699,000	347,000	352,000							
Lafarge	G	AQ	AQ	84		4,489	118,768,000	108,879,000	9,889,000		2,264,000		x	x	x	
Linde	G	AQ	AQ	60		807	14,200,000	4,500,000	9,700,000		760,000		x			
Lonmin	F	AQ	AQ	47		744	1,659,103	75,850	1,583,253							
MeadWestvaco	S	AQ	AQ	62		426	2,827,865	2,120,126	707,739							
Mondi	F	AQ	AQ(L)	67		946	6,003,000	4,435,000	1,568,000		2,922				x	
Monsanto	G, S	AQ	AQ	49		183	2,081,000	1,287,000	794,000							
Mosaic Company	G	NR	NR													
Newmont Mining	G, S	AQ	AQ	70		859	5,325,543	4,138,189	1,187,354	268,947						
Nippon Steel	G	AQ(L)	AQ													
Nucor	G, S	DP	NR													
Pactiv	S	NR	DP													
POSCO	G	AQ	AQ	68		2,197	72,800,000	70,600,000	2,200,000		7,421				x	
Potash Corporation of Saskatchewan	G	AQ	AQ	59		1,185	9,639,000	7,996,000	1,643,000							
PPG Industries	S	AQ	AQ	81		394	6,248,264	4,442,743	1,805,521		19,281				x	
Praxair	G, S	AQ	AQ	83		1,244	13,428,346	3,695,830	9,732,516	*	265,292		x		x	
Randgold Resources	F	AQ	NR		NP											
Rexam	F	AQ (L)	DP													
Rio Tinto	F, G	AQ	AQ	87		927	50,300,000	30,300,000	20,000,000	*	657,555,000	x	x	x	x	x
Rohm and Haas	G, S	AQ	AQ	39	NP											
Sealed Air	S	AQ	AQ	58		155	751,346	258,456	492,890							
Shin Etsu Chemical	G	AQ	AQ	35												
Sigma-Aldrich	S	AQ	AQ	36		76	168,031	37,831	130,200							

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[16]	Total Emissions[17]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[18]	Scope 3[19]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Smith (DS)	F	AQ	AQ	53		506	996,000	315,000	681,000							x
Southern Copper Corporation	G	NR	NR													
Sumitomo Metal Industries	G	AQ	AQ	61		1,426	29,010,000	29,010,000			220,000		x			
Syngenta International	G	AQ	AQ	60		96	1,126,874	700,874	426,000		416,260		x	x	x	
Talvivaara Mining Company	F	AQ	NR	52	NP											
ThyssenKrupp	G	AQ	AQ	45	NP											
Titanium Metals	S	DP	DP													
United States Steel	S	AQ	AQ	67		2,081	49,427,981	45,086,791	4,341,190							
VALE (formerly Companhia Vale do Rio Doce)	G	AQ	AQ	74		522	16,831,316	15,547,662	1,283,654	*						
Vedanta Resources	F	AQ	AQ	48	NP											
Victrex	F	DP	IN													
Vulcan Materials	S	IN	NR													
Weyerhaeuser	S	AQ	AQ	56		376	3,017,352	1,700,061	1,317,291							
Xstrata	F, G	AQ	AQ	68		891	24,913,251	15,605,091	9,308,160	*	215,157,719	x	x			x

16 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

17 Scope 1 and Scope 2 grid average reported emissions.

18 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

19 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

Telecommunications sector report
Covering Global 500, S&P 500 and FTSE 350 listed respondents

Since developing ICT increases electricity consumption from base stations, servers, and other equipment, we are taking measures to reduce overall power consumption through research and development, by implementing highly efficient power outlets and air-conditioning equipment, and even by reviewing the structure of buildings.

NTT DoCoMo

Introduction

In 2009, the Carbon Disclosure Project (CDP) received the highest response rate to date, the highest level of disclosed emissions and greater detail than ever before on the activities being undertaken by the largest corporations around climate change mitigation and adaptation. In parallel, CDP data is increasingly being applied as a catalyst for changing business behavior and is becoming more integrated into mainstream financial analysis.

This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Telecommunications companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Telecommunications
Response rate[1]	**67% (29 of 43)**
Global 500	70% (23 of 33)
S&P 500	67% (6 of 9)
FTSE 350	83% (5 of 6)
Overall sector rank (1-10)[2]	**5th**
Highest disclosure score	73
Lowest disclosure score	16
Average disclosure score	55
Overall emissions disclosure[3]	
Scope 1 emissions	90% (3 million Mt CO_2-e)
Scope 2 emissions[4]	90% (27 million Mt CO_2-e)
Scope 3 emissions	55% (96 million Mt CO_2-e)
Average emissions intensity[5]	33 Mt CO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among ten sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

Carbon disclosure trends in the Telecommunications sector

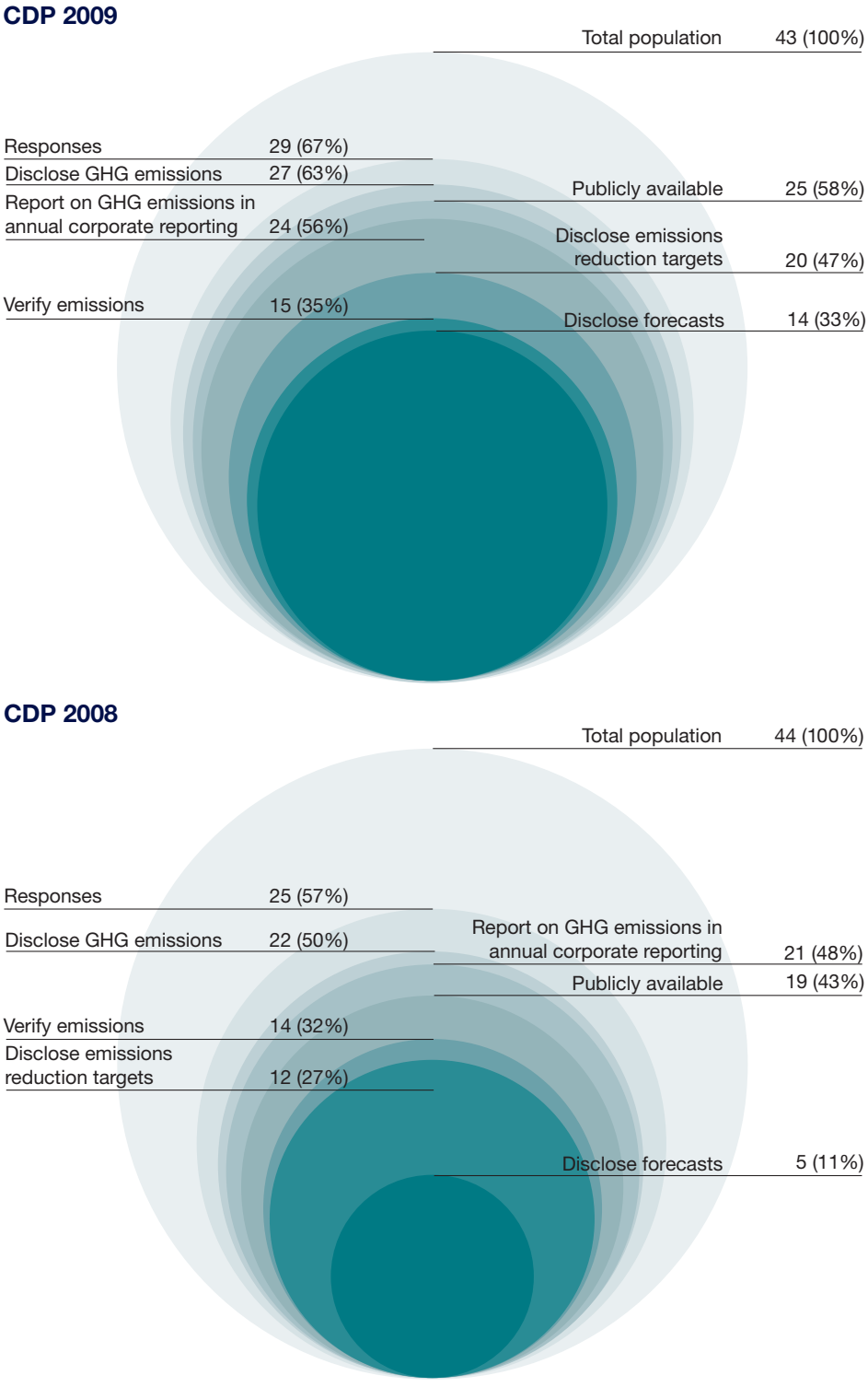
Telecommunications companies have a large role to play in helping businesses and consumers manage their energy costs and reduce their emissions through more efficient use of technology. telecommunications companies – those that provide wireless and other diversified telecommunications services – provide convergent services with Information Technology companies as part of the broader information and communications technology sector (ICT). Broadly, ICT companies help economies run more efficiently in several areas: improving power transmission and distribution (smart grids); making buildings more energy efficient (smart buildings); creating virtual alternatives to physical products or activities (dematerialization); and helping industries optimize motors, transport routes and logistics.[6]

Aside from owning and operating the infrastructures of large telecommunications networks, these companies also have underlying transportation, warehousing and logistics needs that are the source of greenhouse gas (GHG) emissions.

Respondents in the sector represent:

- Large Global 500 diversified Telecommunications companies in Asia, Africa, Australia, Europe and North and South America (23 of 29 respondents). The sizes of these firms give them economies of scale when it comes to upgrading and expanding their networks. Many have international operations that subject them to a range of regulations;
- UK Telecommunications companies (4 of 29 respondents) listed on the FTSE 350. The responses from UK providers reflect progressive regional efforts to respond to climate change; and
- US Telecommunications providers listed on the S&P 500 (6 of 29 respondents). Largely domestic providers, these companies are not subject to the same regulatory frameworks and climate initiatives as their global peers.

Fig. A: Year-on-year disclosure rates, as a proportion of total Telecommunications companies (Global 500, S&P 500 and FTSE 350)



6 *The Climate Group, Smart 2020: Enabling the low carbon economy in the information age (2008).*

We are planning to use the energy consumption specifications for CPE [customer-premises equipment] and network equipment in the EU [European Union] Code of Conduct on Broadband Equipment as guidance in our procurement and vendor selection.

Royal KPN

Fig. B: Disclosure score leaders for the sector.[7]

Global 500 leaders

Company name	Disclosure score
Royal KPN	73
TeliaSonera	71
American Tower	70
BCE	68
Vodafone Group	67

S&P 500 leaders

Company name	Disclosure score
American Tower	70
Qwest Communications International	58
Sprint Nextel	57
AT&T	47
Verizon Communications	41

FTSE 350 leaders

Company name	Disclosure score
Vodafone Group	67
BT Group	65
Cable and Wireless	65
COLT Telecom Group	52
Inmarsat	51

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization[8]

Company name	Index
América Móvil	Global 500
China Mobile	Global 500
China Unicom	Global 500
Bharti Airtel	Global 500
SoftBank	Global 500

Telecommunications companies improved their response rate[9] to CDP in 2009, with 67% (29) responding, up from 57% (25) in 2008. They also improved their disclosure practices in all categories of disclosure, with notable increases in the number reporting emissions reduction targets and forecasts (see Fig. A). On the whole, the sector ranks fifth according to its average disclosure score compared with the scores of all ten sectors analyzed.

Telecommunications leaders for carbon disclosure are listed above in the order of their carbon disclosure scores.[10] While other sector respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation. One-third of Telecommunications companies (33%, or 14 companies) chose not to participate. The largest non-respondents are listed above based on their market capitalization.

7 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the CDLI for the index overall when all ten sectors are considered.

8 Market data retrieved from Bloomberg as of June 18, 2009.

9 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

10 For more information on the disclosure score methodology, see www.cdproject.net/2009CDLImethodology.asp.

Climate change has the potential to physically affect BT's operations, since the associated extreme weather conditions, such as gales and floods, can lead to network disruptions, damaged equipment, customer complaints, etc. The impact of this issue often arises not from a single incident but from an aggregation of many incidents. To rectify network faults takes resources away from other planned network enhancement work and causes customer dissatisfaction.

BT Group

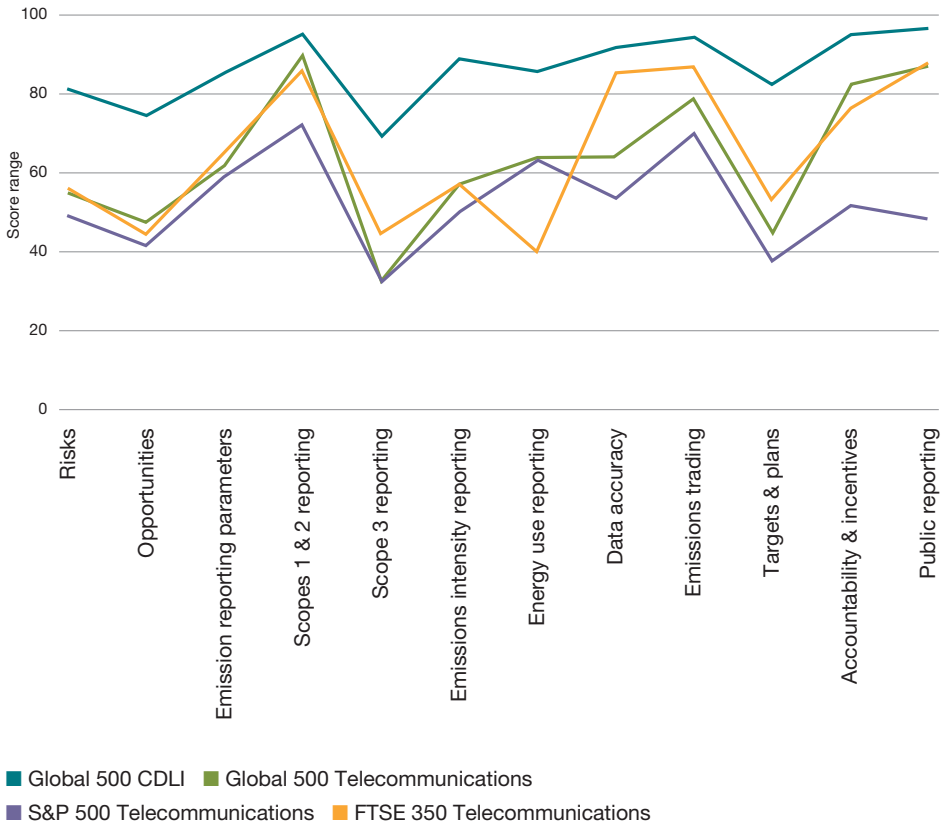
When compared with a cross section of global leaders for carbon disclosure, Telecommunications respondents' disclosure scores closely follow global leaders in the reporting of Scope 1 and 2 emissions. However, they lag in nearly all other areas, particularly disclosure of Scope 3 emissions and emissions reduction plans (see Fig. D).

Notably, the six US Telecommunications respondents lag 48 percentage points behind global leaders for disclosing carbon emissions in annual reports or other mainstream filings. These firms have some challenges in the reporting of carbon emissions across disparate networks due to years of acquiring smaller networks after US deregulation of the industry.

FTSE 350 respondents lead their industry peers in verifying the accuracy of emissions data and participating in emissions trading systems. Their average disclosure score for data accuracy, a requirement for participation in emissions trading, is 22 percentage points higher than that of their Global 500 peers and 32 percentage points higher than that of their S&P 500 peers.

At least one company noted economic conditions are making it difficult to justify investments in climate change projects when cost-cutting efforts top the agenda of the company's C-suite executives. At the same time, Telecommunications companies serve large brands that are similarly pressed and are now exploring more options than ever before to use information and communication technologies as alternates to more expensive activities like business travel.

Fig. D: Score breakdown for Telecommunications within each index versus the global leaders[11]



11 The 2009 Global 500 Carbon Disclosure Leadership Index is an index of the top 10% of companies with the highest disclosure scores in the Global 500 and is used here as a global benchmark. For more information, see www.cdproject.net.

Risks and opportunities

Telecommunications respondents received average disclosure scores for reporting risks and opportunities. Among them, 96% (27) reported at least one significant risk related to climate change – the same number reported that they see at least one significant business opportunity.

Physical risks were reported by 95% (21) of Global 500 respondents, 83% (5) of S&P 500 respondents and 100% (5) of FTSE 350 respondents. Telecommunications networks can be greatly affected by minor climatic variance, and even small changes in temperature or precipitation can impact network service. The ability to supply continuous service for all providers hinges on preventing network disruptions or quickly repairing damage to data centers, mobile towers or underground wires. Even a series of small disruptions could have a negative effect on broadband customers, who place a premium on reliable service.

Regulatory risks related to climate change were reported by 77% (17) of Global 500 respondents, 100% (6) of S&P 500 respondents and 100% (5) of FTSE 350 respondents.

Most respondents noted that the largest impact from regulatory risk is indirect because of their reliance on electricity. Significant increases in energy costs could occur if electric utilities raise their costs to minimize the burden of complying with statutory emissions limits. As a result, many companies, like **NTT DoCoMo**, are preparing their operations to be more energy efficient.

Deutsche Telekom, as a part of the European Telecommunications Network Operators Association's Energy Task Team, is researching energy efficiency measures for infrastructure equipment. Early recommendations focus on steps suppliers can take to improve the efficiency of network components.

Large FTSE 350 and Global 500 Telecommunications respondents reported concern that Carbon Reduction Commitment[12] (CRC) risk may extend beyond compliance to negative financial and reputational impacts. While the CRC clearly resonates with companies operating in the United Kingdom, their concerns may be a harbinger for Telecommunications companies operating in other parts of the world as the push for comprehensive climate change regulations intensifies. While US and Asian companies do not have immediate concerns about regulation, they expect that more change could happen on the regulatory front in the coming years.

> [Our] investments include the installation of permanent generators for our wireless sites and network facilities, as well as investment in additional portable generators and Cell Sites on Wheels and mobile cell sites that can be deployed in impacted areas to restore service quickly. We are deeply involved in researching renewable energy sources that can be used as both backup and even primary power for sites with greater risk of climate change impact.
>
> **Sprint Nextel**

12 For more about the CRC, see http://www.defra.gov.uk/environment/climatechange/uk/business/crc/index.htm.

Over 90% of the NTT Group's CO_2 emissions are attributable to electrical power consumption by offices and communications equipment. To reduce our demand for electrical power, we are implementing a group-wide Total Power Revolution (TPR) campaign. Through this campaign, we have been promoting energy management schemes for the 4,000 buildings that our various companies occupy throughout Japan.

Nippon Telegraph & Telephone (NTT)

An increasing number of customers are incorporating energy and emissions standards into their procurement and vendor selections, and Telecommunications companies are asking the same of their own suppliers.

Nearly all Telecommunications respondents (96% or 27 companies) said the regulatory, physical and other risks posed by climate change also present business opportunities. Impending regulations that encourage the use of communications technologies will foster investment and place more emphasis on the role of the sector in helping major economies meet global reduction targets.

"Vodafone's analysis shows the potential of the mobile industry to enable a saving of approximately 112 million tons of carbon-dioxide-equivalent emissions per annum by the year 2020, across the EU. This equates to a projected saving of €43 billion from reduced energy purchasing."
Vodafone Group

"We are developing products and services to help our customers reduce their energy consumption. This is in line with our CBI Climate Change Task Force pledge to help UK households halve their energy consumption by 2020 to contribute to UK government targets."
BT Group

Extreme physical conditions provide other opportunities for Telecommunications companies to develop reliable technology for monitoring physical changes in the environment. For example, companies can retask existing satellites to monitor physical change, or they can develop products that provide comfort during natural disasters or give advance warning of climatic events.

"Since April 2005, SK Telecom has been offering a text-message service for disaster-related information so that customers in disaster-prone regions can prepare for such emergencies."
SK Telecom

"Telecommunications have a role to play in monitoring the physical impacts through the use of telemetry. As an example, the Australian Institute of Marine Science is using one of the world's first reef-based Internet protocol networks to monitor coral bleaching events on the Great Barrier Reef."
Telstra Corporation

Insights from the performance score pilot

CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

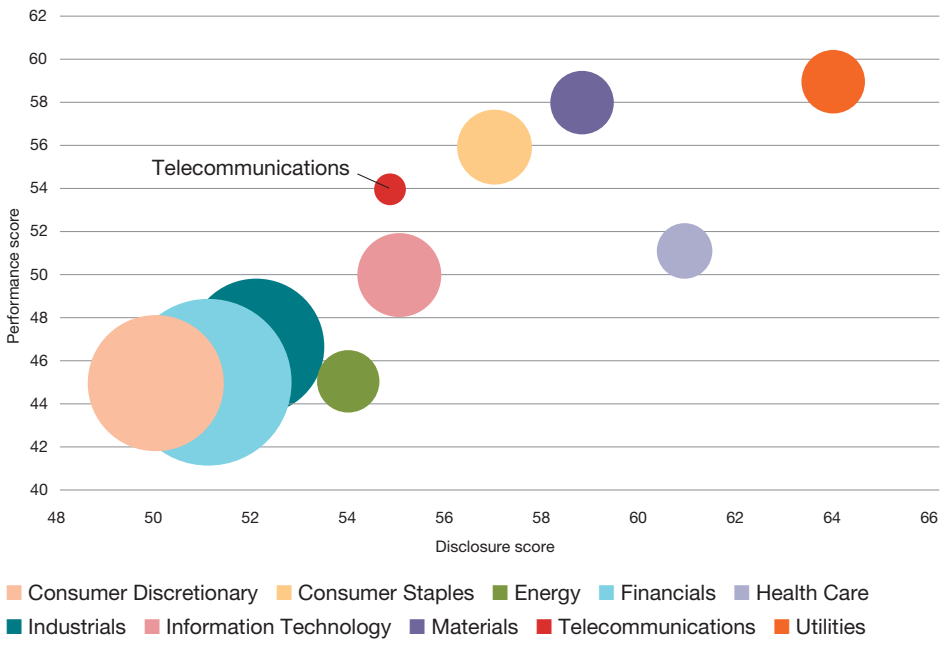
The Telecommunications sector scored fifth overall for disclosure and fourth for performance. The chart below shows how the Telecommunications sector compares with the other sectors for performance.

As 2009 is the first year of use of the performance scoring methodology,[13] individual company performance scores are not shown in the CDP 2009 reports, but we provide comment on initial findings below.

- The three Telecom companies scoring highest in the performance scoring pilot (in alphabetical order) are **BCE**, **Deutsche Telekom** and **Royal KPN**.
- Global 500 Telecommunications respondents lead in most areas of performance. They demonstrate particular strengths relative to all other sectors in maximizing business opportunities related to climate trends, creating the right accountability structures and incentives to help their organizations reach carbon emissions reductions, and creating goods and services that help reduce overall carbon emissions.
- S&P 500 Telecommunications respondents lag their sector peer group in every performance category – largely a reflection of lower participation in voluntary climate-related initiatives in the region and the regulatory differences US companies face compared with companies in other geographies.

All Carbon Disclosure Project reports are available at www.cdproject.net

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

13 For more about the performance scoring methodology, see http://www.cdproject.net/2009CDLImethodology.asp.

Most Telecommunications respondents have a Board member or executive body with overall responsibility for climate change (68%, or 19 companies), and 71% (20 companies) have emissions reduction targets in place. Yet far fewer Telecommunications respondents – only 39% (11 companies) – have incentives in place to encourage accountability to these targets.

Telecommunications respondents also have relatively high rates of disclosing GHG emissions in annual reports or other mainstream filings (86%, or 24 companies), of publishing corporate social responsibility reports (79%, or 22 companies), and of engaging regularly with stakeholders on climate-related impacts (75%, or 21 companies).

Conclusion

In 2009, the Telecommunications sector made significant improvements in terms of the number of companies disclosing emissions reduction targets and emissions forecasts. Yet disclosure scores overall remain average compared with other sectors analyzed, and no Telecommunications company scored well enough to reach the Carbon Disclosure Leadership Index table for the Global 500, S&P 500 or FTSE 350.

While respondents forecast that their emissions will increase with demand, the overall potential for the sector to reduce global emissions by industrializing technologies seems without limit. By providing broadband and mobile services that improve energy efficiency throughout the economy – in power transmission and distribution, buildings and factories, logistical processes to transport goods, and business communication services such as teleconferencing and paperless transactions – Telecommunications companies can make significant contributions to the stabilization of greenhouse gas emissions.

As demand for their products and services increases, Telecommunications companies must stay attuned to the impacts of climate change legislation and continually focus on their own energy efficiency to keep their emissions and utility costs in check. By doing this, they will become better prepared to compete in a carbon-constrained economy and capitalize on emerging opportunities.

> The changing expectations of our major customers, such as banks or large corporations, mean that our response to climate change could impact how we are perceived by those customers.
>
> **Telstra Corporation**

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Telecommunications scores and emissions by company[14]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[15]	Total Emissions[16]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[17]	Scope 3[18]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
América Móvil	G	NR	NR													
American Tower	G, S	AQ	–	70		122	193,896	431	193,465		8,335				x	
AT&T	G, S	AQ	AQ	47		5	580,755	129,985	450,770							
BCE	G	AQ	AQ	68	NP											
Belgacom	G	AQ	–	43		19	154,428	58,385	96,043	150	1,712				x	
Bharti Airtel	G	NR	NR													
BT Group	G, F	AQ	AQ	65		84	1,739,229	330,008	1,409,221	517,364	95,051,977			x	x	x
Cable and Wireless	F	AQ	AQ	65		57	178,798	5,832	172,966		166,389	x	x		x	x
Carso Global Telecom	G	NR	–													
CenturyTel	S	NR	NR													
China Mobile	G	IN	NR													
China Telecom	G	IN	IN													
China Unicom	G	NR	NR													
Chunghwa Telecom	G	AQ	NR	45		151	930,439	27,175	903,264							
COLT Telecom Group	F	AQ	NR	52		62	103,549	4,304	99,245		1,547				x	
Deutsche Telekom	G	AQ	AQ	66		33	2,816,751	375,427	2,441,324		24,381				x	
Embarq	S	DP	AQ													
France Telecom	G	AQ	AQ	49		14	1,046,786	233,157	813,629		20,653				x	
Frontier Communications	S	NR	–													
Inmarsat	F	AQ	DP	51		3	3,220		3,220	*	1,300				x	
KDDI Group	G	AQ(L)	AQ													

14 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[15]	Total Emissions[16]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[17]	Scope 3[18]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Maroc Telecom	G	NR	–													
MTN Group	G	AQ	AQ	39		22	248,927	8,100	240,827							
Nippon Telegraph & Telephone (NTT)	G	AQ	AQ	42		31	3,599,000	222,000	3,377,000							
NTT DoCoMo	G	AQ	AQ	45		21	1,090,169	7,613	1,082,556							x
Optus (Singtel)	G	AQ	DP	65		48	501,534	7,134	494,400							x
Qwest Communications International	S	AQ	AQ	58		102	1,372,627	168,467	1,204,160		9,324		x		x	
Rogers Communications	G	AQ	AQ	44		15	141,758	39,205	102,553		48,445				x	
Royal KPN	G	AQ	AQ	73		27	534,829	87,829	447,000	*	†					x
SK Telecom	G	AQ	AQ	54		35	389,427	10,045	379,382							
SoftBank	G	IN	NR													
Sprint Nextel	S	AQ	AQ	57		58	2,083,274	68,057	2,015,217		37,307				x	
Swisscom	G	AQ	AQ	55		2	28,367	28,367	0							
Telecom Italia	G	AQ	AQ	66	NP											
Telecom Plus	F	NR	–													
Telefonica	G	AQ	AQ	59		22	1,790,900	122,631	1,668,269		27,909				x	
TeliaSonera	G	AQ	AQ	71		21	279,801	54,388	225,413	94,177	59,274		x	x	x	
Telstra Corporation	G	AQ	AQ	66		77	1,315,980	100,440	1,215,540							x
Turkcell Iletisim Hizmet	G	DP	NR													
Verizon Communications	G, S	AQ	AQ	41		64	6,270,714	527,802	5,742,912							
Vimpelcom	G	NR	NR													
Vodafone Group	G, F	AQ	AQ	67		46	1,625,922	271,817	1,354,105	1,150,938	55,358				x	
Windstream	S	AQ	AQ	16	NP											

15 Disclosed Scopes 1 and 2 grid average emissions emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

16 Scope 1 and Scope 2 grid average reported emissions.

17 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

18 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

Utilities sector report

Covering Global 500, S&P 500 and FTSE 350 listed respondents

The election of President Obama is likely to reinforce and globalise efforts to reduce emissions, which will have significant impact on energy markets worldwide. We can expect to see this translate into a continued strong legislative and regulatory push in Europe (which, given the very different nature of the major European energy companies, will have differing competitive consequences) and a transition from disjointed state-by-state and province-to-province initiatives in the USA and Canada into a more coordinated North American basis.

Centrica

All Carbon Disclosure Project reports are available at www.cdproject.net

Introduction

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This year, CDP has responded to feedback from its signatories and other stakeholders for more industry-specific analysis of the responses and has chosen to present this in a series of sector reports.

This sector report, prepared by PricewaterhouseCoopers LLP (PwC), summarizes responses to the 2009 Carbon Disclosure Project Information Request from Utilities companies in the FTSE Global Equity Index Series (Global 500), Standard & Poor's 500 Index (S&P 500) and the FTSE 350 Index (FTSE 350).

Responses to CDP 2009 are grouped according to the Global Industry Classification Standard (GICS).

Summary table

GICS sector	Utilities
Response rate[1]	**88% (59 of 67)**
Global 500	89% (39 of 44)
S&P 500	88% (28 of 32)
FTSE 350	100% (10 of 10)
Overall sector rank (1-10)[2]	**1st**
Highest disclosure score	88
Lowest disclosure score	15
Average disclosure score	64
Overall emissions disclosure[3]	
Scope 1 emissions	88% (2,090 million Mt CO_2-e)
Scope 2 emissions[4]	59% (131 million Mt CO_2-e)
Scope 3 emissions	49% (250 million Mt CO_2-e)
Average emissions intensity[5]	2,171 MtCO_2-e/US$ million revenue

1 The overall response rate will not equal the sum of total respondents for each index (Global 500, S&P 500 and FTSE 350) because respondents can be listed on more than one index.

2 The rank order of the sector among 10 sectors analyzed. The rank is determined by the average disclosure score for each sector.

3 Percentage of respondents who reported emissions and total disclosed emissions for the sector.

4 Gross Scope 2 emissions represent the sum of all grid averages, not adjusted for contractual arrangements.

5 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

Carbon disclosure trends in the Utilities sector

The Utilities sector comprises electricity, gas and water businesses, which include various activities such as energy generation and trading, energy distribution, wholesale/retail sales, water supply and wastewater treatment.

Utilities are among the most carbon-intensive sectors.[6] The production of electricity generates greenhouse gases (GHGs), which are accounted for as Scope 1 (direct) emissions. These translate into the Scope 2 emissions of companies in other industries that purchase the electricity. Due to its high level of GHG emissions, the Utilities sector is highly regulated and often subject to mandatory emissions-reporting requirements. These characteristics necessitate a high level of engagement with policy makers as the sector develops coherent strategies to manage the ongoing risks to the business and to harness the opportunities presented by climate change.

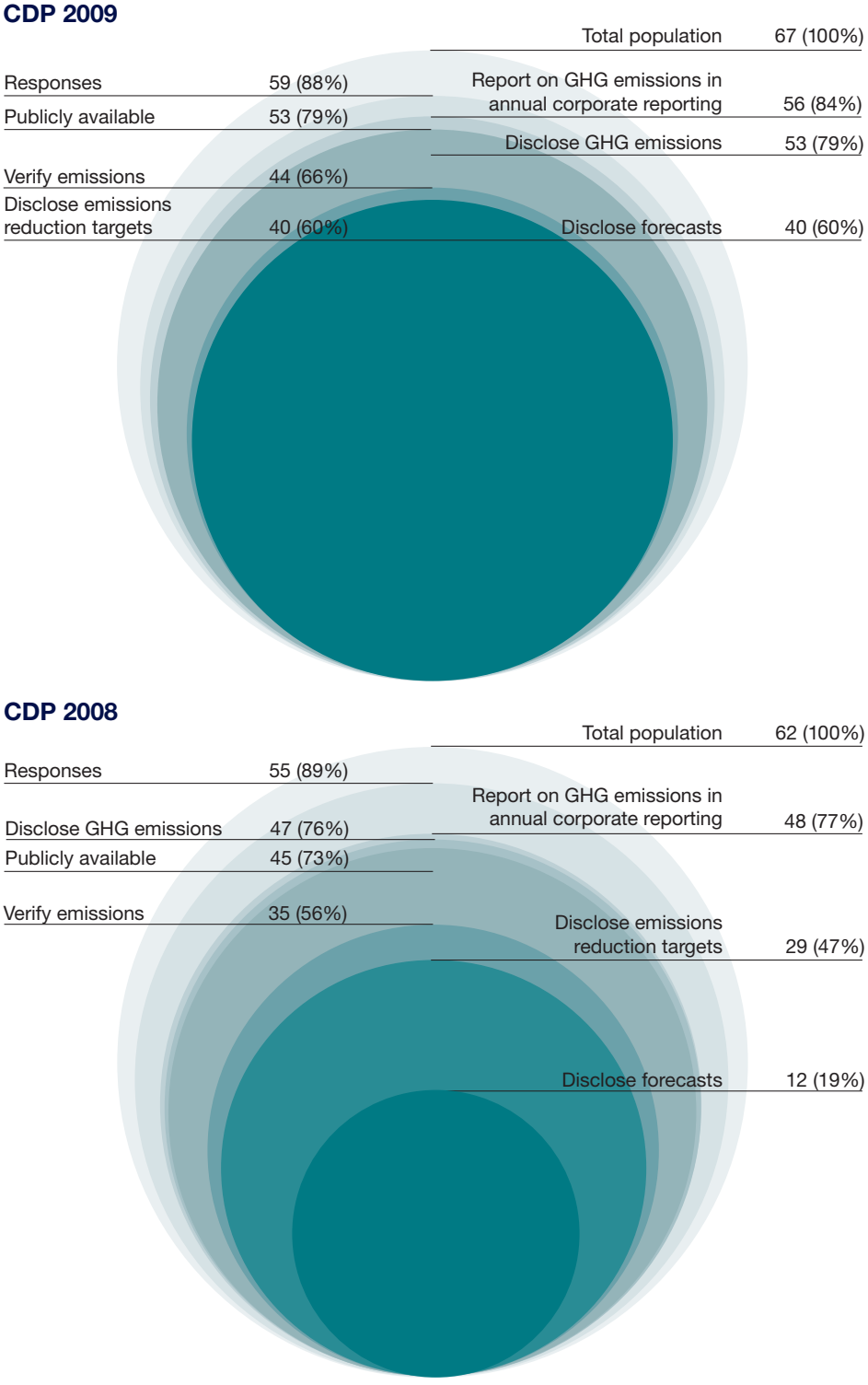
Utilities companies account for 9% (44) of the Global 500, 6% (32) of the S&P 500 and 3% (10) of the FTSE 350 invitees.

The overall response rate[7] for Utilities is a sector-leading 88% (59), although this figure is marginally lower than for CDP 2008. Compared with other sectors, Utilities is ranked first for overall disclosure – ahead of Consumer Staples and Materials in second and third places, respectively.

Utilities are showing modest improvements in nearly all the disclosure metrics, but a marked improvement in the number of respondents choosing to:

- Verify emissions (up 10 percentage points from 2008);
- Disclose emission reduction targets (up 13 percentage points from 2008); and
- Disclose emission forecasts (up 41 percentage points from 2008).

Fig. A: Year-on-year disclosure rates, as a proportion of total Utilities companies (Global 500, S&P 500 and FTSE 350)



6 The sectors traditionally viewed as carbon intensive, according to GICS classifications are Energy, Health Care, Industrials, Materials and Utilities.

7 The response rate represents all responding companies for this sector. Statistics in the remainder of this report are based on the number of analyzed responses only and do not represent companies that responded after the deadline for analysis.

We have seen an increasing sense of urgency in addressing climate change...The Obama Administration has made energy one of its top three priorities and signaled its support for a broad-based GHG cap-and-trade program that requires industry to purchase allowances from the federal government at auction.

Xcel Energy

Fig. B: Disclosure score leaders for the sector[8]

Global 500 leaders

Company name	Disclosure score
PG&E	88
Public Service Enterprise Group	88
Unión Fenosa	86
Centrica	84
RWE	83

S&P 500 leaders

Company name	Disclosure score
PG&E	88
Public Service Enterprise Group	88
Pepco Holdings	87
Xcel Energy	85
DTE Energy	84

FTSE 350 leaders

Company name	Disclosure score
Centrica	84
Northumbrian Water Group	81
Scottish and Southern Energy	78
United Utilities	71
National Grid	69

Fig. C: Largest non-respondents

Largest non-respondents by market capitalization[9]

Company name	Index
National Thermal Power (NTPC)	Global 500
CEZ	Global 500
Hong Kong and China Gas	Global 500
PPL	Global 500, S&P 500
Kyushu Electric Power	Global 500

The increase in forecasting emissions is particularly encouraging and suggests the sector is recognizing the value of forward-looking information to its stakeholders. When compared with a cross-sector group of global leaders for disclosure,[10] Utilities respondents closely followed the leaders in the quality of disclosure with respect to Scopes 1 and 2 emissions reporting, emissions trading, accountability and incentive structures to reduce emissions, and public reporting in annual reports or other mainstream filings. However, they lag in other areas – particularly, disclosure of Scope 3 emissions and targets and plans to reduce emissions (see Fig. D).

Utilities leaders for carbon disclosure are listed above in the order of their disclosure score.[11] While the remaining Utilities respondents ranked lower than these companies, they are nonetheless commended for their disclosures and participation.

8 The companies in this list are leaders in their sector for each of the indexes. However, they may not appear in the CDLI for the index overall when all ten sectors are considered.

9 Market data retrieved from Bloomberg as of June 18, 2009.

10 The 2009 Global 500 Carbon Disclosure Leadership Index is an index of the top 10% of companies with the highest disclosure scores in the Global 500 and is used here as a global benchmark. For more information, see www.cdproject.net.

11 For more about the disclosure scoring methodology, see www.cdproject.net/2009CDLImethodology.asp.

Under current regional (i.e. RGGI [Regional Greenhouse Gas Initiative]) and anticipated federal climate policies (i.e. ACESA [American Clean Air and Security Act]), regulatory risks are, and will continue to be, negated by PSEG's low carbon intensity relative to our competitors and the rest of the US electric power industry. As a result of investments over the past 15 years to reduce carbon emissions and increase our operational ecoefficiency, PSEG has positioned itself to be one of the nation's leading low-carbon energy providers.

Public Service Enterprise Group

Several Utilities companies (12%, or 8 companies) chose not to participate. The largest non-respondents are listed on the previous page based on their market capitalization (see Fig. C).

PG&E and Public Service Enterprise Group, both diversified US Utilities, are the sector leaders in both the Global 500 and S&P 500 populations. **Centrica** from the UK is also well placed in the Global 500 and is sector leader in the FTSE 350.

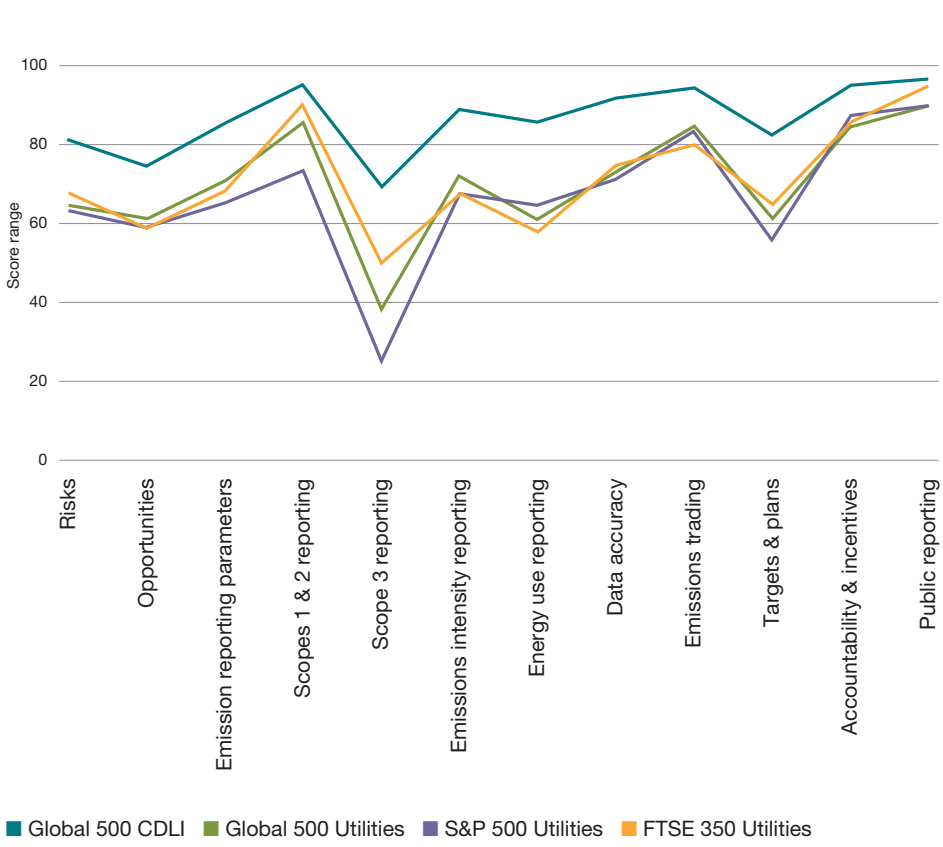
The responses from these three companies clearly demonstrate an acute awareness of the range of risks and opportunities presented by climate change. They also articulate a clear vision of how the business needs to adapt to deal with climate change in terms of either the physical asset infrastructure or the requirements of regulators and customers. Furthermore, the business planning process is already well developed to deal with climate change, with structured targets for reducing emissions over time through either internal abatement measures or diversification of energy sources within the portfolio.

Risks and opportunities

Most respondents from the Utilities sector across the Global 500, S&P 500 and FTSE 350 samples see themselves as exposed to regulatory risks in relation to climate change. In general, there is a clear understanding and appreciation of a more carbon-constrained future ahead. The primary concern is around the form and timing of future regulation at the regional, national, and international levels.

In Europe, uncertainty exists around how the European Union's Emissions Trading System (EU ETS) may be modified in the light of any international commitments agreed to at Copenhagen in December 2009.

Fig. D: Score breakdown for Utilities within each index versus the global leaders[12]



12 The 2009 Global 500 Carbon Disclosure Leadership Index (CDLI), is an index of the top 10% of companies with the highest disclosure scores in the Global 500 index and is used here as a global benchmark. For more information, see www.cdproject.net.

In the US, respondents are concerned about the possible introduction of a cap-and-trade regime as proposed under the Waxman-Markey bill[13] and how federal and state policies for the promotion of renewable energy and energy efficiency will evolve and interact.

In nearly all cases, the implication of this uncertainty is that it may hinder strategic investment decisions in cleaner generation capacity. Notwithstanding this, a high proportion (39%) of Utilities respondents reported company emission reductions targets that extend beyond 2012, compared with an average across all industries of just 20%. This is encouraging.

Regulation impacts on both operational decisions and strategic choices for the sector and respondents cite the following areas where carbon costs are already being incurred or are expected in the future:

- Setting up systems and processes to monitor and comply with regulation;
- Early retirement or adaption of existing generation capacity or network assets to comply with climate change regulation;
- Development of new technologies and energy efficiency programs to reduce emissions;
- Carbon taxation; and
- Direct compliance costs to meet obligations under cap-and-trade programs.

In Europe, the next phase of the EU ETS (starting in 2013) will no longer provide free carbon allowances for the power generation sector: the majority of obligated entities will be required to purchase their requirement through auctions or on the open market. This clearly imposes a new cash constraint on the business. At the time of writing, the expectation in the US is that utilities will be expected to purchase the majority of any future carbon allowances through an auction process instead of receiving them on grandfathered basis at no charge.

On the revenue side, companies are cognizant of two key risk areas as follows.

- A carbon-constrained world is likely to mean less energy is consumed, although this may present opportunities for new business around energy efficiency programs. In addition, numerous companies noted that the potential increase in demand for cooling during summer months could offset any decrease in demand due to warmer winters.
- Regulators are showing increasing interest around whether, and to what extent, carbon costs will be allowed to be passed on to consumers. In particular, respondents from the UK regulated by Ofgem and Ofwat noted some concern over the extent to which the costs of meeting ambitious carbon targets could be recovered in final product prices (i.e., prices paid by consumers for electricity and water).

Aside from regulatory risks, physical risks from climate change are noted by 86% (31) of the Global 500, 79% (22) of the S&P 500 and 78% (7) of the FTSE 350 Utilities sector respondents. Direct risks to fixed assets and operations are cited, including damage to, or deterioration of, power generation facilities, nuclear power plants and hydroelectric dams, as well as gas and power networks. Respondents are already facing increased expenditure to ensure that their physical assets are more resilient in the face of extreme climatic events, although few were willing to quantify actual or projected spend.

Aside from contingency planning and the need for operational resilience, the demand implication of uncertain weather patterns was also noted. Gas companies comment on warmer summer temperatures affecting the efficiency of gas turbines, while water companies remark on insufficient reservoir capacity at certain times of the year. Interestingly, longer-term water availability for hydrogeneration was cited as a significant concern across the Utilities sector, irrespective of whether respondents maintained hydroassets within their portfolio.

Over the past 32 years, PG&E has implemented some of the most comprehensive and aggressive energy efficiency programs in the nation, working to help customers achieve cost-effective energy savings. In total, PG&E's programs have helped customers save almost $24 billion and prevented more than 155 million tons of carbon dioxide (CO_2) from being emitted into the atmosphere, based on cumulative life cycle savings.

PG&E

Complete company responses to CDP can be downloaded from www.cdproject.net

13 H.R. 2454, American Clean Energy and Security Act of 2009 (ACESA).

We have seen an increasing sense of urgency in addressing climate change...The Obama Administration has made energy one of its top three priorities and signaled its support for a broad-based GHG cap-and-trade program that requires industry to purchase allowances from the federal government at auction.

Xcel Energy

Both Ofwat and the Environment Agency have recently established targets on water efficiency...and these also represent a significant regulatory risk. The financial impact of these risks is difficult to estimate but if unmanaged could run to many millions of pounds. For this reason they receive the appropriate level of management attention.

Northumbrian Water Group

During periods of low summer rainfall followed by low winter rainfall there may be insufficient refill to reservoirs to guarantee that the company can provide normal supplies to its customers.

Severn Trent

PHI believes that current and anticipated regulatory requirements offer opportunities in providing renewable and efficient energy and providing net metering programs to our customers. Specifically, PHI's "Blueprint for the Future" is designed to improve service to PHI's customers and empower them to manage their energy use and costs.

Pepco Holdings

Regulation will also lead to increased opportunities for servicing the wider needs of our customers through our broad range of products. For example, if it becomes mandatory for every household in the UK to have a smart meter installed, there will be an opportunity for SSE to provide other services to customers at the same time.

Scottish and Southern Energy

In September 2005, Viridor formed a joint venture with Grundon Waste Management Ltd. for a new £180m, 400,000-tonnes-per-annum-capacity, energy-from-waste facility.

Pennon Group

In addition to the risks outlined above, 94% (34) of the Global 500, 86% (24) of the S&P 500 and 100% (9) of the FTSE 350 Utilities respondents said regulation also presented opportunities. Key areas of opportunity included:

- Development of new business units such as Energy Service Companies (ESCO's) and products that help consumers manage and reduce energy use;
- Diversification into new markets, either self-funded or through joint ventures; and
- Research and Development (R&D) and investment programs to bring new energy technologies to market.

In order to counteract the impact of reduced demand from energy consumption, Utilities have recognized the opportunity to develop business in new areas by providing new products and services for customers. Key ideas noted in responses include smart metering, consultancy services for customers, products to help with demand-side management, insulation options, low-energy products, and green energy tariffs. Although not explicitly stated, it is likely that two of the drivers of such activity are greater customer retention and cross-selling potential in an increasingly competitive, liberalized energy market.

In order to effectively pursue new solutions for climate change mitigation, many companies are entering into, or actively seeking, new joint ventures or other collaborative partnerships.

These serve to bring together complementary skills and ideas and share risks around new capital investment in new areas where technologies may not have a strong commercial track record and external financing may be limited.

Leading Utilities companies are conscious that the industry features long-lived assets and complex value chains. Many recognize that the future structure of the industry is likely to be influenced by key factors such as security of supply, diversified (and, potentially, decentralized) generation, ongoing market liberalization and carbon constraints. This, in turn, means R&D activity may need to be broader in focus and involve other industry players and new alliances.

Carbon capture and storage (CCS) is a prime example in this regard, requiring an understanding of generation technologies and power markets, transportation networks and the prospecting, development and licensing of CO_2 storage sites, which has parallels with traditional exploration for and production of fossil fuels.

A final opportunity considered by several respondents is nuclear energy. A diversified energy mix is embedded in the strategy of many Utilities companies in order to address security of supply and climate change concerns simultaneously. Nuclear is seen by many as a key component in the ongoing low-carbon-energy mix.

> We are investing in R&D for new superconductors to make it more efficient to connect more distant sources of generation (e.g. offshore wind turbines) to our network.
>
> **National Grid**

> As Brazil is a Non-Annex I country the Eletrobrás System is not obliged to have an emission reduction target. Nevertheless... it sees the carbon market as an opportunity due to CDM [clean development mechanism] projects.
>
> **Eletrobrás**

Duke Energy is helping advance the demonstration of geologic CO_2 storage technology through its participation in the US DOE Midwest Regional Carbon Sequestration Partnership Program. Through this partnership, Duke Energy is helping demonstrate the technical feasibility and cost-effectiveness of sequestering large amounts of CO_2.

Duke Energy

PG&E has identified a potential physical risk of reduced hydroelectric generation due to reductions in snowpack in the Sierra Nevada.

PG&E

Insights from the performance score pilot

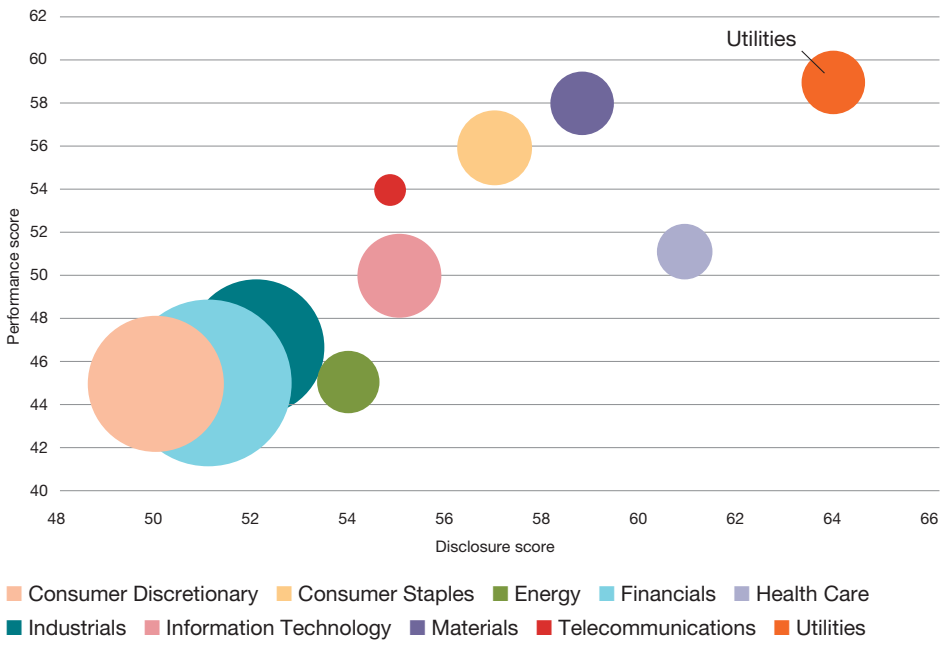
CDP 2009 included, for the first time, separate scores for performance. While CDP has traditionally rated the quality of disclosure, the objective of identifying a performance score is to provide a means of assessing the effectiveness of companies' actions taken to manage their business responses and reduce their contributions to climate change. Certain questions (22 in total) in the CDP Information Request qualified for performance points. (See the main CDP reports for more detail on the performance scoring.)

The Utilities sector scored first overall for disclosure and first for performance. The chart below shows how the Utilities sector compares with the other sectors for performance.

As 2009 is the first year of use of the performance scoring methodology,[14] individual company performance scores are not shown in the CDP 2009 reports, although comment on initial findings is provided below.

The Utilities companies scoring the highest number of performance points (in alphabetical order) are **Centrica**, **Consolidated Edison**, **Exelon** and **Pepco Holdings**.

Fig. E: Average performance scores versus disclosure scores by sector



Sizes of bubbles are based on number of respondents.

14 For more about the performance scoring methodology, see http://www.cdproject.net/2009CDLImethodology.asp.

A number of trends regarding performance were observed in the Utilities sector:

- Within the Global 500, Utilities respondents outscored the other sectors in several areas, with the most significant being progress in respect of the provision of goods and services that enable customers to reduce emissions;
- Utilities respondents within the S&P 500 performed strongly in the management of climate change risks and in the setting of targets and plans (and meeting them); and
- Relative to their sector peers from the Global 500 and S&P 500, FTSE 350 Utilities respondents performed particularly well at providing staff incentives for achieving climate change targets and assigning an executive-level body with responsibility over climate change.

Across the three CDP populations, the Utilities sector as a whole has established good governance, with 91% (51) having Board-level committees with responsibility for climate change in place and 57% (32) reporting staff incentives to reduce emissions. Examples illustrating good governance include regular (monthly or quarterly) management meetings (ideally with cross-departmental representation), specific key performance indicators across different business units and agreed-upon benchmarks to track progress with clear feedback communicated downward to managers and staff.

Conclusion

Consistent with CDP 2008, the Utilities sector has been a strong performer in CDP 2009. Disclosure rates are the highest of all industries, and performance is strong.

To date, this sector has faced a large portion of the burden of regulation and public scrutiny over climate change. Utilities companies have been successful in managing this burden through having systems in place to detect, respond to and take action against potential risks. The impressive performance in this sector to date comes from its ability to not only manage these risks but to also turn them into opportunities for growth in a more carbon-constrained future.

However, if the medium to long-term reduction targets outlined by the Intergovernmental Panel on Climate Change (IPCC) are to be met, then there is still much that needs to be done in the Utilities sector. It can be expected that many more significant challenges lie ahead for Utilities that will inevitably produce winners and losers during the transition to a low-carbon economy.

We have taken the opportunities provided by government support for nuclear by purchasing a 20% stake in nuclear power generator British Energy from EDF for £2.3 billion.

Centrica

Regulations may be placed upon our customers to reduce their energy use, whether it be at the commercial or domestic level, and this would present us with a challenge as to how to assist them in achieving this in a way which maintains our profitability.

Scottish and Southern Energy

Key

AQ	Answered questionnaire
AQ(L)	Answered questionnaire late
DP	Declined to participate
IN	Provided some information (but did not answer the CDP questions)
NP	Non public response
NR	No response
–	Company not in CDP sample that year

Index

F = FTSE 350

G = Global 500

S = S&P 500

For information about the scoring methodology, visit www.cdproject.net/2009CDLImethodology.asp

Utilities scores and emissions by company[15]

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[16]	Total Emissions[17]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[18]	Scope 3[19]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
AES	S	AQ	AQ	15		0	84	84								
Allegheny Energy	S	AQ	AQ	51		11,993	40,606,754	40,606,754								
Ameren	S	AQ	AQ	63		8,688	68,102,804	68,102,804								
American Electric Power	G, S	AQ	AQ	52		10,347	149,415,000	149,415,000								
British Energy Group (see EDF)	F, G	AQ	AQ		NP											
CenterPoint Energy	S	AQ	AQ	45												
Centrica	F, G	AQ	AQ	84		520	11,103,697	10,871,403	232,294		23,317,006	x	x	x	x	
CEZ	G	IN	AQ													
Chubu Electric Power	G	AQ	AQ	50		2,338	64,730,000	64,730,000			30,000		x		x	x
CLP Holdings	G	AQ	AQ	68		6,342	44,430,017	44,422,000	8,017							
CMS Energy	S	AQ	AQ	43		3,322	22,659,483	22,659,483								
Consolidated Edison	G, S	AQ	AQ	79		351	4,769,429	4,211,511	557,918	*	†					x
Constellation Energy Group	S	AQ	AQ	59		952	18,875,860	17,900,347	975,513	*	5,694				x	
Dominion Resources	G, S	AQ	AQ	67		3,303	53,798,568	53,798,568		*						
Drax Group	F	AQ	AQ	54		12,769	22,381,803	22,381,803			249,000		x			
DTE Energy	S	AQ	AQ	84		4,528	42,245,000	41,800,000	445,000	*						
Duke Energy	G, S	AQ	AQ	64		7,482	98,811,000	98,811,000								
Dynegy	S	NR	AQ													
E.ON AG	G	AQ	AQ	74		1,317	158,837,794	155,329,015	3,508,779		797,717		x		x	

15 Some of the figures in this table have been updated since the initial response analysis and may therefore differ from data in the main report contents.

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[16]	Total Emissions[17]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[18]	Scope 3[19]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Edison International	G, S	AQ	–	39	NP											
EDP – Energias de Portugal	G	AQ	AQ	75		1,107	21,384,671	19,813,643	1,571,028		4,902			x	x	x
Electricite de France (EDF)	G	AQ(L)	AQ				91,982,800	91,790,000	192,800							
Eletrobrás	G	AQ	AQ	49		23	300,514	300,514								
ENEL	G	AQ	AQ	55		1,327	109,862,979	109,862,979								
Entergy	G, S	AQ	AQ	78		3,734	48,891,292	33,186,984	15,704,308	*						
Exelon	G, S	AQ	AQ	71		512	9,664,883	9,431,588	233,295		10,234				x	x
FirstEnergy	G, S	AQ	AQ	65		3,587	48,877,547	48,877,547								
Fortum	G	AQ	AQ	79		2,324	18,211,090	17,903,090	308,000		4,078,570	x		x	x	
FPL Group	G, S	AQ	AQ	82		2,813	46,166,488	46,007,608	158,880	*	14,987				x	
Gas Natural SDG	G	AQ	AQ	77	NP											
GDF Suez (formerly Gaz de France / Suez)	G	AQ	AQ	67		1,120	105,705,662	102,602,659	3,103,003							
Hong Kong and China Gas	G	NR	–													
Hong Kong Electric Holdings	G	AQ	–	58		5,564	9,170,000	9,170,000								
Iberdrola	G	AQ	AQ	73		1,282	44,918,783	40,869,083	4,049,700	*	1,028,093				x	
Integrys Energy Group	S	NR	AQ													
International Power	F	AQ	AQ	67	NP											
Kansai Electric Power	G	AQ	AQ	54		1,787	54,990,000	54,990,000		*	11,000			x		
Korea Electric Power (Kepco)	G	AQ	AQ	49		7,658	191,884,046	180,952,435	10,931,611							
Kyushu Electric Power	G	NR	AQ													
National Grid	F, G	AQ	AQ	69		1,066	12,182,000	11,939,000	243,000		5,263,000	x			x	
National Thermal Power (NTPC)	G	NR	NR													
Nicor	S	NR	DP													
NiSource	S	AQ	AQ	50		3,303	29,314,067	29,054,546	259,521		2,459,491	x				
Northumbrian Water Group	F	AQ	AQ	81		419	280,842	59,552	221,290		43,640	x		x	x	x
Pennon Group	F	AQ	AQ	65		269	235,332	117,554	117,789	*	13,344		x		x	
Pepco Holdings	S	AQ	AQ	87		284	3,038,868	2,959,112	79,756		1,488				x	
PG&E	G, S	AQ	AQ	88		235	3,439,406	1,903,901	1,535,505		22,569,017	x				
Pinnacle West Capital	S	AQ	AQ	51		4,844	16,310,917	16,290,019	20,898							
PPL	G, S	NR	AQ													
Progress Energy	G, S	AQ	AQ	67		5,445	49,918,840	49,918,840								
Public Service Enterprise Group	G, S	AQ	AQ	88		1,962	26,138,959	24,287,856	1,851,103	*	42,593,087	x		x	x	

Company Name	Index	2009	2008	CDLI Score	Non-public	Intensity[16]	Total Emissions[17]	Scope 1	Scope 2 Grid Average	Scope 2 Contractual Arrangements[18]	Scope 3[19]	Use & Disposal of Products & Services	Logistics & Distribution	Supply Chain	Business Travel	Other
Questar	S	AQ	AQ	56		776	2,690,222	2,571,101	119,121							
RWE	G	AQ	AQ	83		3,743	247,180,000	172,100,000	75,080,000	*	68,145,400	x	x		x	
Scottish and Southern Energy	F, G	AQ	AQ	78		1,270	19,372,778	19,286,697	86,081	65,567	47,109		x		x	
Sempra Energy	G, S	AQ	AQ	41		971	10,441,679	9,906,141	535,538							
Severn Trent	F	AQ	AQ	58		430	667,866	244,830	423,036	*	126				x	x
Snam Rete Gas	G	AQ	AQ	65		559	1,478,335	1,450,000	28,335							
Southern	G, S	AQ	AQ	48		8,241	141,137,000	141,137,000								
TECO Energy	S	AQ	IN	70		4,077	13,762,234	13,762,234								
Tepco (Tokyo Electric Power)	G	AQ(L)	AQ(L)													
Tohoku Electric Power	G	AQ	AQ	43		1,779	35,380,000	33,730,000	1,650,000		33,395,680	x	x		x	
Tokyo Gas Co.	G	AQ	AQ	63		14	263,000	111,000	152,000		35,715,000	x	x	x		
Union Fenosa	G	AQ	AQ	86		2,008	20,070,935	19,034,052	1,036,883	*	10,583,502	x		x	x	
United Utilities	F	AQ	AQ	71		231	545,791	122,141	423,650	313,025	6,098				x	x
Veolia Environnement	G	AQ	AQ	76		937	47,169,060	42,267,900	4,901,160		475,660†	x	x	x	x	x
Wisconsin Energy	S	AQ	–	31												
Xcel Energy	S	AQ	AQ	85		5,598	62,709,863	62,650,466	59,397		27,375				x	

16 Disclosed Scopes 1 and 2 grid average emissions totals divided by annual US$ million revenues. Revenues based on data retrieved from Bloomberg on June 18, 2009.

17 Scope 1 and Scope 2 grid average reported emissions

18 Where there is a * in this column, the company provided detail in relation to its contractual Scope 2 emissions. Please refer to the company's response.

19 The Scope 3 figure is the sum of data given in answer to questions 13.1-13.4. Information in response to 13.5 was not included in this figure. In a number of cases (marked with †), companies provided data for non-transfer emissions under 13.5, and CDP advises you to look at their full response for details of these emissions.

Risks and Opportunities

1. Regulatory Risks: (CDP6 1(a)(i))

1.1. Is your company exposed to regulatory risks related to climate change?

2. Physical Risks: (CDP6 1(a)(ii))

2.1. Is your company exposed to physical risks from climate change?

3. Other Risks: (CDP6 1(a)(iii))

3.1. Is your company exposed to other risks as a result of climate change?

4. Regulatory Opportunities: (CDP6 1(b)(i))

4.1. Do regulatory requirements on climate change present opportunities for your company?

5. Physical Opportunities: (CDP6 1(b)(ii))

5.1. Do physical changes resulting from climate change present opportunities for your company?

6. Other Opportunities: (CDP6 1(b)(iii))

6.1. Does climate change present other opportunities for your company?

Where the answer to any of the questions in the risks and opportunities section (see left hand column) is yes, please provide the following information if relevant:

- *Describe the company's process for identifying risks/opportunities and assessing the degree to which they could affect the business, including the financial implications.*
- *Describe current and/or anticipated risks/opportunities.*
- *Explain the way in which the risks/opportunities could affect your business and your value chain, including the financial implications.*
- *What geographical areas are affected by the risks/opportunities you have identified.*
- *Outline the timescales over which the risks/opportunities are expected to materialise.*
- *Explain any actions the company has taken or plans to take to manage, adapt to and/or exploit the risks/opportunities that have been identified including the financial implications of those actions.*
- *Comment on whether your views on risks/opportunities have changed in the past twelve months.*

Where the answer to any of the questions is no, please:

- *Explain why you do not consider your company to be exposed to risks/presented with opportunities.*
- *Explain the company process for identifying risks/opportunities and assessing the degree to which they could affect the business.*
- *Comment on whether your views have changed in the past twelve months.*

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

Information about how to respond to this section may be found in "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)" developed by the World Resources Institute and the World Business Council for Sustainable Development ("the GHG Protocol"), see **www.ghgprotocol.org**. *ISO 14064-1 is compatible with the GHG Protocol as are a number of regional/national programme protocols. For more information see* **www.ghgprotocol.org** *and the CDP 2009 Reporting Guidance.*

7. Reporting Year: (CDP6 Q2(a)(ii))

Please also provide CDP with responses to questions 7, 8, 9, 10.1, 10.2, 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request.

7.1. Please state the start date and end date of the year for which you are reporting GHG emissions.

8. Reporting Boundary: (CDP6 Q2(a)(i))

8.1. Please indicate the category that describes the company, entities, or group for which Scope 1 and Scope 2 GHG emissions are reported.

- Companies over which financial control is exercised – per consolidated audited financial statements;
- Companies over which operational control is exercised;
- Companies in which equity share is held;
- Other (please provide details).

8.2. Please state whether any parts of your business or sources of GHG emissions are excluded from your reporting boundary.

9. Methodology: (CDP6 Q2(a)(iii))

9.1. Please describe the process used by your company to calculate Scope 1 and Scope 2 GHG emissions including the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 GHG emissions.

Please also provide:

9.2. Details of any assumptions made.

9.3. The names of and links to any calculation tools used.

9.4. The global warming potentials you have applied and their origin.

9.5. The emission factors you have applied and their origin.

Note about questions 10, 11 and 13

When providing answers to questions 10, 11 and 13, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

10. Scope 1 Direct GHG Emissions: (CDP6 Q2(b)(i))

Electric utilities should report emissions by country/region using the table in question EU3.

Please provide:

10.1. Total gross global Scope 1 GHG emissions in metric tonnes of CO_2-e

Please break down your total gross global Scope 1 emissions by:

10.2. Country or region

Where it will facilitate a better understanding of your business, please also break down your total global Scope 1 emissions by:

10.3. Business division

and/or

10.4. Facility

10.5. Please break down your total global Scope 1 GHG emissions in metric tonnes of the gas and metric tonnes of CO_2-e by GHG type.

10.6. If you have not provided any information about Scope 1 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 1 GHG emissions information in future.

11. Scope 2 Indirect GHG Emissions: (CDP6 Q2(b)(i))

Important note about emission factors where zero or low carbon electricity is purchased:
The emissions factor you should use for calculating Scope 2 emissions depends upon whether the electricity you purchase is counted in calculating the grid average emissions factor or not – see below. You can find this out from your supplier.

Electricity that IS counted in calculating the grid average emissions factor:
Where electricity is sourced from the grid and that electricity has been counted in calculating the grid average emissions factor, Scope 2 emissions must be calculated using the grid average emissions factor, even if your company purchases electricity under a zero or low carbon electricity tariff.

Electricity that is NOT counted in calculating the grid average emissions factor:
Where zero or low carbon electricity is sourced from the grid or otherwise transmitted to the company and that electricity is not counted in calculating the grid average, the emissions factor specific to that method of generation can be used, provided that any certificates quantifying GHG-related environmental benefits claimed for the electricity are not sold or passed on separately from the electricity purchased.

Please provide:

11.1. Total gross global Scope 2 GHG emissions in metric tonnes of CO_2-e

Please break down your total gross global Scope 2 emissions by:

11.2. Country or region

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

Where it will facilitate a better understanding of your business, please also break down your total global Scope 2 emissions by:

11.3. Business division

and/or

11.4. Facility

11.5. If you have not provided any information about Scope 2 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 2 GHG emissions information in future.

12. Contractual Arrangements Supporting Particular Types of Electricity Generation: (CDP6 Q2(b)(i) – Guidance)

12.1. If you consider that the grid average factor used to report Scope 2 emissions in question 11 above does not reflect the contractual arrangements you have with electricity suppliers, (for example, because you purchase electricity using a zero or low carbon electricity tariff), you may calculate and report a contractual Scope 2 figure in response to this question, showing the origin of the alternative emission factors and information about the tariff.

12.2. If you retire any certificates (eg: Renewable Energy Certificates) associated with zero or low carbon electricity, please provide details.

13. Scope 3 Other Indirect GHG Emissions: (CDP6 Q2(c))

For each of the following categories, please:

- Describe the main sources of emissions,
- Report emissions in metric tonnes of CO_2-e,
- State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.1. Employee business travel

13.2. External distribution/logistics

13.3. Use/disposal of company's products and services

For auto manufacture and auto component companies – please refer to the additional questions for these sectors before completing question 13.3.

13.4. Company supply chain

13.5. Other

13.6. If you have not provided information about one or more of the categories of Scope 3 GHG emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 3 indirect emissions information in future.

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

14. Emissions Avoided Through use of Goods and Services: (New for CDP 2009)

14.1. If your goods and/or services enable GHG emissions to be avoided by a third party, please provide details including the estimated avoided emissions, the anticipated timescale over which the emissions are avoided and the methodology, assumptions, emission factors (including sources), and global warming potentials (including sources) used for your estimations.

15. Carbon Dioxide Emissions from Biologically Sequestered Carbon: (New for CDP 2009)

An example would be carbon dioxide from burning biomass/biofuels.

15.1. Please provide the total global carbon dioxide emissions in metric tonnes CO_2 from biologically sequestered carbon.

16. Emissions Intensity: (CDP6 Q3(b))

16.1. Please supply a financial emissions intensity measurement for the reporting year for your combined Scope 1 and 2 emissions, including a description of the measurement,

16.1.1. The units, and

16.1.2. The resulting figure.

16.2. Please supply an activity related intensity measurement for the reporting year for your combined Scope 1 and 2 emissions, including a description of the measurement,

16.2.1. The units, and

16.2.2. The resulting figure.

17. Emissions History: (CDP6 Q2(f))

17.1. Do emissions for the reporting year vary significantly compared to previous years?

If so, please explain why, and:

17.1.1. Estimate the percentage by which emissions vary compared with the previous reporting year.

18. External Verification/Assurance: (CDP6 Q2(d))

18.1. Has any of the information reported in response to questions 10 – 15 been externally verified/assured in whole or in part?

If so, please:

18.2. State the scope/boundary of emissions included within the verification/assurance exercise.

18.3. State what level of assurance, (eg: reasonable or limited) has been given.

18.4. Provide a copy of the verification/assurance statement.

18.5. Specify the standard against which the information has been verified/assured.

18.6. If not, please state whether you have plans for GHG emissions accounting information to be externally verified/assured in future.

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

19. Data Accuracy: (CDP6 Q2(e) – New wording for CDP 2009)

19.1. What are the main sources of uncertainty in your data gathering, handling and calculations e.g.: data gaps, assumptions, extrapolation, metering/measurement inaccuracies etc?

19.2. How do these uncertainties affect the accuracy of the reported data in percentage terms or an estimated standard deviation?

19.3. Does your company report GHG emissions under any mandatory or voluntary scheme (other than CDP) that requires an accuracy assessment?

If so, please provide:

19.3.1. The name of the scheme.

19.3.2. The accuracy assessment for GHG emissions reported under that scheme for the last report delivered.

20. Energy and Fuel Requirements and Costs: (New for CDP 2009)

Please provide the following information for the reporting year:

Cost of purchased energy

20.1. The total cost of electricity, heat, steam and cooling purchased by your company.

20.1.1. Please break down the costs by individual energy type.

Cost of purchased fuel

20.2. The total cost of fuel purchased by your company for mobile and stationary combustion.

20.2.1. Please break down the costs by individual fuel type.

Energy and fuel inputs

The following questions are designed to establish your company's requirements for energy and fuel (inputs). Please note that MWh is our preferred unit for answers as this helps with comparability and analysis. Although it is usually associated with electricity, it can equally be used to represent the energy content of fuels (see CDP 2009 Reporting Guidance for further information on conversions to MWh).

Purchased energy input

20.3. Your company's total consumption of purchased energy in MWh.

Purchased and self produced fuel input

20.4. Your company's total consumption in MWh of fuels for stationary combustion only. This includes purchased fuels, as well as biomass and self-produced fuels where relevant.

20.4.1. Please break down the total consumption of fuels reported in answer to question 20.4 by individual fuel type in MWh.

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

Energy output

In this question we ask for information about the energy in MWh generated by your company from the fuel that it uses. Comparing the energy contained in the fuel before combustion (question 20.4) with the energy available for use after combustion will give an indication of the efficiency of your combustion processes, taking your industry sector into account.

20.5. What is the total amount of energy generated in MWh from the fuels reported in question 20.4?

20.6. What is the total amount in MWh of renewable energy, excluding biomass, that is self-generated by your company?

Energy exports

This question is for companies that export energy that is surplus to their requirements. For example, a company may use electricity from a combined heat and power plant but export the heat to another organisation.

20.7. What percentage of the energy reported in response to question 20.5 is exported/sold by your company to the grid or to third parties?

20.8. What percentage of the renewable energy reported in response to question 20.6 is exported/sold by your company to the grid or to third parties?

21. EU Emissions Trading Scheme: (CDP6 Q2(g)(i) – New wording for CDP 2009)

Electric utilities should report allowances and emissions using the table in question EU5.

21.1. Does your company operate or have ownership of facilities covered by the EU Emissions Trading Scheme (EU ETS)?

If not, please proceed to question 22.
If yes, please give details of:

21.2. The allowances allocated for free for each year of Phase II for facilities which you operate or own. (Even if you do not wholly own facilities, please give the full number of allowances.)

21.3. The total allowances purchased through national auctioning processes for the period 1 January 2008 to 31 December 2008 for facilities that you operate or own. (Even if you do not wholly own facilities, please give the total allowances purchased through auctions by the facilities for this period.)

21.4. The total CO_2 emissions for 1 January 2008 to 31 December 2008 for facilities which you operate or own. (Even if you do not wholly own facilities, please give the total emissions for this period.)

22. Emissions Trading: (CDP6 Q2(g)(ii) – New wording for CDP 2009)

Electric utilities should read EU6 before answering these questions.

22.1. Please provide details of any emissions trading schemes, other than the EU ETS, in which your company already participates or is likely to participate within the next two years.

22.2. What is your overall strategy for complying with any schemes in which you are required or have elected to participate, including the EU ETS?

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

22.3. Have you purchased any project-based carbon credits?

If so, please indicate whether the credits are to meet one or more of the following commitments:

- Primarily for compliance purposes,
- Primarily for voluntary offsetting of your own emissions,
- Other (please describe).

Please also:

22.4. Provide details including the type of unit, volume and vintage purchased and the standard/scheme against which the credits have been verified, issued and retired (where applicable).

22.5. Have you been involved in the origination of project-based carbon credits?

If so:

22.6. Please provide details including:

- Your role in the project(s),
- The locations and technologies involved,
- The standard/scheme under which the projects are being/have been developed,
- Whether emissions reductions have been validated or verified,
- The annual volumes of generated/projected carbon credits,
- Retirement method if used for own compliance or offsetting.

22.7. Are you involved in the trading of allowances under the EU ETS and/or project-based carbon credits as a separate business activity, or in direct support of a business activity such as investment fund management or the provision of offsetting services?

If so:

22.8. Please provide details of the role performed.

Performance

23. Reduction Plans: (CDP6 Q3(a))

23.1. Does your company have a GHG emissions and/or energy reduction plan in place?

If not:

23.2. Please explain why and answer question 23.8 if possible.

If your company does have a plan, please provide the following information:

Goal setting

23.3. Do you have an emissions and/or energy reduction target(s)?

23.4. What is the baseline year for the target(s)?

23.5. What is the emissions and/or energy reduction target(s)?

23.6. What are the sources or activities to which the target(s) applies?

23.7. Over what period/timescale does the target(s) extend?

GHG emissions and energy reduction activities

23.8. What activities are you undertaking or planning to undertake to reduce your emissions/energy use?

Goal evaluation

23.9. What benchmarks or key performance indicators do you use to assess progress against the emissions/energy reduction goals you have set?

Goal achievement

23.10. What emissions reductions, energy savings and associated cost savings have been achieved to date as a result of the plan and/or the activities described above? Please state the methodology and data sources you have used for calculating these reductions and savings.

23.11. What investment has been required to achieve the emissions reductions and energy savings targets or to carry out the activities listed in response to question 23.8 above and over what period was that investment made?

Performance

Goal planning and investment

Electric utilities should read the table in question EU3 for giving details of forecasted emissions.

23.12. What investment will be required to achieve the future targets set out in your reduction plan or to carry out the activities listed in response to question 23.8 above and over what period do you expect payback of that investment?

23.13. Please estimate your company's future Scope 1 and Scope 2 emissions for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

23.14. Please estimate your company's future energy use for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

23.15. Please explain the methodology used for your estimations and any assumptions made.

24. **Planning:** (CDP6 Q3(c))

24.1. How do you factor the cost of future emissions into capital expenditures and what impact have those estimated costs had on your investment decisions?

Governance

25. Responsibility: (CDP6 Q4(a))

25.1. Does a Board Committee or other executive body have overall responsibility for climate change?

If not:

25.2. Please state how overall responsibility for climate change is managed and indicate the highest level within your company with responsibility for climate change.

If so, please provide the following information:

25.3. Which Board Committee or executive body has overall responsibility for climate change?

25.4. What is the mechanism by which the Board or other executive body reviews the company's progress and status regarding climate change?

26. Individual Performance: (CDP6 Q4(b))

26.1. Do you provide incentives for individual management of climate change issues including attainment of GHG targets?

If so:

26.2. Are those incentives linked to monetary rewards?

26.3. Who is entitled to benefit from those incentives?

27. Communications: (CDP6 Q4(c))

27.1. Do you publish information about the risks and opportunities presented to your company by climate change, details of your emissions and plans to reduce emissions?

If so, please indicate which of the following apply and provide details and/or a link to the documents or a copy of the relevant excerpt:

27.2. The company's Annual Report or other mainstream filings.

27.3. Voluntary communications (other than to CDP) such as Corporate Social Responsibility reporting.

28. Public Policy: (CDP6 Q4(d))

28.1. Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading? If so, please provide details.

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